



# Central States Forest Health Watch



Current forest health information for land managers in Illinois, Indiana, Iowa and Missouri

**July 15, 2002 PREMIER EDITION**

## **About This Newsletter...**

This collaborative effort of the USDA Forest Service Northeastern Area, Missouri Department of Conservation, and Indiana, Iowa and Illinois Departments of Natural Resources will provide updates three times per year (Spring, Summer, Autumn) on forest health issues of regional interest.

## **Breaking News: Exotic Ash Borer in Michigan**

**The emerald ash borer** (*Agrilus planipennis*), an exotic Chinese buprestid, was found during late June in the Detroit metropolitan area. The insect is associated with dying and dead ash trees throughout a five-county area, and appears to be a major factor in the mortality of thousands of trees. All species and cultivars of ash appear to be affected. A pest alert is being prepared, and will be available on the web in the near future. Check the website at: [www.na.fs.fed.us/spfo](http://www.na.fs.fed.us/spfo) for a link to the latest information on this new pest.

## **Regional Overview of Current Pest Conditions**

**Anthracnose on sycamore, oak, ash, and maple** have been observed at high levels across the region, due to cool wet spring conditions. A different fungus causes anthracnose on each tree species, though symptoms may appear similar. Healthy, well-established trees can lose a large portion of their foliage in the spring and go on to produce a second flush of leaves without experiencing severe stress. However, repeated defoliation for several years in succession may weaken trees and result in branch dieback, particularly on newly transplanted trees. Sycamore is often severely impacted by anthracnose, as leaf symptoms may commonly be accompanied by shoot blight and twig cankers. More information on anthracnose is available at the following websites:

- [ohioline.osu.edu/hyg-fact/3000/3048.html](http://ohioline.osu.edu/hyg-fact/3000/3048.html)
- [www.na.fs.fed.us/spfo/faqs/anthracn.htm](http://www.na.fs.fed.us/spfo/faqs/anthracn.htm) or
- [www.agcom.purdue.edu/AgCom/Pubs/BP/BP\\_9\\_W.pdf](http://www.agcom.purdue.edu/AgCom/Pubs/BP/BP_9_W.pdf)

**Dutch elm disease** (DED) has also been obvious in red and American elm across the region this spring, particularly along roadsides and fence lines. Several factors may be contributing to this current regional “killing wave”, including ingrowth of host trees to a susceptible size and a build up of bark beetle populations. An increase in prevalence of DED and of vectors increases the risk of infection to trees that may have escaped previous waves of the disease. Vigilant sanitation to reduce the amount of fungus and bark beetle populations remains the single most effective management strategy to reduce elm losses in communities. Individual high value trees can be protected with fungicide. For more information, see the recent brochure “How to Identify and Manage Dutch Elm Disease” at [www.na.fs.fed.us/spfo/pubs/howtos/ht\\_ded/ht\\_ded.htm](http://www.na.fs.fed.us/spfo/pubs/howtos/ht_ded/ht_ded.htm)

**Scotch pine mortality** continues to affect 25-40 year old plantings across Iowa. The deterioration appears due to combined impacts of *Ips pini* bark beetles (southern pine engraver), pine sawyer beetles, and **pine wilt nematode**.

**White pine root disease** is still the most common disease of conifers in Indiana. This disease, caused by *Leptographium procerum*, is killing 5' to 25' tall trees across the state.

**Eastern tent caterpillar** has heavily defoliated black cherry in Southern and South Central Indiana for the third year in a row. Other defoliators that are causing damage in Indiana include bagworm in the northern part of the state and a looper complex on oaks.

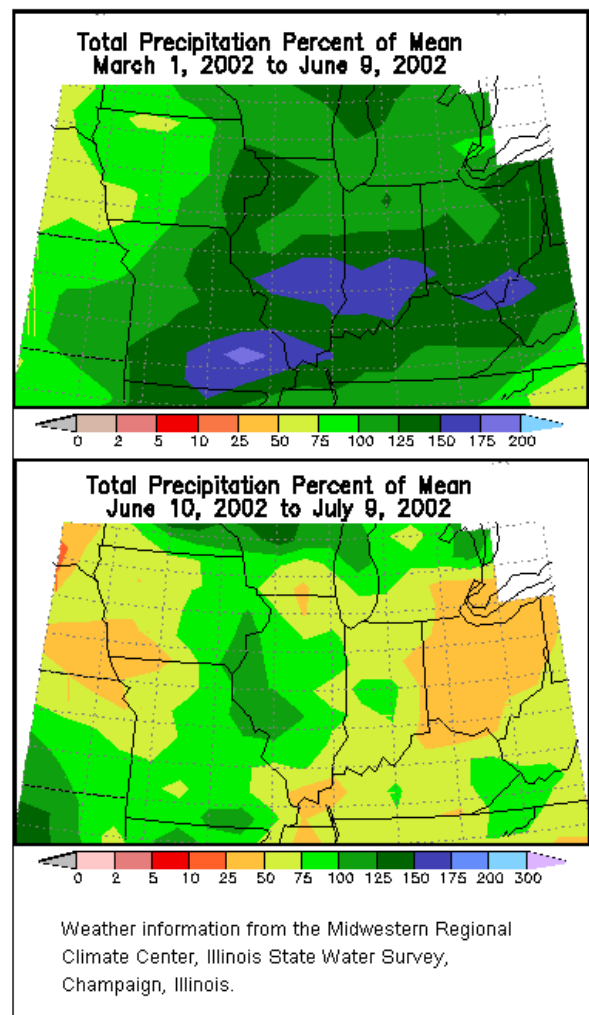
**The common oak moth** (*Phoberia atomaris*) that heavily defoliated post oaks in southern Missouri in spring 2001 was present in much lower numbers this spring. Only minor, scattered defoliation has been observed.

**Forest tent caterpillar** is again causing heavy defoliation on the Oakwood Bottoms of the Shawnee National Forest in Southern Illinois. Annual flooding in this area prevents natural parasites of forest tent caterpillar from surviving in the soil, contributing to a recurring outbreak of damaging levels of forest tent caterpillar.

## Weather Overview

The Central States experienced a very wet spring and early summer, with the exception of Western Iowa. Localized flooding occurred in parts of Missouri, Indiana and Illinois during May. Extreme rainfall gave way to hot dry conditions by mid-June. Precipitation for the 30-day period ending July 7<sup>th</sup> was below normal across the central states. There are several forest health implications to these weather patterns:

- Rainfall in previously drought-stricken areas temporarily gives some relief, but is not expected to halt oak decline and other forest health problems that have been set in motion.
- High moisture has led to high leaf disease problems.
- Flooding impacts to forest health may be present. This includes stress from waterlogged soils, root scouring, and debris wounding. Dead/stressed elms in low areas may also increase elm bark beetles, and thus increase Dutch elm disease.
- Dry conditions are now an additional stressor to trees.



## What's New With Oak Decline?

Oak decline is a complex condition caused by many factors, including predisposing conditions, inciting factors, and contributing secondary insects and diseases. The predisposing conditions in the Central States are often relatively old age, shallow, rocky soils, and previous droughts. The inciting conditions for the current event include severe drought and repeated defoliation by insects. The secondary agents commonly include red oak borer, carpenterworm, two-lined chestnut borer, armillaria root disease and hypoxylon canker.

The latest developments in oak decline include:

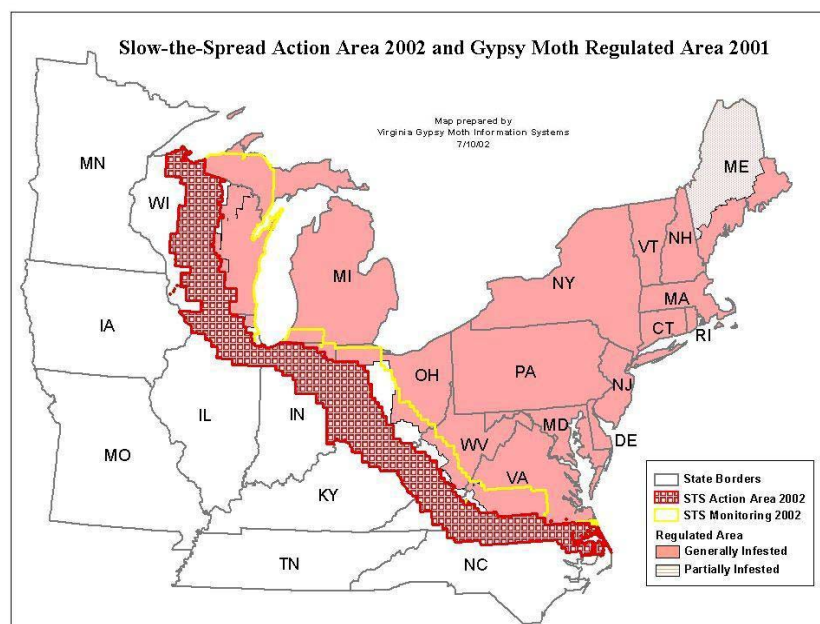
- A conservative estimate is that 15-20% of black and scarlet oak stands in Missouri are showing severe decline. On the Mark Twain National Forest alone, 500,000 acres have moderate to severe decline.
- The Mark Twain National Forest developed guidelines for marking hazard trees along forest roads and in recreational areas. For more information on these guidelines, contact Ross Melick ([rmelick@fs.fed.us](mailto:rmelick@fs.fed.us)) or Donald E. (Pepper) Martin ([demartin@fs.fed.us](mailto:demartin@fs.fed.us)) on the Mark Twain National Forest, or Keith Moser ([MoserW@mail.conservation.state.mo.us](mailto:MoserW@mail.conservation.state.mo.us)) with the Missouri Department of Conservation.
- This spring, high levels of mortality the red oak borer larvae have been observed in Missouri. The impact this may have on emergence of breeding adults in 2003 is unknown.
- A feature article on oak decline just came out in the July issue of the Missouri Conservationist. Check it out at: [www.conservation.state.mo.us/conmag/](http://www.conservation.state.mo.us/conmag/) ( editor's note—as of July 15, the July issue is not yet posted, but should be up any day—if the link leads you to the June issue, check again in a couple of days!)

Other information on oak decline can be found on the www at:

- [www.fs.fed.us/r9/marktwain/management/Oak\\_decline/red\\_oak\\_borer.pdf](http://www.fs.fed.us/r9/marktwain/management/Oak_decline/red_oak_borer.pdf)
- [www.fs.fed.us/r9/marktwain/management/news\\_releases/oak\\_decline.htm](http://www.fs.fed.us/r9/marktwain/management/news_releases/oak_decline.htm)

## Gypsy Moth Activities

Across the Central States, the status of gypsy moth infestation varies: A few counties in Northeastern Indiana and Illinois are now generally infested, a broad band across Illinois and Indiana is within the “Slow-the-Spread” (STS) action area, and all of Iowa and Missouri and the remainder of Illinois and Indiana are out in front of the main line of infestation. In the uninfested areas, gypsy moth traps are set to detect any early infestations. If spot infestations are found in these areas, they are eradicated.



In the STS action area, the main objective is to significantly reduce gypsy moth populations so that they will not spread as quickly. Pheromone flake application is the most common treatment. The pheromone confuses the male gypsy moths, preventing them from finding females. The biological insecticide, Btk, and an insecticide, Dimilin, are also used to reduce gypsy moth populations.

More information on gypsy moth treated acres and defoliation are available on the www at: [fhpr8.srs.fs.fed.us/wv/gmdigest/gmdigest.html](http://fhpr8.srs.fs.fed.us/wv/gmdigest/gmdigest.html)

Information on STS trapping and treatment are at: [www.ento.vt.edu/STS/](http://www.ento.vt.edu/STS/)

### **Update on Asian Longhorned Beetle in Chicago**

The eradication of the five Asian Longhorned Beetle (ALB) infestations in the Chicago area is progressing. Only 19 infested trees have been detected in the last year, all in the main Ravenswood infestation. Since ALB was detected in Chicago in 1998, 1566 infested trees have been found and destroyed. Survey for infested trees continues with bucket trucks and tree climbers (provided by FS Smokejumpers). An insecticide is being tested for the eradication of ALB. Every host tree within one-eighth mile of an infested tree is being injected with the systemic insecticide imidacloprid (tradenames include Merit and Imicide). So far, more than 98,000 trees have been treated during the last 3 years. US Forest Service Research is testing a portable acoustical detection device that is able to detect ALB larvae chewing in trees. This may greatly improve the detection of infested trees over the visual detection method currently used in the survey.

Early detection of any new ALB infestation is key to eradication. People that view the crowns of trees, especially in urban areas, could be early detectors. A key audience is the urban tree care industry, and efforts to increase ALB awareness for this audience are being implemented. More information on ALB is available at: [www.na.fs.fed.us/spfo/alb/](http://www.na.fs.fed.us/spfo/alb/)

### **Feature Topic: Sudden Oak Death**

Sudden Oak Death (SOD) is a devastating disease recently reported in central coastal California and southwestern Oregon. A newly identified fungus, *Phytophthora ramorum*, causes the disease. On tanoaks, coast live oaks, and California black oaks, the disease causes a bleeding canker on the stem, and eventual tree death. On *Rhododendron* spp., huckleberry, bay laurel, madrone, bigleaf maple, manzanita, and California buckeye, the disease causes a leaf spot and twig dieback. It has also been observed on rhododendron and viburnum in Germany and the Netherlands. The origin of the pathogen is unknown. SOD is not involved in the oak decline event that is currently being observed in Arkansas and Missouri.

The SOD pathogen has the potential to infect oaks and other trees and shrubs if it is transported to the Central States. Limited tests have shown that many oak species, including northern red oak and pin oak, are highly susceptible to the disease. The means by which this pathogen spreads to new areas and infects hosts is unknown; long distance spread is most likely facilitated by human movement of infected plants, soil on recreational equipment, hiking boots, tools, and diseased firewood. Early detection of this disease in new areas is important to prevent its spread to other areas. Be aware of this condition, and report any suspected cases to a forest health

