

Integrated Pest Management in Section 8 Multifamily Housing

Bed Bugs

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Outline

- What they are
- What they eat
- Where they live
- How to think like a bed bug
- Prevention and control

Also known as...

- chintzes or chinchies
- mahogany flats
- red coats
- crimson ramblers
- wall lice
- the bug that nobody knows



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What is a bed bug?

- A blood-sucking insect
- Flat
- Range in size from a sesame seed to a apple seed
- Light brown to mahogany red, depending when they last fed



Adult bed bug feeding on a human

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Why they're back

- ✦ Change in pesticide availability
- ✦ Change in pesticide use patterns
- ✦ More travel/mobility of people
- ✦ More infested locations
- ✦ Pesticide resistance
- ✦ Lack of preparedness of society in general

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Bed bugs are health hazards

Bed bugs do not transmit disease, but they are a pest of significant public health importance

- ✦ Cause secondary infections after people scratch their bed bug bites
- ✦ Result in stress, loss of work, loss of productivity, loss of sleep, and financial burden
- ✦ Are unwelcome in our homes and workplaces

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Bed bug life cycle



Fed



Unfed

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Bed bug behavior

- ✦ Most active at night
- ✦ Hide in cracks and crevices, often in groups
- ✦ Cannot fly, jump, or burrow into skin...they crawl
- ✦ Hitchhike on coats, bags, furniture, wheelchairs....



Bed bug crawling into a screw hole to hide

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What bed bugs eat and drink

Blood



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Can be confused with...

- ✦ Ticks
- ✦ Cockroach nymphs
- ✦ Other kinds of bug bites
- ✦ Allergic reactions to chemicals



Tick



Mosquito Bites



Cockroach Nymph



Bat Bug



Spider Beetle

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Signs of bed bugs

- ✦ Bites
- ✦ Fecal spots
- ✦ Shed skins
- ✦ Dead bed bugs
- ✦ Live bed bugs



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Bites

- ✦ Bed bugs cannot be confirmed by bites alone—bites do not show up on everyone
- ✦ Live bed bugs must be found



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Fecal spots

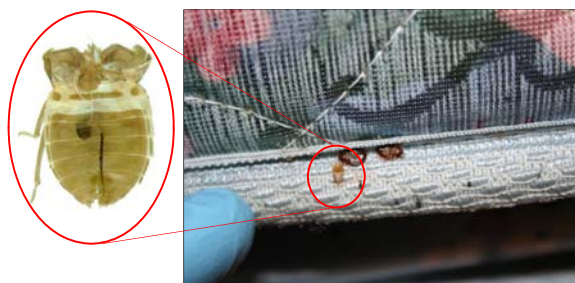
- ✦ Fecal spots are bed bug droppings
- ✦ Different from frass—frass is gritty, fecal spots are smooth.
- ✦ A current bed bug infestation cannot be confirmed by fecal spots alone
- ✦ Live bed bugs must be found



A bad infestation

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Shed skins



Bed bug signs on a mattress seam

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Dead bed bugs



Bottom



Top

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Where bed bugs live

- In the building
- In any crack or crevice where a credit card edge could fit
- In anything near where people rest



Mattress piping



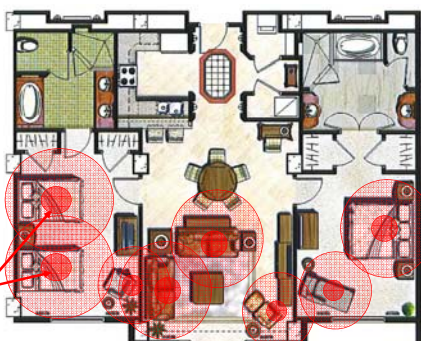
Switch plates

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Where bed bugs live

Beds,
sofas,
bedside
tables,
recliners,
picture
frames...

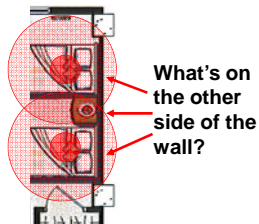
● = Hot Spot



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How do bed bugs spread?

- Actively crawl along wires, pipes, and under doors
- Passively on anything coming from an infested unit (furniture, backpacks, laundry...)



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Think like a bed bug

- After mating once and feeding, a female is ready to lay eggs
- To avoid being injured or killed, a female may go off and find a hiding spot away from other bed bugs



Traumatic insemination
(bed bugs breeding)

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Areas at-risk for introduction and infestation

- ✦ Introduction is likely where people
 - frequently travel
 - set down personal belongings
 - sit or lay down for long periods of time
- ✦ Infestation is likely where bed bugs can
 - Crawl (upholstered furniture or bedding)
 - Feed on a person for 5 minutes without being detected
 - Hide in cracks or folds

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Inspection

- ✦ Always use a flashlight
- ✦ If bed bugs are found, inspect all adjacent units
- ✦ Two types
 - ✦ Visual
 - ✦ Scent detecting canine

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Monitoring

- ✦ Trap and kill bed bugs
- ✦ Determine how bad the infestation is
- ✦ Two types
 - Passive
 - Active



Passive, moat-style interceptor

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Got bed bugs? Now what?

- If found and controlled early in the infestation, the spread of bed bugs can be stopped
- Early detection and rapid response are critical to building-wide bed bug management
- Only licensed PMPs apply pesticides

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If someone finds a bed bug

Document all observations

Rapid response plan:

- Save the insect
- Report the problem
- Don't apply pesticides or move things around
- Prevent carrying the bed bugs to other places
- Have the PMP inspect the unit and adjacent units



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Encourage a community response

- Educate everyone
- Destroy discarded items
- Management may provide:
 - mattress encasements
 - monitors (as described on Slide #21)
 - large bags for furniture removal

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Prepare before you have to

- ✦ Once bed bugs are present, you don't want to disturb the area
- ✦ Ideally, residents routinely
 - inspect with a flashlight
 - launder bedding
 - vacuum
 - maintain their unit according to housekeeping standards

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Prevent introduction and spread: residents

- ✦ Keep coats, backpacks, purses, and bags off beds, recliners, and sofas at home and while out
- ✦ Inspect used furniture carefully before bringing it home—avoid it if possible
- ✦ Look for signs when sleeping away from home

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Advice for staff, health aides, and contractors

- ✦ In units:
 - Avoid sitting or placing items on potentially infested surfaces
 - Wear a protective layer when moving infested items
- ✦ In the main office/community areas:
 - Replace fabric-covered furniture that has many crevices with plastic or metal items
 - Have residents set their belongings in plastic totes during meetings

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Who is responsible?

- The PMP gives all instructions after inspection
- Assign realistic preparation responsibilities, taking into consideration financial, physical, and mental limitations of those involved
- Instructions are ideally carried out by the person who owns the materials

If they are unable

Family and friends

Building staff

Aides

Nonprofit groups

Contracted companies

If they are unwilling

Fall back on lease, job

description, or other existing

formal agreement

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Clutter image rating scale

Compulsive Hoarding and Acquiring Workbook

- If preparation is required, communicate expectations to the resident using a visual rating scale



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Treatment options

- Vacuuming
- Isolation
 - Encasements
 - Clear bags
 - Closed plastic containers
 - Make the bed an island
- Freezing
 - Liquid CO₂
 - Chest freezer
- Heat
 - Clothes dryer
 - Steam
 - Container
 - Whole unit
- Pesticides
 - Spray
 - Dust
 - Fumigation

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Use a mattress encasement

- ✦ Cover mattresses and box springs
- ✦ Ensure a snug fit, zip, seal, and check for rips
- ✦ Leave it on
- ✦ Cover any sharp points on the bed frame with tape or felt



**Mattresses and furniture
don't have to be thrown out!**

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The PMP's role

- ✦ ALWAYS thoroughly inspects the reporting unit and the adjacent areas
- ✦ Provides site-specific preparation and follow-up instructions in multiple languages
- ✦ Follows the label
- ✦ Returns to inspect and treat if bed bugs are found

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Only PMPs use sprays

- ✦ Sprays are not effective when used by homeowners for bed bug control
- ✦ Over-the-counter-sprays and foggers cause the bugs to scatter so the problem becomes harder to deal with



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A review of what you should do

- ✦ Educate everyone about what they can do to prevent bed bugs
- ✦ Prepare before bed bugs are reported by minimizing clutter and installing encasements and monitors
- ✦ Respond rapidly with a professional before the infestation grows and spreads

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Questions?



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