



# Colorado State Forest Service

## Insect and Disease Quarterly Report

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## Let's Be "Friends" - Social Networking

If you, like over 600 million other people, have been using Facebook to reconnect with old friends, keep in touch with family or network with people who share similar interests then I'd like to introduce you to a few groups you might like to "friend."

One new "friend" could be the Colorado State Forest Service, which maintains a profile on Facebook. On our Facebook page you can find updates on events from all of our district offices; hear about exciting opportunities to volunteer with the CSFS; see photos from events; read press releases on forest management, insects and disease, fire and everything else the CSFS is

involved in. It is also a great place to get to know a few of our "friends."

Our "friends" include:

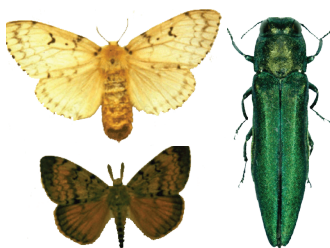
- Colorado Tree Coalition
- National Park Service
- Project Learning Tree
- The Nature Conservancy
- Warner College of Natural Resources (CSU)

We've made lots of "friends" on Facebook and each one of our "friends" might be the source you've been searching for to get the most up to date information on what is happening in Colorado's forests and how you can get engaged.



For example, the Colorado Tree Coalition has recently posted information on the upcoming 12<sup>th</sup> Annual Champion Tree Classic Tour de Poudre. Check out their page for more information.

## Invasive Insect Surveys in Colorado



Gypsy moth (left) and emerald ash borer (right).

Every year the CSFS, in cooperation with the Colorado Department of Agriculture and the USDA Animal and Plant Health Inspection Service (APHIS), conducts surveys for exotic insects.

The two largest known exotic insect threats to Colorado's forests are the gypsy moth (GM) and the emerald ash borer (EAB). If introduced to Colorado these insects could greatly impact the natural and urban/community forests of Colorado.

Early detection of these pests will allow for rapid response from state and federal agencies to determine the area impacted and allow for management and control or eradication. Early detection and

monitoring of insect populations is heavily dependent on trapping. Trapping is conducted throughout the summer and early fall in Colorado. Almost 2,000 traps are deployed with traps in almost every community.

### Gypsy Moth

The GM trap is a bright green delta trap that is often seen hanging from street signs and trees. The GM trap uses a pheromone that mimics the female moth to attract males to the sticky trap. Traps are deployed in late spring and collected in the early fall. These traps have caught GM in Colorado several times; when GM is identified in a trap, an intensive survey is conducted.



Two gypsy moth traps.

### Emerald Ash Borer

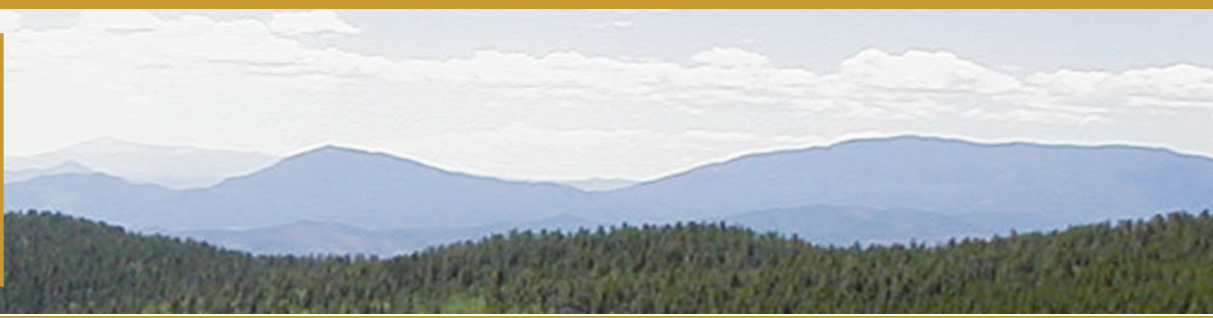
The EAB trap is a large, purple prism trap hung in ash trees. It uses several pheromones to attract EAB to its sticky panels. These traps are checked mid season and lures are refreshed. EAB has not been found in Colorado to date.



EAB trap in an ash tree.

These traps are safe for people, pets and wildlife, and should not be disturbed. For more information on these pests see the February 2010 issue of the Insect and Disease Quarterly.





Cooley spruce gall on spruce.

## Cooley Spruce Gall Adelgid

The Cooley spruce gall adelgid, also known as the Cooley spruce gall aphid, causes the formation of a distinctive gall on the new growth of spruce and Douglas-fir trees. These unsightly galls are 2 to 4 inches in length and once brown are quite sharp, but they seldom have significant impacts on tree health.

This insect is common along the Front Range on Engelmann and blue spruce. The Cooley spruce gall adelgid usually has a two-host life cycle requiring both Douglas-fir and spruce trees, but some populations may be able to exist on spruce alone in the absence of Douglas-fir.

In the two-host life cycle, nymphs overwinter on Douglas-fir needles. In the spring, large egg masses are produced and newly emerging nymphs begin feeding on the current years' foliage. The insects mature in July and form both winged and wingless forms. The wingless forms restart the cycle on Douglas-fir, while the winged forms fly to spruce and start a new cycle.

On spruce trees the distinctive galls are formed in response to feeding. Eggs are laid in the late summer and nymphs overwinter

at the base of needles. At bud break, the nymphs become active and begin to feed. As the gall develops it is soft and green. The developing aphids continue to feed inside the newly formed gall. In mid summer, winged adults move back to Douglas-fir trees and begin the cycle over again.



Early gall development on spruce.

While the Cooley spruce gall adelgid is rarely a significant tree pest, its conspicuous galls make it easy to recognize and the seasonal discoloration of the galls draws attention to the tree. Most people first notice the galls during this brown stage, when they no longer contain insects.

Control of Cooley spruce gall adelgid is generally not warranted. Late spring frosts and winds are highly destructive to overwinter nymphs and cause populations

of Cooley spruce gall adelgid to be highly variable. Individual Douglas-fir and spruce trees show a wide range of susceptibility to the insect.

Chemical treatment must be directed at the overwinter stage. Treatments are best applied prior to the laying of eggs in late April and early May. Effective treatments include carbaryl, permethrin and horticultural oils. Insecticidal soaps work well on Douglas-fir, but have low effectiveness on spruce.

Hand removal of the brown galls may increase the aesthetics of the tree, but will not impact the insect population.



Dried galls on spruce branch tips.



Winter dessication on Austrian pine.

## Austrian Pine Mortality

Recently the question of what is happening in Austrian pine has reemerged. This winter was dry and windy throughout much of Colorado. Initial reports of declining, fading, dying and dead Austrian pine starting a few months ago, might be explained by the dry and windy nature of the winter. In other words - abiotic factors.

I am interested in hearing

about Austrian pine mortality that you are aware of and what you think may have been responsible. You can reach me by email at [sky.stephens@colostate.edu](mailto:sky.stephens@colostate.edu). Please mention the following in your message - location (county), approximate age of trees, number of individuals impacted, type of planting (landscape, windrow, living snow fence), observed pattern of decline (what happened) and timeline (when).

Abiotic factors can include:

- Drought
- Over-watering
- Root binding
- Physical strangulation of roots
- Soil issues (pH, mineral deficiency)
- High winds
- Heavy snow
- Winter dessication



## Things to watch for:

New Brochures!

- Emerald Ash Borer
- Gypsy Moth

CSFS Summer Technicians deploying traps across state!

Aerial Detection Survey gets underway in July.

## Upcoming events and announcements:

### May 2011

25 - Denver Pest Group Meeting, Denver, Colo.

26 - Front Range Urban Forestry Council, Denver, Colo.

### June 2011

13-17 - Fire Ecology Workshop for Educators, Durango, Colo.

26 - Colorado Tree Coalition -12th Annual Champion Tree Bike Classic at New Belgium Brewery, Fort Collins, CO

29 - Front Range Urban Forestry Council, TBD, Colo.

### July 2011

4 - Aerial Detection Survey begins!

27 - Denver Pest Group Meeting, Denver, Colo.

### August 2010

31 - Denver Pest Group Meeting, Denver, Colo.

### **Submissions for I&D Quarterly Report:**

Do you have a FAQ?

Is there something you want to know more about? Submit your event or announcement, ask a question or suggest an insect, disease or product to feature: [sky.stephens@colostate.edu](mailto:sky.stephens@colostate.edu).

Deadline for submissions is July 15, 2011.



Miss an event? Look for updates on activities or contact a participant for an overview.

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