

# Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel



Department of Entomology  
123 West Waters Hall  
K-State Research and Extension  
Manhattan, Kansas 66506  
785-532-5891  
<http://www.entomology.ksu.edu/extension>

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## Time to Sample Grain Sorghum for Caterpillars

Central Kansas currently has substantial 2<sup>nd</sup> - 3<sup>rd</sup> generation corn earworm populations maturing in whorl and boot stage sorghum. These will not create economic losses, but when adult moths emerge, they pose a risk to maturing seed heads. One or two larvae of corn earworm (Fig. 1) or fall armyworm (Fig. 2) per head can cause 5-10% yield losses.



Fig. 1



Fig. 2

Both of these pests are migratory and thus the extent of their damage is quite unpredictable from year to year. If action is taken to preserve yield, it is essential to detect larvae when they are still small (most less than one inch long). Larger larvae are much harder to kill and there is little point in spraying them because they will soon stop feeding. On the other hand, there is much to be gained from treating small larvae as almost 60% of food is consumed in the final instar.

Milo heads are susceptible up to the milk stage. Sample a sorghum field by picking a series of 5-10 heads and beating them against the sides of a plastic bucket or white ice cream container. Count the larvae falling into the bucket and repeat this procedure in at least 5 different places in the field. The threshold for treatment is an average of 1 or 2 larvae per head, depending on projected yield and price of the crop. A number of materials are registered for use against 'worms' in sorghum heads. Refer to the latest version of the Sorghum Insect Management Guide for suitable materials and application information:

<http://www.oznet.ksu.edu/library/entml2/MF742.PDF>

*J.P. Michaud*

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## Soybean Aphids and Corn Earworms

A few colonies of soybean aphids have been detected in central Kansas in the last week. Late planted beans may still be at slight risk but lady beetles and parasitic wasps seem to be relatively abundant.

Mature corn earworm larvae were common. These will be pupating soon, then emerging as moths and begin laying eggs. This will probably occur over the next two weeks, thus sorghum heads and late maturing beans should be monitored to detect the infestation while the worms are still small and thus damage is kept to a minimum.

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## Grasshoppers

There are still significant populations of grasshoppers in grassy areas and weedy areas. If wheat or alfalfa is to be planted in fields adjacent to grasshopper-infested areas it would be a good idea spray these border areas before planting as these new, succulent seedlings will attract considerable interest from these hungry grasshoppers.



Jeff Whitworth

Holly Davis

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## Then (2008) and Now (2009) ..... Nantucket Pine Tip Moth (NPTM)

In the August 15, **2008**, Kansas Insect Newsletter #19, I presented an instance where an insect pest made its “surprise” appearance: Nantucket pine tip moth larvae had a field day on a Mugo pine. To add insult to injury, the rascals picked on an entomologist: ME!

IT WAS MY MUGO! Should I (as an entomologist) have been savvy enough to have prevented this from occurring? As is too often the case, the answer is, “Well yes, and no”.

“Yes”, in that I certainly was aware of the pest status of the NPTM. And yes, I knew that there were commercially available pheromone lures with which to monitor moth activities. But, “No”. Why should I have been concerned with this pest? For over 15 years (from May of 1993 when the Mugos were planted until mid-July of 2008), there was never anything to indicate that these pests were creeping up on me.

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As I said in KIN #19, there was little to be done at the time that the damage became evident. **BUT THAT I COULD TAKE PREVENTATIVE MEASURES TO COMBAT NPTM!**

I knew that the 2008 damage was attributable to the second generation of NPTM larvae. Thus I set out a sticky trap with a NPTM pheromone lure to determine the appearance of moths to deposit third generation eggs. Knowing when the moths were active, I could apply a timely insecticide treatment to combat (=’s kill) the larvae before they bored into shoot tips. **NOT A SINGLE MOTH APPEARED!!! (Apparently they did not read the book regarding their seasonal pattern).** But this did not mean that I would think, “All must be well”.

Rather than again being caught unaware, and knowing that NPTM now had an established presence at this site, another NPTM pheromone-baited sticky trap was placed adjacent to the Mugo on March 1 (Figure 1) to detect the onset of the 2009 season.



Figure 1

As reported in KIN #6 (April 24,2009) the first overwintered NPTM was captured during a warm spell on March 19. With cooler weather to follow, there was no further activity until April 17 and April 18 when 8 and 5 moths

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(respectively) were captured. On April 18, a permethrin insecticide was applied to the Mugo-in-question, as well as to an unaffected Mugo 20 feet away. A second moth flight began June 11, and a bifenthrin product was applied. A third flight was not recorded, either because the previous treatments nipped them in-the-bud (so to speak) or, it never occurred (in previous years of trapping, at least in the Manhattan area, I have never recorded a third generation flight).

The upshot of this is that a year and a week later, the “horrible” appearance 2008 Mugo (Figure 2) has been restored (Figure 3).



Figure 2

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Figure 3

So where does that leave me regarding 2010? While I would think that my “local” population has been checked, I will again set out a NPTM pheromone trap – but more for curiosities sake than the expectation that they will be present. And then there will come a point in time where I simply will “do nothing”. Who knows, it might be 2025 (another 15 years) before NPTM decide to pick on my Mugos.

## The sounds of Summer ---- “Annual” cicadas

Kansas is relatively rich when it comes to diversity of cicadas – 17 species is the considered to be found in Kansas. Some are seldom encountered due to their small size or small populations. But several species are LOUD and numerous. And typically they are referred to as dog-day cicadas.

The “annual” in their common name is misleading. Annual implies a yearly developmental cycle. While it has not been worked out, the “cicada entomologists” state the developmental cycles to range from at 2-5 years. Because there are overlapping generations, some appear every year thus giving a “false impression” a the 1-year developmental cycle.

Dog-day cicadas is an umbrella term for a number of cicadas in the taxonomic genus *Tibicen*. While the term “dog days” was used by the ancient Greeks and Romans, and spanned 30-days (July 24 – August 24, named after the “Dog Star” Sirius) based on the appearance of the “Dog star Sirius), the Old Farmers Almanac refers to a 40-

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day period as the “dog days of summer” (July 3 – August 11). Of course, we know that the yearly appearance of some *Tibicen* species begins in early June and other species are “calling” into early November.

“Calling” ----- the “buzz” which catches a person’s attention. Male cicadas produce species-distinct sounds by vibrating a pair of tympanyl membranes housed within their abdomen. With little difficulty, people can discern which species is “singing”.

Three of the current species are (more-or-less) tree dwellers. *Tibicen pruinosus* (Figure 4) calling typically picks up and intensifies towards sunset, sounding a somewhat repetitive “zow-wie zow-wie zow-wie.....”, sometimes with interruptions.

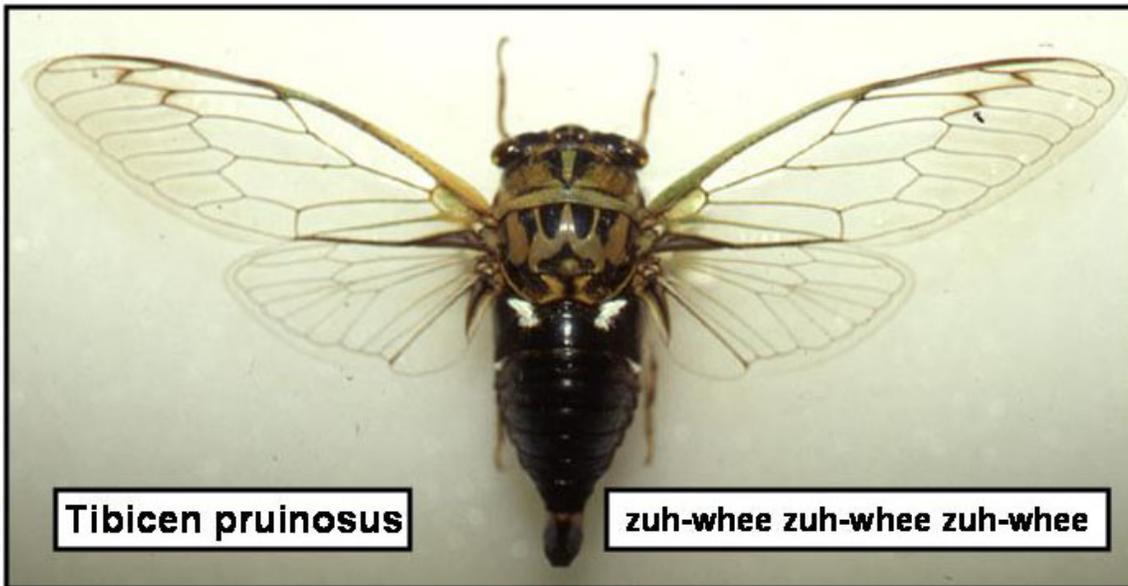


Figure 4

Both *T. delbatusi* (Figure 5) and *T. walkeri* (Figure 6) may begin calling in the morning and continue throughout the day and evening. Both produce a distinct, uninterrupted, rapid and repetitive “zwick zwick zwick zwick zwick.....”. The two can be visually separated by the abundance of white abdominal pruinoses on *T. delbatus*.

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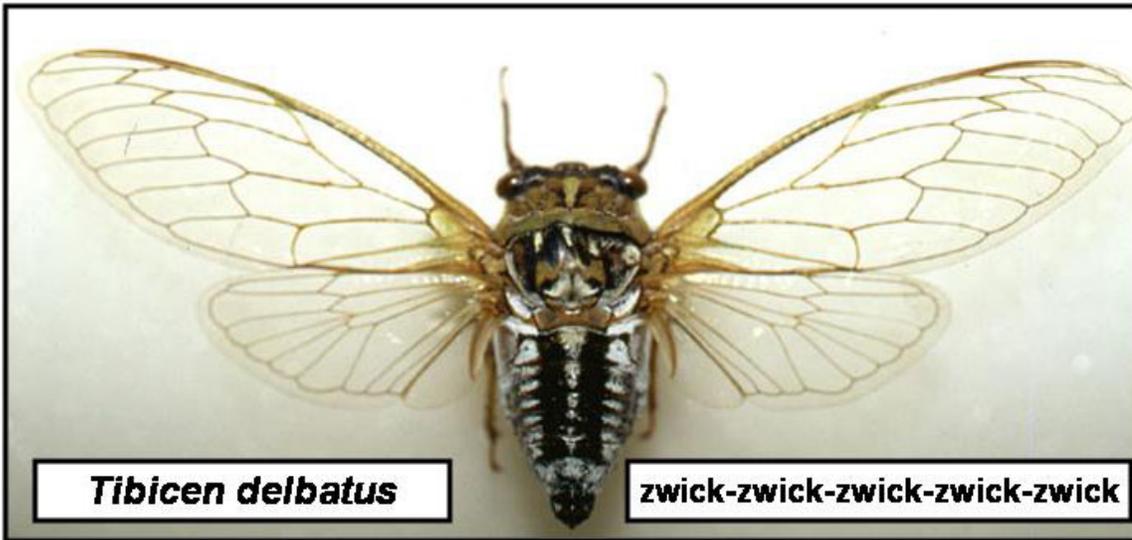


Figure 5

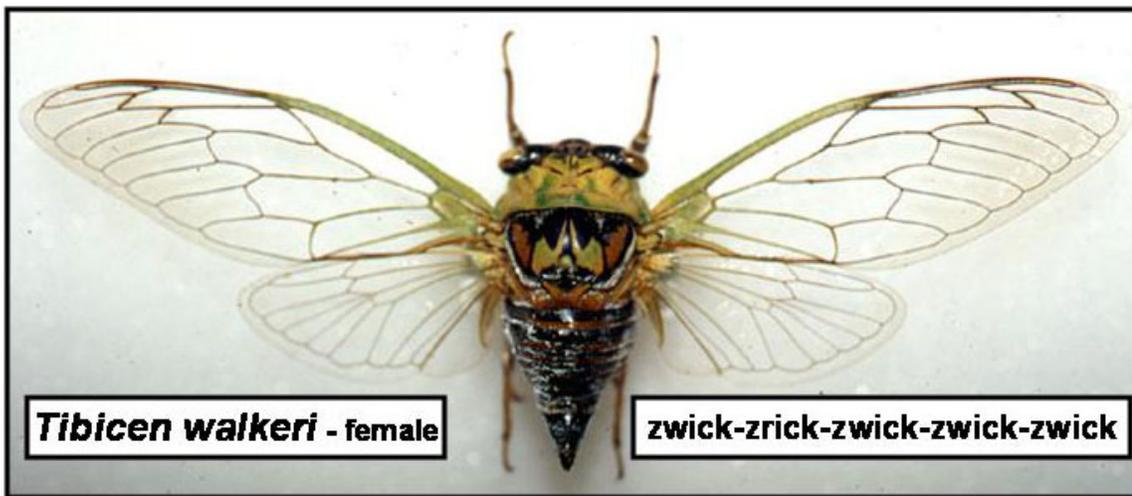


Figure 6

Two species are more commonly associated with grasslands and shrubby areas. *Tibicen dorsata* (Figure 7) is the most robust/largest and loudest of the current mix. Their “buzz” is almost akin to a throaty raspy rattle. *T. dorsata* are considered to be quite wild --- they sense your presence and take flight as you approach.

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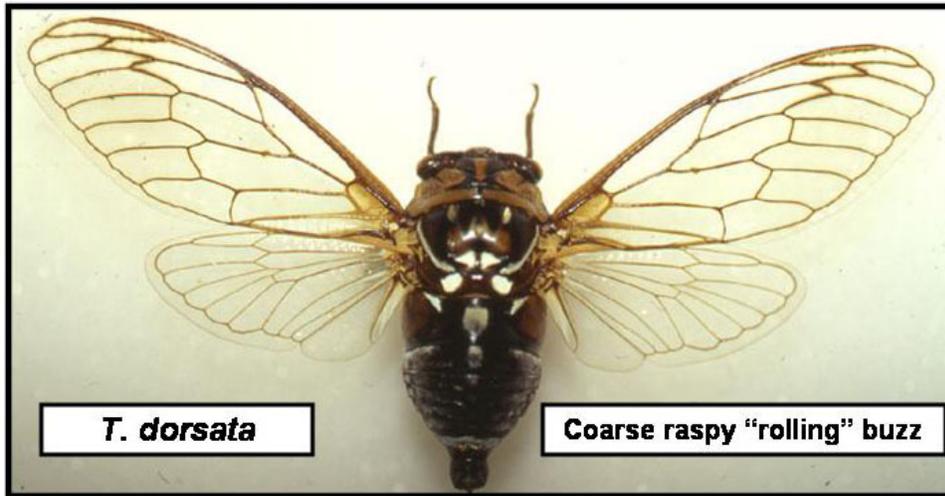


Figure 7

This is in contrast to *T. aurifera* (Figure 8) that can be hand-captured. Whereas the aforementioned cicadas approach 2-inches in length, *T. aurifera* are the smallest of the dog-day cicadas, only reaching 1<sup>1/4</sup> inches in length. Their call is a very piercing/searing unwavering "zzzzzzz" which begins somewhat quietly, gradually escalates and then fades. They actively call throughout the heat of the day but cease after sunset. Of interest is their two color forms: green is by far the most common while red forms are less common ---- both may be found sitting side-by-side.

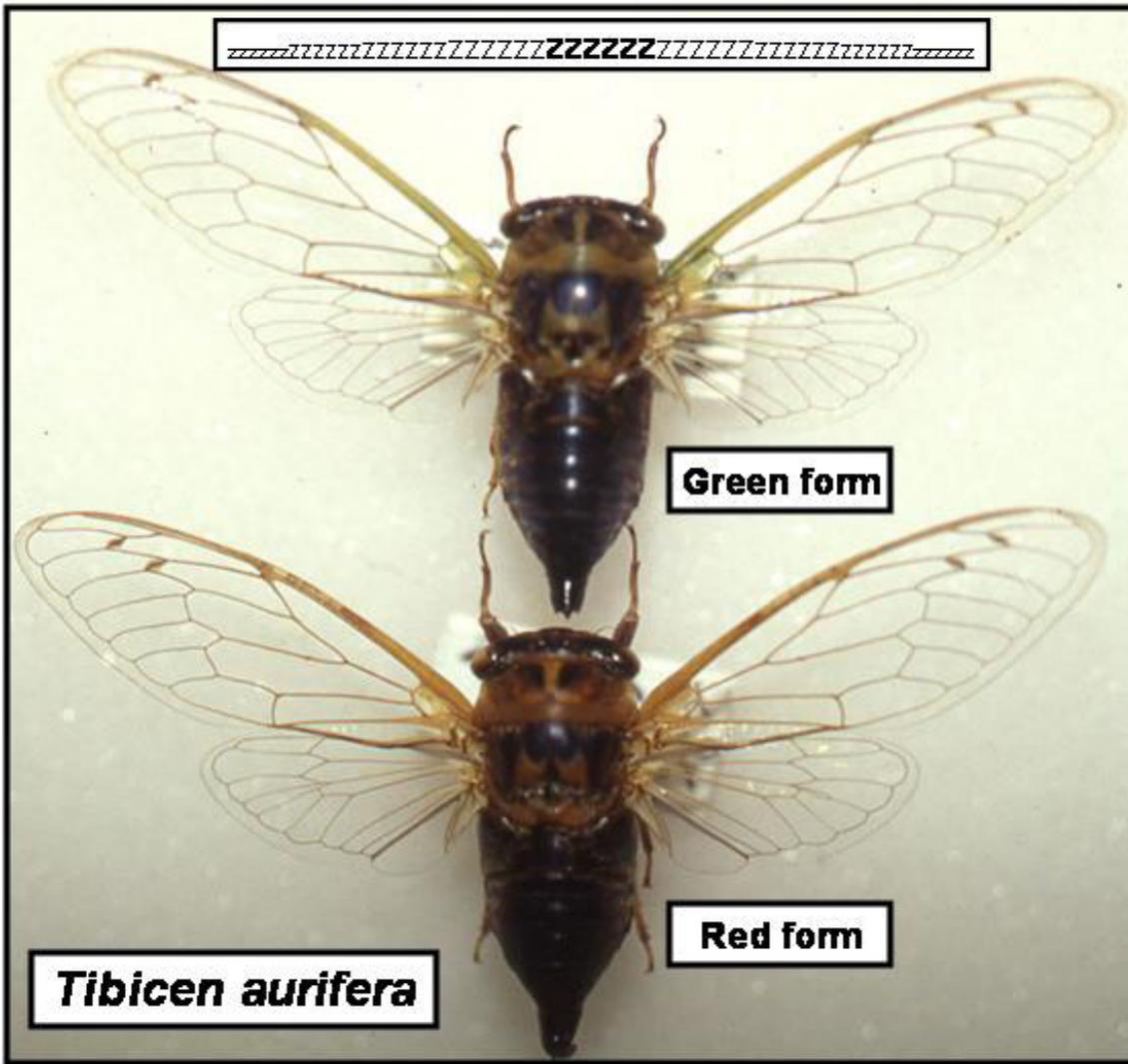


Figure 8

Enjoy the “music” of the cicadas. They are a part of summer.

*Bob Bauernfeind*

## Report from the Kansas State University Insect Diagnostic Laboratory:

The following samples were submitted to the Insect Diagnostician Laboratory from August 14<sup>th</sup> to August 27<sup>th</sup>.

August 17 2009 Haskell County – Cottonwood borer

August 18 2009 Jefferson County – Robber fly around building

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August 19 2009 Haskell County – Megarhyssa wasp (long-tailed Ichneumonid)  
August 19 2009 Nemaha County – Mayflies in yard  
August 19 2009 Nemaha County – Pseudoscorpion in home  
August 19 2009 Washington County – Stored product beetle in home  
August 19 2009 Riley County – Whitelined sphinx caterpillars in home garden  
August 20 2009 Osage County – Barklice (Psocidae) found in home  
August 24 2009 Lincoln County – Engorged female brown dog tick on human  
August 24 2009 Jefferson County – German cockroach nymph in commercial building  
August 25 2009 Sedgwick County – Pennsylvania ground beetle around barn and hay  
August 25 2009 McPherson County – Oak lace bug eggs and cynipid galls in oak tree  
August 27 2009 Chase County – Cynipid gall wasps galls on bur oak

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](mailto:GotBugs@ksu.edu).

*Holly Davis*

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**Sincerely,**

Robert J. Bauernfeind  
Extension Specialist  
Horticultural Entomology  
phone: 785/532-4752  
e-mail: [rbauernf@ksu.edu](mailto:rbauernf@ksu.edu)

J. P. Michaud  
Integrated Pest Management - Entomology  
Agricultural Research Center - Hays, KS  
Phone: (785) 625-3425  
e-mail: [jpmi@ksu.edu](mailto:jpmi@ksu.edu)

Holly Davis  
Insect Diagnostician  
Phone: (785) 532-4739  
e-mail: [holly3@ksu.edu](mailto:holly3@ksu.edu)

Jeff Whitworth  
Extension Specialist  
Field Crops  
phone: 785/532-5656  
e-mail: [jwhitwor@ksu.edu](mailto:jwhitwor@ksu.edu)



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