

School Integrated Pest Management (IPM) Newsletter – February 2014



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Start a new year with clutter control

A cluttered workspace, classroom or kitchen, creates barriers to efficiency and an environment in which many people feel stressed due to information and visual overload. Pests however, absolutely love the chaos. Clutter also contributes to the accumulation of dust and debris often providing food as well as harborage for insects, such as cockroaches. According to the US Environmental Protection Agency, insect allergens (which often come from insect feces and dead insects) along with dust mites account for two of the six most common **indoor asthma triggers**. In this way, clutter is more than a stress-inducer – it can also be a health concern.

Asthma accounts for more than 14 million missed school days each year and is the leading cause of hospital visits among children. Approximately one out of every 13 school-aged kids has asthma, which means your school probably has at least one or two affected children in each class. Keeping insect allergens and dust at a minimum will improve the indoor air quality for *all* students and staff, especially those who are asthmatic.

When your health and that of a child are tied to clutter issues, de-cluttering becomes more than a suggestion. It becomes a necessity.

De-cluttering has the immediate effect of eliminating pest harborage. When clutter is reduced, there is increased access to floor spaces, allowing for more thorough cleaning by custodial staff. The same is true for shelves and inside cupboards. When there are nooks and crannies – created by “stuff” – pests can easily hide and breed there. Because of the added edge surfaces that result from clutter, there will be allergens and lots of bugs.

Clutter control also helps improve overall school hygiene. It's easier for custodial staff to sweep, mop, and dust when things are generally organized. Minimizing clutter also helps teachers stay organized. It's much easier to keep your room tidy when your cupboards and bookshelves are not overflowing with stuff!

Managers

1. **Facilities managers:** have a plan in place for garbage and recycling over the year. If there is a cut-off date beyond which classroom garbage and recycling will not be collected, make sure you communicate with principals to inform teachers and office staff of that date, and how to handle recyclables and waste items during that period. Infrequent trash collection schedules can generate serious pest problems.
2. **Principals:** make sure staff responsible for the Lost & Found convey last communications to students to claim lost articles, then dispose of donate unclaimed items. Cockroaches, mice, and several other pests are commonly found associated with Lost & Found areas.

Faculty

Unfortunately, many bugs LOVE the things we like to store. Classrooms and teacher's lounges are among the most pest-prone areas in schools. Lounges are high-use areas, often with edible items available. Classrooms often have limited storage space resulting in clutter. The beginning of the year is a great time to make sure all pest-prone areas are especially well organized so they can be cleaned effectively.

1. If you have art supplies that originated as food items (macaroni, popcorn kernels, beans, etc.) store them in air-tight plastic or glass containers.
2. Avoid using cardboard boxes as storage containers! German cockroaches will set up home in cardboard boxes. Cockroaches and crickets will feed on, and live in these boxes. Substitute cardboard with sealable transparent storage bins the next time you reorganize.
3. Classroom garbage and recycling may not be emptied regularly. Don't return to a classroom full of flies or cockroaches -- be aware of dates for classroom garbage and cleaning services.
4. Report leaky faucets and watermarks in ceilings and walls to maintenance.
5. Food treats and snacks should not be left in the classroom. Take them home with you, give them to students, or throw them out.
6. Have a plan that involves re-housing classroom plants, pets and pet food at the end of each quarter.
7. Clear-out some "stuff". Haven't used it in two years? Recycle it, donate it, or chuck-it-out!
8. Teacher's lounge: open the refrigerator and take a good long look at every item – is it yours? Has it expired? Or is no longer recognizable as edible food? Don't hesitate: toss it!
9. Refrigerators need to be emptied regularly. Cockroaches live contentedly in the seals of refrigerator and microwave doors, so if you use them, do your part and give these appliances a good cleaning.

Custodians

Custodians are a school's first line of defense against pests. They know where the pest problems are and often what is causing them.

1. Report leaky faucets, wet spots, or water damage in ceilings and walls (indoors and outside). Water is highly sought after by critters in our desert environment.
2. Clean mops and brooms should be stored 'head' up on wall-mounted racks. Ants, crickets, and cockroaches will feed on the organic residue built up in mops and brooms. Flies, spiders and cockroaches breed, feed, and take shelter in mop and broom heads resting on the floor.
3. Make sure all trash and recycling is removed from classrooms.
4. Arrange for staff to flush toilets and run water down drains (including floor drains in kitchen areas and showers) at least once every two weeks. It is well worth the effort! It

keeps the P-traps from drying up, and American cockroaches from gaining access via the drains.

Kitchen Staff

1. Remove as much corrugated cardboard from the pantry and kitchen area as soon as possible. German cockroaches in particular thrive in kitchen environments and can prove challenging to eradicate.
2. Check to make sure the kitchen floor will receive a thorough steam-cleaning to remove build-up in hard to reach areas – especially in corners under appliances!!

Students

All students can help take responsibility for a healthy school environment by removing clutter, food, trash, and helping to tidy up the classroom.

For more information, please read:

<http://cals.arizona.edu/apmc/docs/End-of-YearPestPressJune2012.pdf>

http://cals.arizona.edu/urbanipm/pest_press/2008/june-july.pdf

http://cals.arizona.edu/urbanipm/pest_press/2006/june.pdf

http://cals.arizona.edu/urbanipm/pest_press/2005/aug.pdf

Turkestan Cockroaches

The life history and biology of Turkestan cockroaches was recently described in a new article in the *Journal of Economic Entomology*. This pest was first reported in the U.S. in California in 1978, and has since spread throughout the southwest and into the southern U.S. It is out-competing the Oriental cockroach in the southwest due to its fast growing nymph stages and greater egg production. In Arizona they displace the American cockroaches. They typically inhabit in-ground containers such as water meters, irrigation, and electrical boxes, raised off concrete, cracks, crevices, and hollow block walls. They rarely invade dwellings and if they do it's usually a male (they fly) having been attracted to an external light. At this time of year they overwinter as pupae and the adults have already died off. As a result this cockroach rarely gets completely out of hand or causes any trouble. This is a cockroach most grounds people choose to live with due to their beneficial detritus feeding.



Male (a) and female (b) adult Turkestan cockroaches. (Images by Robin McLeod.) <https://insects.tamu.edu/>

For more details, read [the article](#).

Useful Publications and Apps

[Videos for Teaching IPM](#) is an eXtension web page that provides training videos for teaching IPM, particularly in schools, on topics including pest proofing, monitoring, bed bugs, bees, and more.

The [ID Tools](#) website, created by USDA-APHIS' Identification Technology Program, houses a database of more than 30 tools to quickly identify pests using taxonomic identification key software called "Lucid". The pests that could be quickly identified include insects, diseases, harmful weeds, and more.

[Integrated Pest Management: Current Concepts and Ecological Perspective](#), edited by Dharam P. Abrol, is a new book that presents an overview of alternative measures to traditional pest management practices using biological control and biotechnology.

Upcoming Webinars and Events

Attend Free Sessions of the [Green Strides Webinar Series](#). View archived webinars [here](#).

The [Green Strides Webinar Series](#) provides school communities the tools to reduce their schools' environmental impact and costs; improve health and wellness; and teach effective environmental literacy, including STEM, green careers, and civic engagement.

February 5, 2014, 1-2 p.m. Eastern / 11-12 p.m. Arizona: [Service Learning in the Dynamic Classroom \(EarthEcho\)](#)

February 7, 2014, 2-3 p.m. Eastern / 12-1 p.m. Arizona: [All Bugs Good and Bad 2014 Webinar Series: If Flowers are Restaurants to Bees, Then What Are Bees to Flowers?](#) (eXtension)

February 19, 2014, 7-8 p.m. Eastern / 5-6 p.m. Arizona: [Practices of Science and Engineering on your School Campus – How to use Green STEM to meet the Next Generation Science Standards \(NEEF\)](#)

February 19, 2014, 7:30-9 p.m. Eastern / 5:30-7 p.m. Arizona: [GreenWorks! Action Grants for ClimateChangeLIVE Participants \(USFS\)](#)

February 20, 2014, 4-5 p.m. Eastern / 2-3 p.m. Arizona: ["Ask NICE" – Impacts of Climate Change \(NICE/Minority University Research and Education Program\)](#)

For more information about the EPA Schools program, visit:
<http://www.epa.gov/schools/>



For more information about the Community IPM, visit:
<http://www.extension.org/pages/23359/urban-integrated-pest-management-community-page>



For more information about School IPM in Arizona, visit:
<http://cals.arizona.edu/apmc/westernschoolIPM.html>

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