Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel

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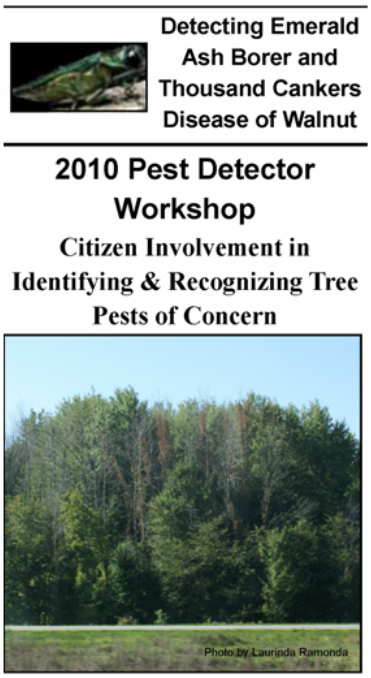
2010 Pest Detector Training



For more information about this workshop, dates and locations, and registration information, please follow this link:

http://www.kansasforests.org/calendar/index.shtml

Mysterious Holes in my Lawn!

This spring the Insect Diagnostic lab has received several phone calls regarding homeowners who are finding numerous small holes in their yards, sometimes accompanied by dying grass. The following is an example shared with me from a golf course in Hutchinson, KS. The complaint was that the Bermudagrass was dying and that there were numerous holes in the same area, which were thought to be related (photos 1 and 2).

Spring dead spots (SDS)

Mystery mounds in dying areas

Upon closer investigation, it was determined that the dead spots in the grass were the result of a disease called spring dead spot (SDS). So what was the cause of the mounds and holes? In most cases, it is not possible to simply peak down the hole and see what is there. So, a “flushing solution” was placed in one of the holes to force the inhabitant out (see recipe below). Soon, a wet, soapy camel cricket emerged. It appears that the camel crickets, not typically associated with turf had simply moved in and exploited the "easy digging" bare spots created by SDS.

Flushing solution poured into hole

A wet, soapy camel cricket emerges

The moral of the story is that, while the answer may not always be simple or straight forward, a little investigation may explain a lot. Here are some arthropod (and other) culprits to consider.

Earthworms – If the soil in the yard has a significant population of earthworms, there may be piles of small, granular pellets of soil. If these piles are pushed aside, there is other no hole in the top. This is most common in spring and fall when soil is moist and earthworms are active.

Ground bees and Cicada killers – There are several species of ground bees that will create cylindrical tunnels in lawns, creating egg chambers. The holes are typically about ½ inch wide. Cicada killers may produce a hole that is up to 1 inch in diameter. Both of these insects may leave mounds of dirt near the entrance of holes and prefer looser, sandy soil with sparse vegetation.

Crayfish – These are only found in areas with consistently wet soil. They create 2-4 inch high piles of mud balls surrounding 1 inch wide holes.

Emerging insects – Many insects, such as June beetles and cicadas, overwinter in the soil in immature life stages. As temperatures begin to warm, they will complete development and emerge as adults. They may leave holes in lawns of various sizes and may be accompanied by small mounds of dirt pushed off to one side.

So how do you determine what is in the holes? Bob Bauernfeind, Extension Specialist, recommends a flushing solution**. Mix 1 Tablespoon of Lemon Joy into 1 gallon of water** and pour it down one or several "mystery holes" and watch to see what comes up. When the holes are created by emerging insects, there will be no insects, but it is possible that a cast skin may float up to give some clue to what was there. It is important to stress that large sections of dying or yellow yard may be the result of a disease rather than the resident of the holes in your yard.

Holly Davis

Alfalfa Weevil Update

Alfalfa weevil infestations continue to cause concern in southwest, south central and north central Kansas. Insecticide treatments do not seem to be as effective as in past years. However, overall, this is the largest population of weevils that I have seen. It is common to average 2-4 larvae/stem, and has been at that level since about 7 April. The majority of the larvae collected from central and south central Kansas however, should be pupating in 7-10 days if the predicted temperatures come about (50-75°F for nighttime and daytime averages). A sample of larvae on 20 April from central Kansas indicated 54% 3rd instars; 23% 2nd instars; and 23% 1st instars (see photo).

If you have already treated once or twice but are still not satisfied with the control, it may be best, if you're within 10 days of harvesting, to just go ahead and cut a little early instead of retreating. If you do treat with an insecticide always pay attention to the preharvest interval (PHI) on the label. If you did treat but there are still a considerable number of larvae feeding in the field, you may want to pay close attention under the windrows after it is swathed. There may be more adults in the fields than in past years and they will feed in new growth until it gets warm enough to drive them from the alfalfa to their over-summering sites.

Jeff Whitworth *Holly Davis*

"Busy Beavers" Moving right along ---- Eastern Tent Caterpillars

When last visited 3 weeks ago (Issue #2 of the 2010 Kansas Insect Newsletter), eastern tent caterpillars had just hatched. Since then, have been emulating beavers which have the reputation of being continuously active and always on the move. The following sequence brings you up-to-date on ETC activities.

We already saw that (upon hatching) the gregarious larvae constructed a tent to provide a protective sanctuary (Figure 1).

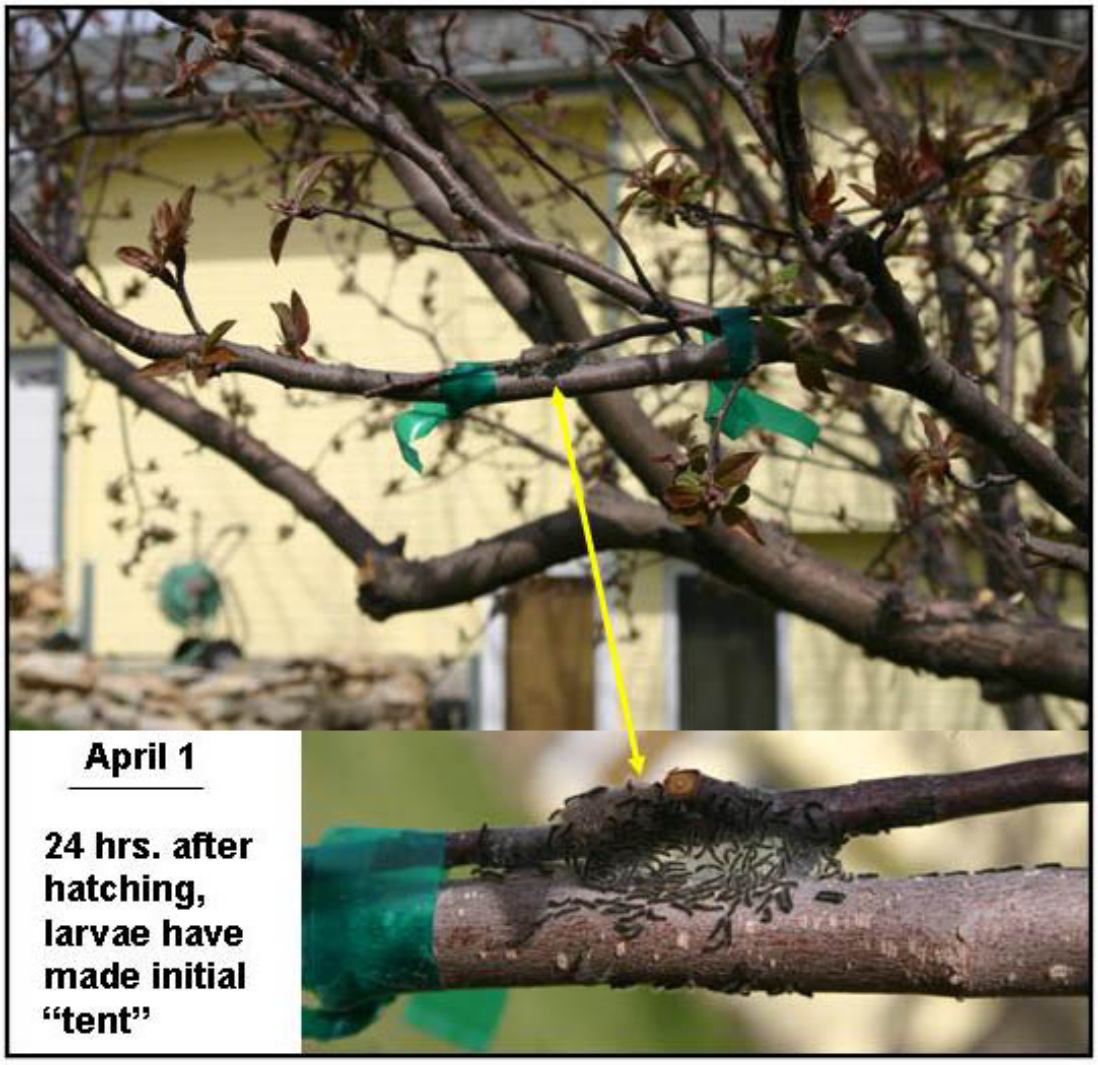


Figure 1

But apparently they were not satisfied with their effort and quickly abandoned their initial tent by moving their base of operations to an adjacent branch crotch (Figures 2 and 3).

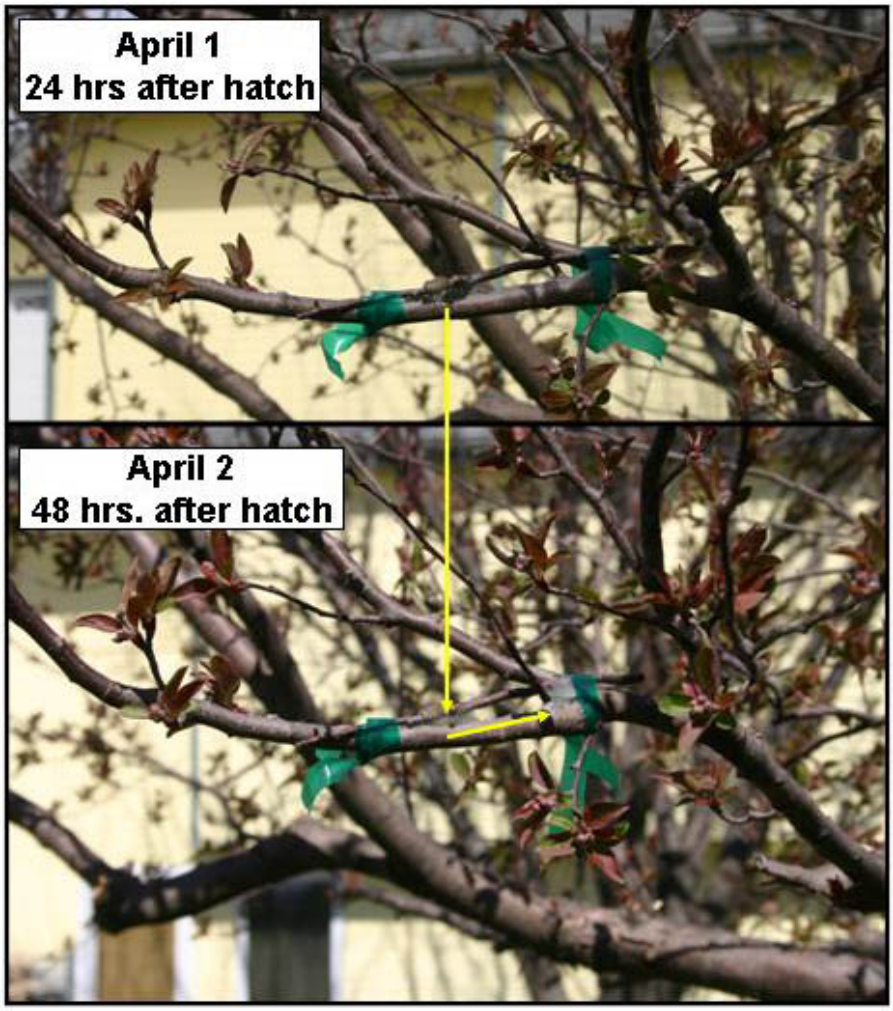


Figure 2

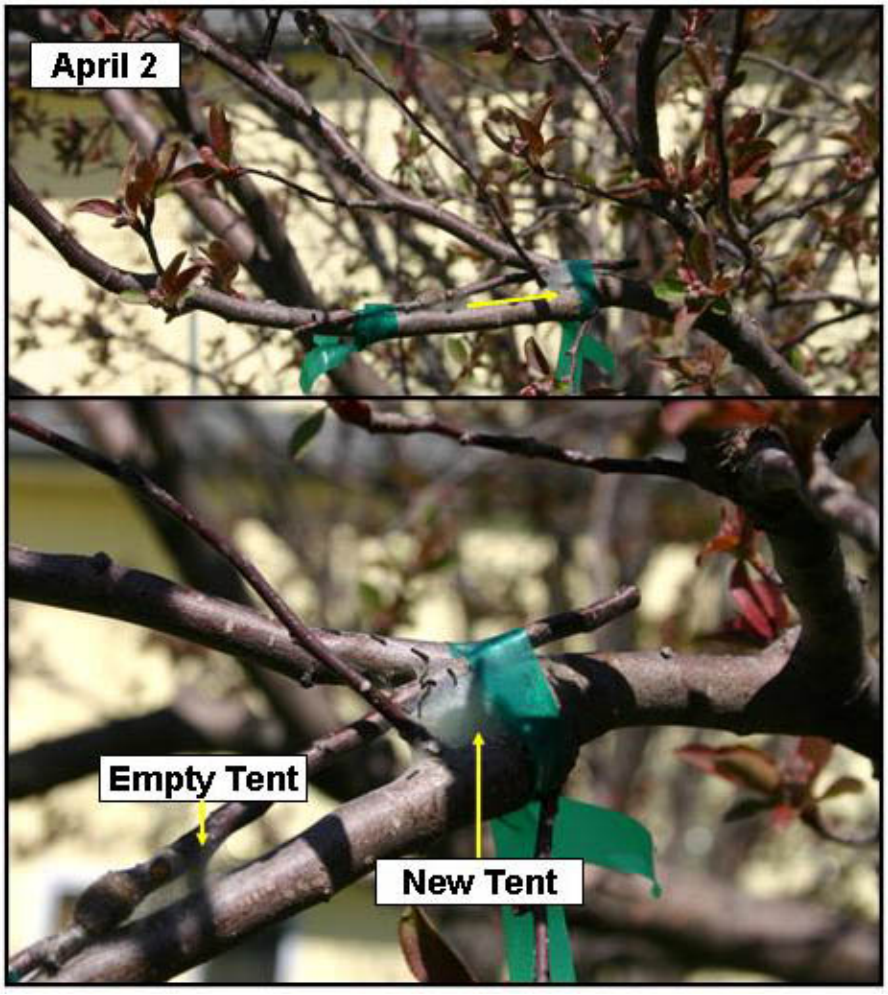


Figure 3

Now content, larvae settled into their new home site, and in a week's time, have expanded the web mass to accommodate their ever-increasing size (Figure 4). Larvae leave the tent to forage primarily at night, and return home where they congregate inside the tent.

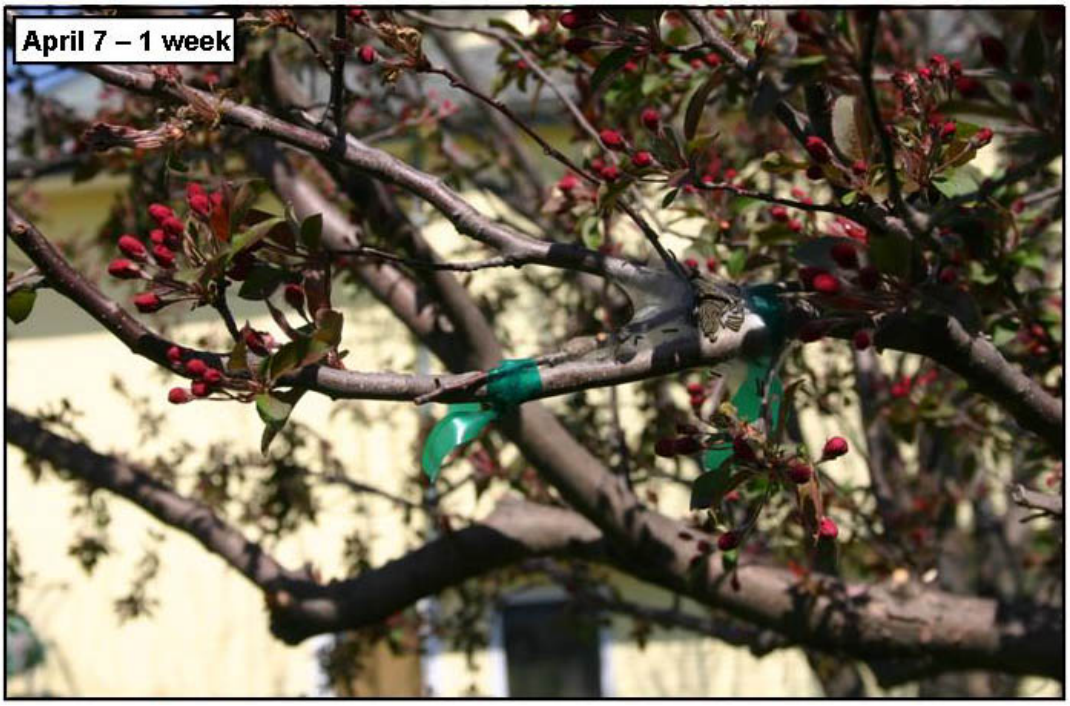


Figure 4

At two weeks, the web mass again has been greatly expanded and has enclosed/included the original hatching site and crotch area (Figure 5).

Figure 5

And most recently, Wednesday, April 21, there has been a most noticeable increase in the size of the tent (Figure 6).

Figure 6

Already 3 weeks into their development, larvae are dramatically larger. They can be seen resting within their tent or basking in the sun (Figure 7).

Figure 7

Due to the increased visibility of web masses, at this time, people should know whether or not they have ETC activity on their flowering crabs. There are two options to pursue. The first is to eliminate ETC. An insecticide treatment would work. Or if within reach (take care if using a ladder), simply use your fingers to "rake out" the web (do this during the daytime as larvae should be in the tent and therefore removed along with the web). People may choose to prune out an infestation --- this could be viewed as an extreme reaction, but is an individual's choice to make.

The second option is to **simply allow ETC to run their course.** They should complete their feeding cycle within 2 weeks after which they will leave the tree as they seek out a nook/cranny/site where they will construct a cocoon inside of which they will pupate. As for the tree itself, a flush of new foliage will replace that which has been lost. With a trees appearance restored, one will soon forget that they were visited by ETC.

"They're Ba-a-ack!" Poltergists? No. ––– European Pine Sawflies? Yes!

Most film buffs are familiar with the Tag-line uttered by Carol Anne in the 1982 movie Poltergeist: "They're he-e-ere", as she alerts her family to the paranormal spirits in their home. In the 1986 sequel, "Poltergeist II: The Other Side, and in a new house, Carol Anne announces to her family, "They're ba-a-ack".

After an absence of 1 year, I announce, "They're ba-a-ack", in reference to European pine sawflies (EPS). From 2002 to 2009, I have been able to report the years' beginnings of EPS egg hatch by monitoring eggs on a particular Mugo pine which was never treated for EPS. The spring time appearance of that Mugo was always "thin" because the only needles present were those from the previous years' growth which remained intact because EPS finish their feeding cycle before the initiation of a current years' needle production. Note the typical "bare branch" exposure (Figure 8).

Figure 8

In 2009, EPS hatched on March 19. But for some unknown reason after that initial emergence, no additional egg hatch occurred. And the original hatchlings disappeared. In essence, this was of benefit to the Mugo because the 2008 needles were retained, and the 2009 needles filled in/eliminated the bare-branch exposure --- thus the restoration of the Mugo's current "full appearance" (Figure 9).

Figure 9

Although (in late February) I did inspect the Mugo for EPS eggs, I found none. Of course I did not/could not inspect each and every terminal/needle, and so I just chalked it up that I would not be able to-report-on/pass-along the timing of EPS egg hatch and larval development ----- until, recently when I chanced to pass by the Mugo. I did a double take at what I saw (Figure 10). **Hence my tag-line, "They're ba-a-ack".**

Figure 10

The straw-colored needles were very apparent when contrasted against the dark green Background (Figure 11).

Figure 11

This type of needle damage is typical of small/young pine sawfly larvae which nibble on the succulent portions of needles (Figure 12) while ignoring the "tough" needle midribs which lose color and curl and twist as a result of desiccation

Figure 12

Traditionally, first emergence of EPS lags behind that for eastern tent caterpillar (12, 6, 5, 1, 0, 7 and 19, for 2002 – 2008, respectively). In 2009, EPS were 4 days ahead of ETC. From previous years' observations, these current EPS larvae are 1-1½ weeks old, meaning an approximate hatching date of April 7th ----- in line with

this year's ETC egg hatch of March 31. All of these comparisons (maybe) are of more interest from an entomological viewpoint. The key point is that for concerned homeowners and landscape/horticultural service personnel, detection of EPS can be accomplished via simple cursory inspections for damaged straw-colored needle clusters. EPS are best controlled before they attain sufficient size at which time they will rapidly devour substantial amount of needles resulting in unsightly plantings (Figure 13).

Figure 13

While it is an exaggeration to say that you can kill EPS larvae with a loud

BOO!, they are easily eliminated with any insecticide registered for their control. This includes a multitude of "synthetically derived" products or several "organically acceptable" alternatives.

Right On Schedule ---- Ash/Lilac Borer (ALB)

The rule-of-thumb "calendar date" for the initial appearance of ALB is mid- to late April. As determined by pheromone trap catches (Figure 14),

Figure 14

the goal posts are wide, with April 13 to April 24 representing the end posts, and April 18-19 being "right-down-the-center".

Past recorded dates are April 19, 15, 20, 23, 13, 24 and 18 for 1994, 1995, 2003, 2004, 2006, 2007 and 2009, respectively. For 2010, the first ALB was captured Thursday, April 15, none over the next 4 days, 5 on Tuesday, April 20 and 1 April 21.

For individuals with concerns about ALB, now is the time to apply a protective insecticide treatment to the trunk and larger branches of ash trees. While lilac and privet also are attacked by ALB, there seems to be little concern for treating these hosts. In fact, some people regard ALB as beneficial ----- larger dead shrub branches (killed by ALB larvae) are simply pruned out and discarded as a normal thinning practice.

Bob Bauernfeind

Report from the Kansas State University Insect Diagnostic Laboratory:

The following samples were submitted to the Insect Diagnostician Laboratory from April 16th to April 22nd.

April 16 2010 – Grant County – Drain flies in basement
April 16 2010 – Leavenworth County – Abiotic debris in garage
April 19 2010 - Grant County – Carabid beetle larva in yard
April 19 2010 – Johnson County – Gall midge maggots on sidewalk
April 19 2010 – Smith County – Larder beetle in home
April 20 2010 – Riley County – Cobweb spider, Lone star tick
April 20 2010 – Leavenworth County – Gall midge maggots on car/sidewalk
April 21 2010 – Riley County – Common green darner – dragonfly
April 22 2010 – Bourbon County – Imported currant worm on gooseberry

If there are any questions regarding these samples or about the identification of any arthropod please contact the Insect Diagnostician at (785) 532-4739 or GotBugs@ksu.edu.

Holly Davis

Sincerely,

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