Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel

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Mimosa Webworm

Mimosa webworm (*Homadaula anisocentra*) caterpillars (larvae) are now present feeding and creating their protective habitat on honeylocust, *Gleditsia triacanthos* and mimosa, *Albizia julibrissin*. The larvae are 1/2 inch long when fully grown, and rapidly move backward when disturbed. Larvae web leaves together on the ends of branches. The webbing usually starts at the tops of trees and serves as protection from natural enemies including parasitoids and predators. Heavily-infested trees appear brown or scorched as the larvae skeletonize the leaf tissue. The larvae eventually fall from trees on a silken strand just prior to pupating. Mimosa webworm pupates in bark crevices or the pupae can be observed glued to structures. What can be done to alleviate problems with mimosa webworms? Well, in some instances, it may be too late although initial damage may be minimal. Pest control materials recommended for control or regulation of mimosa webworm…that are primarily exposed…include acephate (Orthene), *Bacillus thuringiensis* spp. *kurstaki* (Dipel and Thuricide), indoxacarb (Provaunt), spinosad (Conserve), and carbaryl (Sevin). In addition, several pyrethroid-based insecticides (e.g. bifenthrin and cyfluthrin) may be used to "regulate" mimosa webworm caterpillars. Be sure to read the label of each product to make sure that at least webworms are on the label. Also, high-volume sprays are essential in order to contact the larvae inside the protective webbing. If trees are heavily-infested with webbing then it may be too late to apply a pest control material.

Raymond Cloyd

Japanese Beetle Adults

Japanese beetle (*Popilla japonica*) adults have been detected in Kansas City, KS and Topeka, KS. Adult Japanese beetles are 3/8 to 1/2-inch in length, and metallic green in color with coppery wing covers. They possess white tufts of hair that protrude from the end of the abdomen. This characteristic may be used to distinguish Japanese beetle adults from other plant-feeding beetles. Adults feed on a wide-range of horticultural trees and shrubs including birch, linden, crabapple, rose, grape, Virginia creeper, and buckeye. They feed primarily on the upper leaf surface at the top of susceptible trees and shrubs. As such, damage tends to occur initially at the top of plants and then the adults work their way down. Adults consume the upper leaf surface and interior mesophyll tissue, leaving the lower epidermis to dry and turn brown. They will also eat holes through the leaves as well as consuming the entire leaves. Adult beetles fly up to three miles, which means that control or regulation of adults has minimal influence on the amount of injury by Japanese beetle white grubs on nearby turfgrass. Because adults are attracted to plants that have been fed upon previously, applications of insecticides or hand-picking, when the beetles first appear, helps reduce damage later on. When disturbed, adults fold their legs and drop from foliage. Holding a jar containing rubbing alcohol or soapy water under the beetles and then agitating plant parts in which the beetles are feeding causes the adult beetles to drop into the liquid to be killed.

Japanese beetle adults typically feed and cause plant damage for approximately six weeks. Insecticides commonly recommended for control or regulation of Japanese beetle adults includes carbaryl (Sevin) or cyfluthrin (Tempo). Each insecticide may provide “control” for up to two weeks, so multiple applications will be required to protect plants from severe feeding damage. However, both insecticides are very harmful to natural enemies (parasitoids and predators) of other insect and mite pests including the twospotted spider mite (*Tetranychus urticae*). As such, continual use of these materials may result in secondary pest outbreaks or an outbreak of twospotted spider mites. Azadirachtin is sold as a repellent against Japanese beetle adults; however, it performs best when applied before the beetles are numerous. Furthermore, weekly applications will likely be warranted. Research with those “infamous” Japanese beetle traps indicates that plants experience more damage when these traps are used. Also, although many Japanese beetles will be trapped, it appears that the traps actually attract more beetles from a distance that then feed on nearby plants instead of flying into the traps.

Raymond Cloyd

Potato Leafhoppers

Potato leafhoppers continue to be very active. These alfalfa and soybean pests are not going to go away of their own accord. Nymphs are emerging and these populations will continue to increase for the next 4 – 8 weeks if not treated.

Grasshoppers

Many pastures, waterways, and CRP fields are teeming with small grasshopper nymphs. Now is the time to control these populations while they are still concentrated in the grassy/weedy areas and are more susceptible to insecticides.

Soybean Aphids

No soybean aphids have been reported yet in Kansas. When you do find soybean aphids please notify me or Holly.

Dectes (Soybean/Sunflower) Stem Borer

First adults for 2009 were collected on 6 July from Riley Co. in a soybean field.

Corn Rootworms

Lee French, French Ag. Research needs live western corn rootworm adults. Thus, anybody hearing about adult populations of at least 4 or more adults per ear please call or email Jeff Whitworth ASAP at 785/532-5656 or email: jwhitwor@ksu.edu.

Jeff Whitworth Holly Davis

Tripping back in time ……. Black walnut shoot moth

Every now and then, strange occurrences catch somebody's attention. And their instinct is to rub their eyes to see if they are actually seeing what they are seeing. Then they scratch their head and ask, "What's this all about?"

Periodically, people observe large mature walnut trees which are encased in a very thick webbing ---- in effect, the trees appear to be "shrink-wrapped" (Figure 1).

Figure 1

It is not a mystery as to the cause: the larvae of the black walnut shoot moth, [*Gretchena concitatricana* (Heinreich) for those wishing to "Google"]. The moth is only 5/8-inch long and difficult to detect as it blends into the background as it hides in bark crevices. It only moves if disturbed, flies a short distance and then (again) blends in (Figure 2a, 2b and 2c).

Figure 2a

Figure 2b

Figure 2c

The larvae of these moths feed in the tree canopies (Figure 3), and cause extensive (sometimes complete) defoliation. After they complete their feeding cycle, they wander about and then down tree trunks. During this meandering period, they produce and drag strands of silk which results in the aforementioned webbing.

Figure 3

Once on the ground, the larvae seek cover under ground litter where they pupate (Figure 4). While little is known about their life history, in 1993, pupae were collected in July, after which moths subsequently emerged and were collected. This suggested there is a second generation which produces overwintering pupae.

Figure 4

Frequency of reports? In **1970**, a Kansas State University District Forester proposed the name black walnut shoot moth based on his **1968 and 1969** observations of larvae feeding on the foliage and shoots of small trees in a walnut plantation in Geary County. In **1992**, numerous trees on Fort Riley Military Reservation exhibited the thick webbing as did trees at a site in Linn County. And in **2004** in the Auburn area, this phenomenon was repeated. **Several weeks ago**, web-encased trees were reported in Douglas County. In each of these instances, moth populations apparently "exploded", the resultant being massive numbers of larvae. But in the normal "off years", these moths certainly must persist/exist, but just in lower numbers so as to not draw attention.

Damage/economic consequences? The webbing per se is inconsequential. The incidences of intense webbing appear to be associated with large trees growing in woodland areas. [Perhaps, then, it is more widespread than reported ----- simply people have to be in the right place at the right time to observe the webbing] Large established trees would produce adequate amounts of foliage and thus be capable of supporting tremendous populations of larvae. Large established trees are none-the-worse-off despite substantial leaf loss.

Conversely, distorted growth caused by larvae feeding on meristematic tissues of walnut seedlings and saplings is considered a major handicap for the eventual production of straight logs. In these instances, just a few larvae are cause for concern. It is not surprising that the KSU Forester did not observe the webbing: smaller trees would support but minimal numbers of larvae.

Current Reports of Dieback in Ash Trees ----- BUT NOT EMERALD ASH BORER

There have been several recent reports of ash trees displaying "dieback" conditions. With news releases during the last several years regarding the spread of the emerald ash borer (EAB), people may jump to conclusions and assume that EAB has now infiltrated Kansas. However, to date, EAB have not been detected in Kansas.

So what could be causing the aforementioned dieback? Two possibilities come to mind: ash/lilac borer and eastern ash bark beetle.

Ash/lilac borers are the larvae of the clear-winged ash/lilac borer moth. Especially in relatively young/newly transplanted ash trees which are struggling to become established, the dieback is as appears in Figure 5. However, upon close inspection, it is evident by the round holes at the base of the tree that ask/lilac borers are the culprits (Figures 5b and 5c).

Figure 5a

Figure 5b

Figure 5c

A second option could be eastern ash bark beetles (EABB). There are unpredictable sporadic outbreaks in certain years. And in well-established trees, thinning occurs in the upper canopies. By examining dead branches, proof that EABB are the cause of dieback is the presence of tiny round holes (1 mm diameter) through which the beetles exited their tree host, as well as the presence of the 2 mm long EABB (Figures 6a, 6b and 6c).

Figure 6a

Figure 6b

Figure 6c

Any ash tree displaying dieback needs to be closely inspected. IF THERE ARE D-SHAPED EXIT HOLES (Figure 7), then emerald ash borer (Figure 8) might be considered the potential pest in question. But again, thus far in Kansas EAB have yet to be confirmed.

Figure 7

Figure 8

Bob Bauernfeind

Report from the Kansas State University Insect Diagnostic Laboratory:

The following samples were submitted to the Insect Diagnostician Laboratory from July2nd to July 9th.

July 02 2009 Smith County – Tussock moth caterpillars in home
July 02 2009 Shawnee County – Cicada damage and flower gall mites in Ash tree
July 07 2009 Leavenworth County – Broadnosed weevils in home
July 07 2009 Marshall County – Hedgehog gall wasps on oak

July 08 2009 McPherson County – Dung beetle and Ichneumonid wasp
July 08 2009 Pottawatomie County – Bagworms in apple tree
July 08 2009 Nemaha County – Cynipid gall wasps on oak
July 08 2009 Barton County – Jumping spider (spiderlings) in home
July 08 2009 Wyandotte County – Possible bed bug – crushed sample
July 08 2009 Marion County – Insect skeletonized leaves on maple
July 09 2009 Jackson County – Twolined spittlebugs on redbud
July 09 2009 Sheridan County – Bark beetles and spider mites on Eastern red cedar

If there are any questions regarding these samples or about the identification of any arthropod please contact the Insect Diagnostician at (785) 532-4739 or GotBugs@ksu.edu.

Holly Davis

Sincerely,

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