Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel

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What's the buzz? Tell me what's a'happening! …….. Green June Beetles

A person could almost set their "calendar watch" based on the appearance of green June beetles: July 15 (give or take a few days). Hoards of these beetles may appear "dark" in appearance as they skim the surface of the ground as they fly in their erratic patterns. But up close, they can be seen for their true beauty: their soft velvety wing covers (Figure 1) and brilliant metallic coppery-colored underbellies (Figure 2).

Clustered Green June Beetles – Note color variations

Figure 1

Figure 2

Of course, their beauty can only be appreciated by those people who take the time to closely examine them. This means that those are individuals who know that the "menacing" buzzing fliers are not bumble bees, and therefore can be held/handled without receiving the sting associated with bumble bees.

The green June beetle flurry of activity occurs soon after rains serve as a signal/stimulus for the beetles to emerge from the underground quarters in which they developed. After mating, females seek and prefer ovipositional sites that are high in organic matter such as caches of grass clippings and manure reservoirs, but not to the exclusion of grass/turf stands. Green June beetle larvae may be startling in appearance due to their large numbers and habit of crawling on their backs when forced out of the soil by soaking rains in late fall or spring and early summer (Figure3). Mature larvae can exceed 2-inches in length (Figure 4).

Figure 3

Figure 4

Other than the nuisance factor associated with their aerial antics, green June beetles do not constitute a threat to garden crops. They are, however, attracted to fruit trees, especially those with over-ripe fruit (usually peaches) or grounds strewn with early dropped apples which are in an attractive fermentative condition.

Green June beetles do not feed on the foliage of ornamentals. If ornamentals are being attacked by clusters of shiny metallic beetles, the culprits would be Japanese beetles (Figure 5) as aptly described by Dr. Cloyd in last week's Kansas Insect Newsletter #17. Green June beetles and Japanese beetles can easily be differentiated in a side-by-side comparison (in this instance, a piggyback comparison, Figure 6). The distinctive markings and contrast in sizes serve to distinguish between the large green June beetles and smaller Japanese beetles. Also, green June beetles are commonly found throughout Kansas whereas (at this point in time) Japanese beetles are more restricted to northeast Kansas (Wyandotte/Johnson/Shawnee counties) and the Wichita area.

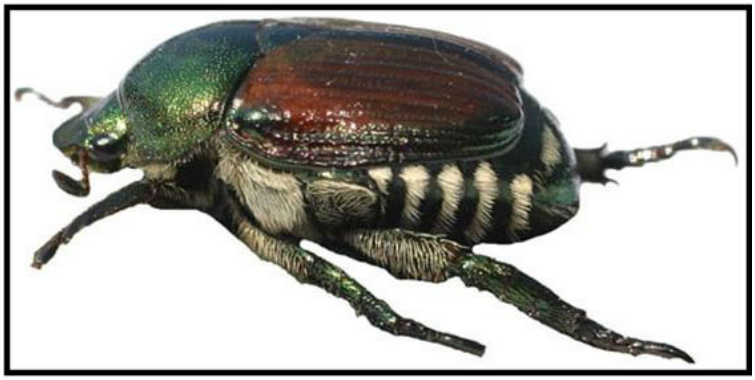

Figure 5

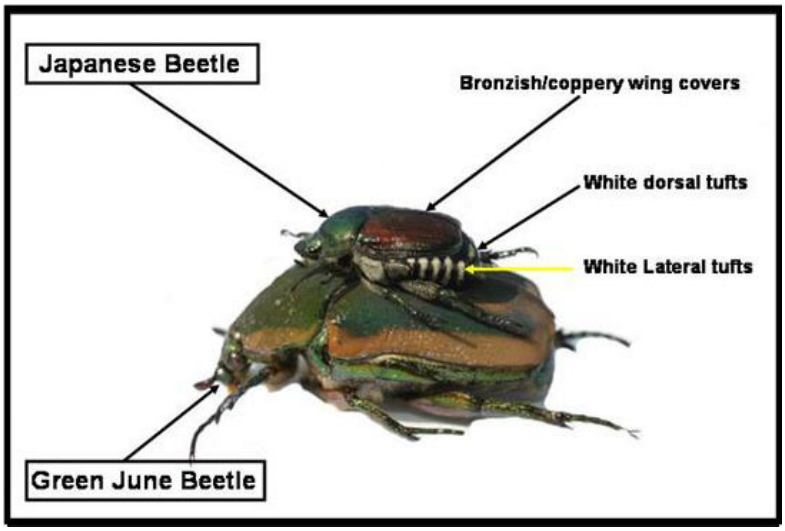

Figure 6

"Broken thumb", or, "No rule-of-thumb"? – Peak flight activities of masked chafers

Defined by Webster, a rule of thumb is a general principle regarded as roughly correct but not intended to be scientifically accurate. While masked chafer flight peaks vary throughout Kansas in any given year, flight peaks will vary between years at specific sites. I have, perhaps, fallen into an erroneous rule-of-thumb

regarding the flight peak for masked chafers in the Manhattan area which I have often cited "around the Fourth of July" as being the average date. However, looking back over 13 consecutive years (1996 – 2008), although flight peaks occurred 7/2, 7/2, 7/3, 7/5, 7/5, 7/5, 7/08 and 7/10, they also occurred 6/21, 6/22, 6/23, 6/24 and 628.

Why this retrospective look "into the past"? For 2009, there was not a definitive evening for a peak flight, but rather, a series of 8 consecutive nights with high chafer numbers recovered from a blacklight trap operated in the Manhattan area (Figures 7a and 7b): 6/21, 6/22, 6/23, 6/24, 6/25, 6/26, 6/27 and 6/28 which defines the major flight period. It is, perhaps, coincidental that these dates correspond to the aforementioned single-evening flight peaks of previous years.

Figure 7a

Figure 7b

What is the purpose of knowing when masked chafer flights peak? It is accepted that when utilizing **short residual** "contact" insecticides (active ingredients are carbaryl and trichlorfon) as preventative treatments against annual white grubs, their application must be timed to coincide with a 10-day treatment window to achieve maximum grub control. It is during that time frame that most current-season eggs will have been deposited, and larval hatch completed. And at that time of treatment, 90% of the larvae will be first and second instar grubs (Figure 8): too small to have caused much damage to grass roots, and small enough to be especially susceptible to contact insecticides.

Figure 8

Thus for the Manhattan area (and perhaps other unspecified towns/areas in that general vicinity), for 2009, a "narrow" 10-day treatment window has been replaced by a "broad" 18-day picture window. While this may seem convoluted and confusing, it probably will have minimal impact on grub control programs because (cutting with a broad sword) statewide, most homeowners and turf management professionals have likely converted to the use of long-residual systemic grubacides which do not rely on precision timing for their application. Thus the monitoring of masked chafer flights and recording data thereof may have become but a passé activity.

In light of the adopted switch to the systemic products, the question might be asked, "What is the role/value of having products containing short residual insecticides?", to which the response is that those products have proven effectiveness as contact poisons when used as rescue treatments if and when grub problems are detected (and thus require) treatment in late summer and into fall.

Bob Bauernfeind

Potato Psyllid Update

Some of the potatoes in western Kansas are nearly ready for harvest. We have been collecting low to moderate numbers of adult psyllids on the sticky traps, but very few eggs or nymphs. However, two of 24 adults collected on the traps from June 22 to June 29 tested positive for Liberibacter. Results of the survey are being posted on the web at: http://www.entomology.ksu.edu/psyllidsurvey.

Phil Sloderbeck

Cicada Killers

We have been receiving inquires regarding the hordes of large wasps flying around. These are primarily the eastern cicada killer, *Sphecius speciosus*, which is actually considered a beneficial insect because it regulates cicada populations. This wasp gets its common name from the fact that it hunts and provisions each cell within its nest with a cicada, which becomes the food source for young cicada killers. Cicada killers are an urban nuisance pest, especially when nesting, sometimes in large numbers, in a bare area or area around a structure. People get concerned because cicada killers resemble giant yellowjackets.

Cicada killers are approximately 2.0 inches in length and black to red in color, with yellow-banded markings on the abdomen. The head and transparent wings are reddish brown. They are not dangerous, but they are intimidating. Cicada killers are solitary wasps, with the female digging a 6 to 10-inch burrow (1/2 inch in diameter) in the ground. These diggings are usually seen in sandy or loose soil. A pile of soil or sand, depending on the soil type, typically surrounds the entrance. The female locates and stings a large insect such as a cicada or katydid and then brings the "prize" back to the burrow. She then places the paralyzed insect into a chamber and lays an egg on the surface of the paralyzed insect; sometimes she places two paralyzed insects in a burrow but lays an egg on only one. The female cicada killer eventually covers the burrow, digs another, and repeats the process. The egg hatches into a grub-like, legless larva that consumes the paralyzed insect. Full-grown larvae overwinter in the burrow, pupate in the spring, and emerge as an adult during the summer—usually July and August.

Male cicada killers establish aerial territories and patrol for intruders. A male cicada killer wards off other males that enter his territory and attempt to mate with females. Anyone else, such as a human, walking into the territory is typically confronted by a very large wasp, which hovers in front of the face and "zips" to the side and back. However, after determining that the "intruder" is not a rival, the male cicada killer ignores the individual. Unfortunately, as a person walks across a lawn, fairway, or other area where these wasps are nesting, the process is repeated through each male's territory. Cicada killers are unlikely to sting a person. Wasp and bee stingers are modified egg-laying devices (=ovipositors), so males are unable to sting. Females may sting if crushed, either by being stepped on with bare feet or grabbed with bare hands.

Cicada killers are more common in areas with bare soil, so mulching, planting ground covers, or sodding may reduce associated problems. Cicada killers become a major problem when nesting in areas accessible to or frequented by the public. Applying carbaryl (Sevin) or a pyrethroid-based insecticide (e.g. permethrin, bifenthrin, deltamethrin, and/or cyfluthrin) to the burrowed area should kill females in golf course sand traps. Once the females are gone, males eventually leave. In home yards, sandboxes should be covered with a tarp when not in use since this deters cicada killers (and also keeps cats out). Sand below swings, jungle gyms, or other playground equipment can be replaced with bark mulch or shredded tires.

Managing cicada killers in volleyball courts and baseball infields is more of a challenge because people with minimal clothing and much exposed skin are diving and sliding onto the ground. This makes it difficult to recommend using an insecticide on a volleyball court. In these cases, the use of weed or other barriers beneath the sand may create enough of a disturbance to cause cicada killers to leave. Of course the recommendations mentioned above will only be effective if cicada killer populations are not excessive. For example, just recently I was informed by an individual who told me he had to discontinue working at a golf course due explicitly to the difficultly in managing the excessive populations of cicada killers.

Raymond A. Cloyd

Report from the Kansas State University Insect Diagnostic Laboratory:

The following samples were submitted to the Insect Diagnostician Laboratory from July10th to July 16th.

July 10 2009 Stevens County – Possible leaf miner damage to cottonwood
July 13 2009 Thomas County – Kermes oak scale on oak
July 13 2009 Wyandotte County – Japanese beetles
July 13 2009 Edwards County – German cockroach in homes
July 13 2009 Edwards County – Carpenterworm pupal casing on oak
July 13 2009 Meade County – Coreidae in Austrian pine
July 14 2009 Lincoln County – Green June beetles
July 14 2009 Nemaha County – Barberry looper on barberry bushes
July 14 2009 Shawnee County – Chinch bug complex in zoysia
July 14 2009 Pratt County – Lesser corn stalk borer in corn
July 14 2009 Riley County – Brown recluse, wolf spiders, and fishing spider in home
July 14 2009 Allen County – Green June beetles around Linden tree
July 15 2009 Leavenworth County – Strawberry crown borer in strawberry
July 15 2009 Northwest Kansas – Helgrammite (dobsonfly larva) in cattle tank
July 15 2009 Harvey County – Wolf spiders (spiderlings) in home
July 15 2009 Phillips County – Carabid beetle larva in home
July 15 2009 Leavenworth County – Weevil larvae and black knot in chokecherry branch
July 16 2009 Leavenworth County – False bumble bees in yard
July 16 2009 Haskell County – Pine needle scale in pine
July 16 2009 Jefferson County – Ichneumonid wasps (*Ophion*) on porch post
July 16 2009 Jackson County – Winged carpenter ant found on ash tree
July 16 2009 Jefferson County – Polydesmida millipede in home

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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