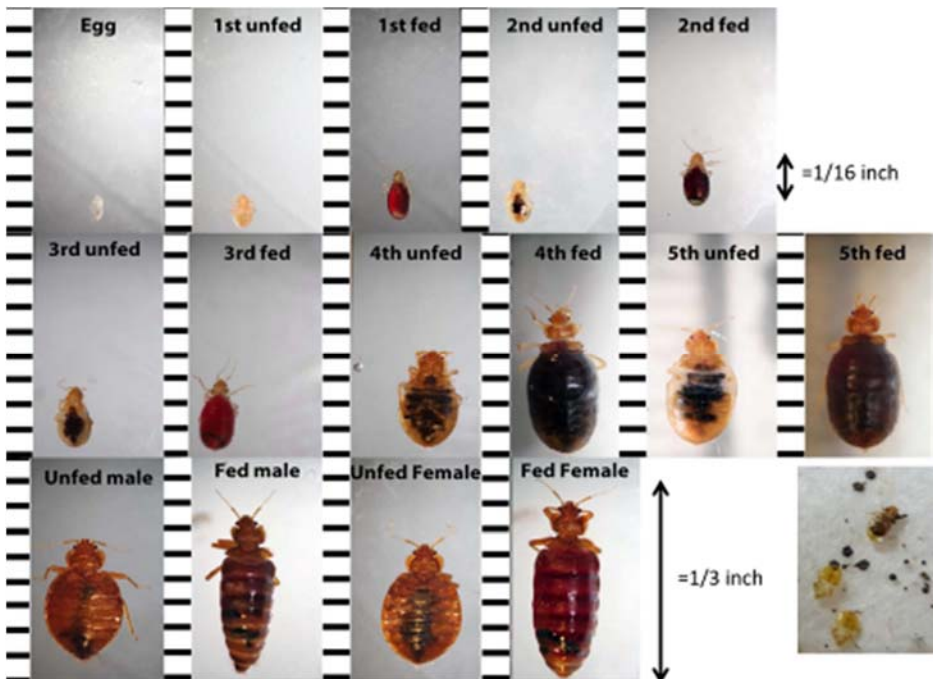




Pests and Pesticides in Child-serving Facilities: An IPM Newsletter

Traveling this Winter Break? Here's Some Suggestions to Help Prevent Bringing Bed Bugs Home
 Karen Vail



Egg, unfed and fed immature, male and female bed bugs. Bottom right, black fecal speckling and bed bug shed skins.

Step 1. Bed bugs expand and change shape slightly as they feed, so to prevent bringing bed bugs home, you must first be able to recognize all the fed and unfed bed bug nymphs and adults, as well as their eggs, feces and shed skins.

Step 2. When travelling, do the following:

- Store luggage away from beds. Some people store luggage in the bathroom or place it in a sealable plastic bag.
- Inspect the hotel room before you unpack. You'll need gloves, a flashlight and magnifying lens. Check behind the headboard, along the mattress seams, and other accessible cracks and crevices. Ask for another room if bed bugs are found.
- Check luggage for bed bugs before leaving the hotel.
- Wash and dry clothes immediately upon your return home.

Special Points of Interest

- > Tips to Prevent Bringing Bed Bugs Home this Holiday Season
- > Don't Invite Pests to Your School Parties

This issue

Tips to Prevent Bringing Bed Bugs Home	1
Classroom Holiday Party Invitations Shouldn't Include Pests!	4
Contacts	6
Links	6



Lint rollers are easier to use than tweezers to remove bed bugs from furniture, clothing and other objects.

- Leave luggage in a sealed bag until you have time to inspect and clean it, or heat treat it.
- If a visit to a home with bed bugs is necessary, do not sit on upholstered furniture or beds. Choose a hard chair but only after scanning the crevices to ensure bed bugs aren't present. Only bring what is essential for the visit and don't lay any items on upholstered furniture, beds or carpet. Before leaving, check your clothing to ensure bed bugs are not present

Step 3. When acquiring used or rented beds, bedding, furniture, appliances and other items that may harbor bed bugs, inspect them before purchasing or bringing them to your home. New items should also be inspected prior to bringing them into the house. Put an end to "dumpster diving." Don't pick up furniture, bedding and appliances that have been placed next to a dumpster. Bed bugs may be one of the reasons these were placed there.

Step 4. Inspect clothing, purses, backpacks and briefcases before entering the home. Purses, backpacks and briefcases can be left in sealed plastic bags during the day to prevent bed bugs from hitching a ride home with you.

Step 5. Mattress encasements made specifically for bed bug management can be placed over mattresses and box springs. The encasements deny bed bugs access to these items and the light color makes the bed bugs easier to detect. The encasements must be intact to be effective, so check them regularly for tears and ensure the zippers remain closed.

Step 6. Reduce bed bug hiding places by sealing cracks and crevices and reducing clutter, especially under the bed.

Step 7. Wash your sheets and pillowcases once a week and other bedding at least once a month. Inspect the bed and bed bug monitors (see Step 10) when changing sheets to detect bed bugs when the populations are still low.



Regularly vacuum beds and upholstered furniture to remove bed bugs while population levels are low .

Step 8. Vacuum beds and upholstered furniture regularly. Place a knee-hi stocking in the vacuum tube and fold the end back over the nozzle so the crevice tool attachment will hold it in place. After vacuuming vigorously along seams and folds, remove the knee-hi, tie it off, place it in a sealable plastic bag and dispose in an outdoor trash can, but not the trash chute.

Step 9. Avoid using over-the-counter (OTC) bed bug sprays as a preventive treatment as they are ineffective. Most bed bugs are resistant to pyrethroids (insecticides ending in “thrin”), the active ingredient in most OTC products.

Step 10. ClimbUp Insect Interceptors, BlackOut Bedbug Detectors or similar bed bug detection devices can be placed under bed or furniture legs to aid detection of new infestations and protect against re-infestation. Pull beds away from walls and don't allow bedding to touch the ground to prevent bed bugs from accessing the bed without climbing up the interceptor. Prevent pet hair from accumulating in the monitor so it does not form a bridge for the bed bugs.



Bed bug pitfall monitors (ClimbUp Insect Interceptor BG, ClimbUp Insect Interceptor, BlackOut or LightsOut Bedbug Detector and SenSci Volcano) (photo credit: J. Chandler)

Classroom Holiday Party Invitations Shouldn't Include Pests!

Karen Vail and Janet Hurley

Let's face it, most classrooms will have a party before school dismisses for the Thanksgiving and winter breaks. Teachers, students and parents will be sharing baked treats, candies and drinks. For most of you this image brings feelings of joy and excited anticipation, but pest management specialists are starting to cringe. If the pests only knew, they would be planning their party too. Teachers are often as excited as students to start the holiday and may rush out of classrooms before rescinding their pest invitation. We offer a checklist for teachers (and classroom helpers and custodians) to use as they prepare for the breaks so pests won't be having a party in their classroom.

Holiday Party Checklist or How to Prevent Inviting Pests to Your Party

Solid foods

- Choose foods that are easy to clean up. For instance, use bagels instead of cupcakes.
- Designate an easily cleaned area for eating.
- Ensure the area is cleaned after eating. Involve the kids and make it fun. Its never too early to teach cleaning techniques.
- Ensure garbage cans are lined with plastic bags so food debris isn't left in the can when it is emptied.
- Don't let cans or bins overflow.
- Empty garbage cans and recycle bins often. These should all be emptied before the start of break.
- Always keep snacks and other food items, whether for kids or teachers, in pest-proof containers such as sealed plastic, glass or metal containers. Yes, that means that package of crackers and emergency candy you keep in your top desk drawer.
- Look under furniture for food crumbs and remove them. We find that food eating surfaces are often cleaned, but food debris under objects is often ignored.
- Remaining party food should be sent home and not left in the classroom overnight or over break!
- Send the kids home with arts and crafts projects made of food. We don't want pests nibbling on these while you're gone. Food-based art projects should have limited duration in the classroom regardless of the time of year.



Adult American Cockroach. Credit: Daniel R. Suiter, University of Georgia, Bugwood.org

Water and other liquids

- Use water as the preferred beverage in the classroom. It's better for the kids and doesn't leave a sticky, sugary mess when spilled for the pests to enjoy.
- Any spills should be wiped up immediately. Report spills of sugary substances on carpets to ensure they are cleaned quickly.
- Report leaking faucets and pipes ASAP. Cockroaches can only live a few days without water, but weeks without solid food.
- Ensure water is present in the p-trap of any sink and cover or plug drains to ensure American cockroaches don't make a visit to your classroom through the pipes.

Clutter (i.e, pest shelter)

- Cardboard boxes used to bring in party supplies should be sent home, recycled or returned to the owner.
- Transition from cardboard as a long-term storage container to plastic totes or similar items. German cockroaches love to hide in **corrugated cardboard** and are often transported into buildings this way. German cockroaches so enjoy corrugated cardboard that we use it for their harborage when we rear them in the laboratory. Crickets will also munch on it, mice build nests out of it and many pests may use it as a hiding place.
- Arts, crafts, and miscellaneous **supplies tend to accumulate in the classroom**. Ask yourself if you have used stored items in the last year. If not, is there someone else who could use it more?
- Please reduce clutter in the classroom. Not only does clutter provide a place for pests to hide, it is very difficult to clean or inspect in, under and around it. Ask yourself why it is here and if you can do without it.



German cockroach adult with nymphs. Credit: Gary Alpert, Harvard University, Bugwood.org

Follow these steps to help keep your classroom pest free. Not only do pests disrupt the learning environment, they are also a source of allergens and asthma triggers.

Sources:

Hurley, J. 2013. As we all prepare to enjoy a few days off with our family and friends, please remember these few short tips to help keep our classrooms, cafeterias, and offices free of places for pests to hide over the holiday break.

Vail, K. and J. Hurley, 2014. Classroom Holiday Party Invitations Shouldn't Include Pests! Pests and Pesticides in Child-serving Facilities: An IPM Newsletter 8(4):1-2.

This newsletter produced by :

Karen Vail, Ph.D., Professor,
Extension Urban Entomologist
Entomology and Plant Pathology
370 Plant Biotechnology Bldg.
2505 E J Chapman Drive
Knoxville, TN 37996-4560
ph: (865) 974-7138
fax: (865) 974-8868
email: kvail@utk.edu
web: <http://schoolipm.utk.edu>
<https://ag.tennessee.edu/EPP/Pages/Vail.aspx>



Jennifer Chandler,
Research Specialist II
Entomology and Plant Pathology
370 Plant Biotechnology Bldg.
2505 E J Chapman Drive
Knoxville, TN 37996-4560
ph: (865) 974-7138
fax: (865) 974-8868
Email: jchand11@utk.edu

Comments or questions
on this newsletter?

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For more information about IPM in Tennessee schools and other facilities, or to view past issues of *Pests and Pesticides in Child-serving Facilities*, please visit <http://schoolipm.utk.edu>

NATIONAL IPM INFORMATION

eXtension's Pest Management In and Around Structures: Urban Integrated Pest Management http://www.extension.org/urban_integrated_pest_management

National School IPM
schoolipm.ifas.ufl.edu/

IPM in Schools Texas
<http://schoolipm.tamu.edu/>

IPM Institute of North America
www.ipminstitute.org/

School IPM PMSP—all schools IPM by 2020 <https://ipminstitute.org/projects/school-ipm-2020/>

National Pest Management Association IPM
www.whatisipm.org/

EPA schools
<http://www2.epa.gov/managing-pests-schools>

For further information about the IPM program at your school or in your county, contact your county Extension Agent or the school IPM Coordinator. For county agent contact information, please visit <https://extension.tennessee.edu/Pages/Office-Locations.aspx>

Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label.

Disclaimer

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

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