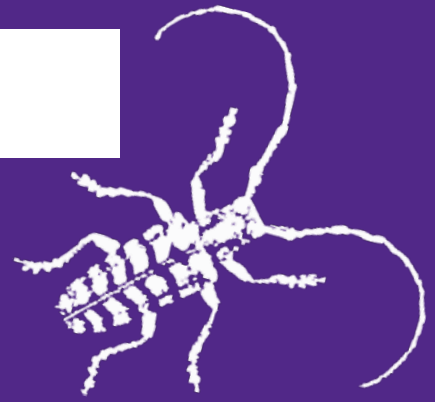


Kansas State University Extension Entomology Newsletter

For Agribusinesses, Applicators, Consultants, Extension Personnel & Homeowners

Department of Entomology
123 West Waters Hall
K-State Research and Extension
Manhattan, Kansas 66506
785-532-5891
<http://blogs.k-state.edu/kansasbugs/>
<http://www.entomology.ksu.edu/extension>



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Bagworms
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Bagworms!

Now is the time to be looking for bagworms. Although the cool weather we experienced this spring may have slowed development, and consequently larvae emerging (eclosing) from eggs, bagworm caterpillars are going to be present throughout Kansas feeding on broadleaf and evergreen trees and shrubs. Therefore, be prepared to take action against bagworms once they are observed on plants. Bagworms are primarily a pest of conifers; however, they feed on a wide-range of host plants including many broadleaf plants, such as; elm, flowering plum, hackberry, honey locust, linden, maple, oak, rose, sycamore, and wild cherry. It



Figure 1. Young Bagworm Larva Or Caterpillar Feeding On Plant Foliage (Author--Raymond Cloyd, KSU)

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is important to apply insecticides when bagworms are approximately 1/4 inch long or less (Figure 1) to maximize effectiveness of insecticide applications and subsequently reduce plant damage.

There are many insecticides labeled for use against bagworms; however, the insecticides that can be used now to suppress populations of bagworms are *Bacillus thuringiensis* subsp. *kurstaki* and spinosad. These active ingredients are commercially available and sold under various trade names or as generic products. The bacterium, *Bacillus thuringiensis* subsp. *kurstaki*, is only active on young caterpillars and must be consumed or ingested to be effective. Therefore, thorough coverage of all plant parts and frequent applications are required. The insecticide is sensitive to ultra-violet light degradation and rainfall, which can reduce residual activity (persistence). Spinosad is the active ingredient in several homeowner products, including: Borer, Bagworm, Tent Caterpillar, and Leafminer Spray; Captain Jack's DeadBug Brew; and Monterey Garden Insect Spray. The insecticide works by contact and ingestion; however, activity is greatest when ingested by bagworm caterpillars. The key to managing bagworms with these insecticides at this time of year is to apply them early and frequently enough to kill the highly susceptible young caterpillars feeding on plant foliage. Applying insecticides weekly for four to five weeks when bagworms are first noticed will reduce problems with bagworms later in the year.

Thorough coverage of all plant parts, especially the tops of trees and shrubs, where bagworms commonly start feeding, and frequent applications are essential in achieving sufficient suppression of bagworm populations. The reason multiple applications are required is that bagworm caterpillars do not emerge (eclose) from eggs simultaneously but emerge (eclose) over time depending on temperature. In addition, young bagworms can be 'blown in' (called 'ballooning') from neighboring plants on silken threads. If left unchecked, bagworms can cause significant damage and ruin the aesthetic quality of plants. In addition, bagworms may kill plants, especially newly transplanted small evergreens, since evergreens do not usually produce another flush of growth after being fed upon or defoliated by bagworms.

If you have any questions on how to manage bagworms in your garden or landscape contact your county horticultural agent, or university-based or state extension entomologist. You can also read the following extension publication on bagworms:

Cloyd, R. A. 2019. Bagworm: insect pest of trees and shrubs. Kansas State University

Agricultural Experiment Station and Cooperative Extension Service. Kansas State University; Manhattan, KS. MF3474. 4 pgs.

<http://www.bookstore.ksre.ksu.edu/pubs/MF3474.pdf>

Raymond Cloyd—Horticultural Entomology

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ALFALFA PESTS

Most alfalfa around north central Kansas, has been swathed at least once and some fields even twice. Adult alfalfa weevils were very common in many fields up until about 10 days ago, which caused considerable concern. When temperatures finally approached and/or exceeded 80-85 °F, however, most adults migrated out of the fields and should not cause any more concern, or return in large numbers, to alfalfa fields, until September. Adult alfalfa weevils do feed just a little-but not anywhere as voraciously or as long as the larvae (see pic 1-alfalfa weevil larva noted still in the field on 8 June, 2021)



Picture 1 Alfalfa weevil larva



Picture 2 Grasshopper Nymph

Very few actual pests have been noted in alfalfa fields over the last couple of weeks. However, grasshoppers are hatching and these small nymphs (see pic 2) should be closely monitored. Adult leafhoppers have started migrating back into the state so as fields start to grow back after cutting these should be monitored also. Fortunately, there seem to be good numbers of lady beetles (see pic 3-lady beetle larva; pic 4-lady beetle pupa; and pic 5-adult- -this adult has the neatest name in entomology in my opinion--twicestabbed lady beetle) which should help control any aphid problems going forward.

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Picture 3 Lady beetle larva



Picture 4 Lady beetle pupa



Picture 5 Lady beetle adult (Twicestabbed lady beetle) – two distinct red spots on their back

Jeff Whitworth –Field Crops

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BEAN LEAF BEETLES

Many soybeans have been planted recently and seem to be doing really well under good growing conditions. Most (if not all) fields with germinated beans have a few bean leaf beetle adults feeding on them (see pic 6). However, seedling soybeans can withstand considerable defoliation, especially under these good growing conditions, without any adverse effect. These adults usually cause round or oval holes in leaves (see pic 7) but it takes approximately 6-8 beetles/row foot to justify a rescue insecticide application. These adults will feed a little on leaf tissue then start depositing eggs around the base of soybean plants where the larvae feed for 2-3 weeks.



Picture 6 Bean leaf beetle adult



Picture 7 Soybean leaves with round or oval holes from Bean leaf beetle feeding

(All Photos by Cody Wyckoff)

Jeff Whitworth – Field Crops

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Be an Insect Detective

This week I got the opportunity to visit a community garden to view the beautiful flowers and try to obtain some images of insects. It occurred to me that as an entomologist I often need to be a bit of a detective to discover who is feeding on what plant. It is possible to be deceived if we don't take the time to take a closer look!

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At first glance the Black Eyed Susan's appeared to have a fuzzy web like appearance making a person think of a disease, but upon closer inspection I could tell they had been fed on by an insect. The image illustrates what I was seeing in the landscape. The leaves appeared fuzzy because something had skeletonized the leaves and left behind their frass, which is characteristic of some type of caterpillar. Upon closer inspection, I was able to find the culprits feeding on the plants in groups as shown in the second image. It is important to remember that the larval stage can be difficult to identify as there are not as many identification guides available. In this case, I determined them to be Variegated Checkerspot caterpillars.



Since caterpillars can be vary host specific sometimes what type of plant they are found on will give you a clue as to what they are! I recommend using a notebook or your phone to take notes of where the insect was found, on what type of plant, and to make a note of any identifying features. A magnifying glass may help you be able to identify key characteristics. The camera on your phone can be used to take a clear photo, which can then be identified later. An image can be worth a thousand words and is a lot easier to identify from than a description. Just some items to think about as you explore the outdoors this summer.

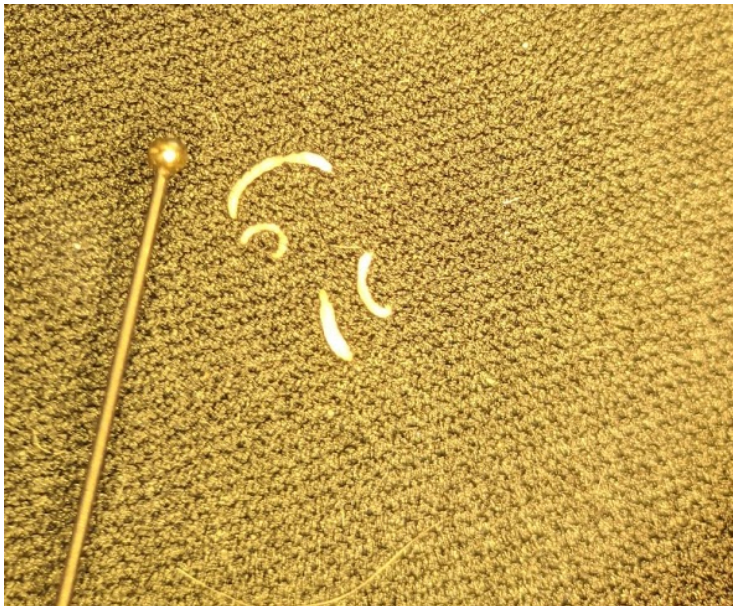


Frannie Miller-- Pesticide Safety & IPM Coordinator

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Finding developing flea larvae in your home

While many of us are familiar with identifying adult fleas, we may be less familiar with what juvenile fleas look like (Figure 1). Fleas are holometabolous insects having an egg, larval, pupal and adult stage. Most flea species have three larval instars, which are white in appearance, increasing in size with each molt (Figure 2). Flea larvae feed on organic matter present in dark, humid environments including animal bedding and carpeting. Cannibalism is common in fleas with larger individuals feeding on younger, smaller individuals. In some species, adults will produce dried blood rich fecal pellets called flea dirt; this provides further nourishment for growing larvae. Most dog and cat flea products kill adult fleas as well as preventing larvae from reaching the adult stage by regulating growth processes. Washing animal bedding as well as vacuuming often will also remove developing flea larvae.



Cassandra Olds – Livestock and Veterinary Entomology

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Bug Joke of the Week

Q: What kind of petroleum do snails use?

A: Shell!

Raymond Cloyd – Horticultural Entomology

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Sincerely,

Jeff Whitworth
Extension Specialist
Field Crops
phone: 785/532-5656
e-mail: jwhitwor@ksu.edu

Raymond A. Cloyd
Professor and Extension Specialist
Horticultural Entomology/Integrated Pest Management
Phone: 785-532-4750
Fax: 785-532-6232
e-mail: rcloyd@ksu.edu

Frannie Miller
Pesticide Safety & IPM Coordinator
Kansas State University
600 W. Woodside
McPherson, KS 67460
Phone: (620) 241-1523
Fax: (620) 241-3407
<http://www.ksre.ksu.edu/pesticides-ipm>

Cassandra Olds
Assistant Professor
Livestock & Veterinary entomology
Phone: (509) 715-7611
e-mail: colds@ksu.edu

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Kansas State University Agricultural Experiment Station and Cooperative Extension Service

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