



Pest Press



“ I P M - I T ' S T H E R I G H T T H I N G T O D O . ”

B E D B U G S



Many of us have heard the old expression “sleep tight, don’t let the bed bugs bite” while being tucked in as a child. However, most people of this generation have never seen a bed bug. Prior to the 1950s, most people had a certain level of bed bug awareness. People modified their behavior to prevent bringing bed bugs back home with them. With the resurgence of bed bugs we want to make you aware of them, so that you will know their signs, symptoms, and how to prevent them. They are **not** something to be scared of but be aware of.

Bed bugs, *Cimex lectularius*, are small, oval-shaped, soft-bodied and wingless insects. They are brown to rusty-red in color. They feed solely on the blood of animals, but they prefer human blood. Before feeding they are 1/4 -3/8 of an inch long (about the size of a pencil eraser) and nearly as flat as a piece of paper, which is why they can fit into such narrow crevices. Their appearance changes dramatically after they have fed; they become rounded and dark red. Their eggs are white, slightly pear-shaped and about 1/32” long, about the size of a pinhead. They are laid in crevices, in clusters of 10-50. Newly hatched bed bugs are nearly colorless but otherwise resemble the adults, only smaller.

Under ideal conditions (70-80 degrees F), bed bugs can complete development in as little as a month, producing three or more generations per year. Inside buildings, bed bugs can breed all year. Their average lifespan is ten months to a little over one year, and in that time, a female may lay between 200-400 eggs, depending on the temperature and the amount of food available. The females need a blood meal before laying eggs. Eggs hatch in about ten days. Under

ideal conditions, the young can reach adulthood in five to eight weeks.

Bed bugs are active mainly at night. They will bite all over the body, especially on exposed areas, such as the face, neck, arms, and hands. During the daytime, they prefer to find shelter within twenty feet of beds where people sleep. Their flattened bodies enable them to fit into tiny crevices. Bed bug eggs, immature nymphal stages and adults can all be found together in bed frames, seams of mattresses and box springs, and under and behind other furnishings. Characteristically, these areas are marked by dark spotting and staining, which is the dried excrements of the bugs.



Bed Bug evidence on a mattress.

Bed bugs are not known to transmit diseases. Bites are often painless initially but may become large, itchy welts. Though not known to carry diseases, bed bugs can severely reduce quality of life by causing discomfort, sleeplessness, anxiety, and embarrassment. Although bed bugs are most often found associated with locations where humans sleep, they are expert hitch-hikers, and may be inadvertently transported on clothing, back-packs, or other belongings to child care facilities, schools and other places. Bed bugs typically arrive in schools as stowaways on student or staff belongings. When a bed bug is found, it can be difficult to determine the source. A bed bug found on a person or belongings may have come from another person. Similar to head lice, it is very important to address the issue with care and sensitivity. There is no association between cleanliness and bed bug infestations. Anyone can experience an infestation.

If the specimen is confirmed to be a bed bug, the principal and school health professional should be notified and the following steps are recommended:

1. The classroom or other area where the bed bug was found should be fully inspected by a trained professional including desks, floors, walls and storage areas for student belongings. A thorough cleaning may be needed including vacuuming with special attention to cracks and crevices in furniture and equipment, walls and floors, and laundering washables in hot water and drying on the highest heat setting. Delicate fabrics can be soaked in warm water and laundry soap for several hours before rinsing. Infested items that cannot be cleaned or treated with high heat (>120F for several hours) should be disposed of. If necessary, a licensed pest management professional can treat infested areas with pesticides labeled for bed bugs.
2. If the bed bug was found on a student's clothing or other belongings, guardian(s) should be notified. **There is no need to send the student home.** Similar to head lice, the health professional should manage the case including re-inspecting belongings, desk, classroom, etc. until the problem is resolved. Student belongings such as backpacks can be isolated in tight-sealed plastic containers or bags to reduce potential for bed bug dispersal, both at home and in school while the problem is being resolved.
3. Parents of all children using the room where the bed bug was found should also be notified and provided with basic information about bed bugs including description, signs, and symptoms, strategies to monitor for and eliminate infestations in homes including cleaning, laundering and specially designed mattress and box-spring covers that can entrap bed bugs and reduce harborage opportunities. The information should include where to go for additional help.

Inspect and monitor classrooms. If specimens are confirmed, inspect crevices in baseboards, behind pictures, furniture, windows, and door casings, wallpaper, behind electrical switch plates, in telephones, radios, clocks, behind wall mounted art-work. Look for the insects, their cast skins, bug feces, and eggs near crevices.

- Schools are not ideal places for bed bugs as they prefer to hide during the day and few people are around during the night. However, hungry bed bugs will feed during the day.
- Evening school staff on-break in rest areas may be the first to notice regular bites.
- Faculty lounge, office areas or nurse offices with upholstered furniture or a cot may become infested. Similarly schools that have child care facilities with stationary bedding are prone trouble spots.

In nearly all cases, careful inspection, vacuuming, laundering and school health professional case management will be adequate to resolve a confirmed bed bug sighting in schools without space heat or steam treatment. Note: Bleach and ammonia are not effective against bed bugs. Soap and water is effective removing bed bugs, eggs and debris from surfaces.

Managing bed bugs

- Inspect and monitor for bed bugs constantly, they arrive with people and their belongings. Inspect donations and monitor lost-and-found areas with extra vigilance.
- Vacuuming is an effective way to remove bed bugs and the dirt that provides them with shelter.
- Bed bugs are sensitive to extreme temperatures in all of their life-stages. So toss all infested clothing in a hot (140F) dryer for 40

minutes.

- Eliminate shelter by sealing cracks and crevices with a silicone based sealant. Seal around utility conduits.
- Remove clutter.
- Separate student back-packs and coats. Most bed bugs in schools will be coming in with students and can be found on, and in student's belongings.
- Encourage staff and faculty to report bed bug sightings.



If a suspected bed bug is found in a school, it should be collected for identification by a trained professional. Other bed bug-like species may be found in schools, including bat bugs or swallow bugs.

- To collect the specimen, use a piece of tissue, or forceps to place the bug in a plastic bag, double bag, then tape the outer bag closed.
- Do not crush the specimen.
- If the specimen will not be identified immediately, place the bag in a freezer for several hours to kill the bed bug and prevent escape.
- Do not mail or transport live specimens. They are skilled escape artists.

Collect the following information for each specimen:

- date found
- name and contact information for the person collecting the specimen,
- location found (e.g., on a student, on student's belongings or on walls or furniture),
- room number
- school name, school principal's name and phone number.
- Contact Your Local Extension Agent

A bed bug management plan for schools can be found at: <http://schoolipm.ncsu.edu/bedbugs.htm>

Information taken from:

- AZ Extension Pest Press, Sept 2010
 - University of Kentucky Extension Publication; Bed Bugs
 - Virginia Tech Publication; Bed Bug Prevention Methods
- For more Information
- www.extension.org

For further information about

Alabama's IPM program,
Please contact:

Dr. L.C. "Fudd" Graham
(334) 844-2563

grahalc@auburn.edu

Kim Pope
(334) 844-2786

popekim@auburn.edu

