

Colorado Coalition for School IPM Newsletter

March 2019

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CCSIPM Spotlight: New Tool for School Districts Considering IPM Programs

A New Tool for School Districts Considering the Implementation of IPM Programs

Contributed by: Clyde Wilson, Regional School IPM Coordinator (SEE), EPA Region 8



The U.S. Environmental Protection Agency has released a new guide for implementing Integrated Pest Management (IPM) programs in schools. It provides an overview of IPM, and lays out the important steps for schools to establish an effective verifiable IPM program. This edition incorporates additional concepts of integrated pest

management (IPM) in schools and addresses the roles of all stakeholders within the school community in implementing a successful IPM program.

INTEGRATED PEST MANAGEMENT AND YOUR SCHOOLS

Improperly managed pest problems and improper pesticide use can lead to health risks for children, given the significant time they spend in and around schools. Many schools have environmental conditions conducive to pest infestations. Reducing unnecessary exposures to pests and pesticides improves health and student attendance, and leads to greater academic achievement. Healthier school environments enable children to learn and produce more in the classroom, which ultimately leads to a more productive, and higher quality life.

Children face increased risks to their health when exposed to pests and the excessive use of pesticides. They may consume or come into contact with foods and objects contaminated with bacteria associated with rodent feces and urine; contract diseases spread by biting insects; suffer asthma when exposed to cockroach and rodent allergens; or be exposed to pesticides residues when used improperly or unnecessarily. Children are more likely to experience adverse health effects than adults when exposed to these risks due to their small body size in relation to the amount of the contaminant or pathogen in the school setting. Not only are their brains and other organs still developing and more vulnerable, children's hand-to-mouth behavior and playground activities increases the likelihood that they will come into contact with pests, pathogens, and pesticides.

Protecting the health of children is a top priority for EPA, and we recommend that all school districts consider implementing programs that promote the use of integrated pest management (IPM) strategies. IPM encourages long-term, sustainable approaches to successfully manage pests. By developing a coordinated program, school leaders demonstrate their commitment to a healthy environment where students can thrive. IPM addresses not only the safety concerns of pesticide use, but also focuses on solution-based approaches that focus on the reasons why pests are present in schools.

For more detailed information [Get the guide here](#)

Colorado Coalition for School IPM Agency Partner Spotlight: Webinar



Three reasons to register for this upcoming webinar—

1. Be the first to access Indoor Air Quality (IAQ) Tools for Schools: Preventive Maintenance Guidance! This webinar will feature soon-to-be released guidance that will help you develop a tailored IAQ preventive maintenance plan and promote healthy, reliable and efficient school buildings.
2. Make the case to others and gain buy-in! During this webinar, you will hear strategies for communicating the benefits of IAQ preventive maintenance practices in schools, such as a high return on investment, improvements in equipment longevity and building health, and a reduction in unexpected and often costly repairs.

3. Harness the power of evaluation! By attending this webinar, you will learn how to evaluate your plan for continued improvement and ensure that your practices are helping you maintain optimal learning environments, save money and protect health.

Date: Thursday, March 28, 2019

Time: 1:00 p.m. – 2:30 p.m. EDT

[Registration Link](#)

Featured Expert Speakers



**TRACY WASHINGTON
ENGER**

FACILITATOR

Indoor Environments Division,
U.S. Environmental Protection
Agency



FRED REMELIUS

DIRECTOR OF OPERATIONS

Upper Merion Area School
District, Pennsylvania



SHAWNA CRAGUN

**DIRECTOR OF CUSTODIAL
SERVICES**

Davis School District, Utah



TYLER PULS

**ENERGY AND
ENVIRONMENTAL
SPECIALIST**

Des Moines Public Schools,
Iowa

Featured Pest of the Month: Millipedes, Centipedes and Sow bugs

Millipedes, Centipedes and Sow bugs

Millipedes, centipedes and sowbugs are many-legged relatives of Insects. They generally are found in small numbers in damp locations around the yard. Occasionally, they become unusually abundant or move into homes, where they may cause considerable concern to homeowners.

Millipedes

The most common millipedes are dark brown and reach 1 to 1 1/2 inches when full grown. They are round and elongated, with many small legs. A common description is "little black worms crawling in the basement windows." When dead or disturbed, they tend to curl into a tight coil.



Figure 1: Common millipedes (*Allajulus londonensis*).

Millipedes do not bite or pose any danger to humans. They feed on rotting organic matter such as leaves and wood and rarely feed on tender green leaves and roots. They spend almost all their time in moist areas, such as under rocks or logs and in lawn thatch.

Movement into houses often is sudden and sporadic. Most millipede movement takes place in September and October and again in midspring. Invasions, usually into cellars, often take place shortly after a period of wet weather and end as suddenly as they start.

Because millipedes require high moisture, they usually die in a home within a day or two. Chronic problems are associated with damp conditions. Measures taken to dry out moist areas usually are sufficient. The hard body of the millipede, however, remains intact for a considerable time after it is dead.

Because millipedes cause no damage in homes other than a minor annoyance, the best way to handle infestations is to wait a few days for the problem to subside, then vacuum the bodies that remain. Remove debris and other favorable habitats from around building foundations to help reduce problems. Seal or

caulk openings around the foundation to reduce future millipede problems.

Where problems are persistent and severe, insecticides may help reduce invasions. These may be applied

around the base of the building foundation out into lawn areas. Usually only shaded sides of the home need treatment. Whole yard treatments are unnecessary and not recommended. However, most sod webworm and white grub treatments applied to lawns will also control millipedes.

When millipedes damage garden plants several practices can limit injury. Ripening fruit should be lifted off the soil, on mulch or other surfaces. Fruit that is overly ripe may be left in the garden to divert and concentrate feeding by millipedes. Similarly, millipedes can be concentrated under fruit rinds or moistened newspapers. The millipedes that are found at these sites can then be collected. Garden baits that contain carbaryl (Sevin) may also be used to control millipedes in gardens.



Figure 2: A common species of millipede found in gardens



Figure 3: Young millipedes in strawberry fruit. (Photo by W. Cranshaw.)



Figure 5: Duff millipede.

Duff Millipede

The duff millipede is an unusual species found in some foothills areas. It reaches only 1/8 inch. It is covered with fine bristles and has a tuft of hairs protruding from the hind end. Superficially, it resembles tiny carpet beetle larvae. Close inspection shows it has far more legs than do carpet beetles.

Invasions can involve hundreds of individuals, which crawl over walls, floors and counters. Often they are

concentrated near areas of high moisture, such as bathrooms, around kitchen sinks, and near outdoor hot tubs and faucets.

Although sometimes a significant nuisance, they do not reproduce or survive long in a home. Instead, they develop outdoors on decaying plant matter, fungi and algae. Prevent invasions by sealing the structure.

No effective insecticides have been identified to reduce invasions of duff millipedes. It is suggested to keep the area around foundations clean of cover and sources of moisture.



Figure 7: Stone centipede.
(Photo by W. Cranshaw.)

Centipedes

In general appearance, centipedes superficially resemble millipedes.

However, there are important differences. Centipedes have one pair of legs per body segment; millipedes appear

to have two pairs on most segments. A centipede's legs are usually quite prominent. Centipedes are far more active than millipedes, particularly the common house centipede. Most are flattened and elongated. They feed on small Insects and other arthropods.

Centipedes usually are less common in homes than millipedes. However, they may be far more conspicuous, particularly the giant desert centipede that can reach 6 inches in length.

In homes, centipedes are found most frequently in the morning trapped in bathtubs or wash basins. They also may be seen darting for cover when a light is turned on in a dark room. Occasionally, a startled centipede may run at the person entering the room, giving the incorrect impression that it is attacking.

Except for the largest species, centipedes cannot bite through skin, so hazard to humans is remote. Bites are extremely rare, because centipedes are light shy and bite only when being picked up or crushed. The bite of the largest species is reported to cause a sharp, temporary pain, similar to a bee sting.

Control is similar to that for millipedes — wait out the problem and control moisture sources in and around the home. Infestations usually involve only a few individuals. Extreme situations in homes may require insecticides as indicated for millipedes. Interior applications of insecticides are not recommended.

Sowbugs and Pillbugs

Sowbugs and pillbugs (roly-polys) are small, gray crustaceans usually found outdoors under rocks or other cover. They feed on decaying vegetable matter and occasionally small plants. They do not bite and are harmless to humans.



Figure 8: Pillbug, also known as 'Roly-Poly'.



Figure 9: A pillbug (rolled-up) and sowbug.
(Photo by Whitney Cranshaw.)

During some times of the year, particularly after extended wet spring weather, sowbugs and pillbugs may move into homes. Their survival is often shorter than for millipedes and centipedes. Because of this and the minor annoyance they cause, control generally is unnecessary. Controls effective for millipedes and centipedes also are effective for sowbugs and pillbugs.

By Whitney Cranshaw, Colorado State University Extension entomologist and professor, bioagricultural sciences and pest management.

Colorado State University, U.S. Department of Agriculture and Colorado Counties cooperating. Extension programs are available to all without discrimination. No endorsement of products mentioned is intended nor is criticism implied of products not mentioned.

Current Pests: What Are You Seeing?

Arapahoe, Douglas, & Elbert Counties

Boxelder bugs, conifer seed bugs, cluster flies: Overwintered adults become active in and around homes.

Clover mites: Migrations of mites from lawns into buildings may begin at this time, during warm days

Firewood insects: Bark beetles and wood borers emerge from stored wood in homes.

Subterranean termites: Winged adults of the aridland subterranean termite fly in late winter.

Oystershell scale: Scrape scales with eggs off limbs of aspen, ash and other host plants.

Flickers: Males are actively drumming on buildings and defending territories during mating season.

Swallow Bugs: Overwintered swallow bugs become active in anticipate of returning migrant birds and bite humans.

Millipedes: Nuisance movements into homes occurs following wet weather.

Ants: Field ants forage in homes for sweet materials.

Carpet beetles: Some species of carpet beetles are noticeable in spring when they transform to adults.

Poplar twiggall fly: Larvae begin to leave galls and pupate in soil at the base of trees.

Dormant oils: Many insects that winter on plants can be controlled with dormant applications of horticultural oils.

Ips beetles: Ips (engraver) beetles may be active during warm periods. Recently transplanted pines may need protection.

Southwestern pine tip moth: Adults begin to emerge from pupae at the base of trees.

Spider mites on conifers: Spring activity of spider mites on junipers, pines, arborvitae and spruce increase during spring.

Clover mites: Mites are actively feeding on lawns near buildings and shrubs during warm days.

Nightcrawlers: Tunneling activities during spring can create lumpy lawns.

Vole injury: Tunneling injuries in lawns and girdling of shrubs may be evident as snow melts.

Denver Metro Area

Boxelder bugs, cluster flies: Overwintered adults become active in and around homes.

Clover mites: Migrations of mites from lawns into buildings may begin at this time, during warm days

Winged termites: Winged reproductive stages continue to swarm in late winter.

Firewood insects: Bark beetles and wood borers emerge from stored wood in homes.

Ants: Foraging by field ants for sweet materials intensifies in homes.

Poplar twiggall fly: Larvae begin to leave galls and pupate in soil at the base of trees.

Oystershell scale: Scrape scales with eggs off limbs of aspen, ash and other host plants.

Ips beetles: Ips (engraver) beetles may be active during warm periods. Spruce and pines in high risk sites may need protection.

Clover mites: Mites are actively feeding on lawns near buildings and shrubs during warm days.

Nightcrawlers: Tunneling activities during spring can create lumpy lawns.

Vole injury: Tunneling injuries in lawns and girdling of shrubs may be evident as snow melts.

Flickers: Males are actively drumming on buildings and defending territories during mating season.

Ants, clover mites: Movements indoors continue.

Poplar twiggall fly: Larvae continue to leave galls and pupate in soil at the base of trees.

Dormant oils: Many insects that winter on plants can be controlled with dormant applications of horticultural oils.

Pinyon needle scale: Females produce cottony egg sacks on branches and trunk.

Ips beetles: Ips (engraver) beetles may be active during warm periods. Spruce and pines in high risk sites may need protection.

Southwestern pine tip moth: Adults begin to emerge from pupae at the base of trees.

Spider mites on juniper: Spring populations may begin to increase; monitor plants.

Eastern Plains Counties

Boxelder bugs, cluster flies: Overwintered adults become active in and around homes.

Clover mites: Migrations of mites from lawns into buildings may begin at this time, during warm days

Millipedes: Nuisance movements into homes occurs following wet weather.

Winged termites: Winged reproductive stages continue to swarm in late winter.

Firewood insects: Bark beetles and wood borers emerge from stored wood in homes.

Ants: Foraging by field ants for sweet materials intensifies in homes.

Oystershell scale: Scrape scales with eggs off limbs of aspen, ash and other host plants.

Clover mites: Mites are actively feeding on lawns near buildings and shrubs during warm days.

Nightcrawlers: Tunneling activities during spring can create lumpy lawns.

Vole injury: Tunneling injuries in lawns and girdling of shrubs may be evident as snow melts.

Flickers: Males are actively drumming on buildings and defending territories during mating season.

Dormant oils: Many insects that winter on plants can be controlled with dormant applications of horticultural oils.

Ips beetles, twig beetles: These bark beetles may be active during warm periods. Recently transplanted pines may need protection. Pinyon Ips may attack new trees at this time; preventive insecticides should be applied before trees are attacked.

Southwestern pine tip moth: Adults begin to emerge from pupae at the base of trees

El Paso & Teller Counties

Boxelder bugs, conifer seed bugs, cluster flies: Overwintered adults become active in and around homes.

Clover mites: Migrations of mites from lawns into buildings may begin at this time, during warm days

Firewood insects: Bark beetles and wood borers emerge from stored wood in homes.

Winged termites: Winged reproductive stages of the aridland subterranean termite fly in late winter.

Oystershell scale: Scrape scales with eggs off limbs of aspen, ash and other host plants.

Flickers: Males are actively drumming on buildings and defending territories during mating season.

Swallow Bugs: Overwintered swallow bugs become active in anticipation of returning migrant birds and bite humans.

Millipedes: Nuisance movements into homes occurs following wet weather.

Ants: Field ants forage in homes for sweet materials.

Poplar twiggall fly: Larvae begin to leave galls and pupate in soil at the base of trees.

Dormant oils: Many insects that winter on plants can be controlled with dormant applications of horticultural oils.

Ips beetles: Ips (engraver) beetles may be active during warm periods. Recently transplanted pines may need protection.

Southwestern pine tip moth: Adults begin to emerge from pupae at the base of trees.

Spider mites on juniper: *Platytetranychus libocedri* populations may begin to increase on arborvitae.

Tiger moth: Tents and actively feeding larvae may be observed in pinyon and juniper.

Clover mites: Mites are actively feeding on lawns near buildings and shrubs during warm days.

Nightcrawlers: Tunneling activities during spring can create lumpy lawns.

Vole injury: Tunneling injuries in lawns and girdling of shrubs may be evident as snow melts.

High Country Counties

Fungus gnats: Adults commonly are observed around windows and around the soil of potted plants where they originate.

Boxelder bugs, conifer seed bugs, cluster flies: Overwintered adults become active in and around homes.

Firewood insects: Bark beetles and wood borers emerge from stored wood in homes.

Oystershell scale: Scrape scales with eggs off limbs of aspen, ash and other host plants.

Flickers: Males are actively drumming on buildings and defending territories during mating season.

Swallow Bugs: Overwintered swallow bugs become active in anticipate of returning migrant birds and bite humans.

Millipedes: Nuisance movements into homes occurs following wet weather.

Ants: Field ants forage in homes for sweet materials.

Poplar twiggall fly: Larvae begin to leave galls and pupate in soil at the base of trees.

Dormant oils: Many insects that winter on plants can be controlled with dormant applications of horticultural oils.

Ips beetles: Ips (engraver) beetles may be active during warm periods. Recently transplanted pines and pines in outbreak areas may need protection.

Clover mites: Migrations of mites from lawns into buildings may begin at this time, during warm days.

Southwestern pine tip moth: Adults begin to emerge from pupae at the base of trees.

Spider mites on juniper: *Platytetranychus libocedri* populations may begin to increase on arborvitae.

Tiger moth: Tents and actively feeding larvae may be observed in pinyon and juniper.

Clover mites: Mites are actively feeding on lawns near buildings and shrubs during warm days.

Nightcrawlers: Tunneling activities during spring can create lumpy lawns.

Vole injury: Tunneling injuries in lawns and girdling of shrubs may be evident as snow melts.

Northern Front Range

Boxelder bugs, cluster flies: Overwintered adults become active in and around homes.

Clover mites: Migrations of mites from lawns into buildings may begin at this time, during warm days

Millipedes: Nuisance movements into homes occurs following wet weather.

Winged termites: Winged reproductive stages continue to swarm in late winter.

Firewood insects: Bark beetles and wood borers emerge from stored wood in homes.

Ants: Foraging by field ants for sweet materials intensifies in homes.

Poplar twiggall fly: Larvae begin to leave galls and pupate in soil at the base of trees.

Oystershell scale: Scrape scales with eggs off limbs of aspen, ash and other host plants.

Clover mites: Mites are actively feeding on lawns near buildings and shrubs during warm days.

Nightcrawlers: Tunneling activities during spring can create lumpy lawns.

Vole injury: Tunneling injuries in lawns and girdling of shrubs may be evident as snow melts.

Flickers: Males are actively drumming on buildings and defending territories during mating season.

Poplar twiggall fly: Larvae continue to leave galls and pupate in soil at the base of trees.

Dormant oils: Many insects that winter on plants can be controlled with dormant applications of horticultural oils.

Ips beetles: Ips (engraver) beetles may be active during warm periods. Recently transplanted pines may need protection.

Southwestern pine tip moth: Adults begin to emerge from pupae at the base of trees.

Spider mites on juniper: *Platytetranychus libocedri* populations may begin to increase on arborvitae.

Pueblo & Fremont Counties

Boxelder bugs, cluster flies: Overwintered adults become active in and around homes.

Clover mites: Migrations of mites from lawns into buildings may begin at this time, during warm days

Millipedes: Nuisance movements into homes occurs following wet weather.

Winged termites: Winged reproductive stages continue to swarm in late winter.

Firewood insects: Bark beetles and wood borers emerge from stored wood in homes.

Ants: Foraging by field ants for sweet materials intensifies in homes.

Oystershell scale: Scrape scales with eggs off limbs of aspen, ash and other host plants.

Clover mites: Mites are actively feeding on lawns near buildings and shrubs during warm days.

Nightcrawlers: Tunneling activities during spring can create lumpy lawns.

Vole injury: Tunneling injuries in lawns and girdling of shrubs may be evident as snow melts.

Flickers: Males are actively drumming on buildings and defending territories during mating season.

Dormant oils: Many insects that winter on plants can be controlled with dormant applications of horticultural oils.

Ips beetles, twig beetles: These bark beetles may be active during warm periods. Recently transplanted pines may need protection. Pinyon Ips may attack new trees at this time; preventive insecticides should be applied before trees are attacked.

Southwestern pine tip moth: Adults begin to emerge from pupae at the base of trees.

Southwestern Counties

Boxelder bugs, conifer seed bugs, cluster flies: Overwintered adults become active in and around homes.

Clover mites: Migrations of mites into buildings may become noticeable; movement of outdoor host plants, such as grasses, may begin to produce injuries.

Firewood insects: Bark beetles and wood borers emerge from stored wood in homes.

Swallow bugs: Overwintered swallow bugs become very active and peak period of human bites can occur at this time.

Bullpine sawfly: Overwintered larvae may be observed feeding on older needles of ponderosa pine.

Oystershell scale: Scrape scales with eggs off limbs of aspen, ash and other host plants.

Dormant oils: Many insects that winter on plants can be controlled with dormant season applications of horticultural oils.

Ips/Engraver Beetles: First flights of some species may occur by this time during warm seasons.

Millipedes: Nuisance movements into homes occurs following wet weather.

Ants: Field ants forage in homes for sweet materials.

Boxelder bugs, conifer seed bugs, cluster flies: Overwintered adults become increasingly active in and around homes during warm periods.

Ips beetles: First flights of some species can be expected by this time. Preventive insecticide applications should be made before flights.

Dormant oils: Many insects that winter on plants can be controlled with dormant season applications of horticultural oils.

Tiger moth: Tents and actively feeding larvae may be observed in pinyon and juniper.

Clover mites: Mites are actively feeding on lawns near buildings and shrubs during warm days.

Nightcrawlers: Tunneling activities during spring can create lumpy lawns.

Vole injury: Tunneling injuries in lawns and girdling of shrubs may be evident as snow melts.

Tri-River Counties

Boxelder bugs, cluster flies: Overwintered adults become active in and around homes.

Clover mites: Migrations of mites from lawns into buildings may begin at this time, during warm days

Millipedes: Nuisance movements into homes occurs following wet weather.

Winged termites: Winged reproductive stages continue to swarm in late winter.

Firewood insects: Bark beetles and wood borers emerge from stored wood in homes.

Ants: Foraging by field ants for sweet materials intensifies in homes.

Oystershell scale: Scrape scales with eggs off limbs of aspen, ash and other host plants.

Ips beetles, twig beetles: These bark beetles may be active during warm periods in late winter. Recently transplanted pines may need protection. Trees grown in outbreak areas may need protection.

Clover mites: Mites are actively feeding on lawns near buildings and shrubs during warm days.

Nightcrawlers: Tunneling activities during spring can create lumpy lawns.

Dormant oils: Many insects that winter on plants can be controlled with dormant applications of horticultural oils.

Ips beetles, twig beetles: These bark beetles may be active during warm periods. Recently transplanted pines may need protection. Trees grown in outbreak areas may need protection.

Southwestern pine tip moth: Adults begin to emerge from pupae at the base of trees.

White pine weevil: Adults may be expected to be laying eggs around this time.

Honey bees: Honeybees will begin to forage during warm days. During this time they will visit sources of water and pollen.

Clover mites: Nuisance migrations into homes may be observed during warm days. Most activity is on south and west sides of buildings. Clover mites will continue to be active for the next two months.

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

Credits

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