Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel

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Raining rice? The explanation follows.

A phone call from Jamie Hancock, Shawnee County CEA- HORT, got the old grey matter stirring.

Jamie has been receiving reports of what appeared to be tiny rice-sized white caterpillars “raining down” from trees.

Samples were brought in and were described as being milky white with dark heads. However, upon closer examination, the “caterpillars” lacked legs.

The specimens actually were small legless grub-like larvae of curculionid beetles. Curculionid beetles are commonly referred to as weevils.

Weevils are quite specific to their preferred host plant. In this instance, the reported larvae were beneath oak trees. Thus the larvae should be those of acorn weevils, C*urculio glandium*.

I have not been able to locate any single "firm and all-inclusive" account regarding the seasonal life history of acorn weevils. As best I can report, the larvae currently being encountered are the overwintering stage of acorn weevils. Normally they burrow into the soil, but also are reported to seek shelter beneath trash and debris on the soil surface. At some point in time, (probably in earliest Spring) larvae pupate. Beetle emergence begins when temperatures (one would assume constant air temperatures) reach 63° F.

Beetles sustain themselves by feeding on oak foliage. They have elongated "snouts" (rostrums) (#1). While one might assume (by looks) that the snouts must be "long straws" which pierce leaf tissues and through which they suck plant juices, in fact on the very tips, they possess chewing mouthparts with which they "nibble". Feeding damage to oak is inconsequential.

After acorn formation, females use their rostrum to nibble/pierce the hard acorn shell. After reaching the center of the nut, the female withdraws, does an about-face, and uses her ovipositor to insert an egg into the acorn. The ovipositional hole "heals itself" offering protection to the egg within. After hatching, the larva moves to the center of the nut --- the pathway facilitated by the female's prior boring activity. The larva feeds and develops within (#2). When mature, the soft-bodied larva uses its strong chewing mouthparts (#3 - arrow) to create a small exit hole through which it squeezes its way out (#4). Thus, the appearance of "holey acorns" (#5).

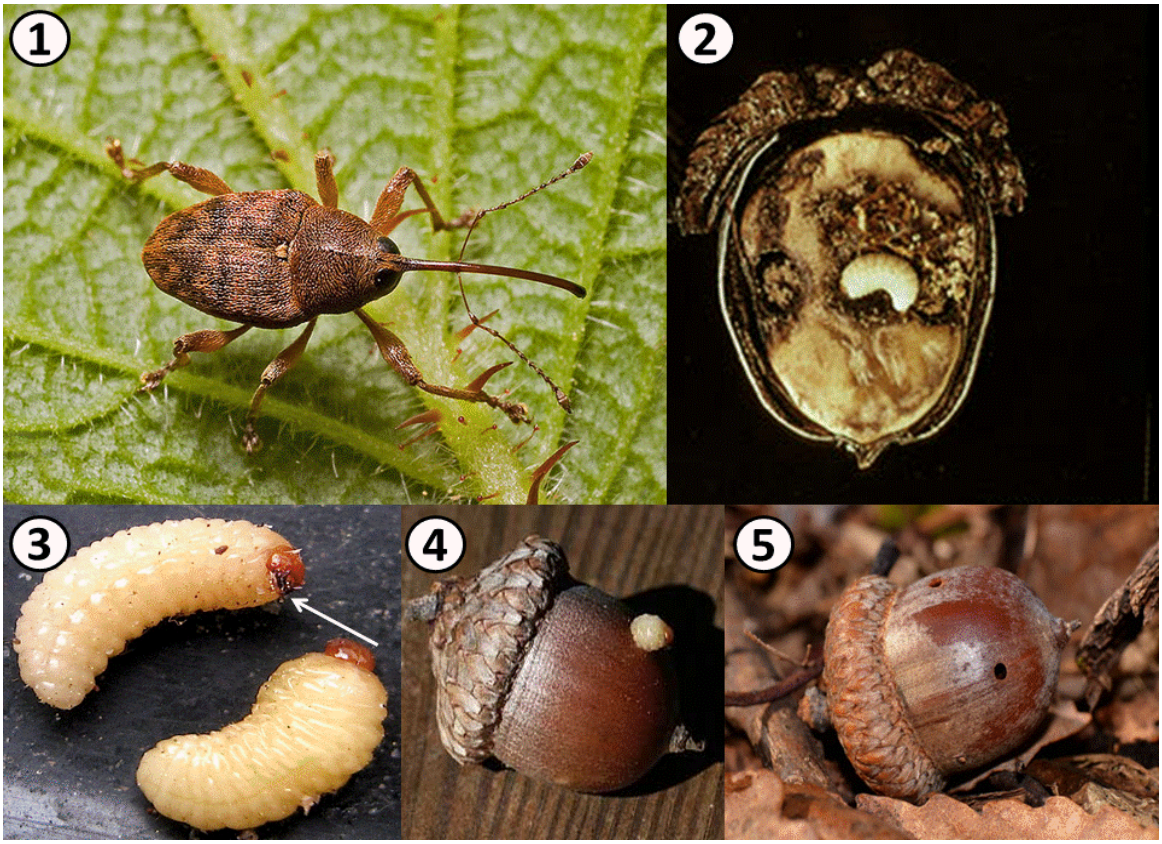


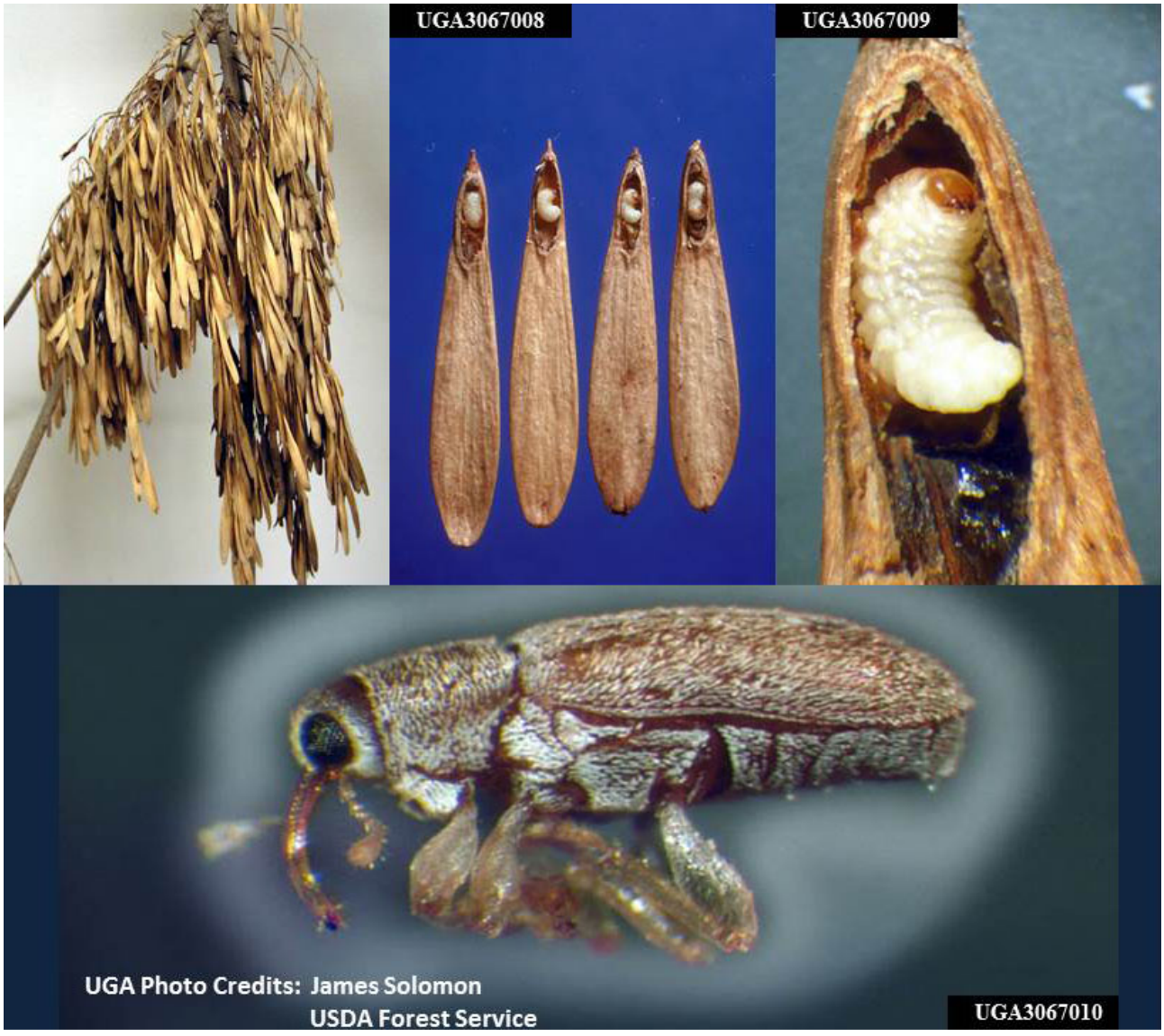
Image Credits: #1 – David Evans www.Flickr.com; #2 – Louisiana State University Archives; #3 – Lakecountynature.com; #4 – Unknown; and #5 – www.abundant nature.com.

When acorns naturally drop and larvae then leave the acorn, they go unnoticed as they seek overwintering quarters (again, burrowing into the soil, or seeking shelter beneath trash and debris on the soil surface). But when (for whatever reason) larvae receive the signal/stimulus to exit acorns before they (the acorn) drop, "raining rice" draws the attention of people with acorn trees on their property.

The bottom line is that this situation is just that: a situation. Besides the disconcerting, possibly unappealing appearance of the weevil larvae, there is no cause-for-concern regarding the health of the oak trees. All will soon be forgotten.

A similar incident was reported in 2008 involving a different weevil species. Six years ago to the same day as I prepare this article (October 16), I received a phone call reporting small white "rice-like worms" littering a driveway, street and truck hood/roof/bed. The tree next to the driveway (yellow arrow) was an ash.

Whereas many of the tree's leaves had dropped, most of the seed pods were retained. Thus the only source of the "rice" raining from the tree could have been the seed pods. Upon close inspection of seed pods, many possessed larval exit holes. Pods lacking exit holes were dissected and each found to contain a larva. In this instance the legless larvae were those of the Ash seed weevil, *Thysanocnemis bischoffi*.



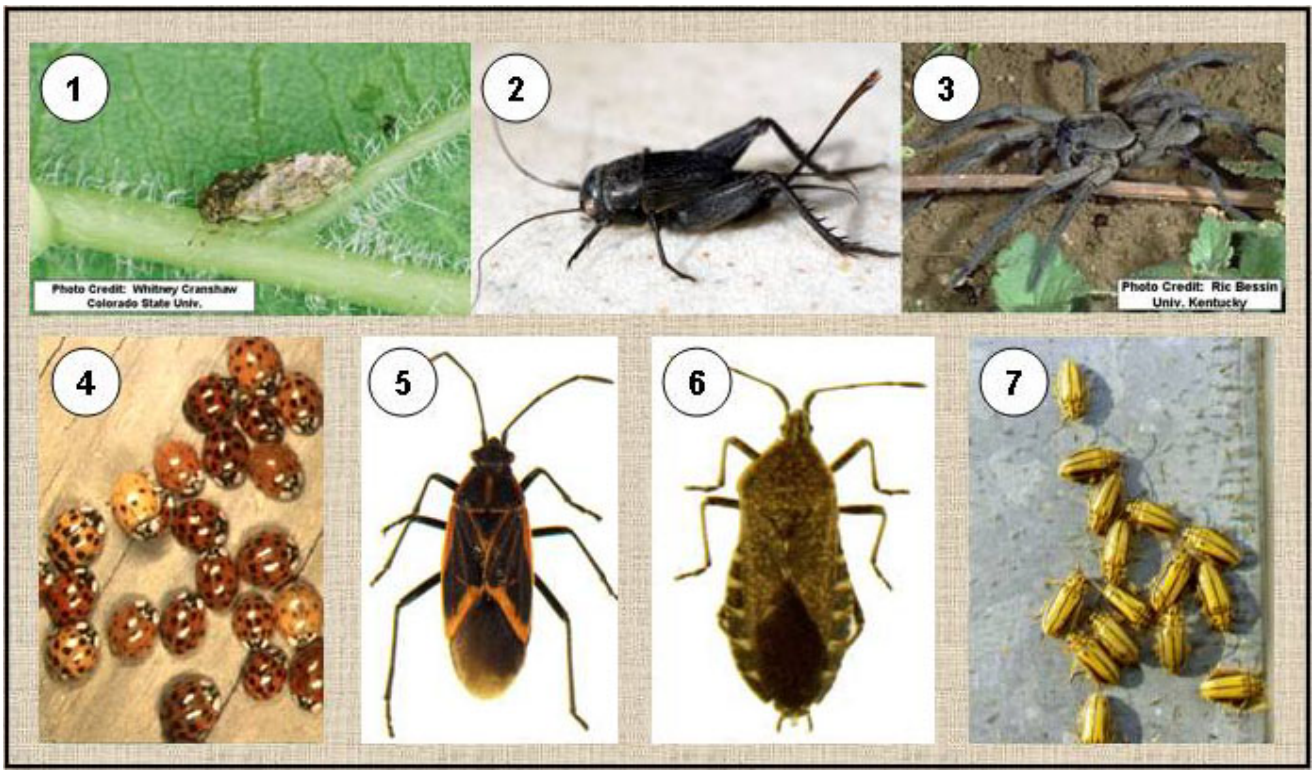
Interestingly, earlier today, I returned to that site to visit with the homeowner. He reported that in the intervening years, there had been no repeat instances of the 2008 episode. Again, this reinforces that the accumulations of weevil larvae (regardless of their species) is an event of sporadic and unpredictable occurrence ---- at most, merely a curiosity.

Uninvited Visitors In Your Home?

This recent run of above-average temperatures has seen quite a bit of insect activity around homes. There have been a lot of "critters" in the blacklight trap that I continue to run in my backyard, as well other "night fliers" that congregate around the garage, porch and deck lights. And, while painting some house trim, small "jumpy" insects were attracted to (and getting stuck in) the wet paint: hackberry nipplegall psyllids. The following Return of the Magnificent Seven is previous Kansas Insect Newsletter copy which addresses a variety of arthropods commonly encountered with the cooler temperatures of Fall.

In staying with movie trivia (as so often happens with my articles): this 1966 remake of the original 1960 movie, The Magnificent Seven, is somewhat misleading ----- only the characters Chris, Vin and Chico actually **Return** (the other 4 were killed off). But never fear, 4 new characters were inserted to bring the "good-guy gang" back to 7 (although not quite as **Magnificent** --- personnel opinion). [And Yul Brenner (Chris), the guy who made "bald is beautiful" a catch phrase, was the only "repeat" movie actor].

The Seven Magnificent Creatures that seem to return to our homes every Fall are hackberry nipplegall psyllids, crickets, spiders, multicolored Asian lady beetles, boxelder bugs, squash bugs and elm leaf beetles. Most of these overwinter as adults. And all are trying to get in out-of-the-cold.



#1 – Hackberry nipplegall psyllids are very small insects which (during Fall) emerge from the galls within which they developed through the summer months. They overwinter as adults which seek out secluded areas to escape the harsh winter elements. In natural settings, this means any available crack, crevice, nook and cranny, and in and under debris/trash. In residential areas, homes offer alternative overwintering sites. Because of their small size, the psyllids are able to slip through openings as small as window screens, and thus gain entrance into homes. They become a nuisance because of their presence.

#2 – While crickets overwinter as eggs deposited in the soil, adults seek out areas-of-warmth. Moving towards sources of heat (radiated heat from house/building foundations), crickets slip through any available opening to gain access to indoor areas. Again, their mere presence can be annoying. In addition, while the chirping of male insects may be considered beautiful music-of-the-night in outdoor settings, indoors it may be regarded as noisy racket. Although not bona fide fabric pests, being they are insects with chewing mouthparts pests, crickets may be responsible for creating holes in fabrics as well as leaving stains on light-colored fabrics (curtains/sheers the oft-cited areas showing damage).

#3 – In the eyes of many people, spiders are visualized as "creepy" and "dangerous". While all spiders produce venom which is used to "still" their prey, bear in mind that: spiders are non-aggressive; most spiders are small and their tiny fangs too weak to penetrate our toughened skin; and their venoms are very mild to humans. Spiders living outdoors may seek the warmth our homes. Perhaps wolf spiders are the most commonly recognized species due to their size (some species with a 4-inch leg span) and hairy appearance. Their overall color may vary from brown to grey. They may be flecked with different body patterns. Wolf spiders are hunting spiders that are always on the prowl. But they are timid creatures and do not seek out and attack people.

#4 – Multicolored Asian lady beetles (MALB) are a relatively recent addition to the list of nuisance pests. While in nature, most coccinellid (lady beetle) species are beneficial predators (as is the MALB), the MALBs have become a nuisance pest due to their habit of congregating (especially) on the south side exteriors of homes and buildings. They then may gain entrance via any available crack/ or crevice such as crevice/ill-fitting door or window opening to gain indoor entrance.

Their crime? Again, their presence. Also, when disturbed (if picked up or brushed up), they leave behind an orangish fluid which can cause a stain. There also is an odor (objectionable to some) accompanying the beetles. And some people say that MALBs bite (to which I respond, "Show me the blood!") However, I do agree that they may "pinch" with their mouthparts.

#5 – Boxelder bugs (BEB), also known as "Democrat bugs", are regarded as nuisance pests, again, based on their presence whether (in number) one, several or many. Although their preferred host is their namesake tree (boxelder), ash and maple serve as alternative tree species upon which BEBs thrive. Especially in the fall of the

year, these insects will gravitate towards areas of warmth (south sides of homes and buildings). Some gain access into indoor areas while others seek shelter beneath debris/rubble around home/building foundations. Throughout the winter months during brief warm spells, BEBs will be "awakened out of their slumbers", and actively crawl up the sides of houses and buildings to bask in the sun.

#6 – Ditto for squash bugs except to change their preferred host plants to squash and pumpkins. One great difference, however, is that whereas BEBs cause no apparent damage to their tree hosts, squash bugs are all-too-well-known for their deleterious effects on squash and pumpkin vines/plants. But in the context of this newsletter, they are regarded as indoor nuisance pests.

#7 – The feeding activities of elm leaf beetles (ELB) and their larvae result in elm trees taking on a "burnt appearance" in late summer and early fall. Second generation beetles seek dry protected sites to escape the rigors of winter. Again, "indoor sanctuaries" favor their survival through the winter months.

So we have named "The Seven". What does one do to prevent them from entering homes/businesses? **Deny-them-entryways!** This is easier said than done. There is no "perfect structure". Even newly constructed homes and buildings have gaps and holes through which insects can easily move. A person needs to inspect their property, identify portals of entry and seal them off (be generous with caulk). Check exclusionary screening (and repair or replace as needed) over/behind gable vents, roof vents, breezeways. Replace seals around windows, doorways and garage doors. Remove debris and trash around foundations to deny protected sites providing harborage(s). Consider a 6-12-foot "barrier" insecticide spray treatment around homes/buildings, and (possibly) extending up the side of the structures.

Despite one's best efforts, insect/arthropod "visitors" may still be encountered indoors. Simply remove and dispose of them ---- by hand, vacuum or any other method-of-choice. Bear in mind that all of these are OUTDOOR SPECIES which are merely seeking refuge/survival during the winter months.

Bob Bauernfeind

Insect Diagnostic Laboratory Report

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

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Sincerely,

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