

Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel



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Update on Sugarcane aphid

South Texas had an abnormally cool and wet spring this year, and populations of sugarcane aphid were initially very low and mostly well controlled by natural enemies. However, with the onset of warmer, drier weather, economically significant aphid populations have now developed in the Rio Grande Valley and along the Gulf Coast. These are now producing winged forms with the potential to migrate northward. About 30% or the sorghum in south Texas has already been harvested, although later planted fields remain vulnerable and some are as much as one month away from harvest. However, harvested fields tend to re-sprout and thus may also serve as a source of migrant aphids, especially considering that no efforts will likely be made to control aphids in these situations. Thus, despite no reports from Kansas, and no economic infestations yet in Oklahoma (despite successful overwintering of the aphid on Johnson grass as far north as the TX-OK border), sorghum producers are advised to remain vigilant, especially with later-planted fields.



J.P. Michaud, Hays, KS

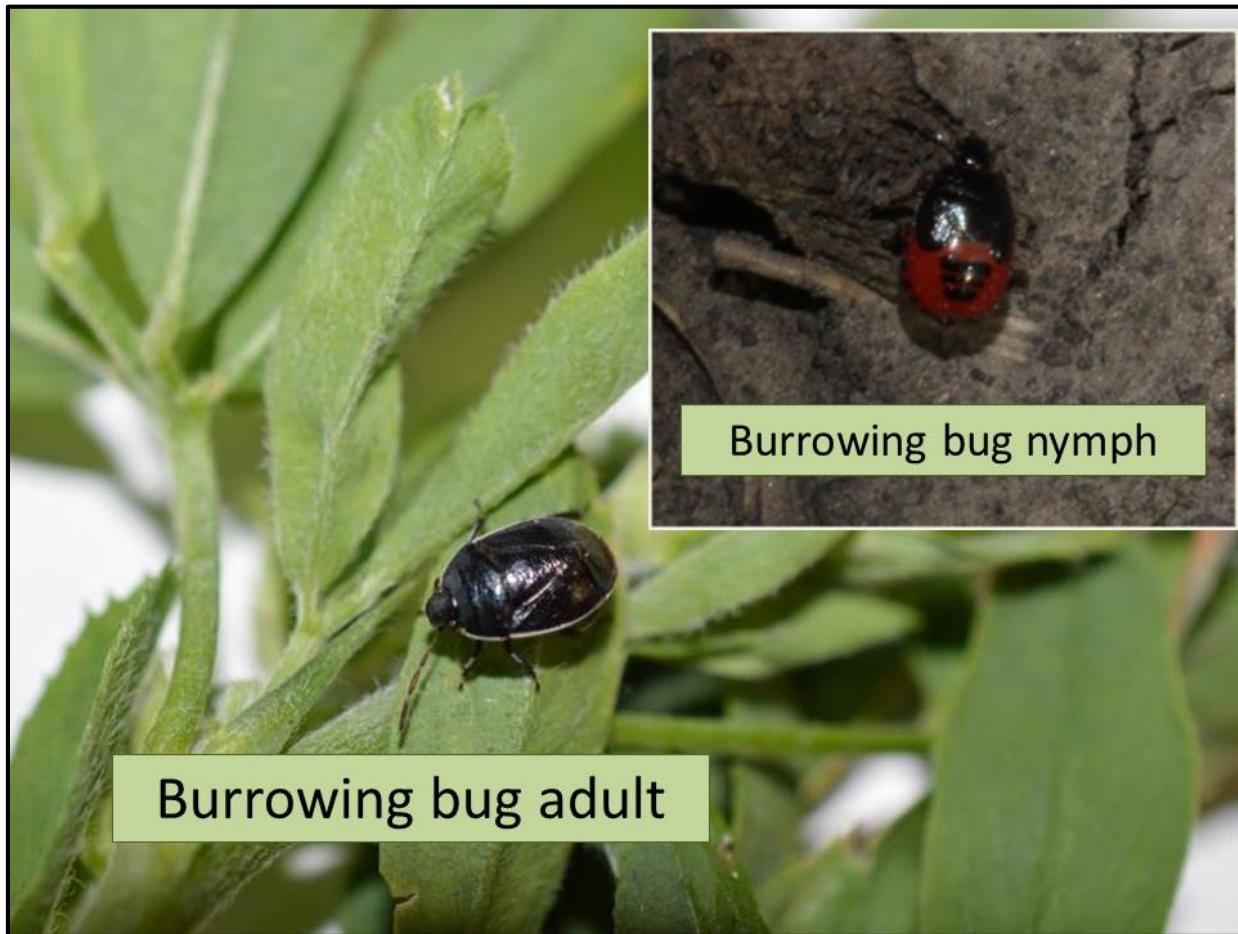
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Burrowing Bugs

Getting numerous calls about “little black and/or red” bugs all over soybean plants from just about all over the state. Everything we have checked out so far indicates burrowing bugs. The adults are shiny black, and outlined with a small white line. They nymphs (immatures) are even smaller, shiny black with patches of red. They are common feeding on and around the base of many weed species, especially henbit. When these weeds are sprayed with an herbicide, and therefore are no longer a source of food, the bugs move to the closest succulent vegetation, which are the soybean or sorghum plants near their original source of food, the weeds. They can aggregate on a few plants, and in a few areas, by the hundreds and/or thousands and this is always a cause for concern. However, these bugs will soon disperse and will not impact the crop.



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Grasshoppers

There continue to be numerous reports of grasshoppers coming in from all over the state. Most are still nymphs and are mostly still in grassy/weedy areas adjacent to crops, but as they get larger, are starting to move into crops. The best time to control these grasshoppers is before they become adults. Most of the insecticides labeled for grasshoppers work quite well, especially while they are still nymphs. So, if treatment is justified, applications should be made ASAP!



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Dectes Stem Borer

Adult Dectes (soybean or sunflower) stem borers are very active in north central Kansas where they are aggregating on weeds adjacent to last year's soybean stubble. They will soon be dispersing to this year's soybean fields to start inserting eggs into stems and petioles.

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Jeff Whitworth

Holly Schwarting

Wasps and Cicadas

Yesterday morning (July 7) as I walked out the back door of Waters Hall, two men were servicing a couple of AC units. They were being intimidated by BIG WASPS. I asked them if they were worried to which one responded, “Look at the size of them things. I don’t want to get stung!”

Aha! The proverbial “teachable moment”. I went back to my office and got an insect net. Back outside, I netted a wasp and reached into the net and grabbed the wasp. The workers gave me a quizzical look, like, “What are you? Nuts?” But I explained to them that this was a male cicada killer wasp --- and that male wasps (of any species) do not possess a stinger. I then had each of them grasp the wasp and then take a close look at it. “See? No stinger”. They were relieved to know that they could work carefree and would not be on the receiving end of a painful sting.

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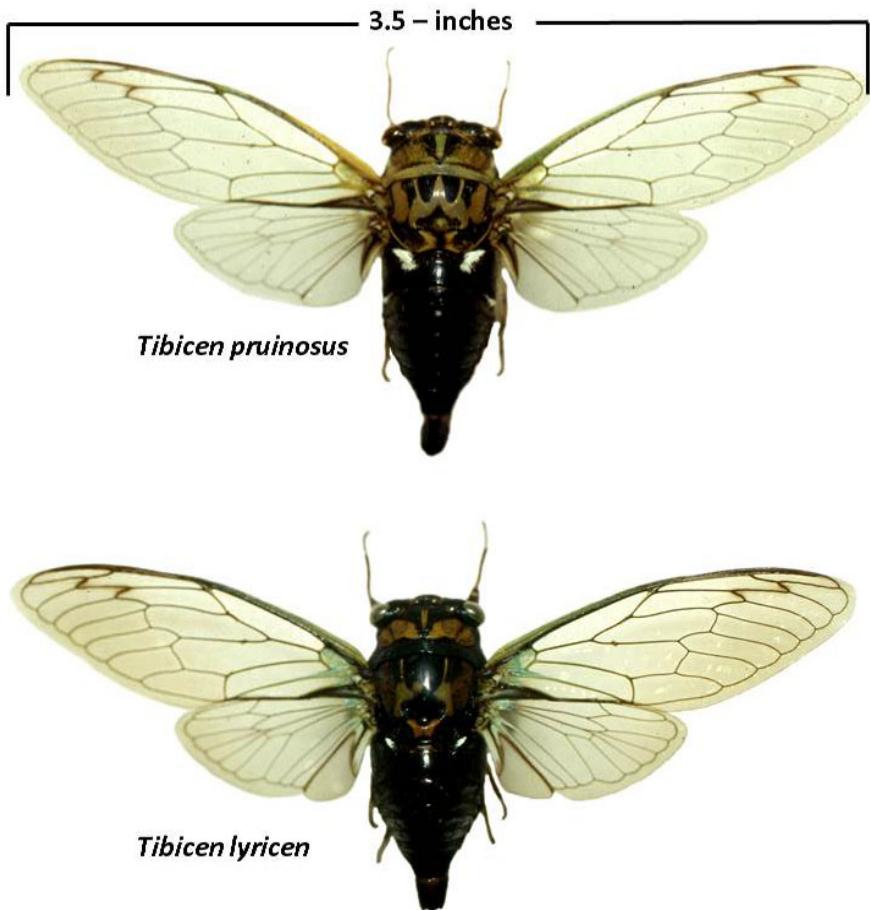
So, yes cicada killer wasp activities are in full swing. Already long-gone are the periodical cicadas (well, “long” depends upon how one defines long). So how will cicada killer wasps survive? They will rely upon their yearly supply of “annual cicadas”.

Currently, two early-summer species are singing away. I heard my first *Tibicen pruinosus* the evening of June 24, and first *T. lyricen* mid-day on July 2.

In comparison to the recent periodical cicadas, both of *T. pruinosus* and *lyricen* are larger and thicker-bodied with impressive wingspreads.

Both *T. pruinosus* and *T. lyricen* are tree-inhabiting species. But side-by-side, they are visually inseparable based upon their individual distinct body patterns and coloration. By far, *T. pruinosus* surpasses *T. lyricen* in terms of population levels, their wider distribution in Kansas, and their longer period-of-activity which extends well into Fall (*T. lyceum*'s “run” is completed by mid-August). The familiar ZzuhWhee ZzuhWhee ZzuhWhee ZzuhWhee (typically beginning in the late afternoon into the evening) is the most familiar sound heard coming from high-in-trees in cities and towns throughout Kansas. But back to cicada killer wasps. Digging back in the vault-of-time and dusting off and somewhat modifying a previously used Kansas Insect Newsletter article ---- good then and good now:

There are many types and species of wasps. **Vespid wasps** (including the familiar paper wasps, yellow jackets and baldfaced hornets) live in “colonies” consisting of a single egg-laying queen and her attendant female workers who will defensively protect the colony against intruders/people who (even if) accidentally disturb the nest/nesting site. In contrast, **sphecid wasps** (most familiar and recognized are mud daubers which build “mud nests”) are solitary species with just a single female tending her nest. Sphecid wasps are docile and unlikely to sting unless provoked by being carelessly handled or accidentally stepped on.



Tibicen pruinosus

Tibicen lyricen

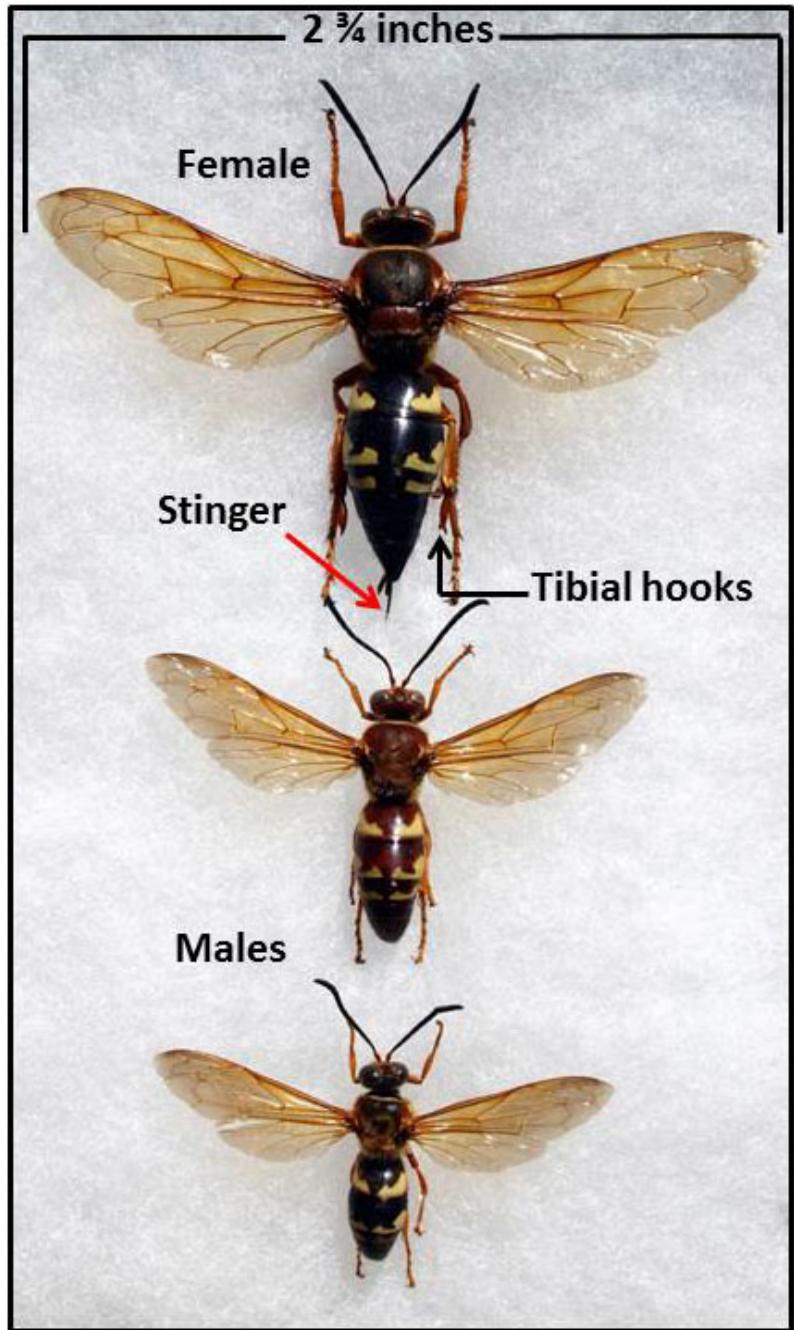
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Thus, cicada killer wasps (despite their appearance and large size) are nothing to be feared. The female uses her stinger to paralyze a cicada. The cicada remains a “juicy” (as opposed to becoming dried out) food source for the wasp larva.

Male cicada killer wasps do not possess a stinger (as already mentioned above). Never-the-less, they appear menacing due to their erratic swarming as they establish territories and seek female mates. While occasionally one might accidentally bump into a person, it is not “attacking”.

Once a male has established his own small territory, he will be on active patrol protecting against interlopers. Buzzing about, he may hover and circle a person. While this may be intimidating, again, he cannot sting!



Cicada killer wasps have a 1-year life cycle. Whereas males do little more than mate, you have to admire female cicada killer wasps ----- **they do all the work**. She selects a preferred site (often a bare sandy area) in which to construct her burrow. Nests are 8 to 20-inches underground. Using her mandibles and legs, she digs/loosens/"kicks out" soil particles which results in the creation of a dirt mound at the burrow entrance. There is a central tunnel off of which are separate side cells/chambers.

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After the structural completion of the nest, she begins the provisioning process. Each chamber contains a single-to-several paralyzed cicadas. After depositing a single egg, the cell is sealed off with dirt. Within the cell, a newly-emerged larva feeds and matures. By mid-summer, it forms a cocoon inside of which it spends the remainder of the summer, the fall and winter. In the late spring, the larva pupates. "New" cicada killer wasps emerge in early summer, mate, and repeat the cycle.

It is not coincidental that nesting areas tend to be close to wooded areas. Given that many cicada species are arboreal, trees are ideal sites for locating cicada hosts. Another advantage of trees? They provide a high point. That is, because a cicada far outweighs the female cicada killer wasp, she is already high enough that she can spread her wings and be airborne. Should she fall short of reaching her nest, and because she cannot take off from the ground with her heavy "cargo", she will drag her cicada up another tree (or some other convenient high point) to again become airborne. The last part of her journey may be on foot when she is close enough to the nest entrance. She then drags her captured cicada to the entrance of, and into the burrow. This process is repeated time after time after time until all of the chambers are provisioned, eggs deposited, chambers sealed and the burrow entrance closed.

A point of interest: females use their middle pair of legs to wrap around/hold the paralyzed cicada. Furthermore, the tibia of the female's hind legs possesses a pair of hook-like appendages (see image above) used to hold/maintain the cicada parallel to its body when in flight. In an experiment where those appendages were removed, the middle legs still secured the cicada although it dangled beneath the wasp as she flew.

Comes the question, "How do I get rid of the cicada killer wasps around my house? I'm worried about being stung!" If you have read through to this point in this article, you already know that you need not be overly concerned about, "..... being stung!" But still, if there is the desire/need to do something, the best procedure would be to observe and identify where the nest openings are. Wait until the female departs. Between that time and when she returns, apply an insecticide into the entryway. (There currently are 795 different products registered for use in Kansas against wasps. Shop-the-shelves at local retail outlets for product availability in your area.) When the female wasp returns, contact with the insecticide will probably lead to her eventual demise. Whether the insecticide will kill the developing larvae is questionable as they are protected by the dirt wall closing off its underground incubation chamber.

The practicality of the above? One or two mounds/nests? Doable. Many mounds/nests? Probably impractical. It is up to an individual's best judgment as to what to do. But maybe consider altering "the attractiveness" for next-year's bout. Renovate lawn areas ---- restore a thick vigorous turf which would have females searching elsewhere for a thin/bare area in which to raise her brood. Also, maintain a moist soil as that would tend to deter her from wanting to expend maximum excavation efforts. In flower bed areas, a layer of gravel or mulch may dissuade her from setting-up-house.

From the viewpoint of an entomologist: take the opportunity to watch and be fascinated by these harmless creatures. If adventurous, put your hand next to her burrow entrance. When "Madam" exits, she may crawl onto your hand. You'll find yourself talking to her. She may move her head this way or that as if to say, "Nice chatting with you. But I must be off. I have more work to do."

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Bob Bauernfeind

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Insect Diagnostic Laboratory Report

<http://entomology.k-state.edu/extension/diagnostician/recent-samples.html>

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Department of Entomology

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