



STATE OF MAINE  
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY  
MAINE FOREST SERVICE  
INSECT & DISEASE LABORATORY  
168 STATE HOUSE STATION  
AUGUSTA, MAINE 04333

JANET T. MILLS  
GOVERNOR

AMANDA E. BEAL  
COMMISSIONER

[http://maine.gov/dacf/mfs/forest\\_health/index.htm](http://maine.gov/dacf/mfs/forest_health/index.htm)

**Forest & Shade Tree – Insect & Disease Conditions for Maine**

**October 23, 2020**

This is the final Conditions Report for the 2020 season. All of this year's reports and updates, as well as reports from previous years, are archived on our Conditions Reports Index Page:

[https://www.maine.gov/dacf/mfs/publications/condition\\_reports.html](https://www.maine.gov/dacf/mfs/publications/condition_reports.html). However, this may not be the last time you hear from us between now and next season. If significant news and events of interest occur before the first Conditions Report of 2021, we will communicate these to electronic newsletter subscribers via the GovDelivery system. As always, please reach out with concerns or observations about forest health through our [on-line reporting form](#) or by calling (207) 287-2431.

The MFS Forest Health and Monitoring group thank you for your continued interest in and contributions to these reports. We value your participation as a critical part of the forest health monitoring network and wish you a healthy, safe and comfortable fall and winter.

**Upland Invasive Plant Detection in Maine – Stiltgrass**

*Images: (top) If left unchecked, stiltgrass can take over and smother vegetation. Over time, a dense thatch layer develops, this inhibits natural regeneration and increases wildfire risk; (bottom) close-up of stems. Images: DACF*

The first known Maine location of the invasive plant stiltgrass (*Microstegium vimineum*), also known as Japanese stiltgrass, was recently confirmed by Maine Department of Agriculture, Conservation and Forestry (DACF) staff at a nursery in York County. This severely invasive plant can be a significant threat to forest regeneration and increases wildfire risk. Previously, the closest known locations for stiltgrass were in New Hampshire. DACF urges landscape and nursery professionals, landowners, and land managers to carefully search properties for this invasive plant.

Stiltgrass forms dense colonies in sun or shade, invading the forest and forming a thick thatch layer over time. Stiltgrass is an annual plant, and each stem can produce hundreds to thousands of seeds before dying in the fall. Seeds survive for at least five years in the soil.



PATTY CORMIER, DIRECTOR  
MAINE FOREST SERVICE  
18 ELKINS LANE, HARLOW BUILDING



PHONE: (207) 287-2791

[www.maineforestservice.gov](http://www.maineforestservice.gov)

Look for any dense patches of unfamiliar grass that could be stiltgrass. Several features of stiltgrass can help distinguish it from other grasses:

- Leaves of stiltgrass alternate along the stem, 2-4" long and 1/2" wide, and have a stripe of reflective hairs along the top surface of the leaf midrib. Individual hairs may be too small to see with the naked eye, but the pale stripe along the leaf midrib is distinctive. The midrib may be slightly off-center.
- The leaf edges and surfaces feel smooth to the touch, unlike some native grasses with stiff hairs along the leaf edge.
- The common name "stiltgrass" comes from the plant's growth habit: it trails along the ground, branching from nodes where it produces "stilts" (roots) to support the new branches. It is shallow-rooted and easy to pull.
- Plants flower and set seed very late in the season (September-October); most other grasses seed much earlier in the year. Each plant can have one to three seed spikes that resemble crabgrass.
- Stems can develop a reddish tint late in the season.



If you think you have stiltgrass on your property, please review the above list of characteristics to confirm, and check your plants against photos of stiltgrass at these websites: [MNAP](#), [GoBotany](#). If you still believe you have found stiltgrass, please either map the location and upload images in the online mapping tool [iMapInvasives](#), or send an email with photos and location description to [invasives.mnap@maine.gov](mailto:invasives.mnap@maine.gov).

New detections of stiltgrass should be controlled to keep this damaging grass from invading Maine's forests and natural areas. DACF staff can offer guidance to impacted landowners. For general information on managing stiltgrass and other invasive plants, please visit the MNAP [website](#).

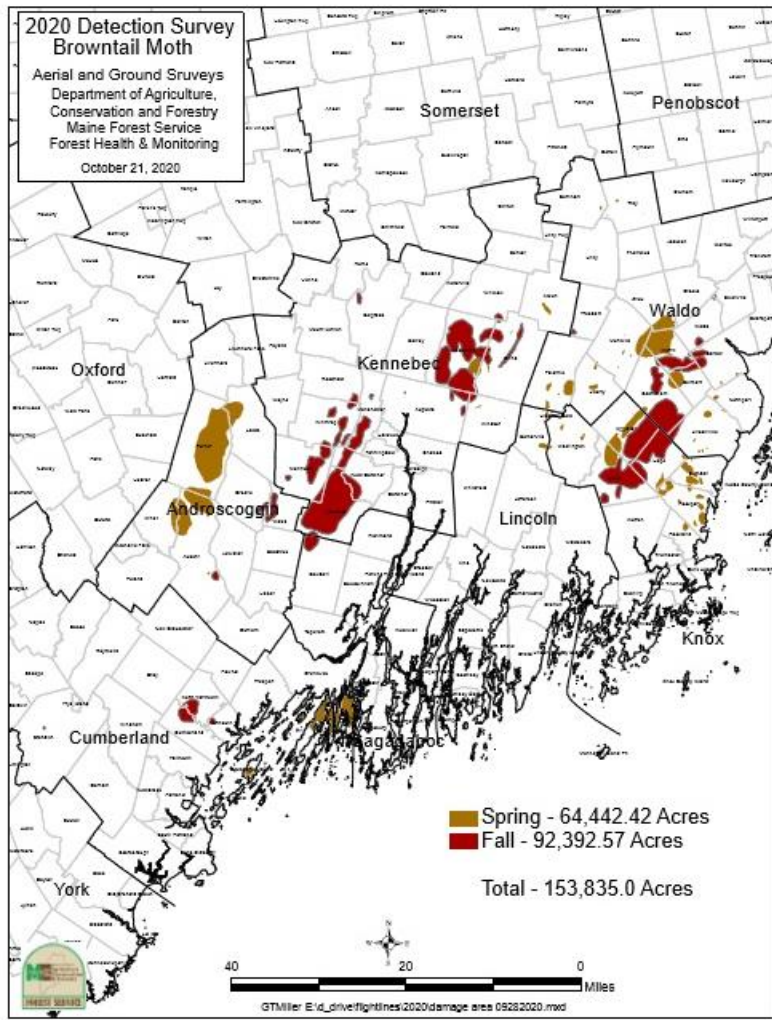
### ***Insects***

#### **Browntail Moth (*Euproctis chrysorrhoea*)**

*Image: 2020 map of browntail moth damage detected through aerial survey*

As cooler temperatures and shorter days signal plants and animals to prepare for a long winter's rest, browntail moth caterpillars are no exception. The young caterpillars which hatched in August have completed their winter webs inside which they will spend the long winter months.

Up to two rounds of aerial surveys are flown each year for browntail moth monitoring: one in the late spring/early summer to map defoliation from mature larvae and another in late summer to map skeletonization damage from the newly hatched larvae. During the early summer survey, 64,442 acres of defoliation were mapped, mostly along the leading edge of the infestation from the Belgrade Lakes region east to the Belfast area. During the late-summer survey, 92,392 acres of defoliation were mapped. The late-summer surveys show increasing populations in the Belgrade Lakes region as well as around Cobbosseecontee Lake and the China Lake area. The total area of defoliation mapped in 2020 was 153,835 acres. This winter we will perform our annual winter web survey to provide a more detailed picture of how browntail moth is impacting Maine.



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

Image: Elongate hemlock scale on hemlock.



Although hemlock woolly adelgid is likely the most serious pest of hemlock in Maine, the lesser-known elongate hemlock scale (EHS) is also of concern. Hemlock and fir are the primary hosts of this armored scale insect, but it can also infest other conifers. EHS is established in forest trees in southern Kittery and parts of Frye Island. In other areas throughout York, Cumberland, Sagadahoc and Hancock Counties it has been found on planted trees. This autumn, we have confirmed infestations reported by arborists, landscapers and landowners on planted trees in Brunswick,

Freeport and Casco. Watch for signs of this insect particularly on planted hemlock, fir and spruce. Also look in native stands of these trees in areas where hemlock woolly adelgid is present or near where EHS has been found. For more information, see [www.maine.gov/forestpests#ehs](http://www.maine.gov/forestpests#ehs).

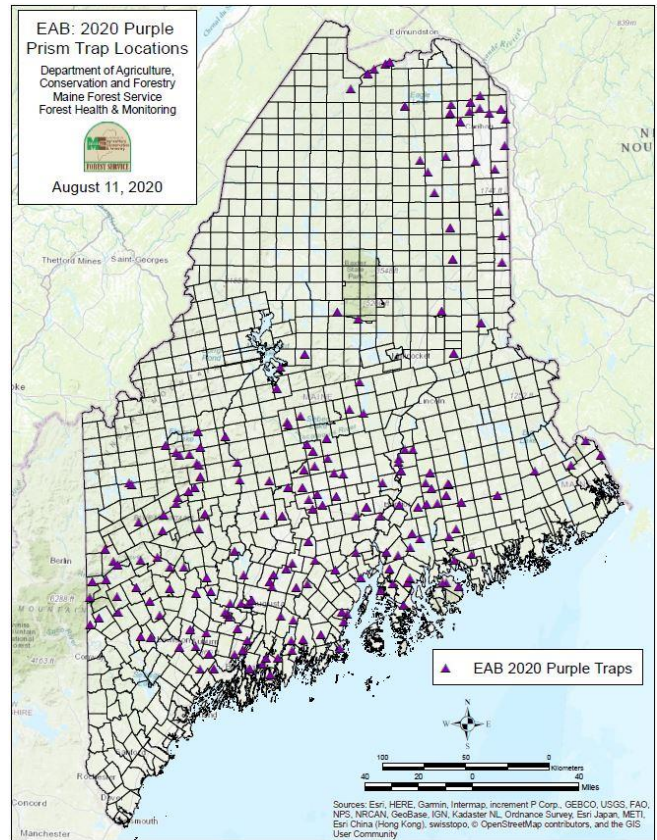
## **Emerald Ash Borer (*Agrilus planipennis*)**

*Images: (top) Map of Maine purple prism locations in 2020; (bottom) Woodpecker feeding may indicate presence of emerald ash borer.*

The 2020 purple prism trap (PPT) survey is now complete and all 201 traps have been accounted for and removed for the season. These traps are hung outside of emerald ash borer (EAB)-regulated areas to aid in new detections. Several samples of native Buprestids in the same genus (*Agrilus*) as EAB were recovered, however no adult EAB were identified in 2020 as a result of the PPT survey. Other EAB survey efforts for 2020 are ongoing. Once all survey results for 2020 are in-hand, we will know whether any revisions to the current boundaries of the regulated areas in Maine are necessary.

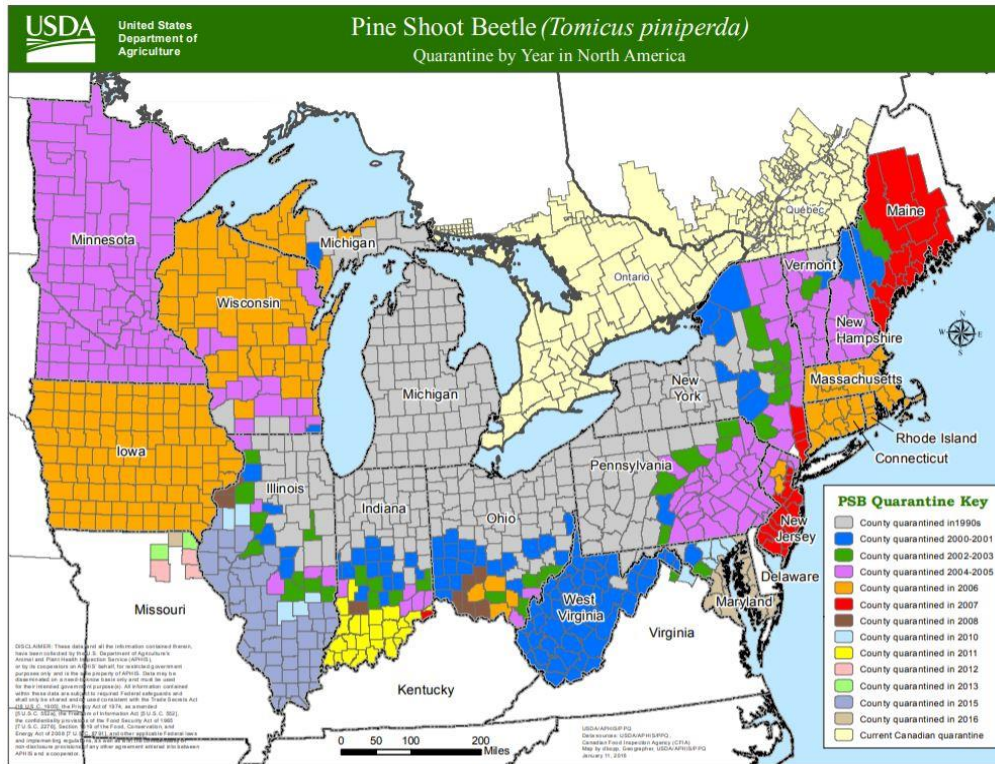
This month we started peeling ash trap trees girdled this spring to monitor for signs of EAB. So far, in areas outside the current quarantine, two girdled trees processed on Mount Desert Island and one in Patten have shown no signs of EAB. Although several trees processed from the northern Aroostook County quarantine were negative, we have also discovered EAB in three trees within that area: two in Grand Isle, a town where EAB has been previously trapped, and one in Van Buren, where EAB has not previously been found. This indicates that EAB is spreading in northern Maine. Additional trap trees will be peeled over the coming weeks. If you girdled a tree in the spring and have not yet contacted us about peeling it, please contact [Kaitlyn.Whittemore@maine.gov](mailto:Kaitlyn.Whittemore@maine.gov) or call (207) 287-2431.

As we move into the winter months, remember to watch for signs of woodpecker feeding on ash trees. Woodpeckers often feed on overwintering EAB larvae, and as they feed, they flick off the grey outer bark, revealing the bright blond inner bark. If you see this on ash trees, please contact us. Although woodpeckers do feed on native insects in ash, this distinctive 'blonding' pattern is often an indication of EAB.



## Pine Shoot Beetle (*Tomicus piniperda*)

Image: Map of annual pine shoot beetle regulated area additions prior to deregulation in 2020. Image: [USDA APHIS](#)



Pine shoot beetle (PSB) is exotic to North America and was first detected on an Ohio tree farm in 1992. Given the presumed economic impact to our native pine species, federal quarantine regulations were quickly enacted by USDA APHIS to protect North American pine commodities. Despite precautions regulating the movement of pine products, PSB has since expanded to occupy 19 US states, ranging from Minnesota to Maine, and the Canadian provinces of Ontario and Quebec. PSB was first detected in

Maine in 1999 and by 2007, all Maine counties except Aroostook and Washington counties were included in the federally regulated area. At that point, many forest health managers in the northeast US, including those in Maine, had concluded that the impacts of PSB would be minimal. However, it was still unclear what threat was posed to the pine resources in southern states.

At this time, the decision has been made to remove the federal domestic PSB quarantine regulations and those regulating importation of pine products from neighboring Canada, effective November 2, 2020. The DACF will subsequently propose to strike the current quarantine rules in CMR 01-001 Chapter 268. Those interested in greater detail regarding the rationale for PSB deregulation are encouraged to read about this decision on the [federal register website](#). It is expected this pest will be deregulated by the Canadian Food Inspection Agency (CFIA) in Canada in early November. Be on the lookout for the DACF rulemaking proposal to remove the quarantine.

When both of these regulations have been removed, pine products will be able to move freely between the previously regulated areas of Maine and Aroostook and Washington counties. Following deregulation of PSB, be sure to check if there are other regulations impacting movement of pine to the intended destination before shipping products out of the state. The USDA APHIS, PPQ office in Hermon, ME can assist with export questions; you can also reach out to the State [State Plant Regulatory Official Office](#) in any state. For export to Canada, the CFIA offers [this helpful resource](#) and an [automated import system](#).

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

*Image: A group of adult spotted lanternflies, including a female depositing a fresh white egg mass on a red maple tree in Pennsylvania. Note the older egg masses, also pictured here, become darker in color and are well-camouflaged. Photo Credit: Emelie Swackhamer, Penn State Extension*

The news last month of trees arriving in Maine with [spotted lanternfly](#) (SLF) egg masses on them is a good reminder to keep a lookout for this invasive pest. Egg masses were found on trees planted in Maine that had been grown by a Pennsylvania nursery, which lies at the core of the SLF infestation area in North America. DACF Horticulture Program staff found egg masses on trees planted in the communities of Boothbay, Freeport, Northeast Harbor, and Yarmouth. Those trees in Freeport and Yarmouth probably arrived in Maine prior to egg hatch, and the others after the eggs hatched.



It is not likely that this is the first time SLF has arrived in Maine, nor will it be the last time. SLF is an expert stowaway. It will deposit eggs on just about any available surface and egg masses are extremely difficult to detect. Nymphs and adults can also hitch rides during the growing season. SLF can move on vehicles, firewood, outdoor equipment and other items carried by individuals and shipped by businesses from within infested areas. These vectors have endpoints throughout Maine.

Experts suggest that only extreme coastal areas of Maine are warm enough to support significant populations of this pest. However, just a small amount of additional warming could make crops and trees across a major portion of the state vulnerable to SLF damage. In addition to the harm caused to plants, SLF can develop into a nuisance for people.

SLF is not known to be established in Maine. If you suspect you have found evidence of this pest, please report it to [bugwatch@maine.gov](mailto:bugwatch@maine.gov).

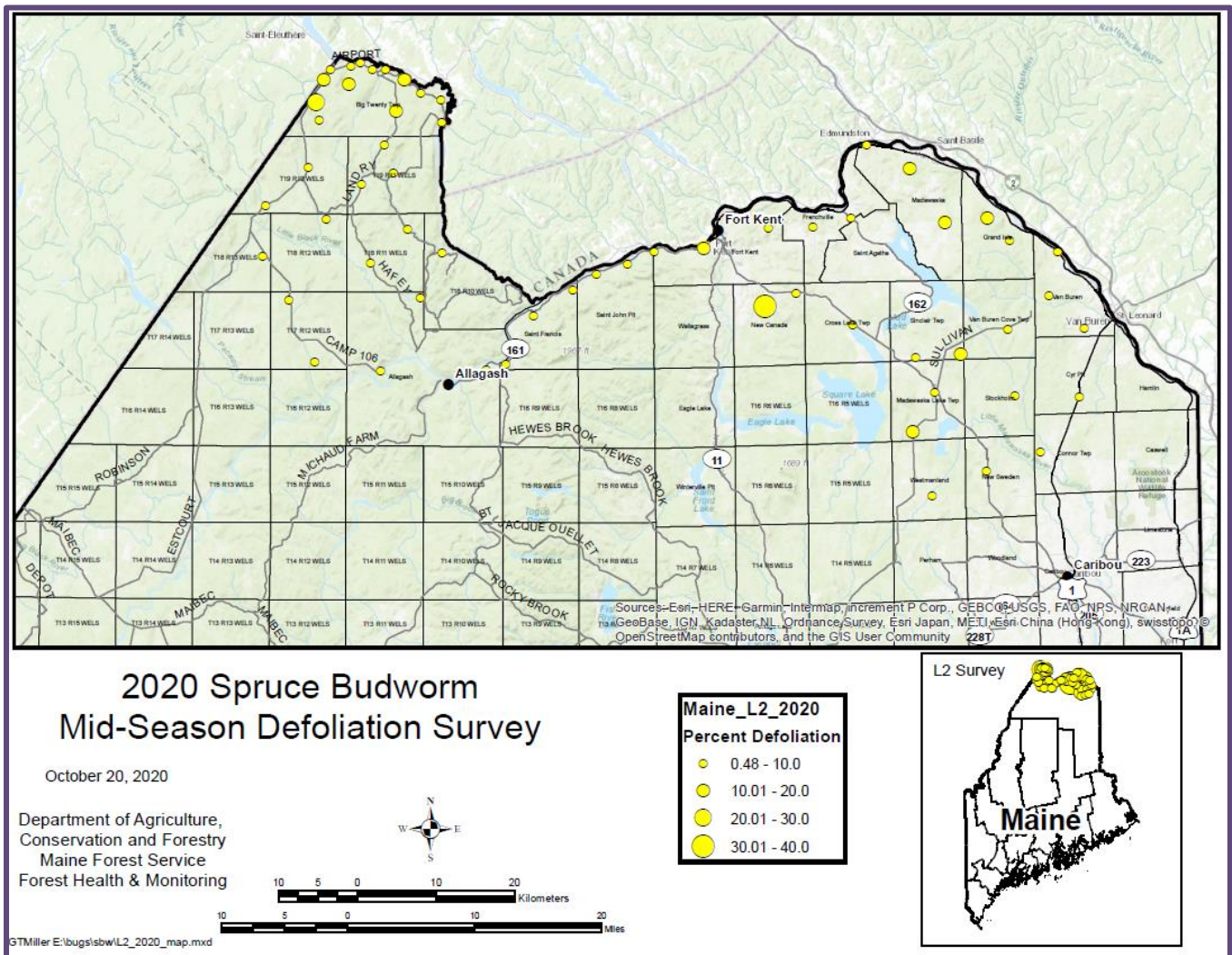
### **Spruce Budworm (*Choristoneura fumiferana*)**

*Image: Map of 2020 Fettes defoliation assessments for spruce budworm across northern Maine.*

After a summer spent hanging in the spruce-fir forests of Maine, spruce budworm trap samples are starting to trickle in. The remaining flood of samples is expected to arrive at the end of October and the counting will begin in earnest. It's still too soon to say what the moth numbers will look like for the 2020 season, although it appears there might be a sharp contrast between the far northern portion of Maine (where defoliation was observed) and other areas sampled so far. Unlike 2019, we have seen little evidence from Canadian flight model data to indicate that Maine received any major in-flights of migrating moths from further north. Despite this, we still expect to see a continuation of the trend of elevated SBW moths in Maine again this year.

More telling than preliminary moth numbers is the fact that light defoliation by SBW larvae was visible from the ground this summer, a sight not seen since perhaps the late 1980s or early 1990s. Current-year defoliation was quantified on 60 sites distributed across the northernmost reaches of the state using the Fettes Method. Fettes Method observations quantify defoliation from all sources on branches from the mid-crown of spruce budworm host trees. This data has been used to map defoliation intensity and will help complement L2 and pheromone

trap data in characterizing SBW populations across the landscape. A more thorough picture of the 2020 SBW situation will emerge over the next few months and be made available once the annual SBW report is published.



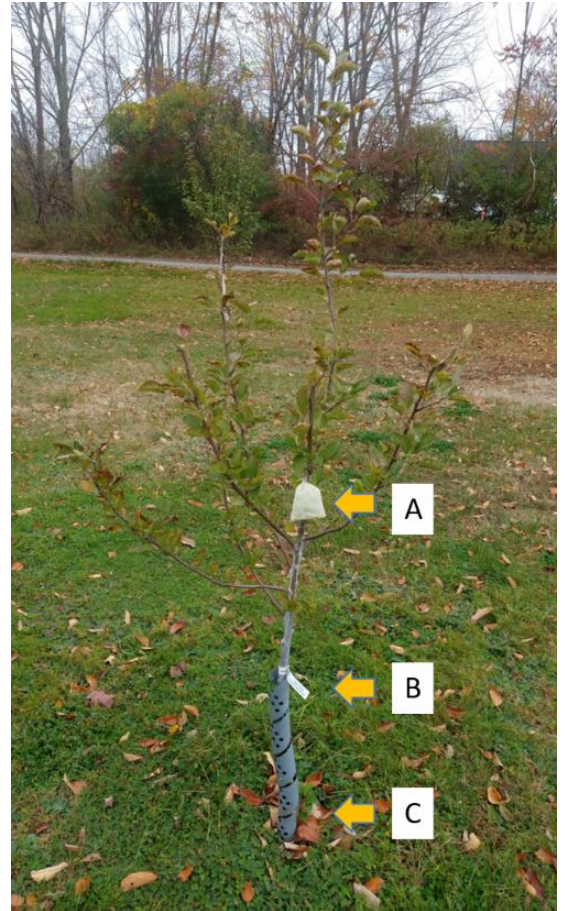
## Diseases, Injuries and Environmental Issues

### Fall tree care tips

*Image: An apple tree ready for winter with A) Bar soap in a cloth bag tied loosely to a branch; B) A tree guard protecting the lower portion of the main stem from rodents and sunscald; C) The tree has been recently watered (although the owner of this tree could further support this tree by maintaining a mulch ring around the base).*

Although many of the leaves have fallen and the above ground growing season is coming to a close, it is important to keep in mind some fall tree care tips to ensure your trees overwinter in good health. For example, roots will continue to grow until soils temperatures fall to a consistent 40° F. Thus, to encourage root growth of all trees and prevent winter injury in conifers, regular fall watering is key. Further, cultural practices like cleaning up leaf debris and pruning dead wood from trees decrease overwintering inoculum for some diseases and reduces overwintering spots for insects that can harm trees next season.

Wrapping the lower stem of high-value, young and thin-barked trees will discourage rodents from feeding on the bark causing serious injury – it will also decrease the chance of sunscald injury in spring. Hanging a bar of soap on shorter-stature trees works surprisingly well as a deterrent to deer browsing in the yard setting. Protecting the regeneration of desirable tree species in your wood lot so they escape browsing during the winter months is much more challenging. Following these basics will help to ensure a positive start for high value ornamental trees in the 2021 growing season.



### Oak Wilt Survey (*Bretziella fagacearum*)

*Image: A map of the 73 oak wilt survey site locations evaluated in 2020.*

Oak wilt has not been found in Maine, however the Maine Forest Service Forest Health and Monitoring group has been surveying for this destructive fungal tree disease, supported by a grant from the US Forest Service. This summer and into early autumn, 73 sites were surveyed. The main criteria for oak wilt survey site selection were a high oak component in the surrounding forest/urban forest and human activity. Thus, certain areas of cities and towns were mainly targeted for early detection efforts. Also targeted were areas like state parks, camping areas, trail heads and areas designated for ATV use. These areas were of interests because human activities, such as camping and the associated movement of firewood, represent the highest likelihood of oak wilt introduction to Maine.

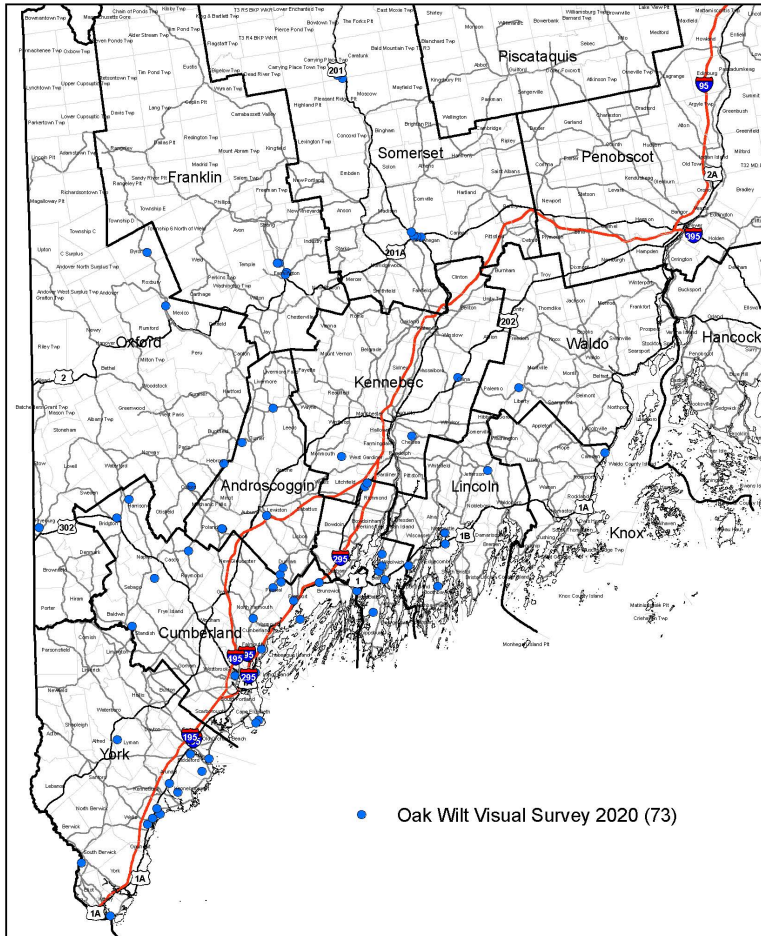
Currently, the closest confirmed location of oak wilt is in New York State. However, as with many tree pests, this threat to our oak trees is only a load of firewood away from being a serious and persistent threat to Maine's oak resources. If you have concerns about oak wilt, or suspect a tree you have seen is affected by the disease, please contact [aaron.bergdahl@maine.gov](mailto:aaron.bergdahl@maine.gov), (207) 287-3008.



## Calendar

**December 11, 2020, 12:30 pm:** Mike Parisio will provide a forest insects and disease annual review for 2020 as part of the NER.COFE webinar series. Recordings will be available on-line: <https://cofe.org/index.php/regional-groups/ner-cofe/226-ner-cofe-meeting-presentations>

**March 4, 2021, Noon:** Allison Kanoti and Bill Livingston (University of Maine) will head up a panel discussion on northern pests and climate change as part of the Maine Forest Climate Initiative first Wednesday webinar series. See the recorded October webinar and learn about future topics at the [series website](#).



October 19, 2020



Oak Wilt Visual Survey - 2020



Maine Forest Service  
Forest Health & Monitoring



**Office hours** are 7:30 am to 4:00 pm, Monday through Friday, except for holidays. However, we are currently working remotely and DACF buildings are closed to public access. You can still reach us at: (207) 287-2431. Status of the building closure will be updated on the DACF homepage, [www.maine.gov/dacf](http://www.maine.gov/dacf).

**NOTE:** The Augusta office is now housed in the Deering Building, 90 Blossom Lane, Suite 201. The mailing address and phone numbers are unchanged. A map is available on our website, [https://www.maine.gov/dacf/mfs/forest\\_health/contact\\_us.html](https://www.maine.gov/dacf/mfs/forest_health/contact_us.html). The lab at 50 Hospital Street is currently housing the Kennebec County Soil and Water Conservation District.

### Conditions Report No. 7, 2020

On-line: [https://www.maine.gov/dacf/mfs/publications/condition\\_reports.html](https://www.maine.gov/dacf/mfs/publications/condition_reports.html)

DEPARTMENT OF AGRICULTURE CONSERVATION & FORESTRY

Maine Forest Service – Forest Health and Monitoring

Contributors: Aaron Bergdahl, Allison Kanoti, Greg Miller, Mike Parisio, Thomas Schmeelk, Colleen Teerling and Kaitlyn Whitemore

*Unless otherwise noted, photos by Maine Forest Service, Forest Health and Monitoring, DACF*