

Bed Bugs

A microscopic view of a bed bug, showing its segmented body, legs, and antennae. The image is in shades of orange and yellow, with the bug's body appearing as a dark, textured shape against a lighter background.

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



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

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

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

Bed bug life cycle



Fed



Unfed

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

What bed bugs eat and drink

Blood



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

Signs of bed bugs

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



Bites

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



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

Shed skins



Bed bug signs on a mattress seam

Dead bed bugs



Bottom



Top

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

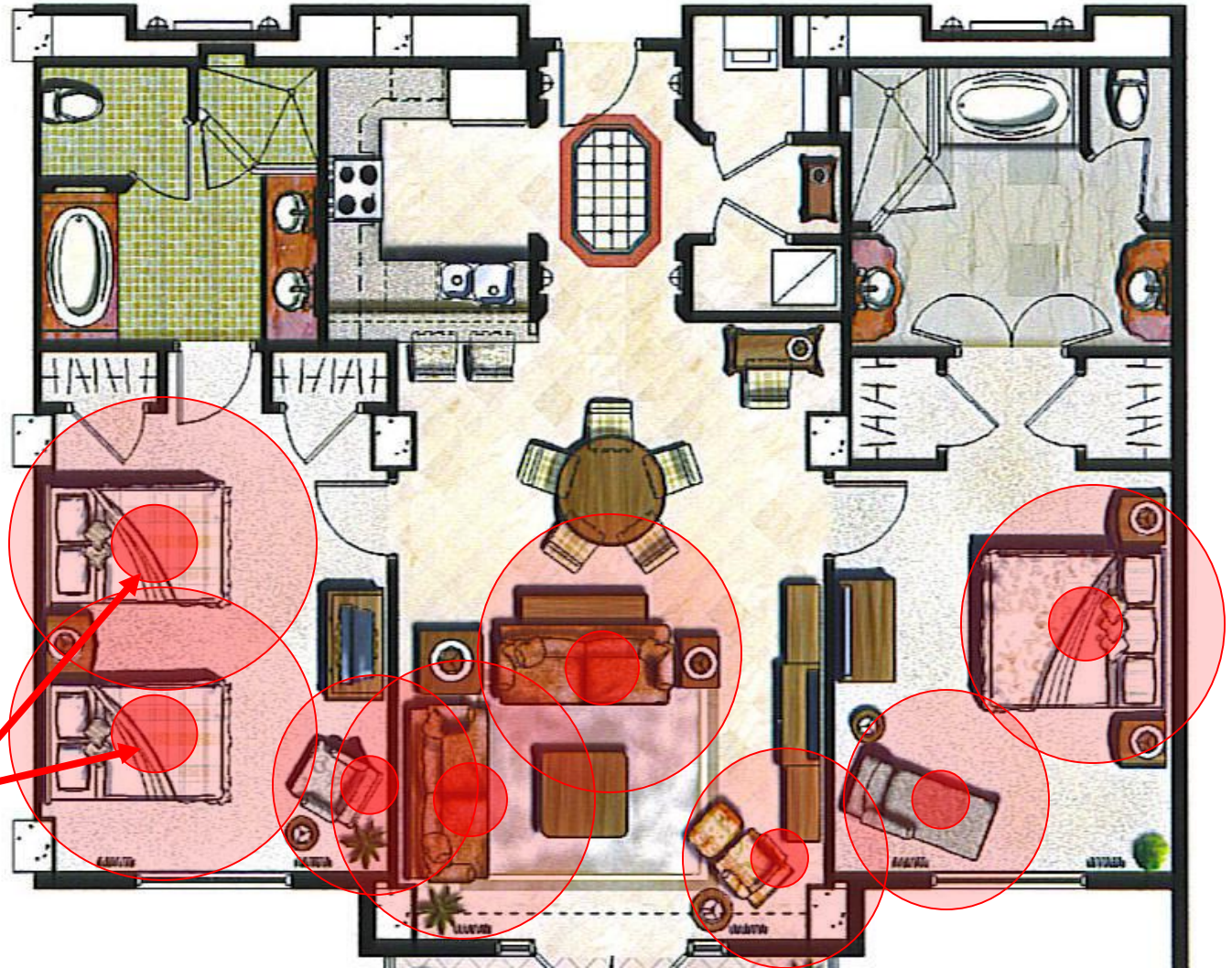


Switch plates

Where bed bugs live

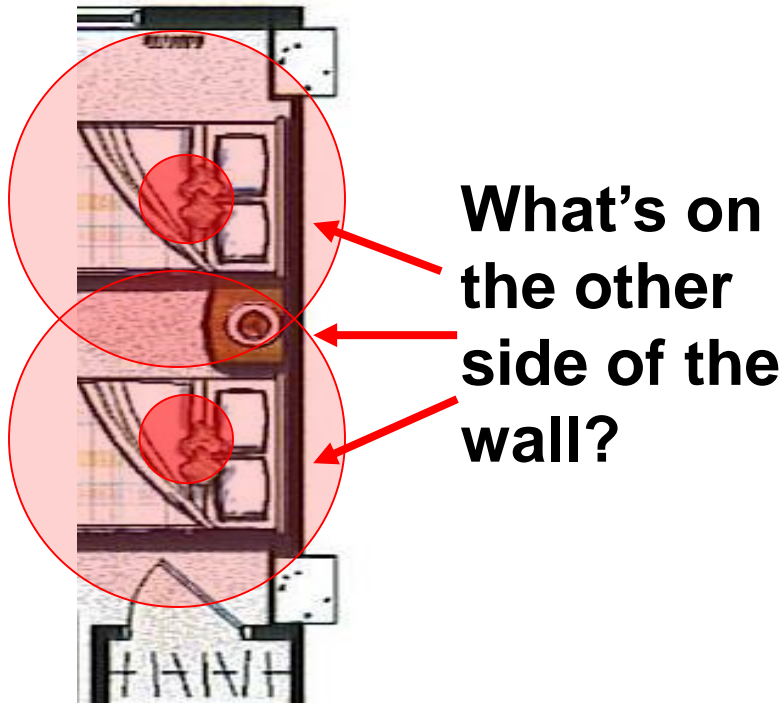
Beds,
sofas,
bedside
tables,
recliners,
picture
frames...

● = Hot Spot



How do bed bugs spread?

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



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

Inspection

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

Monitoring

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



Passive, moat-style interceptor



Photo credit: FMC Corp.

Active, plug-in trap

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 PMPs apply pesticides

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



Encourage a community response

- Educate everyone
- Destroy discarded items
- Housing should take the financial burden off of residents by providing
 - mattress encasements
 - monitors
 - large bags for furniture removal

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

Prevent introduction and spread: residents

- Manage items that come or go from the home
 - 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

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

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 & friends

Building staff

Aides

Nonprofit groups

Contracted companies

If they are unwilling

Fall back on lease, job description, or other existing formal agreement

Clutter image rating scale

Compulsive Hoarding and Acquiring Workbook

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



Treatment options

Vacuuming

Isolation

- Encasements
- Clear bags
- Closed plastic containers
- Make the bed an island

Freezing

- Liquid CO₂
- Chest freezer

Heat

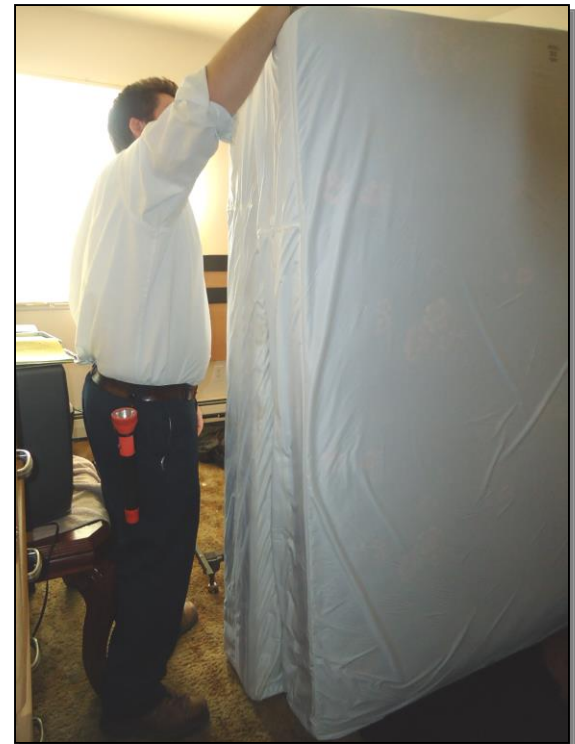
- Clothes dryer
- Steam
- Container
- Whole unit

Pesticides

- Spray
- Dust
- Fumigation

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!**

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

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



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

Questions?

