

Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel



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Insect Diagnostic Laboratory Report

Sugarcane aphid in sorghum

Despite a slow start in 2015, the sugarcane aphid is now spreading fast. The aphid has been causing serious problems in Georgia where some farmers have been seeking insecticide alternatives after two applications of Transform, the allowable limit. This week, economically significant infestations were found as far north as Noble, Kay and Grant Counties, OK, right on the Kansas state line. With some southerly wind, we will soon get winged aphids landing in Kansas sorghum.

Scouting Sugarcane Aphids

Timing effective treatment to control sugarcane aphids (SCA) in sorghum depends on the size of the SCA population. To estimate the number of SCA in a field, follow these steps for scouting the field and use the **Sampling Protocol** (below) and the **Quick Aphid Checker** (on back) to make treatment decisions.

First Detection: Is the Field at Risk?

- Once a week, walk 25 feet into the field and examine plants along 50 feet of row.
- If honeydew is present, look for SCA on the underside of a leaf above the honeydew.
- Inspect the underside of leaves from the upper and lower canopy from 15–20 plants per location.
- Sample each side of the field as well as sites near Johnsongrass and tall mutant plants.
- Check at least 4 locations per field for a total of 60–80 plants.

If no SCA are present, or only a few wingless/winged aphids are on upper leaves, continue once-a-week scouting.

If SCA are found on lower or mid-canopy leaves, begin twice-a-week scouting. Use the Sampling Protocol and the Quick Aphid Checker to determine if aphid densities exceed the economic threshold.

Sampling Protocol: Making Treatment Decisions

Examine the underside of one completely green leaf from the lower canopy and the uppermost leaf (or the leaf below the flag leaf at boot to heading) and estimate the number of SCA per leaf, using the Quick Aphid Checker. Examine 2 leaves from each of 5 random plants per location. Repeat at 4 locations, for a total of 40 leaves. Use the Quick Aphid Checker to calculate the mean number of aphids per leaf.

- If the field average SCA infestation is **50–125 aphids or more per leaf**, apply an insecticide within 4 days and evaluate control after 3–4 days. Consider treatment at 50 aphids per leaf if limited to once-a-week scouting.
- If the SCA infestation is less than the threshold level, continue scouting twice a week.



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J.P. Michaud, Hays, KS

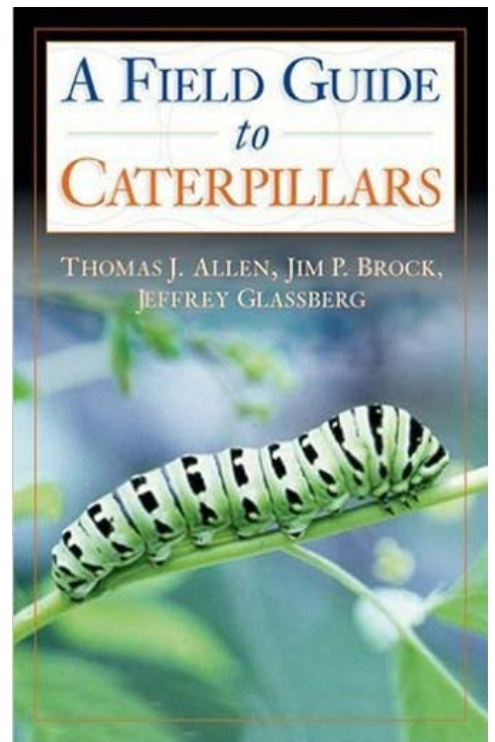
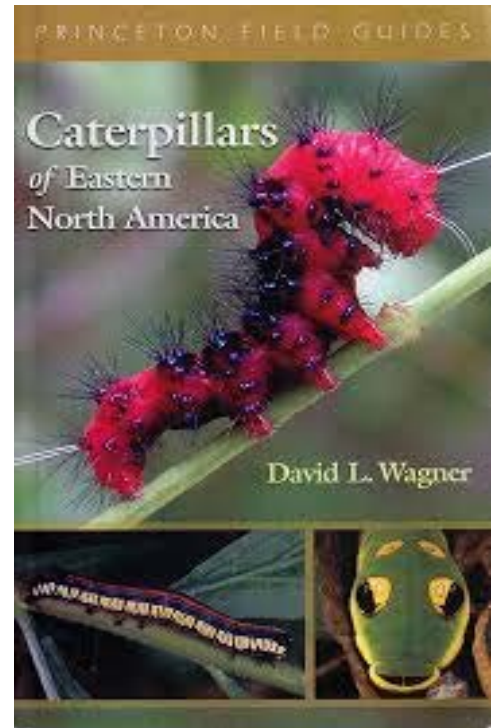
What's in a Name? Caterpillars.

Within the last two weeks, I received e-mails with attached images of caterpillars feeding on various landscape ornamentals. The senders requested identifications of the caterpillar species. Of course, as entomologists, we are expected to come through with positive identifications, as well as recommendations on how to address situations where caterpillars are feeding on prized plants.

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Identifying caterpillars can be easy-as-pie for those species of common occurrence (recently, caterpillars of whitelined sphinx moths, cercropia moths and walnut caterpillar moths), but more difficult for the many many many caterpillars of species encountered on but an infrequent basis. While there are various books with page upon page showing images of butterflies and moths, similar publications picturing the larvae of the same butterflies and moths are limited. The following references would be good additions to one's book shelf. However, they do not necessarily guarantee accuracy for identifying caterpillars. But at least these references provide a useful starting point when attempting to identify caterpillars.



Four recent submissions were images of rather spiny/bristly looking caterpillars. Almost immediately, one suspects that they likely are caterpillars of butterflies in the taxonomic family Nymphalidae, most of whose caterpillars are adorned with spiny tufts, and rows of branched spines. The collective common name applied to

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nymphalid butterflies is “brushfoot butterflies” ----- so named because (in general) of their hair-covered front legs which are reduced in size, held close to the body, and not used for walking. This largest family of butterflies includes commonly recognized species such as the many that comprise the fritillaries and checkerspots, anglewings (question mark and comma butterflies), thistle butterflies (painted ladies and red admirals), tortoise shells (morning cloak), admirals (white, viceroy and red-spotted purples), milkweed butterflies (commonly, monarchs), hackberry and tawny emperor butterflies, and satyrs and wood nymphs.

Of the most recent inquires, one (an image that I was unable to retrieve) was that of a morning cloak butterfly caterpillar. The accompanying image shows (in detail) the exquisite array of spines and hairs, the dark body with multitudes of small white dots, and the prominent orangish-to-red dorsal patches. Listed hosts include elm, willow, hackberry, poplar, wild rose and Hawthorne.



Photo Credit: Jim P. Brock
butterfliesofamerica.com

The next was the unmistakable larva of the dotted checkerspot butterfly. It is always nice when an ID seems to be so clear-cut based on an exact match between the actual specimen and the pictured specimen. Matt McKernan has received numerous reports of these being feeding on Echinacea which includes cone flowers (purple cone flowers being popular garden varieties).



Photo Credit: Matthew McKernan, CEA – Hort.
Sedgwick Co. Extension Education Center, KS

The next 2 examples may be more typical in terms of complicated identifications. Jenae Ryan’s image was of caterpillars on zinnias. Paging through the images in Caterpillars in the Field and Garden, I settled on the only closest match: caterpillars of the Meadow Fritillary.

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Photo Credit: Jenae Ryan, CEA – Hort.
Post Rock District #1, Mankato Office, KS

The complications? The listed host plants were violets, not zinnia. And, Kansas is well outside of the range indicated on the accompanying distribution map.

Mark Ploger submitted this image of caterpillars found on cone flowers. Assuming that they likely were from the same egg mass, this exemplifies differences in appearances between siblings. As hard as I tried and squinted, there were no matching images in-the-books. So the simple response was, "Larvae of a Nymphalid butterfly"



Photo Credit: Mark Ploger, CEA – ANR
Pratt County Extension Office, KS

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The point to be made is that although it is well-and-good to submit actual caterpillar specimens and/or images for identification to satisfy the curiosity of “What is it?”, regardless of knowing their exact identity, if the caterpillars are causing intolerable damage, they need to be eliminated.

People have their own levels of tolerance ranging from zero (preferring perfection of plant appearances), to live-and-let-live (preferring to enjoy the beauty of expectant butterflies).

Bob Bauernfeind

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

Eva Zurek

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Kansas State University Agricultural Experiment Station and Cooperative Extension Service

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