

Colorado Coalition for School IPM Newsletter

June 2017

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CCSIPM School District Spotlight: Boulder Valley School District

CCSIPM School District Spotlight – Boulder Valley School District

Contributed by Clyde Wilson, U.S. EPA, Region 8 Office

The Boulder Valley School District has long been a leader in the state of Colorado for addressing environmental risk management concerns and issues in their district facilities. They were one of the earlier districts to take on the task of implementing verifiable School Integrated Pest Management Programs throughout their district, and continues to have a strong focus on implementing environmental initiatives such as their enhanced Indoor Air Quality initiative, that contributes toward making their facilities safer and healthier for both students and staff.

Because of their strong focus on continuous improvement in addressing environmental concerns in their facilities, we wanted to take this opportunity to congratulate the Boulder Valley School District and the Douglass Elementary School in this month's issue of the Colorado Coalition for School IPM Newsletter. A recent outcome of their ongoing efforts, and continuing commitment in the area of environmental stewardship, was the honor of becoming one of the recipients of the 2017 President's Environmental

Youth Award.

The President's Environmental Youth Award (PEYA) recognizes outstanding environmental projects by K-12 youth. The PEYA program promotes awareness of our nation's natural resources and encourages positive community involvement. Since 1971, the President of the United States has joined with EPA to recognize young people for protecting our nation's air, water, land, and ecology. It is one of the most important ways EPA and the Administration demonstrate commitment to environmental stewardship efforts created and conducted by our nation's youth.

Each year the PEYA program honors a wide variety of projects developed by young individuals, school classes (kindergarten through high school), summer camps, public interest groups, and youth organizations to promote environmental awareness. Thousands of young people from all 50 states and the U.S. territories have submitted projects to EPA for consideration.

Food Waste Awareness at Douglass Elementary Colorado

Team: The Food Waste Club



A group of 1st through 5th graders at Douglass Elementary, called the “Food Waste Club,” took action to educate their fellow students about food waste and help reduce waste at their school in Colorado.

To begin, the Food Waste Club sent out a survey to other students at Douglass Elementary to gauge which foods students did or did not like, as well as their thoughts on portion size, hot versus cold lunches, how hungry they were at lunchtime, and noise level in the cafeteria. The team then conducted a waste audit, weighing food from the cafeteria to see how much food their school was wasting and discovered that many students were throwing away untouched fruits and vegetables. In response, the Food Waste Club created an “untouched food bin,” where students place fruits and vegetables they haven’t eaten to be washed and used in future lunches. To promote food waste awareness, members of the Food Waste Club prepared a video about food waste and being proactive in the lunch room, which was shared with other classes and put on the Douglass Elementary website.

Most recently, the Food Waste Club has been involved in the larger community, participating in a food reclamation campaign called Feeding the 5,000 Front Range. The group also presented their project to the director of food services in the Boulder Valley School District, who asked the club to design food waste posters to be put up in all elementary schools in the district.

Colorado Coalition for School IPM Agency Partner Spotlight: CDPHE

Colorado Rabies Update – Skunks running amok!

Contributed by Dr. Leah Colton, Zoonoses Program, CDPHE

Rabies has been spreading into new places in Colorado in 2017. In particular, rabies virus has been found in skunks in four urban neighborhoods in Denver and in parts of Jefferson and Broomfield Counties. Denver has had nine rabid skunks this year, Jefferson County has had 15, and Broomfield two. When there is rabies in wildlife in urban areas more people and pets are at risk of exposure. This is because rabid animals may become aggressive

and attack people and pets. Signs of a rabid animal include acting aggressively, strange behavior such as night-time animals being out in the day, and drooling, shaking, paralysis or seizures. If you see a wild animal acting strangely, call your animal control officer or Colorado Parks and Wildlife to report it.

The last time a person had rabies in Colorado was in 1931. There is no cure for rabies once symptoms start – almost 100% of people with rabies will die. It is very important for people who are bitten or scratched by a wild animal to report the incident and consult with their health care provider. Rabies is transmitted when the virus gets in bite wounds, open cuts in the skin, or in the eyes or mouth. Animals suspected of having rabies should be tested so we know if exposed people need to be treated to prevent rabies. If there is no exposure (bite or scratch), no testing of the animal is needed. People who were exposed to a rabid animal should get a series of 4 vaccine shots in the arm, and one shot in the place where they were bitten or scratched so they won’t get rabies. This treatment is called post-exposure prophylaxis.

All animal bites should be reported, including dog and cat bites. It’s especially important to report encounters with wildlife such as bats, skunks, raccoons, foxes or coyotes since they can carry rabies. Animal bites are a public health reportable condition, and the public and healthcare providers should contact their animal control officer or health department to report animal bites within 24 hours. If you’ve captured the animal (like a bat), do not let it go. If it gets away, try to see what direction it goes so you can let animal control know.

As of June 9, 2017, the total number of rabid animals reported in Colorado is 68. This includes 49 skunks, 1 coyote, 4 foxes, 12 bats and 2 pet dogs. Talk to your veterinarian and make sure your pets get their rabies shots – one shot is never enough. Pets cannot get post-exposure prophylaxis like people can, so protect them with the rabies vaccine.

For help with rabies questions, or to learn about post-exposure prophylaxis, call your local health department or the state health department at 303-692-2700 during business hours (Monday through Friday, 8 am – 5 pm).

For additional information on rabies in Colorado, visit: <https://www.colorado.gov/pacific/cdphe/rabies-data>

Featured Pests of the Month: Ants

Management of Household Ants (II)

Colorado household ants, namely pavement ants, field ants, carpenter ants, cornfield ants, odorous ants and pharaoh ants and their life history was published in May issue of the School IPM Newsletter.

The first and most important step to reducing problems with ants occurring in homes/buildings is to eliminate sources of food and water that are attractive. In addition to obvious sources of food left on counters, sinks or floors, spilled food in cupboards and food associated with trash baskets may also be visited by foraging ants. Dripping faucets and leaking pipes may also be important water sources that ants will use. Also, if ants have been foraging in a home, wash down counters or floors with some household cleaner to eliminate the odor trails the ants have established to locate sources of food or water.

Most ants found in homes nest outdoors, sometimes adjacent to building foundations. Heavy mulch, piled leaves or ground covers that abut buildings can provide cover for ant colonies and can increase the likelihood of their subsequent occurrence in a house. Keeping the area around the building foundation free of cover can reduce the likelihood of ants foraging indoors.

Alternatives to insecticides are sometimes sought. Boiling water can kill small colonies that do not extend too deeply. Large colonies spread over a wide area, those that extend deeply into the ground, and those that are in sites cannot be managed by this method. Furthermore, the hazards of handling boiling water generally exceed that of using currently available ant insecticides, with less likelihood of success.

Insecticides can be useful to control ants and a wide range of ant control products are available. These are primarily used either to: 1) generally suppress ant numbers in a yard; 2) establish perimeter barriers around a home; 3) spot treat foraging ants found in homes; or 4) incorporate into baits to kill colonies.

General Suppression of Ants in Yards. Products used for general ant suppression include various sprays, dusts or granules applied to lawns (Colorado State University Extension fact sheet #5.518). These surface-

applied treatments can temporarily reduce numbers of ants foraging through lawns and on garden beds. However, such treatments do not penetrate into colonies nor do they affect ants that use below-ground tunnels for much of their travel.

Similarly, applications of such insecticides made directly to nests will often kill only surface foragers, again providing only temporary control. The great majority of the ants within the nest will not be affected unless insecticides thoroughly penetrate into the colony, which may extend a few feet deep. Where entrance areas are disturbed by insecticides or other activities, colonies will often abandon the treated area and establish new entrances at a different location.

Perimeter Treatments of Buildings. Most ants that occur within homes originate from outdoor colonies. An insecticide barrier maintained around the building perimeter can inhibit much of this activity. Such treatments are generally applied as sprays or dusts to the soil immediately adjacent to the building and/or the lower areas of walls. Particular attention should be given to areas where ants are known to be able to enter buildings, such as near foundation cracks or windows. However, such treatments will not be able to well control ants that enter homes through below ground openings in building foundations.

All such perimeter treatments involve insecticides of the pyrethroid class (see fact sheet #5.518) and these typically may persist to control ants for a week to around month under outdoor conditions. One perimeter treatment with a different mode of action is hydramethylnon, an insect growth regulator. Sold in a granule formulation under the Amdro trade name, it acts as a bait that may be accepted by some species of ants that occur in Colorado homes.

Baiting. Use of ant baits will usually provide the most satisfactory control. This strategy involves use of acceptable food into which a small amount of an insecticide is incorporated. The ants feed on the bait and return it to the colony where it is shared with nest mates (trophyllaxis).

The types of insecticides used for baiting ants are very different than those used as sprays around building perimeters or in spot treatments. Instead of being fast acting, these have slower effects that allow the forager ant time to carry the treated food back to the nest. Boric acid, borax and arsenic trioxide are some of the older insecticides used as baits. Others act as insect growth regulators (e.g., hydramethylnon), affecting insect hormones that affect growth or prevent queens from producing fertile eggs. In recent years, several new insecticides have been marketed that have

different activity allowing highly effective disruption of ant colony functions.

The formulation of insecticides used as ant baits is also different. Historically, baits involved solid food mixtures placed inside a bait station ("ant trap") that was visited by ants. In recent years food baits that are applied as gel droplets or are in bait stations that provide liquids have been marketed. Solid food-based baits are also available now in a broadcast form for use outside.

Several features determine if ants can be successfully controlled with baits. Perhaps most important is that the bait is acceptable to the ant so that they will feed on it. Feeding habits of the various ants found in homes vary with some preferring sweet materials (e.g., field ants, cornfield ants), others favoring greasy materials (e.g., pavement ants). Another important factor in bait acceptance is moisture content. Baits often become unattractive when they dry out, a common problem in the arid climate of Colorado. For this reason, liquid and gel formulated baits may often be more readily accepted by ants. Carpenter ants are one group of ants that will not visit most solid ant baits but will feed at some liquid or gel sugar-based baits.

Effectively using baits also requires a few steps be taken so that the ants will visit and feed upon the baits. Most important is to deny them alternate food and water sources within the home or building. Thoroughly clean-up food preparation areas and other sites of ant activity. Secure garbage cans to prevent ant foraging. Leaking faucets and other areas providing free water should also be corrected.

Spot sprays of insecticides should not be used in the vicinity of a bait station. The point of effective ant baiting is to get ants to actively visit the bait. Place the baits in areas where ant activity has been observed. Ant baits will need to be reapplied if they dry out or are consumed.

Effects of ant baiting usually start to become apparent within a week or two after they are begun. Under optimum conditions the ant colony may ultimately be eliminated by a bait program.

Homemade ant baits preparation involve incorporating a small percentage (ca 5-10% by weight) of boric acid or borax with some acceptable food. Since feeding preferences of ants vary, test several foods to see if they are visited. Among the commonly available foods accepted by ants are either sweet materials, such as honey or apple jelly, and/or greasy, protein rich materials, such as peanut butter. If these baits are made, they must be applied in a manner so

that pets or children cannot reach them. Placement of the bait in a sealed container with punched entry holes can produce a more protected bait station. Baits containing boric acid/borax also cannot be applied directly to soils where plants are growing as boron-containing materials can be soil sterilants.

Household spot sprays. Some household insecticides allow use indoors as a surface spray to kill ants that move across treated surfaces. Such treatments are best applied to cracks and crevices used by foraging ants to enter living areas. However, these have very limited and short-term effectiveness as the insecticides degrade and/or the ants change routes of activity. Far more effective are insecticides used as baits, fed on by ants and returned to the nest. Contact sprays should not be used in the vicinity where baits are applied.

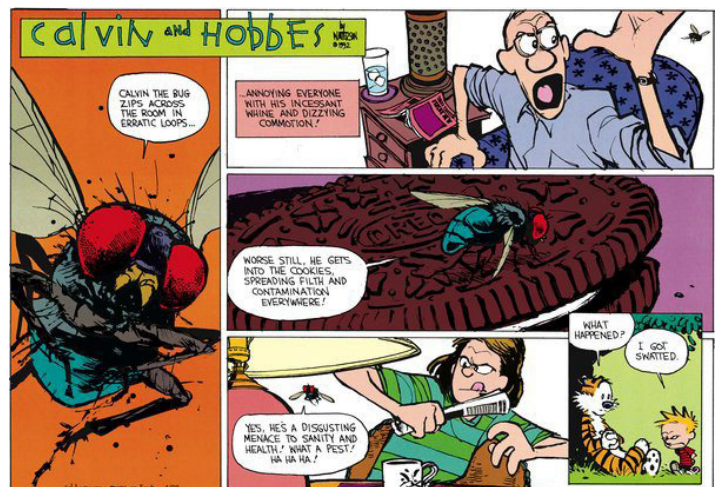
Source: Ants in the Home (Colorado State University Extension fact sheet #5.518) by W.S. Cranshaw

Upcoming Events

- IAQ Knowledge-to-Action Professional Training Webinar Series: [Green Cleaning for Improved Health: The Return on Investment of Green Cleaning in Schools](#). June 22, 2017, 1pm-3pm EDT.

The Funnies

Comic by Bill Watterson, Calvin & Hobbes ©



Current Pests: What Are You Seeing?

Statewide

- Cooley spruce gall: April: Insects continue development and usually begin to produce egg sack in late April. May: Eggs hatch and young nymphs move to feed on new growth. Galls are initiated.
- Honeylocust plant bug: April - Check trees for newly emerged nymphs. May - Nymphs have hatched and begin to damage new growth. (Except High Country Areas)
- Lilac/ash borer: Flights of adult moths may begin.
- Nightcrawlers: Tunneling activities and associated lawn lumps continue.
- Peach tree borer: Larvae causing peak injury to bases of trees at this time.
- Spider mites on pines: Populations may increase rapidly on ponderosa and other susceptible pines.
- Spiny elm caterpillar: Small colonies of these caterpillars may be seen on willow, hackberry, aspen, elm and other trees. (Except Southwestern counties)
- Spinach leafminer: Egg laying and tunneling begins in older spinach foliage.
- Tick season: The next two months are the peak season for tick activity and spread of Colorado tick fever.
- Tent caterpillars: April - Early season species, mostly associated with cottonwood in low lying areas, should be rapidly developing. Aspen is another common host. May - Tent caterpillars affecting cottonwood in lower elevations may be completing development.
- Slugs: Slugs may cause peak damage to seedlings during cooler weather.
- Southwestern pine tip moth: Egg-laying occurs when new needles emerge on pines.

Arapahoe, Douglas, & Elbert Counties

- Ants: Foraging ants in homes are common until temperatures allow them to seek food outdoors.
- Poplar twiggall fly: Adults emerge and begin to lay eggs in emerging aspen shoots.
- Douglas-fir beetle: In forested areas, adult

emergence, flights and tree attacks may begin.

- Brownheaded ash sawfly: Adults may lay eggs during warm days following bud break.
- Zimmerman pine moth: April: Approximate treatment timing for overwintered larvae. May: Period ending during which larval control is possible.
- Turfgrass mites: Clover mites continue to feed on lawns and enter homes in nuisance migrations.
- Midges: Non-biting midges emerge from ponds and mating swarms may be observed over lawns.
- Miller moths: Flights into areas often begin in early May.
- Spider mites: Clover mite populations should be peaking and may begin natural decline.
- Sod webworms, cutworms: Damage to lawns by webworms and cutworms begin at this time.
- Hackberry psyllid: Adults return to trees and lay eggs on the emerging leaves.
- Brownheaded ash sawfly: Pinhole feeding wounds indicate early stage infestations.
- Elm leaf beetle: Adults return to trees and chew holes in leaves.
- Walnut twig beetle: Overwintered adults in trunk bark move to branches and begin tunneling.
- Pine needle scale: Egg hatch may begin during warm seasons.

Eastern Plains Counties

- European elm bark beetle: Preventive sprays should be completed before adults emerge and fly.
- Ash sawfly: Typical period of peak egg laying.
- Poplar twiggall fly: Adults emerge and feed on sap from leaves; egg laying may begin.
- Cutworms: Army cutworm injury may peak at this time. Injury can occur in gardens, lawns, wheat and alfalfa fields.
- European paper wasp: Nest initiation usually has begun.
- Spider mites: Injury by banks grass mite increases. Clover mite populations should be decreasing.
- Miller moths: Flight sometimes begin in early May.

- Millipedes: Cool wet, weather may trigger migrations of millipedes from lawns.
- Spider mites: Injury by banks grass mite increases. Clover mite populations should be decreasing.
- Hackberry psyllid: Adults return to trees and lay eggs on the emerging leaves.
- Honeylocust podgall midge: Adults begin laying eggs on new growth. First generation begins.
- Elm leaf beetle: Adults return to trees and chew holes in leaves.
- Ash sawfly: Early feeding injury should be present. Optimum time for treatment in most seasons.
- Seedcorn maggot: Early planted beans, corn, and melons are susceptible to seedcorn maggot damage.
- Flea beetles: Larvae chew small holes in many garden plants and may kill seedlings.
- Strawberry injuries: Millipedes and slugs tunnel ripening berries.

El Paso & Teller Counties

- Ants: Foraging ants in homes are common until temperatures allow them to seek food outdoors.
- Poplar twig gall fly: Adults emerge and begin to lay eggs in emerging aspen shoots.
- Douglas-fir beetle: In forested areas, adult emergence, flights and tree attacks may begin.
- Brownheaded ash sawfly: April- Adults may lay eggs during warm days following bud break. May - Pinhole feeding wounds indicate early stage infestations.
- White pine weevil: Adults move to spruce terminals to mate and lay eggs.
- Zimmerman pine moth: April - Approximate treatment timing for overwintered larvae. May - Period ending during which larval control is possible.
- Clover mites: continue to feed on lawns and enter homes in nuisance migrations.
- Midges: Non-biting midges emerge from ponds and mating swarms may be observed over lawns.
- Miller moths: Flights into areas often begin in early May.
- Spider mites: Clover mite populations should be

peaking and may begin natural decline.

- Sod webworms, cutworms: Damage to lawns by webworms and cutworms begin at this time.
- Hackberry psyllid: Adults return to trees and lay eggs on the emerging leaves.
- Elm leaf beetle: Adults return to trees and chew holes in leaves.
- Walnut twig beetle: Adults move from overwintering chambers in bark to branches and initiate new tunnels.

High Country Areas

- Ants: Foraging ants in homes are common until temperatures allow them to seek food outdoors.
- Aphids on fruit trees: Spray oils on dormant trees to kill overwintered aphid eggs.
- Douglas-fir beetle: In forested areas, adult emergence, flights and tree attacks may begin.
- Ips beetles: Ips (engraver) beetles may be active during warm periods. Recently transplanted pines and pines in outbreak areas may need protection.
- White pine weevil: Overwintered adults may become active and move to terminals of spruce to feed and lay eggs if daily temperatures exceed 50F.
- Turfgrass mites: Clover mites continue to feed on lawns and enter homes in nuisance migrations.
- Midges: Non-biting midges emerge from ponds and mating swarms may be observed over lawns.
- Miller moths: Flights into areas often begin in early May.
- Spider mites: Clover mite populations should be peaking and may begin natural decline.
- Sod webworms, cutworms: Damage to lawns by webworms and cutworms begin at this time.
- Hackberry psyllid: Adults return to trees and lay eggs on the emerging leaves.
- Western spruce budworm: Overwintered larvae begin to tunnel buds and flowers. Check for early stages of infestations.
- Elm leaf beetle: Adults return to trees and chew holes in leaves.

Pueblo & Fremont Counties

- European elm bark beetle: Preventive sprays

should be completed before adults emerge and fly.

- Ash sawfly: Typical period of peak egg laying.
- Spider mites: Injury by banks grass mite increases. Clover mite populations should be decreasing.
- Miller moths: Flights into areas often begin in early May.
- Spider mites: Injury by banks grass mite increases. Clover mite populations should be decreasing.
- Hackberry psyllid: Adults return to trees and lay eggs on the emerging leaves.
- Honeylocust podgall midge: Adults begin laying eggs on new growth. First generation begins.
- Elm leaf beetle: Adults return to trees and chew holes in leaves.
- Ash sawfly: Early feeding injury should be present. Optimum time for treatment in most seasons.
- Seedcorn maggot: Early planted beans, corn, and melons are susceptible to seedcorn maggot damage.
- Flea beetles: Larvae chew small holes in many garden plants and may kill seedlings.
- Strawberry injuries: Millipedes and slugs tunnel ripening berries.

Southwestern Counties

- Ants: Foraging ants in homes are common until temperatures allow them to seek food outdoors.
- Aphids on fruit trees: Spray oils on dormant trees to kill overwintered aphid eggs.
- Turfgrass mites: Clover mites continue to feed on lawns and enter homes in nuisance migrations.
- Midges: Non-biting midges emerge from ponds and mating swarms may be observed over lawns.
- Spider mites: Clover mite populations should be peaking and may begin natural decline.
- Sod webworms, cutworms: Damage to lawns by webworms and cutworms begin at this time.
- Hackberry psyllid: Adults return to trees and lay eggs on the emerging leaves. Western spruce budworm: Overwintered larvae begin to tunnel buds and flowers. Check for early stages of infestations.

Tri-River Counties

- Poplar twiggall fly: Adults can be found resting on newly emerged and females insert eggs into developing stems.
- Spider mites: Injury by Banks grass mite increases. Clover mite populations should be decreasing.
- Spider mites: Injury by Banks grass mite often increases if dry conditions persist. Clover mite populations should be decreasing.
- Pine needle scale: Egg hatch may begin during warm seasons.
- Seedcorn maggot: Early planted beans, corn, and melons are susceptible to seedcorn maggot damage.
- Flea beetles: Larvae chew small holes in many garden plants and may kill seedlings.
- Strawberry injuries: Millipedes and slugs tunnel ripening berries.

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

Credits

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