

Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel



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September 21, 2012, No. 25

Here Come Those “Infamous” Nuisance Pests...Boxelder Bugs!

We have received numerous inquiries regarding the presence and abundant populations of the **boxelder bug** (*Boisea trivittata*) in yards and near buildings. It is during this time of year that boxelder bugs start congregating in large masses on the south-side of buildings; eventually entering and becoming a nuisance. Boxelder bug adults are flattened insects, 3/8 to 5/8 inches long, black in color, with distinctive reddish markings on the wings. Nymphs are bright red in color and resemble adults but are more oval-shaped and possess wing pads...not wings.

Adults overwinter in protected locations...including peoples' homes. They may also overwinter in the soil or leaf litter near building foundations. Adults emerge during mid-spring and females lay eggs, which are red in color, on the trunk, branches, leaves, and/or seeds of the boxelder (*Acer negundo*) and maple trees. Eggs may also be laid on plum, cherry, peach, and pear trees. Eggs hatch into nymphs that primarily feed on seeds; however, they will also utilize other plant material and even dead insects as a food source. They become full-grown adults in early summer. Boxelder nymphs and adults feed on plants, removing sap or fluids, with their extended mouthpart or beak. In late summer, a second generation develops. During this time, both the boxelder bug nymphs and adults feed and reproduce on a variety of trees and shrubs including boxelder, maple, and ash. They consume seeds, flowers, and/or leaves causing minimal plant damage although they may also feed on the fruit of apple trees. The damage caused by boxelder bugs is strictly cosmetic or aesthetic.

They become nuisance insect pests in the fall, when temperatures start to decrease, leaving plants to find hiding places for winter. After congregating on the south or southwest side of buildings they enter these buildings (e.g., homes and commercial facilities) through cracks in the foundation and siding, or enter through openings along windows and doors. Boxelder bugs are a nuisance when they are warmed by heat via exposure to furnaces or the sun, becoming active during the winter and flying or crawling into rooms. They do not feed or reproduce indoors. Boxelder bugs will not damage homes or any of the furnishings present...including people ☺. They will emit a pungent or foul odor if handled.

The best and most efficient means of dealing with boxelder bugs and other nuisance pests such as crickets, millipedes, and centipedes is preventing entry by sealing or caulking any potential entry sites (e.g., cracks or crevices). Spraying the outside of the building with a contact insecticide such as carbaryl (Sevin), malathion, a pyrethroid-based insecticide (e.g., bifenthrin, cyfluthrin, or permethrin), or insecticidal soap (potassium salts of fatty acids) may reduce the number that eventually enter buildings. Once boxelder bugs enter homes there are few effective management options other than vacuuming them up, and discarding them from the bags outdoors. You should never crush boxelder bugs as they emit a foul-smelling odor and can stain furniture or curtains with their brown fecal material.

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Boxelder Bug



Boxelder Bugs



Boxelder Bug Nymphs

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Another closely-related insect is the **red shouldered bug** (*Jadera haematoloma*), which is similar to the boxelder bug but adults lack red markings on the wings. They possess a distinctive red line on both sides of the thorax or “shoulder.” Red shouldered bugs primarily feed on golden-rain tree (*Koelreuteria paniculata*), and become a nuisance when they enter buildings to overwinter.



Red Shoulder Bug



Red Shoulder Bug

Raymond Cloyd

Correction

I'm making a correction to last week's Newsletter: On page 7, I have a picture of a moth and labeled Army Cutworm Moth. However, a sharp-eyed Dr. Bob Bauernfeind was quick to point out that it is not an army cutworm moth but in fact is a Dingy cutworm moth! I did not know anything about Dingy cutworms (and, in fact, do not care to learn any more about them), but after studying the pictures of each on page 349 of "Insects In Kansas", (for about an hour last Sunday), I agree with Dr. Bauernfeind. My bad! Dingy Cutworms apparently are not an agricultural pest-but Army Cutworms can be and occasionally are, especially in alfalfa and wheat, and there were numerous infestations last spring. So, please stay vigilant for the larvae (that is an accurate picture of the larval feeding stage in last week's Newsletter), especially next spring as the adult moths are and will be laying eggs in fields for probably the next month. However, the larvae, for the most part, will be too small to cause much damage or even be noticed until then.

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So, thank you very much, Dr. Bauernfeind, for having and taking the time and being vigilant enough to help keep me straight!

Jeff Whitworth

A Tangled Mass ---- AKA Gordian Worms ---- AKA Horsehair Worms

A recent phone inquiry has opened a “can of worms”. The caller described “something” which was white, skinny, 8-inches long and with no discernible features. Why would we be talking of this sort of “creature” in an insect newsletter? Because the caller went on to say that this “something” came out of a cricket.

Having only heard of them but never having personally seen them, I knew that she was describing what are commonly called horsehair worms. In a water medium, horsehair worms appear “worm-like” as they float and squirm (Figure 1 - A & B). Horsehair worms are also called Gordian worms because, especially when mating, they twist and turn and contort themselves into a tangled mass (Figure 1 - C) akin the mythical/fabled Gordian Knot. Eventually they become darkened in appearance (Figure 1 - D).



Figure 1

While they may superficially resemble round worms such as nematodes which taxonomically belong to the Phylum Nematoda, horsehair worms belong to the closely related phylum, Nematomorpha. Horsehair worms are mainly associated with grasshoppers, crickets and cockroaches. However, according to one source, they also have been linked to aquatic insects (dragonflies, Mayflies and caddisflies), mantids, certain beetles, millipedes and centipedes. Given that there are more than 350 known species, it is not surprising, then, that horsehair worms have a wide host range.

Host range implies parasitism. And the larval stages of horsehair worms live and grow within the body cavities of their hosts. With no digestive tract of their own, larvae directly absorb liquid elements of broken down host tissue and materials. Usually by Fall, parasitized hosts are weakened and driven-to-drink and seek out water ---

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-- sources might include streams, ponds, puddles, ditches, troughs, bird baths, pet water dishes, and many other "open containers" which collect water. At this point, now-matured horsehair worms leave their host and enter their "new" water environment. This is when people encounter/notice horsehair worms. The name horsehair worms is derived from the myth that long hairs from horse manes had fallen into drinking troughs and miraculously come to life in the form of the "squirmy worms"

Adult horsehair worms are free-living and do not feed. They overwinter in aquatic situations. Adults mate in the spring. Each female then (reportedly) produces millions of eggs in floating long chains. At this point, several directions may be taken depending upon the particular species of horsehair worm. The bottom line, though, is that the larvae eventually wind up in their host to begin the aforementioned parasitic stage of their life cycle.

It is important to point out that horsehair worms DO NOT POSE A HEALTH THREAT! They will not infect humans, pets or livestock. There is no need to think or imply that any control measures need to be implemented. Actually some might view horsehair worms as being beneficial because they will weaken and kill their hosts --- one less cricket or grasshopper to contend with! While this may be true, in actuality, very few crickets or grasshoppers apparently are parasitized, as evidenced by overall cricket and grasshopper populations which confront people on an annual basis. At best horsehair worms are but an interesting curiosity ---- one that maybe someday, I will have the privilege of a chance encounter.

Bob Bauernfeind

Sincerely,

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