

Bed Bugs

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Presentation Overview

Why did bed bugs come back?

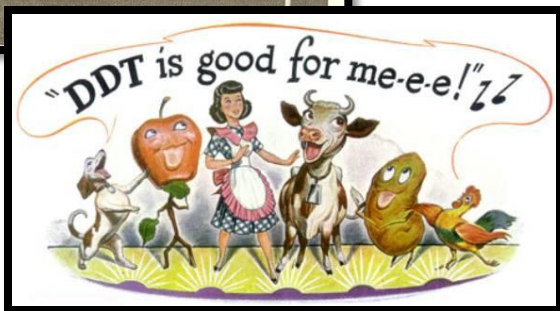
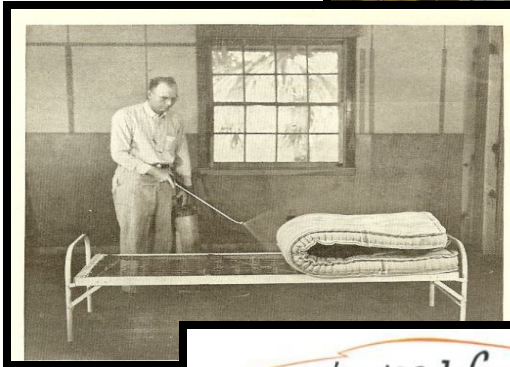
Bed bug identification and biology

Inspecting for bed bugs

Bed bug treatment overview

What can YOU do to help stifle the spread?

Why are we seeing them again?

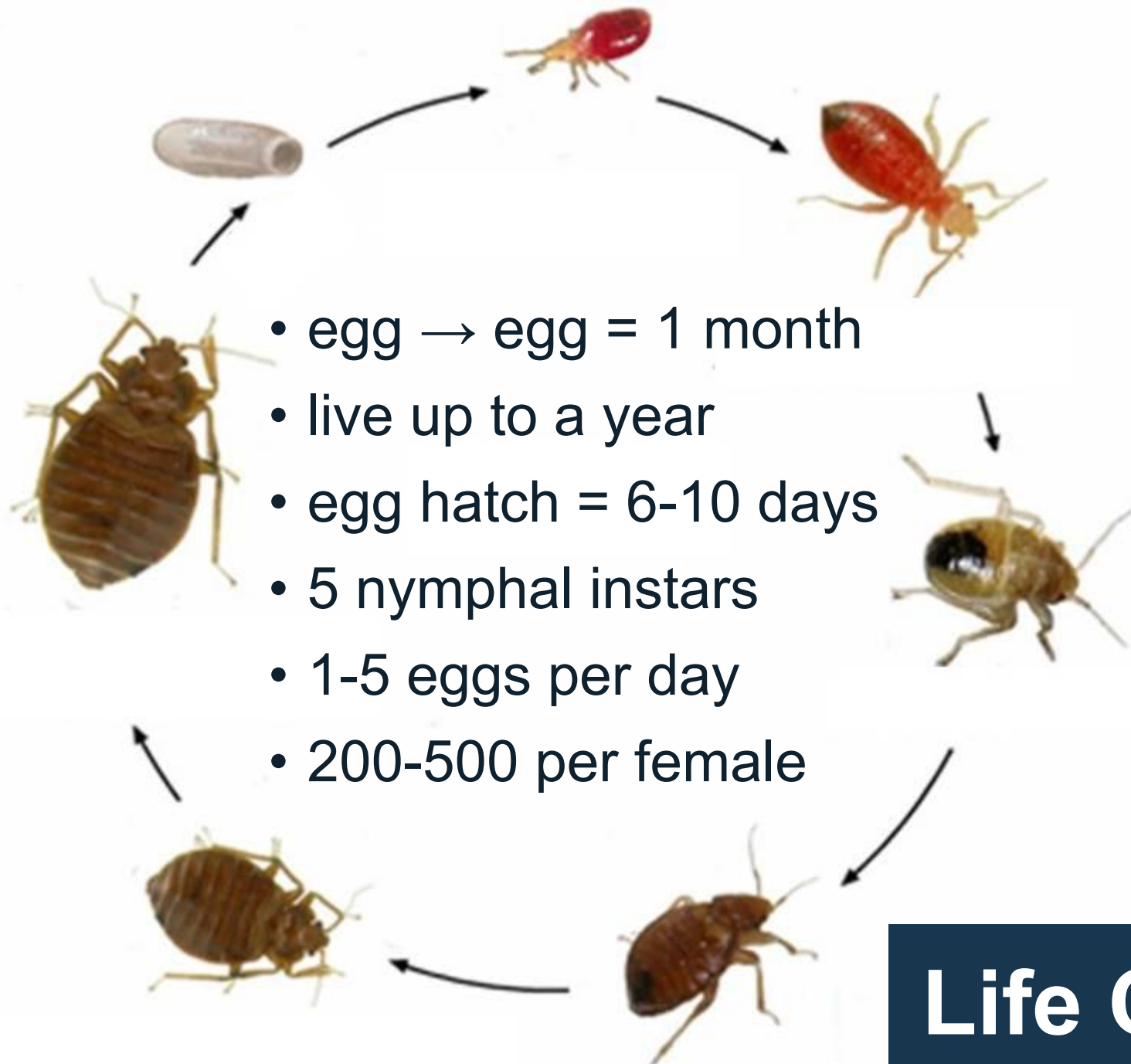


- Increased global travel, migration, immigration
- Re-sale of second hand goods, furniture rentals
- Changes in pest control practices (IPM, baits, etc)
- Lack of knowledge treating for bed bugs
- Loss of most effective (toxic) chemicals
- Resistance

Bed Bug Identification

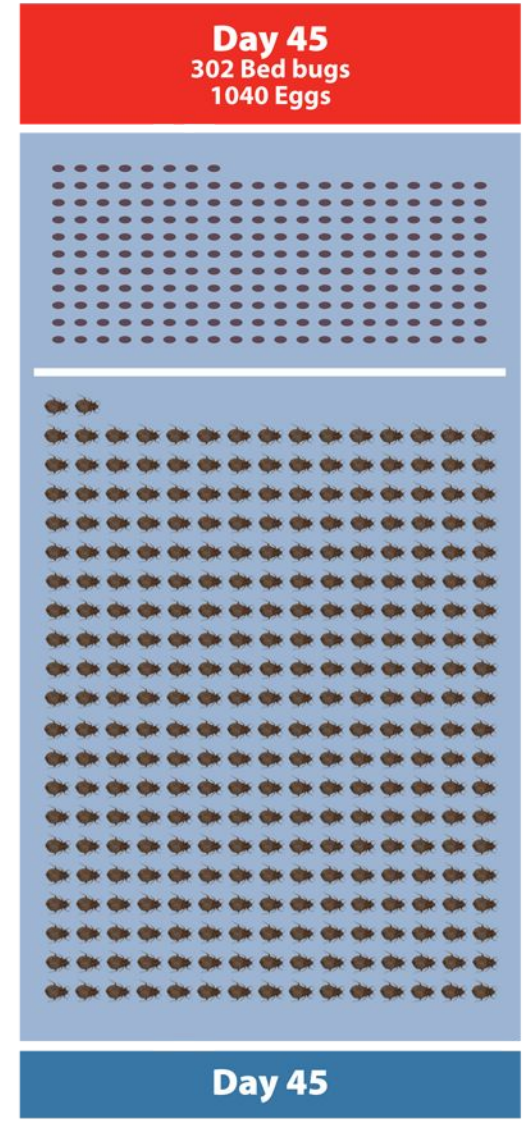
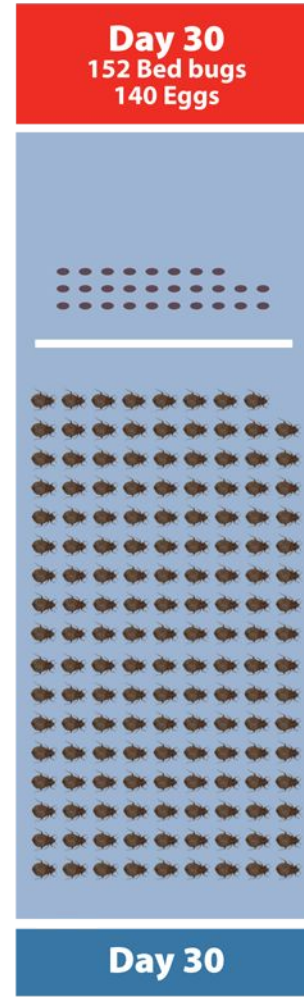
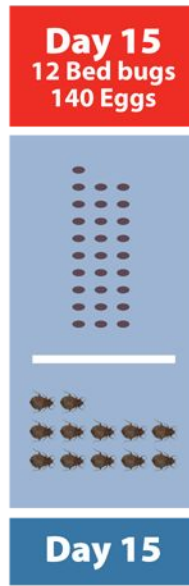
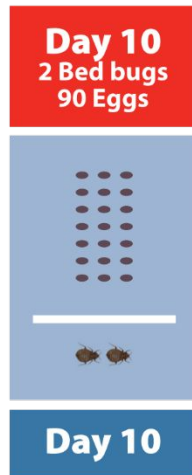
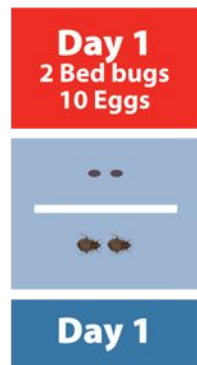


- **Color:** Yellow to reddish brown (depending on age and when they last fed)
- **Shape:** Flattened, oval body
- **Size:** Adults are the size of an apple seed (5mm)
- **Mouthparts:** Piercing-sucking
- **Wings:** No wings, but move quickly



Life Cycle

BB Population Growth Projection



- Short of inspecting and treating guests as they check in, there is no known way to prevent bed bugs from entering a property

Bed Bugs Do NOT Spread Disease

- ✓ **Blood feeding**
- ✓ **Prefer humans**
- ✓ **Long lived**
- ✓ **Patient hunters**



- >30 human pathogens isolated
 - Hepatitis B, HIV, relapsing fever, typhus, plague, tularemia
- Secondary infection (from scratching)
- Anemia (infants & elderly)

Bed Bug Feeding



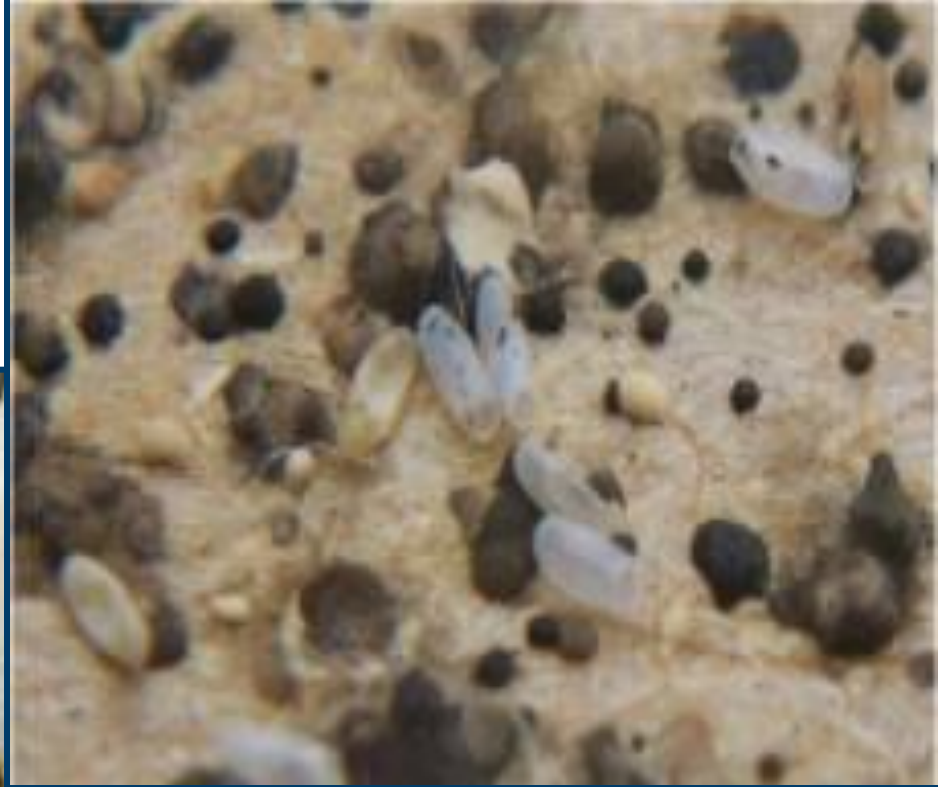
Signs of Bed Bugs

- Insects
- Cast skins
- Fecal droppings/spotting
- Blood smears??
- Bites??

Signs of Bed Bugs

Keep an eye out for

- Adults, nymphs (eggs?)
- Shed skins



Inspecting for bed bugs is a
SKILL! The more you do
it, the better you will
become at it!

Fecal Spotting—looks like fabric was touched by permanent black marker



Signs of Bed Bugs

Bites only are NOT a good indicator of bed bugs!



Which of these are bed bug bites?????

fleas?

chiggers?

spiders?

no-seeums?

mosquitoes?

ticks?

black flies?

Inspecting for Bed Bugs

- Bed bugs tend to hide as close to the host as possible
- Start with the bed!
- Next, inspect items around the bed such as headboard, night stand, pictures above bed
- If no evidence on or around bed, then decreased chances of finding them elsewhere in the room (provided the room does not have history of infestation)

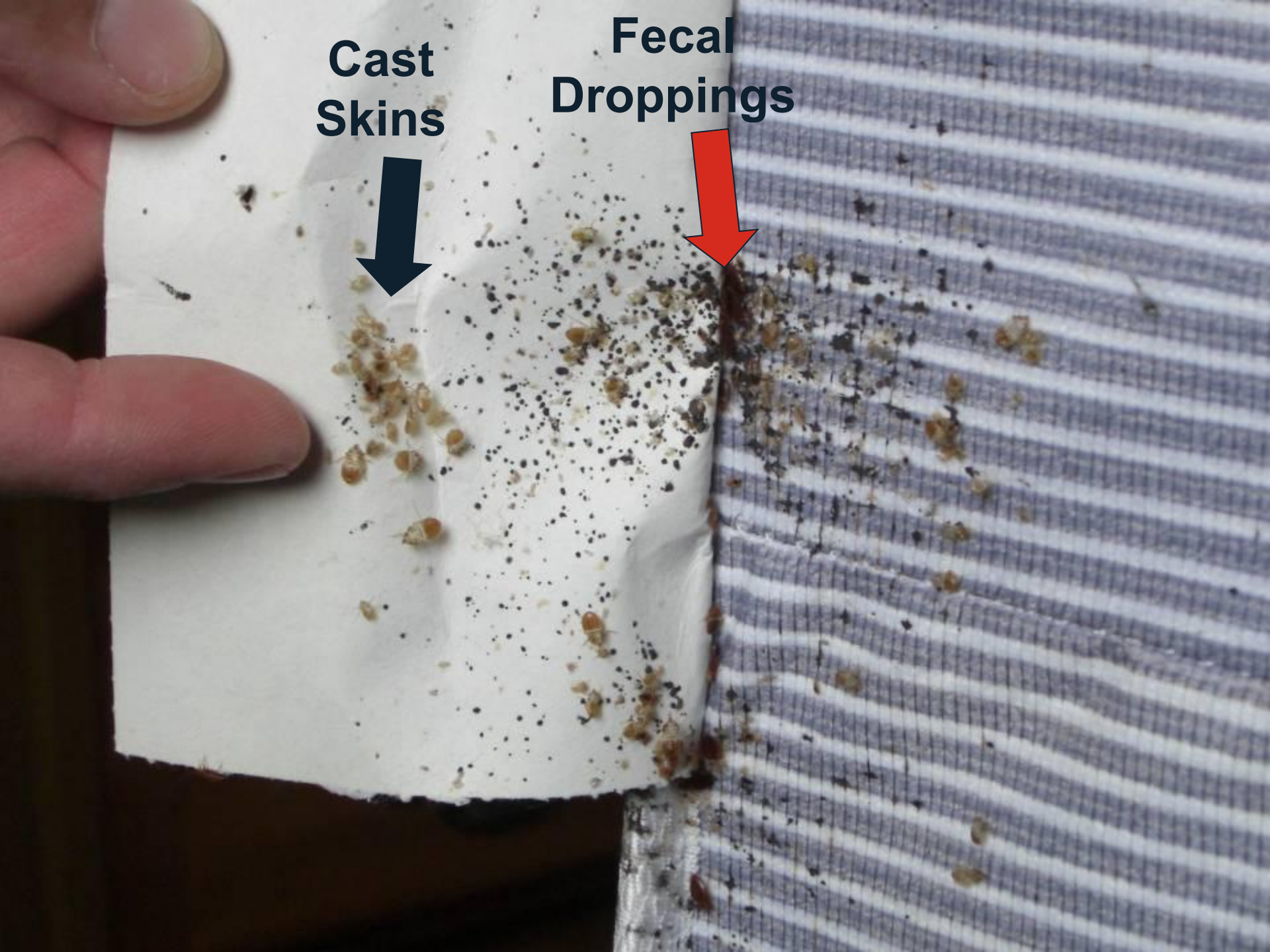




**Cast
Skins**



**Fecal
Droppings**





**Hide in small
places**



Wall Hangings

Furniture





Canine Inspections



If You Find Bed Bug Evidence...

Don't panic.

- Notify Person In Charge
- Collect a specimen for positive identification
- Take the room out of service
- Have a plan in place for moving guests to their new accommodations, not the bed bugs



Do NOT remove anything from the room

- Do NOT place items in the common laundry areas
- Bag and isolate washable items

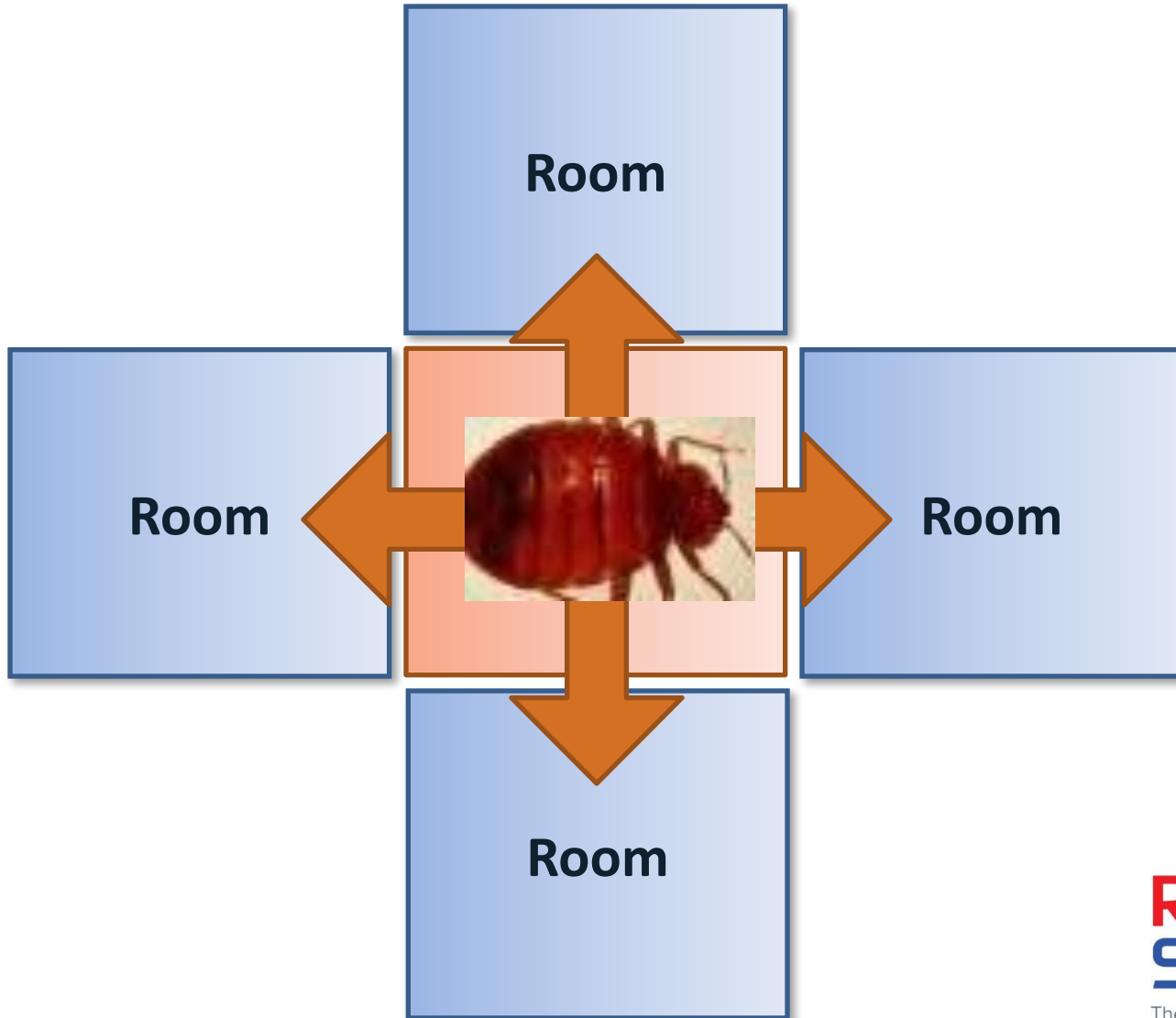


Arrange for a professional inspection as soon as possible

Have the professional:

- Confirm visible evidence
- Confirm species
- Determine if old or new infestation
- Inspect guest's "new" room and possibly their belongings
- Inspect additional rooms

Additional Inspections



Responding to guests

- Respond sympathetically
- Inspect guest's belongings for bed bugs
- Conduct thorough inspection of new room

Treatment Strategies

- **Non-Chemical Methods**

- **Physical Removal**

- Vacuuming, brushing...
- Removal of infested items

- **Exclusion**

- Mattress covers
- ActiveGuard mattress liners

- **Traditional Insecticide Treatments**

- **Heat Treatments**

- Entotherm Structural Heat Treatment
- Heat Pod



Determining a Treatment Plan

Considerations include:

- Extent of infestation
- Type of site
- Finances



Mattress Encasements: Benefits



PROTECT-A-BED™
AUTHORIZED RESELLER

ALLERZIP™
BEDDING ENCASEMENT

WITH  **Patented BUG LOCK™**
Secure Seal

Scientifically Proven & Independently
Tested to Eliminate Bed Bugs from Bedding

- Protects new bedding
- Salvages infested bedding
- Aids in early detection of bed bugs
- Eliminates preferable bed bug hiding areas
- Prevent Bed Bugs from escaping, infesting, and biting through
- Chemical free

Mattress Liners: Benefits

- Protects new bedding
- Salvages infested bedding
- Pre-treated with long-lasting residual to reduce risk during application
- Ideal for box springs
- Great for long-term control and prevention



Traditional Insecticide Treatments

- **Advantages**

- Residual effect
- Periodic applications can help lessen re-establishment.
- Most economical

- **Disadvantages**

- Label restrictions
- Sensitivity to chemical insecticides
- Potential resistance



Traditional Insecticide Treatments

- 1 or 2 services spaced 7-14 days apart
- Combinations of pesticide materials with different formulations and different modes of action



Entotherm (Heat) Treatments

- **Advantages**

- Heat penetrates furniture and walls
- Kills all life stages of Bed Bugs.
- Excellent choice when infestation is severe an/or living space is cluttered
- Short turn around (Rooms Back in service quickly)



- **Disadvantages**

- Can damage sensitive items.
- Fire suppression systems must be addressed
- Cost may be prohibitive



Prepped Room— overturned mattress & box spring, reduced clutter, removed items susceptible to melting



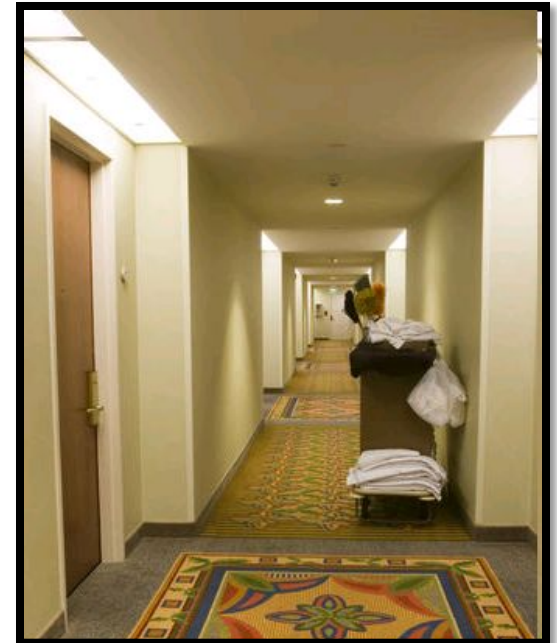
Chamberized Heat

- Portable heat chamber than can be used in place of Entotherm treatment.
- Reduced pesticide process, allows for treated items to be re-used shortly afterward.



Help Stifle the Spread

- **Educate yourself!!!**
 - What do they look like?
 - Where are they likely to be?
 - What do I do if I find them?
- **Keep alert!!!**
- **Avoid infested items & environments.**
- **Inspect rooms regularly.**
- **Inspect housekeeping items and carts regularly**



<https://youtu.be/lpmkVOAn9hc>

**Inspection Technique Training
video for your use**

Questions?

