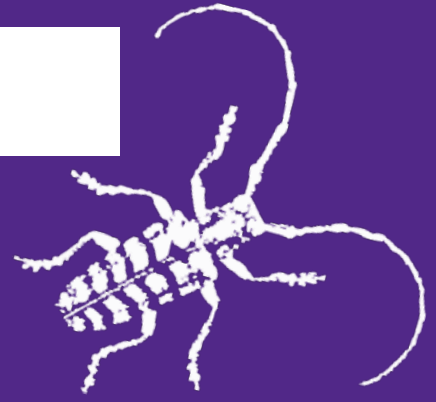


Kansas State University Extension Entomology Newsletter

For Agribusinesses, Applicators, Consultants, Extension Personnel & Homeowners

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ID to last week's bug
Identify This Insect
Euonymus Scale
Wheel Bug
DECTES--Soybean Stem Borer
Western Corn Rootworms
Carpenter Bees
Bug Joke of the Week

ID to last week's bug

Squash bug – Squash bugs use their piercing-sucking mouthparts to suck the sap out of plants leaves. This feeding can lead to the plants to wilt. These pests prefer to feed on zucchini, winter squash, and pumpkins, but will also attack members of the cucurbit family, such as cucumbers, cantaloupe and watermelon. It is important to detect the presence of these pests early, in order to try to control their population.

Can you identify this insect and tell a plant it likes to feed on?



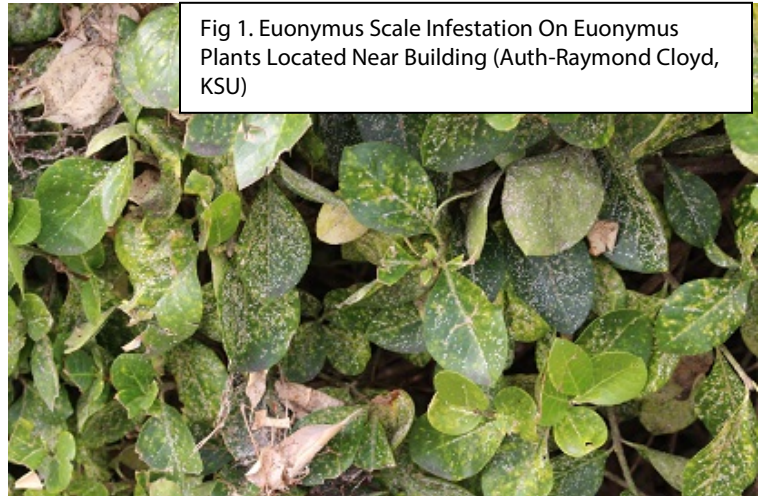
Identify This Insect

Can you identify this insect and tell how they got their name?

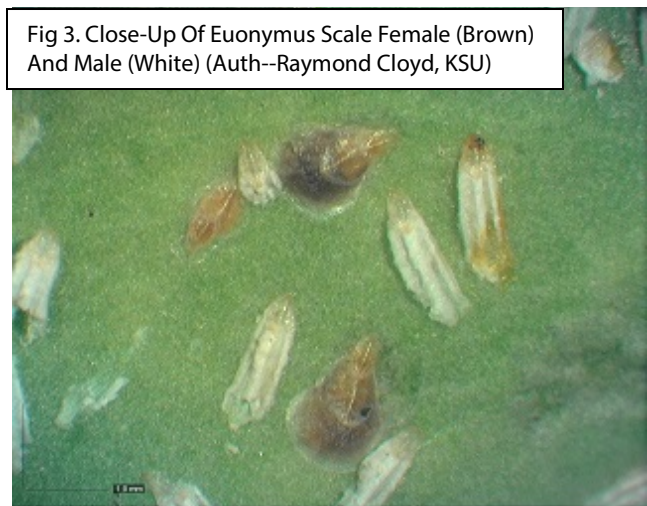
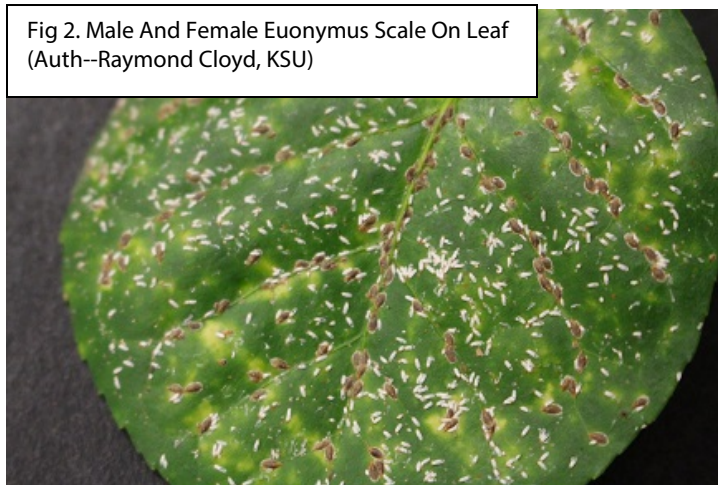


Euonymus Scale

Now is the time year when euonymus scale, *Unaspis euonymi*, is noticeable on evergreen euonymus, *Euonymus japonica*, and Japanese pachysandra, *Pachysandra terminalis*, plants in landscapes. Euonymus scale overwinters as a mated female on plant stems. Eggs develop and mature underneath the scale, and then nymphs (crawlers) hatch from eggs over a two to three-week period. The nymphs migrate along the stem and start feeding near the base of host plants. Nymphs can also infest adjacent plants by being blown around on air currents, which results in infestations not being detected until populations are extensive and damage is noticeable. Leaves eventually become spotted yellow or white (Figure 1). Plants located near structures such as foundations, walls or in parking areas are more susceptible to euonymus scale than plants growing in open areas that receive sunlight and are exposed to air movement.



Extensive infestations of euonymus scale can ruin the aesthetic appearance of plants, causing complete defoliation or even plant death. Females are dark brown, flattened, and resemble an oyster shell. Males, however, are elongated, ridged, and white (Figures 2 and 3). Males tend to be located on leaves along leaf veins whereas females reside on the stems. There can be up to three generations per year in Kansas.



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Cultural practices such as pruning out heavily infested branches, without ruining the aesthetic quality of the plant are effective in quickly reducing euonymus scale populations, especially this time of year. Be sure to discard all pruned branches away from the area.

Insecticide applications should have been applied in May through early-June (now is really too late!) when the nymphs are most active, which will help alleviate problems with euonymus scale later in the season. Insecticide active ingredients recommended for suppression of euonymus scale populations, primarily targeting the nymphs, include acephate; pyrethroid-based insecticides such as bifenthrin, cyfluthrin, permethrin, and lambda-cyhalothrin; potassium salts of fatty acids; and petroleum, mineral, or neem-based (clarified hydrophobic extract of neem oil) horticultural oils. Always check plants regularly for the presence of nymphs, which will help time insecticide applications.

Three to four applications performed at seven to 10-day intervals may be required; however, this depends on the level of the infestation. Euonymus scale is a hard or armored scale, so, in most cases, soil or drench applications of systemic insecticides such as imidacloprid are not effective in suppressing euonymus scale populations. However, the systemic insecticide dinotefuran, due to its high-water solubility (39,000 ppm), may provide suppression of euonymus scale populations when applied as a drench to the soil.

Euonymus scale is susceptible to many different natural enemies (e.g. parasitoids and predators), including: braconid and ichneumonid wasps, ladybird beetles, green lacewings, and minute pirate bugs. However, natural enemies may fail to provide enough regulation to substantially impact extensive populations of euonymus scale. Furthermore, insecticides such as acephate; and many of the pyrethroid-based insecticides, including bifenthrin, cyfluthrin, permethrin, and lambda-cyhalothrin are very harmful to most natural enemies, so applications of these materials may disrupt any natural regulation or suppression.

For more information on how to manage euonymus scale and other scale insect pests refer to the following extension publication:

Scale Insect Pests (MF3457 July 2019)

<https://www.bookstore.ksre.ksu.edu/pubs/MF3457.pdf>

Raymond Cloyd

HOME

Wheel Bug

If you have spent any time outdoors walking around, you may have noticed a very distinct, grotesque looking insect on trees, shrubs, or near homes. The insect is the wheel bug (*Arilus cristatus*), which is common, and widely distributed throughout Kansas. Wheel bugs, also called assassin bugs, are predators that feed on many insect pests. However, the nymphs and adult can inflict a painful bite if handled by humans.

Adult wheel bugs are 1 to 1-1/4 inches long, robust with long legs and antennae, and have a stout beak and large eyes on a narrow head (Figure 1). They are dark-brown to gray and possess a wheel or crest with 8 to 12 protruding teeth-like structures (tubercles) on the thorax that resembles a cogwheel; similar to the dinosaur—Stegosaurus (Figure 2). Wheel bugs have two long, slender antennae that are constantly moving or weaving around. Females are typically larger than males. Females lay eggs that resemble miniature brown bottles with white stoppers (Figure 3). Eggs are laid in clusters of 40 to 200. The eggs are glued together and covered with a gummy cement, which protects eggs from weather extremes and natural enemies (e.g. parasitoids and predators). Egg clusters are located on leaves, or the trunk or branches of trees or shrubs. Nymphs hatch (eclose) from eggs and are bright red with black markings (Figure 4). The nymphs do not have the wheel or crest. The life cycle, from egg to adult, takes three to four months to complete. Wheel bugs are active day and night, and are very shy, tending to hide on leaf undersides. The wheel bug overwinters as eggs with one generation per year in Kansas.

Wheel bugs are voracious predators feeding on a wide-variety of insects, including caterpillars (Figure 5), beetles, true bugs, sawflies, and aphids.

Fig 1. Wheel Bug Adults Mating. Male Is On Top Of Female (Auth--Raymond Cloyd, KSU)



Fig 2. Wheel Bug Adult (Auth--Raymond Cloyd, KSU)



Fig 3. Wheel Bug Eggs On Leaf Underside (Auth--Raymond Cloyd, KSU)





Fig 4. Wheel Bug Nymph (Author--BugGuid.Net)



Fig 5. Wheel Bug Adult Preparing To Attack A Caterpillar (Auth--Raymond Cloyd, KSU)

Unfortunately, wheel bugs will feed on beneficial insects such as ladybird beetles and honey bees. The mouthparts are red-brown and resemble a tube or straw that is located underneath the head. The mouthpart extends out when wheel bugs are ready to “stab” prey. Wheel bugs paralyze prey with their saliva that contains a toxic substance, which immobilizes prey within 30 seconds. In addition to feeding on insects, wheel bugs are cannibalistic, and will feed on each other if they cannot locate a food source (prey). What is there not to like about “bugs?” 😊

Raymond Cloyd

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DECTES (soybean) Stem Borer

The 1st adult Dectes (soybean) stem borers were observed on 29 June in north central Kansas (see fig. 1). This adult emergence seems to be right on schedule with past years, as we have found adults emerging right around the 4th of July since 1997. These adults usually feed a little while on pollen, then mate for about 7-14 days before disbursing to soybean (or sunflower) fields to deposit their eggs in the stems right at the petiole.



Figure 1 Adult Dectes Stem Borer (BY Cody Wyckoff)

Jeff Whitworth

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Western Corn Rootworms

Western corn rootworm larval feeding seems to be almost finished around the north central part of Kansas, anyway. Root monitoring yielded mostly mature larvae-- but also one that had just recently pupated (see fig 2). No western corn rootworm adults have been observed yet.



Figure 2 Two WCRW larvae plus new pupa (by Cody Wyckoff)

Jeff Whitworth

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CARPENTER BEES

A couple folks viewed last weeks carpenter bee photos and thought they were bumble bees. This is a great example then to point out just how important it is to take the best possible photos before sending them in to be ID'd. Please take several closeups from several angles and please place some object beside the specimen, i.e., a penny, pencil, ruler, etc, will work, so we can get an idea of size. Also very important, where the specimen was found and what was it found on, and how many were at that location and what were they doing-feeding/crawling on the ground, etc. The specimens last week were collected from insulation in an old garage and seemed to have smooth abdomens. See figure 3 for side by side comparison between a carpenter bee vs bumble bee.



Figure 3 carpenter bee (on the left) vs bumble bee (on the right)

Also, for those interested in trapping carpenter bees-please see Dr Phil Sloderbeck's carpenter bee trap (fig 4). Dr Sloderbeck retired ca.6 years ago as a KSU Extension Entomologist and Southwest Kansas Area Administrator. But, (fig 5)as you can plainly see--Dr Phil is still an entomologist at heart! Happy retirement, Dr Phil, and thank you for the pictures!

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Figure 4 bee trap (P. Sloderbeck)

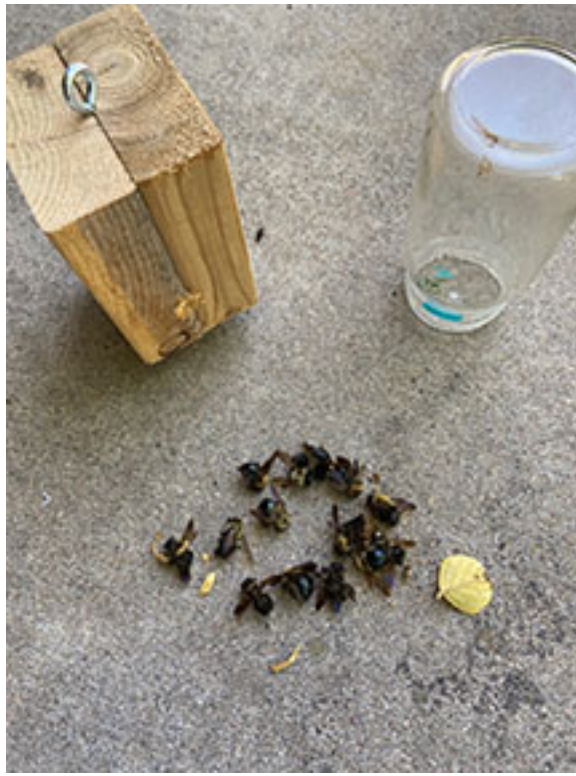


Figure 5 captured 17 carpenter bees (P. Sloderbeck)

Jeff Whitworth

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Bug Joke of the Week

Question: What did the click beetle say to his colleague just before departing?

Answer: Catch you on the "flip" side!

Jeff Whitworth

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