

Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel



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April 15, 2011 No. 2

Termite Swarms Have Begun

Termites have begun swarming in central Kansas. The presence of swarmers may indicate that there is an existing termite problem in or around a home, but the swarmers themselves are not destructive and are not going to be successful at starting a new colony in a home. Unless the females land on moist soil, they will die within a short time. Once the termites have mated they will shed their wings and homeowners may find wingless swarmers or wings lying around in window seals (see photos). These insects and wings can be removed by vacuuming them up and placing the vacuum bag in an outdoor trash can. If termite swarmers are found, the home should be inspected for other signs of termites. Common symptoms of termite infestations include tube shelters built between the soil and wooden structures and the presence of mud-filled joints in wood framing, paneling, and trim in finished areas of a structure. In many cases, wood damaged by termites goes undetected. If termite damage is suspected, probe wood near a foundation with an ice pick or similar tool. If the wood is soft and easily punctured, termites should be suspected. Termite infestations are best treated and controlled by a professional pest control operator.



For more information on termites please visit:

<http://www.ksre.ksu.edu/library/entml2/MF722.PDF>

Jeff Whitworth

Holly Davis

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Alfalfa Weevil

Weevil activity has increased dramatically in central Kansas. Two fields sampled on April 6 had only a 10 to 20% infestation. The same two fields were re-sampled on April 13th and both had 100% infestations with 2.8 to 3.0 larvae/stem. Feeding damage is also becoming readily apparent (see photo). Sampling of larval populations indicated 35% 1st instar; 35% 2nd instar; and 30% 3rd instar (see photo). This means you can probably expect at least 2 more weeks of feeding, especially with the warm/cool Kansas spring weather. Periods of cooler weather, below 50°F, slows their development



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Wheat

Sampled wheat in central Kansas on April 13th. Found total of 3 bird cherry-oat aphids and no flaxseed (Hessian fly pupae). Thus, aphids should not yet be a problem in central Kansas wheat fields. Hessian fly adults however, have been active during the past week.

Jeff Whitworth

Holly Davis

Pines X 2

1. Pine Wilt Disease (PWD). We always recommend that trees which succumbed to pine wilt disease the previous fall and during that winter be destroyed to kill the overwintering pine sawyer beetle pupae. This can be accomplished by chipping or burning, whichever is more convenient. We recommend this be done by April 1 of the new calendar year to ensure that that chore is completed well in advance of when beetle emergence begins in mid-May. The early “destruction date” is encouraged because as weather moderates in the spring, the intact diseased trees are relegated to the back burner as other chores rise to the top of the Spring “to-do” list. By the time that the “pine chore” is eventually undertaken, beetle emergences may be in full swing and thus the pinewood nematode transmission/pine wilt disease cycle has already been perpetuated. Granted that we already are past April 1, adequate time remains to accomplish the disposal of diseased trees and the destruction of pine sawyer pupae before their transition into and emergence as beetles

Because pine wilt disease is profusely widespread in the eastern Kansas, people in this portion of the state may ask, “What’s the point of the timely removal and destruction of diseased trees given the already established prevalence of the disease?” The response is that while possibly it is an inevitability that a tree will eventually succumb to PWD, sanitation practices, the removal and timely destruction of beetle “brood trees” may stave off the rate/spread of PWD in certain settings. Failure to “take action” may result in total loss of all trees.

The following sequence illustrates this point. Compare and contrast the differences in a tree line over a period of 9 years (Figure 1). It is obvious that the trees put on substantial growth (height and breadth). But by 2009, “sick” trees have made their appearance (black arrows). Had those trees been removed, it is possible that PWD could have been arrested.

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Figure 1

However, it is evident that those trees were ignored, and thus they completely went dead (Figure 2 – 2010). And they likely were the reservoir for beetles responsible for the new instances of PWD (red arrows). Most startling was the rapid spread of PWD and the dramatic demise of additional trees in less than a year's time (January 25, 2011).

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Figure 2

This, again, reinforces the necessity of a diligent sanitation program: removal of diseased trees and their timely destruction.

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This becomes especially important in western Kansas where PWD has not established its foothold. That is, with Community Awareness Programs and an alerted citizenry, diseased trees can be identified, reported, marked and removed, and then destroyed as they are encountered, thus reducing the threat of further escalation Pine Wilt Disease in western Kansas.

Just a FYI regarding vectors of the pinewood nematode: even in this article, I began by citing pine sawyer beetles as the culprits. However, in previous recoveries of beetles from individually confined trees which succumbed to PWD, I have collected other species; and in instances, those being collected in the absence of pine sawyer beetles. The other beetles included two longhorned beetle species (akin to pine sawyers) and a weevil (Figure 3).

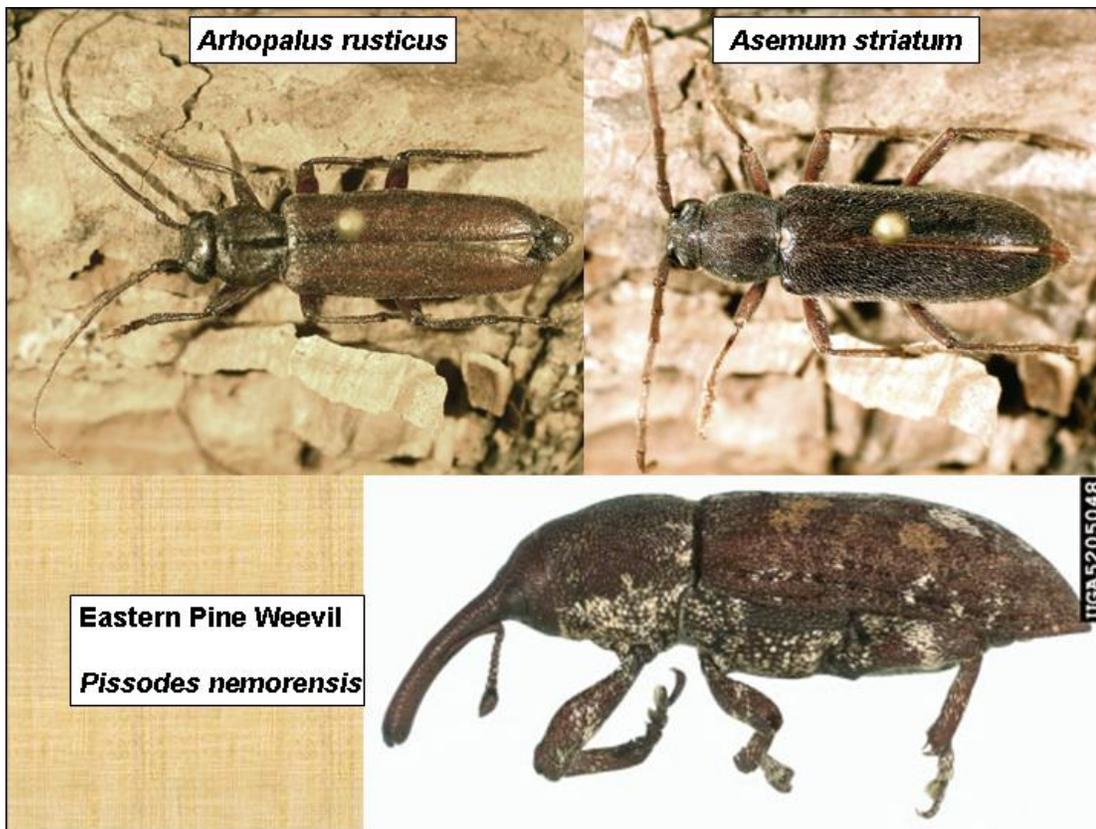


Figure 3

While pinewood nematode recovery has been documented from each of these species, the average number of nematodes per beetle were nowhere near the enormous average numbers associated with pine sawyer beetles. Nor were the number of recovered longhorned “relatives” near the total number of pine sawyer beetles in the recovery cages. This is just to clarify/justify the statement that: “Pine sawyer beetles are the **primary vector/species** associated with Pine Wilt Disease”.

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2. Nantucket Pine Tip Moth (NPTM). Another situation (of “ignoring an insect pest” associated with pine trees) can result in tree decline. In this instance, however, it is a slower acting consequence. Whereas once a pine tree becomes inoculated with the aforementioned pinewood nematode resulting in the eventual “internal plumbing = vascular system” becoming damaged and clogged resulting in the rapid demise of the tree, the larvae of the small NPTM feed in the shoots/tips of branches. This feeding damage disrupts the normal production of current-season needles. If ignored year after year, repeated prevention of new growth results in individual branch die-back which contributes to unthrifty, unsightly trees which may ultimately be scheduled for removal.

Nantucket pine tip moths overwinter as pupae in terminal buds or under the bark near the tips of infested shoots. Historically, the emergence of 1st generation moths begins in early April. The moths must have read the books, because this year (as well as last year), NPTM activities (as recorded in the Manhattan area) began (coincidentally) as determined by pheromone trapping. By mid-April, flights will peak (Figure 4 – top left image), with that first generation flight being completed by month’s end



Figure 4

Eggs are less than 1-mm in size, yellow in color and mostly deposited at the base of existing needles near the newly-forming pine shoots (Figure 5).

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Figure 5

Under favorable temperatures, larvae emerge from eggs a week later. They construct a silken web at the base of needles. Feeding on needles causes needle death (Figure 6).



Figure 6

Larvae eventually enter newly-developing shoots. If left unchecked, continued attacks on shoots results in their destruction and the eventual death of entire branches (Figure 7).

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Figure 7

With their overall appearance greatly diminished, tree removal becomes the option (Figure 8 – white arrows).

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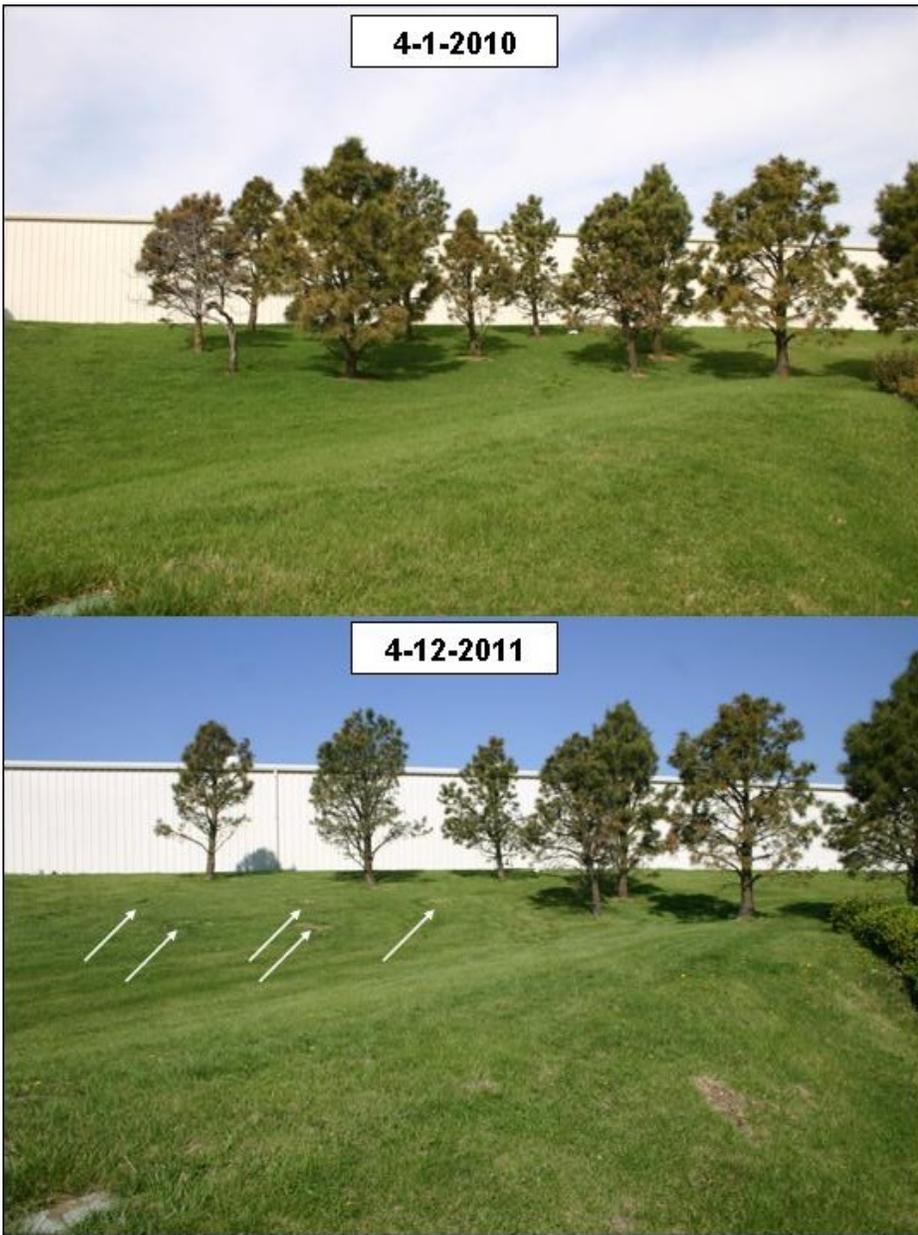


Figure 8

Who should be concerned with NPTM? Nursery personnel and Christmas tree producers who have Zero tolerance for NPTM damage ---- their livelihood is dependent on top quality “stock”. Landscape maintenance personnel need to be observant in order to deliver “good service” to their clientele. Groundskeepers for municipal parks industrial parks or other businesses/buildings with landscape plantings need to be alert in order to maintain high quality aesthetically pleasing surroundings. For the average homeowner it is a matter of wait-and-see-if they appear. It may be that Nantucket pine tip moths are something they may never experience.

Bob Bauernfeind

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Report from the Kansas State University Insect Diagnostic Laboratory:

The following samples were submitted to the Insect Diagnostic Laboratory from April 9th to April 15th.

April 11 2011 – Cheyenne County – Indianmeal moth in home
April 11 2011 – Ellis County – Pyralid caterpillars inside cedar apple rust galls
April 11 2011 – Douglas County – Bed bug in building
April 12 2011 – Sherman County – Leafroller damage to crabapple tree

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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