

Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel



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What Are Those “Huge” Wasps Flying Around? These Are Cicada Killers!

We are receiving numerous inquiries regarding 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 is the food source for young cicada killers or larvae. 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 ground-nesting solitary wasps, with the female digging a 6 to 10-inch burrow (1/2 inch in diameter) in the ground, which is usually present 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. Observing a cicada killer female dragging a large, immobilized cicada across the ground to a nest is a very impressive natural event ☺.

The female 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 legless grub-like 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. However, they can also be a problem in well-maintained areas such as irrigated and regularly fertilized turfgrass. 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 containing

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the active ingredient permethrin, bifenthrin, cyfluthrin, and/or lambda-cyhalothrin 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 a geotextile fabric placed beneath the sand may create enough of a barrier to prevent cicada killers from creating burrows. Of course the recommendations mentioned above will only be effective if cicada killer populations are not excessive.



Raymond Cloyd

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Current Status of Bagworms

Time swiftly passes. It seems like just yesterday that the questions related to the 2012 bagworm “season” were of primary concern given the unusually warm spring and the early initiation of activities for some species of insects. As you might recall, in Kansas Insect Newsletter #8 (May 4th), it was stated that mid-May is recognized as the normal/traditional onset of bagworm activities, and that the hatching period spans a 4-5 week period. Based on these criteria, the recommended time to apply a one-time bagworm insecticide application is during the last week of June and first week of July ---- after most, if not all, eggs have hatched, and larvae are still small, essentially not capable of causing noticeable damage and especially susceptible to insecticides.

As noted in that newsletter, at least in the Manhattan area, on April 18, 1 bagworm was found on a single cedar in a windbreak heavily infested in 2011. One week later, bagworms were found on several trees, and on May 2, small bagworms were found on all trees in the windbreak. Thus at least in the Manhattan area, bagworm activities began several weeks earlier than normal.

In Kansas Insect Newsletter #14 (June 15th), I stressed that the control of bagworms was more contingent upon the timing of a spray treatment and the thoroughness/coverage achieved rather than the product/active ingredient used. Currently in Kansas, 501 products are registered for use against bagworms. In KIN #15 (June 22nd), Dr. Cloyd listed a number of active ingredients registered for use on bagworms, but also noted that not all of those listed AI’s were in products available to homeowners.

The windbreak in question (Figure 1) provided an opportunity to evaluate the effectiveness of several active ingredients in products **available for homeowner use**. I shopped-the-shelves in local retail outlets in Manhattan and found products containing the active ingredients acephate, bifenthrin, carbaryl, gamma-cyhalothrin, malathion, permethrin and spinosad. (Although aware that some products containing cyfluthrin and deltamethrin also list bagworms on their labels, I found none of those products on-the-shelves in Manhattan ---- at least the 10 retail outlets visited).

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Figure 1

The trial was very simple ----- 4 trees were randomly designated/marked to receive an insecticide treatment. No attempt was made to assess levels/numbers/populations of bagworm on each tree ----- other than noting, again, that on May 2, all trees were infested with bagworms. A knapsack sprayer was used to apply treatments on June 18th. Adequate amounts of spray mixtures ensured thorough coverage/distribution of each product.

On July 18th, trees were inspected and rated as either clean or infested. Other than an occasional “escape”, bagworms were only found on untreated trees. All products performed equally well ---- see the following images

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The following 4 trees were untreated. Though not the best of images, with but a glance, each is readily identifiable as “untreated” by the presence of bags.



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Zeroing in on a tree provides further evidence of unrestrained bagworm feeding.



Some of the bags are of sufficient size to suggest that the larvae within are approaching the completion of their feeding stages. Homeowners are advised to inspect their landscape plantings for bagworms. It might be more apparent than one thinks ----- that is from a distance, evergreens may have a “yellowed” appearance, or in severe instances, a “burnt” appearance.

At this point in time, despite their large size, sprays can still be applied because as larvae nibble away as they near the completion of their feeding phase, they will ingest the insecticide-treated foliage. Bags may not necessarily drop off, but the larvae within will be dead ----- this can be confirmed by opening bags to observe “shrunk” dead larvae.

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Bob Bauernfeind

Insect Pests vs. Hot/Dry Weather

Have received many calls in the last few weeks about what to expect from insect pests attacking our various crops during this drought. We have been looking at all crops from the OK border to the NE border but mainly in between Hwy's 77 and 81 (central KS). The hot dry conditions affect the insect pests just as it affects the crops - negatively. If the crops die there is no food for the pest so they do not survive, pretty simple. But where we are having real problems is where the crop, mainly soybeans, sorghum, and alfalfa,(that have been monitored so far) are seriously stressed due to heat and lack of moisture-- and there are a few bugs, but not enough to reach our usual treatment threshold. Thus, do we spray to relieve the plants of the added stress from the insects? Because commodity prices are so high we want to preserve every bit of the harvestable product, but are the plants going to die eventually anyway so no use in wasting a treatment? These concerns are mostly for dryland fields but even some of the irrigated ones are having trouble keeping up. So here is what we have noted so far:

Soybeans-less than usual insect activity, especially in double cropped beans. Spider mites are present in many fields but not yet to the point of causing added stress, however they can increase rapidly so those spots need to be monitored weekly. Have not seen many podworms (corn earworms) yet, although they are still around but are of little consequence until pods start to fill. These worms need to be watched during the reproductive times. There were less corn ear worms in corn then I have seen in many years so maybe that will mean we have fewer in soybeans and sorghum?

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Alfalfa-Cowpea aphids remain plentiful in many fields so this pest needs to be continuously monitored as it will not go away on its own-however, lady beetles and wasps are really doing a good job of controlling them in some fields, others not so much so you need to monitor each field separately. They are relatively easy to control if you decide that is needed. Potato leafhoppers are still present but the numbers are relatively low this year and we have not seen any treatable populations yet.

Sorghum-Chinch bugs are abundant, especially very small nymphs, which look like they just started hatching last week and continued this week. They will suck more and more juice from the plants as they grow and so they will continue to add stress to these already stressed plants. Sprays will have a really tough time getting to these little nymphs behind the leaf sheath and around the roots, especially on taller plants. Probably have the best luck spraying plants up until they are knee to thigh high, after that it will be more difficult to get the insecticide to where the bugs will come into contact with it, and these are all contact insecticides.

That's kind of a quick synopsis of what we are seeing but rain and cooler temperatures will go a long way to helping relieve much anxiety.

Jeff Whitworth

Holly Davis

Report from the Kansas State University Insect Diagnostic Laboratory:

The following samples were submitted to the Insect Diagnostic Laboratory from July 13th to July 26, 2012.

July 16 – Johnson County – Aquatic midge flies, *Chironomus* sp. in commercial building

July 16 – Shawnee County – Goldsmith beetle, *Cotalpa lanigera*

July 16 – Reno County – Broad-nosed weevil, *Otiorhynchus* sp. in lawn and home

July 16 – Cheyenne County – Flatheaded borer damage, Family Buprestidae, to honeylocust

July 17 – Riley County – Insect feeding damage and non-insect galls on linden tree

July 17 – Saline County – Bed bugs in home

July 18 – Ellis County – San Jose scale insects on firethorn

July 18 – Harvey County – Woodlouse hunter spider in home

July 23 – Ford County – Red flour beetle in horse feed

July 23 – Saline County – Antlike flower beetles in commercial building

July 23 – Riley County – Leaf-footed bug, *Leptoglossus* sp. around home

July 24 – Pratt County – False wireworm beetles and twig borer, *Lichenophanes bicornis* on hackberry

July 26 – Shawnee County – Vinegar flies in kitchen

July 26 – Jefferson County – True bugs and borer damage on a redbud

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July 26 – Wyandotte County – Carpet beetle larval exuvia in bedroom

July 26 – Graham County – Bed bugs in a 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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