http://www.oznet.ksu.edu/entomology/extension/extensio.htm

Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants, and Extension Personnel

Department of Entomology
239 West Waters Hall
K-State Research and Extension
Manhattan, KS 66506-4027

Tel: 785-532-5891
Fax: 785-532-6258

July 15, 2005 No. 13

# Revised Publication on Spiders and Scorpions:

The revised publication on spiders and scorpions of public health importance is now posted on the web here: http://www.oznet.ksu.edu/library/entml2/mf771.pdf and it replaces MMF-1158 (Brown recluse spiders) and old MMF-771 (Poisonous spiders and scorpions). The sign-up forms for ordering the new MMF-771 will show up in the next ordering cycle.

Ludek Zurek

# An update on West Nile virus in Kansas in 2005:

We have the first cases of positive people, horse, and mosquitoes for WNV in Kansas this year! The first positive mosquito sample is a pool of *Culex tarsalis* collected on July 1 from the Trego County. The horse case is from the Anderson County (confirmed positive on July 6). The human cases are from the Douglas County (mid-May) and from the Rice County (mid-June; confirmed on July 14).

You can follow the progress on the number of WNV positive cases in Kansas here: http://www.oznet.ksu.edu/westnilevirus/

For information on mosquito control and personal protection go here: http://www.oznet.ksu.edu/westnilevirus/mosquito_control.htm

Ludek Zurek

# Grasshoppers:

Received several reports this week relative to increasing populations of grasshoppers. This may be an ideal time to start checking field margins, waterways, etc. for the presence of small grasshoppers as this is the best time to manage these pests. They do not yet have wings, thus they are less mobile, and still confined, where less acreage needs to be treated and insecticides seem to be much more effective, and they have not yet caused any crop damage.

Jeff Whitworth

# Potato leafhoppers:

Starting to find treatable levels of potato leafhoppers in central Kansas. Have only found adults so far but nymphs will probably be forthcoming soon, and thus an increase in feeding damage to alfalfa. Please consult the KSU Insect Management Guide available at your local county Extension office for treatment thresholds and insecticide registration.

Jeff Whitworth

# Where are all the sunflower moths?

Light and pheromone trap catches of sunflower moth have been very low so far this year. For example, our light trap in Hays caught only 2 moths early in May, long before even the first wild flowers bloomed. Then, quite abruptly, 37 moths were caught the night of July 13. Similarly, an absence of moths to date has been reported from some eastern Kansas locations where sunflower development is slightly more advanced; traps next to blooming fields have been catching very few moths, if any. At a recent training program, a participant indicated that a few fields near Emporia had required treatment and another agribusiness representative reported that as many as half the fields that his firm serves near Hutchinson had populations of sunflower moths that justified treatment. The only way to gauge the population in a given field is to scout it – either with pheromone traps, by eye, or better yet, by employing a combination of the two approaches.

We have had a number of periods of sustained southerly winds that would be expected to carry moths northward on their annual summer migration, so why did they take so long to show up? One possible explanation is that conditions have not been conducive to support the early season buildup of populations to the south of us. Another is that the peak spring emergence to the south was delayed and these moths are only now about to appear in large numbers.

Sunflower moth

For crop consultants and sunflower growers continued vigilance of blooming sunflowers is advisable. However, it is also possible that this season may present an opportunity for many growers to save the cost of an insecticide application targeting sunflower moth. If current indications are representative and populations remain low in many areas, growers that simply schedule an application to coincide with 80-90 % bloom in the crop may miss an opportunity to increase their bottom line. However, the migratory habits of this pest mean that a sudden influx of moths may occur at almost any time from now until the end of August. Savvy growers will scout blooming fields every 2-3 days until petal fall and verify that threshold numbers of moths are present (1-2 per 5 plants) before investing in the cost of a treatment.

J.P. Michaud and Randy Higgins

# Holes in soybean leaves?

While looking for soybean aphids in local fields, it was not uncommon to find limited leaf damage in the form of various densities and shapes of holes. A few third- and fourth-stage (middle-size) green cloverworms, the occasional bean leaf beetle, and reportedly, some small grasshopper nymphs are contributing to give bean plants in many areas a less-than-perfect appearance. Green cloverworms generally leave the larger leaf veins and the midrib intact as they chewing ragged holes across the interior of the leaf, with the damage sometimes reaching the edge of their host leaflet. Very young larvae may not feed all the way through the leaflet causing a window-pane effect, while medium-sized to larger larvae feed completely through the leaf. Bean leaf beetles and sometimes corn rootworm adults, typically chew small, largely round holes that often pass completely through the leaf surface. Grasshoppers often feed from the edge of the leaf, creating a tattered appearance and often consume larger leaf veins as well as the rest of the leaf blade as they work on satisfying their hunger.

Remember that soybean plants developing under normal growing conditions (not too droughty, no hail damage, etc.) generally have more foliage than necessary to provide maximum yield. Defoliation of less than 20% rarely triggers treatment. Treatment need at higher levels of defoliation depends on the stage of crop development and size of and type of defoliators. That is, try to determine if there are many young pests developing that could raise the level of concern as they become more mature. See our Soybean Insect Management recommendations for more details and a list of products that are labeled for treatment of the crop or possibly nearby vegetation (if warranted). Treatment of nearby non-crop-field sites is sometimes recommended to prevent grasshopper nymphs from moving into the field proper. Natural controls often

lower the need for treatment. For instance, the entire population of green cloverworms sometimes succumbs to one or more types of fatal fungal infections about the time economic damage is achieved, so make sure the problem is still there before giving the applicator clearance to treat the field.

Randy Higgins

# Japanese Beetle Reports:

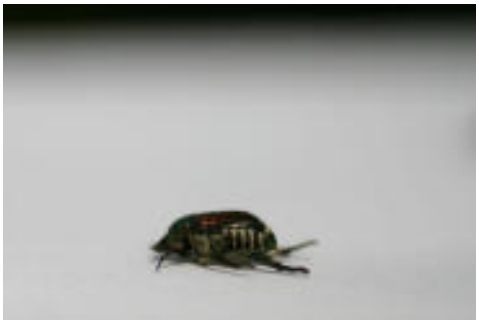
Two recent communications reporting the presence of Japanese beetles prompts this inclusion in Kansas Insect Newsletter #13.

The Japanese beetle is an important pest species in many states east of the Mississippi River, and are especially prominent several midwestern states east of Kansas (notably IL, MO, IN, OH, TN and KY). The larval “white grub” stage is a serious turf pest. The adults are indiscriminate feeders, and attack a wide host range (nearly 300 plant species including fruits, vegetables, agronomic and forage crops, ornamentals, trees and shrubs). Often time, host plants are literally covered with the gregarious beetles which rapidly consume any and all foliage and floral plant tissue. In fact, the adult feeding damage is often viewed as being more serious than grub damage to lawns/turf sites.

While Kansas is considered outside the established Japanese beetle zone, it must be noted that currently, there are several documented sites (in Kansas) where Japanese beetles have gained a foothold. The sources of those infestations have been identified and attributed to Japanese beetle grubs transported (to Kansas) in the root balls of plant stock grown in eastern nurseries where Japanese beetle populations are well established. Thus the current “hot spots” are adjacent to retail nursery outlets in several larger metropolitan areas. Thus we can no longer say that Japanese beetle do not occur in Kansas.

However, there are frequent reports of Japanese beetle which, in fact, are incidences of mistaken identity. How is this possible?

**Japanese beetles** have a very distinctive appearance. They are described as being brilliant metallic green and having wing covers with a copper-brown/bronzish tinge (Figure 1). Of note are 5 vertical bands of white hair tufts on each side of the abdomen (Figure 2) and a pair white hair tufts on the dorsal surface of the last abdominal segment (Figure 3). Japanese beetles are active daytime fliers. They are also very gregarious, and (as mentioned above) masses of beetles overwhelm their host plants.



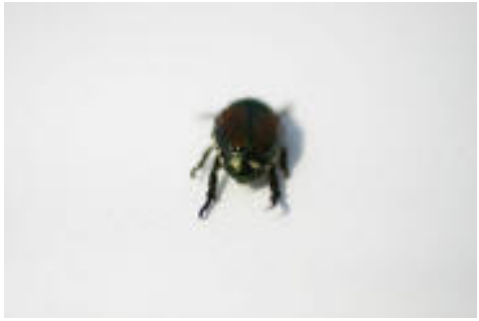


Figure 1
Top view

Figure 2
Side view

Figure 3
Hind view

If Japanese beetles are so distinct, why are there are false reports/sightings of Japanese beetle? The words metallic, green and coppery/bronze come to mind. While there are many beetles which exhibit some of these characteristics, all lack the white hair tufts possessed by Japanese beetles. Many of the metallic and/or greenish beetles (found in Kansas) are not in the family of scarab beetles (to which the Japanese beetle belongs), and therefore, body conformation of these “pretenders” eliminate them as being Japanese beetles. However, two “scarab cousins” are commonly mistook/reported as Japanese beetles.

July marks the beginning of **green June beetle** activities. Overall, these beetles have a green almost velvety coloration when viewed from above (Figure 4) and a coppery metallic “underbelly” (Figure 5). Like Japanese beetles, green June beetles are active daytime fliers. Green June beetles produce and an audible buzz which causes some people to run away to escape what they think are buzzing bees (green June beetles neither sting or bite). And like Japanese beetles, green June beetles are somewhat gregarious and can be found feeding in groups. But green June beetles are distinctly larger than Japanese beetles Figure 6).

Figure 4
Top view

Figure 5
Bottom view

Figure 6
Japanese beetle (top)
Green June beetle (bottom)

The second Japanese beetle “pretender” does not have a common name. ***Anomela marginata*** and the Japanese beetle belong to the same taxonomic tribe, which, perhaps, accounts for their similar size and shape. *Anomela marginata* (Figure 7) has a definite overall metallic green/coppery/bronze coloration. However, *A. Marginata* lack the white hair tufts along the sides of their abdomen (Figure 8). *Anomela marginita* (unlike Japanese beetles and green June beetles) are less likely to be seen and reported because that are active at night. They are commonly recovered in black light trap collection containers.

Figure 7
Top view

Figure 8
Side view

# They’re Baaaack!

Several (seemingly) perennial “tree pests” have recently made their presence known. And, while additional damage is likely to occur, little can be done to prevent it. The good news is that despite the startling appearance of infested trees, the overall damage has minimal effect on the overall health of the trees.

The first generation of mimosa webworms are responsible for the current browned terminals of honeylocust (Figure 9). The second generation of mimosa webworms may cause trees to trees to be entirely brown by late-August and September (Figure 10). However, trees will leaf out normally the following spring (Figure 11).

Figure 9
Current damage

Figure 10
Fall damage

Figure 11
Spring recovery

First generation elm leaf beetles have caused foliar damage in some locales in Kansas. While some green leaf tissues remain (Figure 12), the second generation of elm leaf beetles cause entire trees to take on the burnt appearance by fall (Figure 13). But as with the above-mentioned mimosa webworms, trees will leaf out normally the following spring (Figure 14).

Figure 12
Current damage

Figure 13
Fall damage

Figure 14
Spring recovery

Within the last two weeks, the web masses of the redheaded race of fall webworms have become readily evident (Figure 15). Fall webworm development seems to be behind schedule in northeast Kansas — this based upon a trip (earlier this week) down a stretch of road where fall webworm occur most years. The biggest objection to fall webworms is the unsightliness of the web masses per se and the worms themselves (Figure 16). But as with other defoliating pests, there is little damage to overall tree health.

Figure 15
Web masses

Figure 16
Worm clump

# And bagworms?

We are two weeks past the recommended optimal time to apply bagworm insecticide treatments. And where treatments have yet to be applied, bagworms are causing considerable damage (Figure 17 and 18). Most bagworms have essentially reached the halfway point in their development (Figure 19). They will consume

increasingly greater amounts of foliage as they move towards the completion of their development. and will from this point onwards. Thus it is imperative that treatments be immediately applied in order to preserve any remaining green foliage.

Figure 17
Bagworm damage

Figure 18
Closeup

Figure 19
Half-grown bagworms

Do not ignore neighboring/adjacent plantings. While they appear healthy and lush (Figures 20 and 21), there could be “unseen” bagworms which, if left untreated, could serve as the source for the 2006 bagworm infestation. Sprays (in these instances) may not be necessary — if and where practical, handpick the few bagworms that you come across.

Figure 20
Few (if any) bagworms

Figure 21
Lush foliage

Bob Bauernfeind

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

The following samples were submitted to the Insect Diagnostic Laboratory from July 7 through July 14, 2005:

7-7-2005, Butler County: Yellowstriped Caterpillar on chives.
7-8-2005, Ford County: Mound Ants from yard.
7-11-2005, Republic County: Brown Recluse Spider from yard.

7-11-2005, Shawnee County: Clothes Moths from wool rug.
7-12-2005, Johnson County: Possible Fowl Mites in office.
7-12-2005, Barton County: Codling Moth in apple.
7-13-2005, Riley County: Click Beetle, wood shavings from home.
7-13-2005, Thomas County: Indian Meal Moths in home.
7-13-2005, Osborne County: Ichneumon Wasps on juniper.
7-13-2005, Gove County: Spider Mites on cucumber.
7-13-2005, Gove County: Spider Mites on cherry tree.
7-14-2005, Osborne County: Possible Juniper Webworm.

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 at bbrown@oznet.ksu.edu.

Bobby Brown

Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned.

Sincerely,

Randall Higgins
Extension Specialist
Entomology (Crops)

J.P. Michaud
Integrated Pest Management -
Agricultural Research Center - Hays

Jeff Whitworth
Extension Specialist
Entomology (Crops)

Bobby Brown
Entomology Diagnostician

Ludek Zurek
Extension Specialist
Medical & Veterinary Entomologist