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Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants, and Extension Personnel

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Periodical Cicadas - Where Are They?:

Some Kansans have been watching news releases on national television, hearing stories on national radio, reading articles in major magazines and/or reading national news releases printed in local/regional newspapers describing the on-going emergence of periodical cicadas and the inescapable noise associated with their presence. The silence (in Kansas) as caused people to ask, "When will we see the periodical cicadas in Kansas?" The answer is simple: in May, **2015**.

What people fail to glean from the national periodical cicada hubbub is that those individuals are all Brood X periodical cicadas. Kansas is not included in the Brood 10 range. Rather, Kansas has Brood IV periodical cicadas ---- the last emergence back in 1998. Add 17 to 1998, and you quickly see that we have a long wait until **2015**. Thus Kansans it will be another 11 years before we see our periodical cicadas (Figures 1 & 2.)



Figure 1



Figure 2

In the mean time, we will have to satisfy ourselves with the various other cicada species which appear on a yearly basis in Kansas. The fact that these cicadas appear on a yearly basis earns them the title, "Annual Cicadas". The "annual cicada" moniker implies that they have a 1-year developmental cycle. This is a misnomer because they actually require several years for development. However, because there are overlapping generations, some individuals of these asynchronous populations appear each year.

Kansas is relatively rich in cicada diversity — 17 species. Some are very common due to their wide distribution throughout the state. Others have a more restricted range of occurrence, and are therefore seldom encountered.

People often think that, “If you’ve seen one cicada, you’ve seen them all”. Upon close observation, however, it is easy to see distinctive differences between each species. There also are differences in times that they appear during the season, as well as their preferred habitat. And for people who are really involved with cicadas, there is the additional fact that male cicadas produce distinct sounds/calls/songs unique to their species.

Two of the common “tree species” are *Tibicen pruinosus* and *Tibicen lyceus* (Figures 3 & 4). *T. pruinosus*, perhaps, has the longest seasonal presence (typically the end of June into October) of the Kansas cicadas and is prominent in cities and towns. Its song might best be described as a repeated “Za-wee” beginning at dusk and into the late hours of the evening.



Figure 3



Figure 4

Two of the larger species are *Tibicen dealbatus* (Figure 5) and *Tibicen walkeri* (Figure 6). While both are similar in overall coloration, the former possesses more white pruinose markings on the abdomen. While both are considered tree species, both are often taken on lower growing woody shrubs. They are somewhat unusual in that their songs are identical (repeated rapid distinctive “Zwick Zwick Zwick”).



Figure 5



Figure 6

Two species prefer open grassy areas, and initially appear later in the season (July and August). Although described as a brown-colored cicada, *Tibicen dorsatus* possesses both black and white markings (Figure 7). *T. dorsata* is considered to be quite wild in the sense will take flight as it is approached. Conversely, *Tibicen aurifera* (a smaller species) (Figure 8) are less wily and can actually be hand-captured. There are two color

forms of *T. aurifera*: greenish and orangish. Both species are active throughout the heat of the day and can be easily located by their distinctive calls. That of *T. dorsatus* is a loud, dull and rolling buzz. *T. aurifera* produces a loud, shrill, high-pitched searing buzz. Due to their late appearance in the season, these two species are the last to disappear in the fall.



Figure 7



Figure 8

“Huge ‘Worms’ Everywhere”:

There have been several reports of large “worms” crossing over country roads, and in and around homes. Invariably, these worms exist each and every year in Kansas. Whether or not they are reported depends upon whether they are being observed. There is no mystery as to what the “worms” are: the larvae of **white-lined sphinx moths**.

Whitelined sphinx moths (a good image appearing on Page 328 of “Insects in Kansas”) are fairly good-sized moths (3-inch wingspan), and are commonly observed hovering around flowers at dusk. In fact, because they hover like humming birds, these moths (as well as other species of sphinx moths) are referred to as hummingbird moths.

The larvae of whitelined sphinx moths gain attention when they are full-grown and near the end of their feeding cycle. Because of their increased food requirements, larvae ravenously feed on a wide variety of vegetation and quickly deplete their food supply. Thus their “startling appearance” as they move on (en masse) in their search for additional source of food.

During times when worm populations are low, the overall color form tends to be more green (Figure 9). When larval populations are high, different color forms appear. Higher populations of worms may be observed as they feed (Figure 10). Upon closer examination, darker, non-green larvae can be observed (Figure 11).



Figure 9



Figure 10



Figure 11

Two color forms are currently present and described as either the dark form (Figure 12) in which black is the predominant background color, or the light form (Figure 13) in which a yellowish hue predominates. There are various degrees of overall coloration and intensity and shapes of body markings. Yet all are the larvae of whitelined sphinx moths which (in of themselves) do not show any varied differences displayed by their larval stages.



Figure 12



Figure 13

If one feels the need to control whitelined sphinx moth larvae, any number of insecticides registered for use against “caterpillars” can be used. However because larvae are at the end of their feeding cycle, the best course of action may be to simply allow them to run/finish their course, pupate and then enjoy the beauty of the soon-to-emerge moths (again, refer to page 328 of “Insects in Kansas”).

Little Ragged Holes Are.....

People are reporting little ragged holes in/on various plants. Whether hollyhocks or **asters** (Figure 14), the culprits may be little **grasshoppers**. People usually become aware of grasshoppers later in the season when large/mature grasshoppers invade gardens and flowerbeds. But now might be a good time to be more observant and begin applying control measures against localized grasshoppers.



Figure 14

At this time of year, grasshopper nymphs are small (Figure 15). Thus, because they are only capable of taking “small bites”, feeding damage is relatively mild and in the form of small irregularly-shaped holes or notching of leaves. As nymphs grow (Figure 16), they will take “bigger bites” and foliar damage will become increasingly more noticeable.



Figure 15

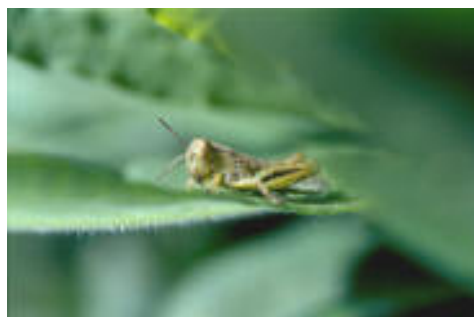


Figure 16

Now is the time to address grasshopper control. They are small and especially susceptible to insecticides. They are concentrated in small areas with an adequate food supply to suit their feeding requirements. And being immature and lacking wings, they are relatively immobile and restricted in their movements (and therefore confined to small areas).

Numerous active ingredients are registered for use against grasshoppers. Active ingredients include carbaryl, bifenthrin, cyfluthrin, esfenvalerate, lambdacyhalothrin, permethrin and spinosid. While some formulations of a specific active ingredient may be restricted for use only on ornamentals, a second formulation may be registered only for use on vegetables while a third formulation may be listed on both ornamentals and vegetables. Thus it is imperative that the end-user read the labels of specific products (before purchase) to ensure the legal use of products.

Bob Bauernfeind

Weekly Report from the Kansas State University Insect Diagnostic Laboratory:

The following samples were submitted to the Insect Diagnostic Laboratory from May 27 to June 2, 2004:

- 5-27-2004, Reno County: Carpenter Ant in home.
- 5-27-2004, Marion County: Redheaded Ash Borers in home.
- 6-1-2004, Bourbon County: Leaf Galls in Oak.
- 6-1-2004, Reno County: Sawtoothed Grain Beetle in kitchen.
- 6-1-2004, Cheyenne County: Nevada Buck Moth larvae in Cottonwood.
- 6-2-2004, Labette County: Common Stalk Borer in Tomato.
- 6-2-2004, Bourbon County: Cave Cricket from home, yard.
- 6-2-2004, Clay County: Burrowing Bug nymph from yard.
- 6-2-2004, Russell County: Scentsless Plant Bug.

This week's Critter Pix features a Nevada Buck Moth caterpillar (*Hemileuca nevadensis* Stretch, order Lepidoptera, family Saturniidae) feeding on Cottonwood from Cheyenne County, submitted June 1. This species is mainly western, being found through Rocky Mountain and northern Plains states. Larvae feed on willows and cottonwoods. They overwinter as eggs, which hatch in spring, the young caterpillars feeding on host in groups. In later instars caterpillars disperse and become more solitary. Adults emerge and are on the wing from September through December.



Nevada Buck Moth caterpillar submitted by: Cheyenne County

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

Bobby Brown

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Sincerely,

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