

Colorado Coalition for School IPM Newsletter

October 2017

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CCSIPM Spotlight:

Adams 12 Five Star Schools

By Kevin Delohery

Assistant Director, Facilities Maintenance

Adams 12 Five Star School District



I have been working in K-12 facilities maintenance with Adams 12 Five Star School District for over thirty years. My first introduction to integrated pest management was when I received a copy of EPA Pest Control in the School Environment: Adopting Integrated Pest Management handbook, printed in 1993 (EPA 735-f-93-012). From that book we developed a facilities culture of utilizing IPM as a way of doing business. Wanting to take this to the next level in April of 2012 we began working with Front Range school districts to develop our IPM request for proposal for contracted services, which focused on utilizing IPM strategies to manage pests around and in our buildings. Since that time Adams 12 Five Star School District has gone to great lengths to reduce or eliminate the use of pesticides inside of our facilities with the intent of reducing the impact of IAQ related

issues on building occupants with allergies and or asthma.

Prior to integrated pest management (IPM) strategies there was not much thought given to how pest control was performed. The main objective at that time was just getting the pests under control the easiest and most cost effective way possible. Most of the time when you called the pest control contractor they showed up with pesticides, in hand, ready to go to work. Now, with an IPM program the contractor shows up ready to perform an IPM inspection working with the school to identify a pest control strategy, and letting them know what they can do to resolve the issue without using chemicals. Most frequently eliminating access, harborage, food and water. Some things require help from facilities Maintenance. Items commonly identified are:

- Keep areas free of trash and food and water
- Doors being propped open or needing sweeps
- Harborage near buildings consisting of shrubs etc.

If the issue persists we will usually perform a thorough inspection followed by a written report to building administration to assist them in modifying behavior. Most of the time these inspections and reports are well received. I feel after working with many pest control contractors over the years that their roles have changed going from being a pesticide applicator to being an IPM consultant. They definitely have to understand and support IPM as well as you do to be successful.

Anyone close to the IPM program in our district understands and supports the program. It is difficult but very important to get staff and students to understand and support IPM as they are the keys to success. In my opinion many ongoing issues are directly related to behaviors not changing. This is my biggest challenge. Many times when I have met with our customers to discuss ongoing issues it is somewhat of an educational experience which I look forward to sharing. Changing the culture and helping them understand what we are doing and why we are doing it is my goal.

I believe one of my biggest successes has been working with wildlife advocates to incorporate cultural practices and natural controls to control Prairie Dog populations and other wildlife. I also think that our IPM program with the IPM pest control contract has reduced the use of pesticides in our schools tremendously at little or no added cost. We do not schedule sprays. Over the years I have dealt with just about every animal insect or plant pest common in our area. This has caused stress and been the source of many great stories. Squirrels in the kitchen, raccoons in the basement, pigeons in the HVAC equipment, rabbit's snakes coyotes and foxes on the playgrounds. Bed bugs, ants, cockroaches and spiders in the buildings and rats and mice everywhere. I have not dealt with bats yet but if I do I'll bet one of you can and will advise me as I have learned a lot from many of you.

pesticide exposures in schools and thereby creating the healthiest and highest achieving learning environment. As a part of this effort, Colorado State University Extension has developed a new School IPM website.

The Colorado School IPM website: <http://schoolipm.colostate.edu/> contains useful school pest management resources including detailed accounts of school pests and their management, IPM benefits, monthly IPM newsletters and pesticides information (Colorado pesticide programs and Federal Pesticide regulations). Other relevant information included are school inspection check list, sample IPM policy for schools and information on school IPM programs, Colorado Environmental Pesticide Education Program (CEPEP) website and activities in other states.

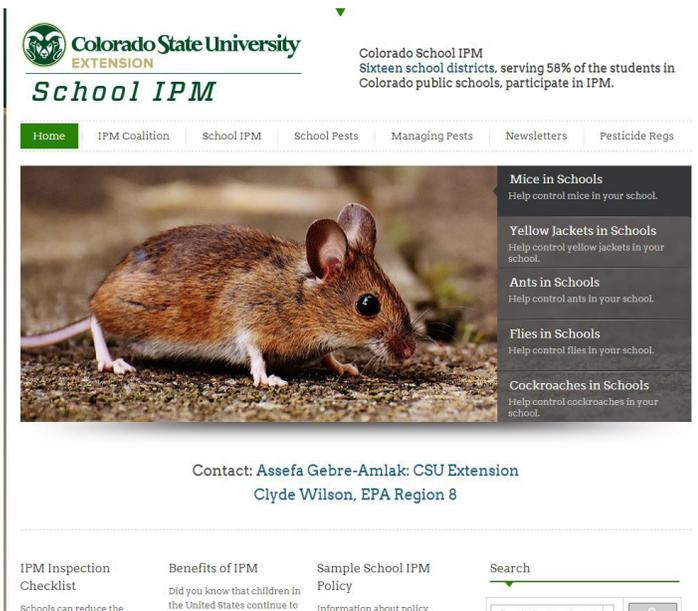
Additional Colorado State University resources that can be found at this web site includes information and updates from the CSU Extension and research and educational resources from the Department of Bioagricultural Sciences and Pest Management (entomology, plant pathology and weed Science).

The website is still a work in progress, and we encourage all Colorado School IPM Coalition members and other visitors to provide comments and suggestions to improve it. Please feel free to refer this website to your school faculty, staff, students and other schools. If you have any questions about this website or School IPM, please reach out to us at Assefa.Gebre-Amlak@colostate.edu

Colorado Coalition for School IPM Agency Partner Spotlight: School IPM Website Update

New School IPM website starts up

Assefa Gebre-Amlak, Pest Management Specialist



Colorado State University (CSU) works with the Colorado School IPM Coalition (six agencies and 17 school districts) helping school districts implement and use Integrated Pest Management (IPM) to reduce pest problems, pesticide applications and

Featured Pest of the Month: Boxelder Bug

Assefa Gebre-Amlak, Pest Management Specialist
Colorado State University Extension

For most people, the boxelder bug needs no introduction. Boxelder bugs are primarily a nuisance pest from fall through early spring, annoying residents by crawling on exteriors and inside dwellings on warm fall and winter days. They also may stain draperies and other light-colored surfaces and produce an unpleasant odor when crushed, but these are not major problems. They do not reproduce during this period. They may attempt to feed on house plants but do not cause any damage. On rare occasions, they have been reported to bite humans.

This bug is about 1/2 inch long as an adult, black with three red lines on the thorax (the part just behind the head), a red line along each side, and a diagonal red line on each wing. The immature forms (Figure 3) are smaller and are easily distinguished from the adults (Figure 1) by their red abdomens and lack of wings.



Figure 1: Boxelder bug. (Photo courtesy of Clemson University Extension.)



Figure 2: Boxelder bug eggs on leaf. (Photograph by W. Cranshaw)

The small milkweed bug (Figure 4) and the goldenrain tree bug (Figure 5) are local insects that are sometimes confused with boxelder bugs. Boxelder bugs become a nuisance in and around homes from fall through early spring.

Boxelder bugs feed on a variety of plants, but their favorite food is boxelder seed pods, which are found only on the female boxelder tree, and occasionally maple seeds. These bugs seldom develop in sufficient numbers

to be a nuisance unless a female boxelder tree is in the neighborhood.

Overwintering

The boxelder bug overwinters as an adult in protected places such as houses and other buildings, in cracks or crevices in walls, doors, under windows and around foundations, particularly on south and west exposures. In the spring when tree buds open, females lay small, red eggs on leaves (Figure 2) and stones and in cracks and crevices in the bark of female



Figure 3: Boxelder bug nymph. (Photograph by F. Peairs.)



Figure 4: The small milkweed bug is a seed feeding bug that resembles the boxelder bug.

boxelder trees. The eggs later hatch into young nymphs that are wingless and bright red with some black markings. These young bugs usually are found on low vegetation near boxelder trees until seeds are formed on the tree, on which they start to feed.

Types of Control

The most permanent solution to the boxelder bug problem is the removal of female boxelder trees from a neighborhood, although this may not be practical or desirable. Because boxelder bugs usually overwinter near the trees that they feed on, the removal of one or two problem trees may help. Screening or sealing cracks or other entrances into the dwelling is important. Once boxelder bugs have entered the home, control becomes more difficult.

When the bugs begin to congregate on building exteriors, these areas (including all resting and hiding



Figure 5: Goldenrain tree bug is sometimes confused with the boxelder bug. (Photo by W. Cranshaw.)

places) may be sprayed with residual insecticides. However, most insecticides registered for treatment of building exteriors are not that effective against boxelder bugs. Laundry detergent and water mixes are cheap, safe and effective when applied directly to boxelder bugs. Drawbacks of detergent sprays are that they will kill only if they contact the insect directly, and they may damage vegetation.

Use a vacuum cleaner to control bugs that have entered the house. Household insecticidal aerosols and many household spray cleaners also are effective when applied directly to individual insects. These measures provide temporary relief only. Bugs may continue to enter the home as they move about on warmer days throughout the fall, winter and early spring. Nuisance infestations should be finished by late May, as the boxelder bugs have either died or moved back to the host trees.

Source: Colorado State University Extension Fact Sheet # 5.522 (by F. B Peairs Extension Entomologist and Professor).

Current Pests: What Are You Seeing?

Statewide

Arapahoe, Douglas, & Elbert Counties

Vinegar flies/Fruit flies: Flies develop in overripe fruit and may become abundant in homes.

Wasps and hornets: Nests are abandoned at the end of the season.

Boxelder bugs, conifer seed bugs: Invasions of homes accelerates with cool weather. Massing bugs occur on building sides during warm, sunny days.

Multicolored Asian lady beetle, lacewings, root weevils: Invasions of homes occurs by insects looking for overwintering shelter.

Hackberry blistergall psyllids: Adults move into homes and to shelter of other overwintering sites.

Spiders, crickets: Movements into homes accelerate greatly with cool weather.

Aphids on trees: Overwintering eggs are laid as long as weather permits.

Poplar twiggnall fly: Galls become obvious when aspen leaves fall.

Needle drop of pines: Pines naturally begin shed of third year needles in fall.

Kermes scale: Typical period of crawler emergence

Lawns

Cranberry girdler: Damage to lawns by this sod webworm occurs in the fall.

Clover mites: Egg hatch follows cold weather and mites begin to develop on grasses and weeds around foundations.

Denver Metro Area

Fruit flies: Flies develop in overripe fruit and become abundant in homes.

Wasps and hornets: Nests are abandoned at the end of the season.

Boxelder bugs, conifer seed bugs, multicolored Asian lady beetles: Invasions of homes accelerates with cool weather. Massing bugs occur on building sides during warm, sunny days.

Hackberry blistergall psyllids: Adults move into homes and to shelter of other overwintering sites.

Spiders, crickets: Movements into homes accelerate greatly with cool weather.

Aphids on trees: Overwintering eggs are laid as long as weather permits.

Poplar twiggnall fly: Galls become obvious when aspen leaves fall.

Oak bulletgall wasp: Adults begin to emerge late in month.

Needle drop of pines: Pines naturally begin shed of third year needles in fall.

Cranberry girdler: Damage to lawns by this sod webworm occurs in the fall.

Clover mites: Egg hatch follows cold weather and mites begin to develop on grasses and weeds around foundations.

Eastern Plains Counties

Household/Miscellaneous

Fruit/Vinegar flies: Flies develop in overripe fruit and become abundant in homes.

Wasps and hornets: Nests are abandoned at the end of the season.

Boxelder bugs, conifer seed bugs, elm leaf beetles,

root weevils: Invasions of homes accelerates with cool weather. Massing boxelder bugs occur on building sides during warm, sunny days.

Hackberry blistergall psyllids: Adults move into homes and to shelter of other overwintering sites.

Spiders, crickets: Movements into homes accelerate greatly with cool weather.

Tree/Shrub Insects

Aphids on trees: Overwintering eggs are laid as long as weather permits.

Needle drop of pines: Pines naturally begin shed of third year needles in fall.

Lawns

Cranberry girdler: Damage to lawns by this sod webworm occurs in the fall.

Clover mites: Egg hatch follows cold weather and mites begin to develop on grasses and weeds around foundations.

El Paso & Teller Counties

Household/Miscellaneous

Fruit flies: Flies develop in overripe fruit and become abundant in homes.

Wasps and hornets: Nests are abandoned at the end of the season.

Boxelder bugs, conifer seed bugs: Invasions of homes accelerates with cool weather. Massing bugs occur on building sides during warm, sunny days.

Multicolored Asian lady beetle: Invasions of homes accelerates with cool weather. Massing bugs occur on building sides during warm, sunny days.

Hackberry blistergall psyllids: Adults move into homes and to shelter of other overwintering sites.

Spiders, crickets: Movements into homes accelerate greatly with cool weather.

Tree/Shrub Insects

Aphids on trees: Overwintering eggs are laid as long as weather permits.

Poplar twig gall fly: Galls become obvious when aspen leaves fall.

Needle drop of pines: Pines naturally begin shed of third year needles in fall.

Kermes scale: Typical period of crawler emergence

Lawns

Cranberry girdler: Damage to lawns by this sod webworm occurs in the fall.

Clover mites: Egg hatch follows cold weather and mites begin to develop on grasses and weeds around foundations.

High Country Counties

Household/Miscellaneous

Green lacewings, willow leafminers: Adults of these insects sometimes enter mountain homes during Fall.

Fruit flies: Flies develop in overripe fruit and become abundant in homes.

Wasps and hornets: Nests are abandoned at the end of the season.

Boxelder bugs, conifer seed bugs: Invasions of homes accelerates with cool weather. Massing bugs occur on building sides during warm, sunny days.

Spiders, crickets: Movements into homes accelerate greatly with cool weather.

Tree/Shrub Insects

Aphids on trees: Overwintering eggs are laid as long as weather permits.

Poplar twig gall fly: Galls become obvious when aspen leaves fall.

Ponderosa pine needleminer: Larvae tunnel needles.

Needle drop of pines: Pines naturally begin shed of third year needles in fall.

Lawns

Cranberry girdler: Damage to lawns by this sod webworm occurs in the fall.

Clover mites: Egg hatch follows cold weather and mites begin to develop on grasses and weeds around foundations.

Northern Front Range

Household/Miscellaneous

Fruit flies: Flies develop in overripe fruit and become abundant in homes.

Wasps and hornets: Nests are abandoned at the end of the season.

Conifer seed bugs, boxelder bugs, multicolored Asian lady beetle: Invasions of homes accelerates with cool weather. Massing of boxelder bugs occurs on

building sides during warm, sunny days.

Hackberry blistergall psyllids: Adults move into homes and to shelter of other overwintering sites.

Spiders, crickets: Movements into homes accelerate greatly with cool weather.

Tree/Shrub Insects

Aphids on trees: Overwintering eggs are laid as long as weather permits.

Poplar twiggnall fly: Galls become obvious when aspen leaves fall.

Oak bulletgall wasp: Adults begin to emerge late in month.

Needle drop of pines: Pines naturally begin shed of third year needles in fall.

Lawns

Cranberry girdler: Damage to lawns by this sod webworm occurs in the fall.

Clover mites: Egg hatch follows cold weather and mites begin to develop on grasses and weeds around foundations.

Pueblo & Fremont Counties

Household/Miscellaneous

Fruit/Vinegar flies: Flies develop in overripe fruit and become abundant in homes.

Wasps and hornets:Nests are abandoned at the end of the season.

Boxelder bugs, conifer seed bugs, elm leaf beetles, root weevils:Invasions of homes accelerates with cool weather. Massing boxelder bugs occur on building sides during warm, sunny days.

Hackberry blistergall psyllids:Adults move into homes and to shelter of other overwintering sites.

Spiders, crickets:Movements into homes accelerate greatly with cool weather.

Tree/Shrub Insects

Aphids on trees: Overwintering eggs are laid as long as weather permits.

Needle drop of pines: Pines naturally begin shed of third year needles in fall.

Lawns

Cranberry girdler: Damage to lawns by this sod webworm occurs in the fall.

Clover mites: Egg hatch follows cold weather and mites begin to develop on grasses and weeds around foundations.

Southwestern Counties

Household/Miscellaneous

Green lacewings, willow leafminers: Adults of these insects sometimes enter mountain homes during Fall.

Fruit flies:Flies develop in overripe fruit and become abundant in homes.

Wasps and hornets:Nests are abandoned at the end of the season.

Boxelder bugs, conifer seed bugs: Invasions of homes accelerates with cool weather. Massing bugs occur on building sides during warm, sunny days.

Spiders, crickets: Movements into homes accelerate greatly with cool weather.

Tree/Shrub Insects

Aphids on trees:overwintering eggs are laid as long as weather permits.

Ponderosa pine needleminer: Larvae tunnel needles.

Lawns

Cranberry girdler: Damage to lawns by this sod webworm occurs in the fall.

Clover mites: Egg hatch follows cold weather and mites begin to develop on grasses and weeds around foundations.

Tri-River Counties

Household/Miscellaneous

Fruit/Vinegar flies: Flies develop in overripe fruit and become abundant in homes.

Wasps and hornets:Nests are abandoned at the end of the season.

Boxelder bugs, conifer seed bugs:Invasions of homes accelerates with cool weather. Massing bugs occur on building sides during warm, sunny days.

Hackberry blistergall psyllids:Adults move into homes and to shelter of other overwintering sites.

Spiders, crickets: Movements into homes accelerate greatly with cool weather.

Tree/Shrub Insects

Aphids on trees: Overwintering eggs are laid as long as weather permits.

Needle drop of pines: Pines naturally begin shed of third year needles in fall.

Lawns

Cranberry girdler: Damage to lawns by this sod webworm occurs in the fall.

Clover mites: Egg hatch follows cold weather and mites begin to develop on grasses and weeds around foundations.

Source: <http://bspm.agsci.colostate.edu/outreach-button/insect-information/> (Yard/Garden Insect Calendars)

Credits

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