

BED BUGS-SAFETY TRAINING FOR INTERNATIONAL TRAVELERS



Common Bed Bug, *Cimex lectularius*

History of Bed Bugs

- Common in US prior to WWII
- Improved hygiene & widespread use of DDT during 1940's & '50s, bed bugs all but vanished
 - They were still prevalent in Asia, Africa, Central/South America, & Europe
- Reports of bed bug resurgence began around 1999

They're back...

- By the end of 2002, reported in at least 28 states, in 35 states in 2003 and 43 states in 2004.

Why the recent resurgence in the US?

- Increase in international travel
- Shift in pest management methods & materials
 - Reduction in routine interior insecticide applications



Bed Bugs are good hitchhikers!



Commonly Infested Facilities

- Hotels
- Motels
- College Dormitories
- Apartments
- Health Care Facilities
- Shelters

- And also Residential Homes

Introduction of Bed Bugs

- Carried in luggage to and from hotels and homes.
- Can be introduced from furniture, especially flea markets, yard sales, second-hand stores and even in new furniture.

Biology

- Adult bed bugs:
 - About 1/8 inch long
 - Reddish brown
 - Resemble unfed ticks or small cockroaches
 - Oval shaped, flattened (unless engorged with blood)
 - Adults have no wings, but do possess small wing pads



Bed Bug Life Cycle

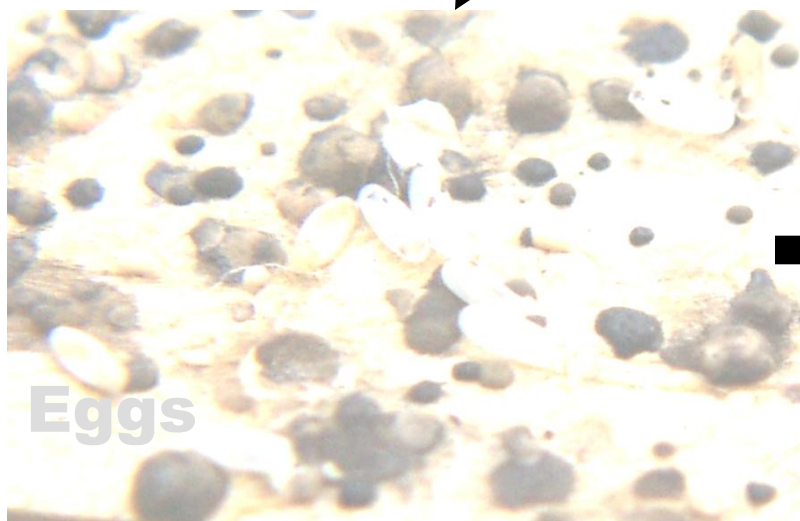


Bed Bug Life Cycle



Egg production

- 1-5 eggs/day
- 200-500 eggs during her lifetime



Bed Bug Life Cycle



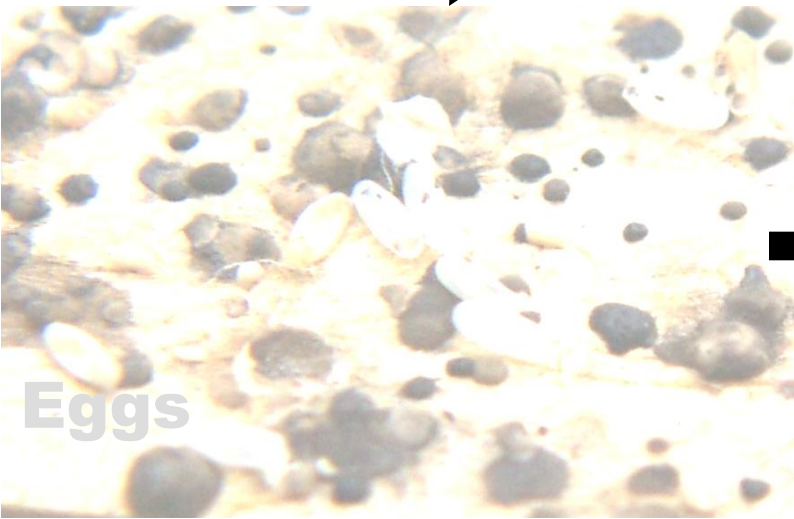
- Eggs are tiny (size of a pin head), white, and attached with cement-like material into cracks & crevices
- Eggs hatch in 6-10 days



Bed Bug Life Cycle



- Nymphs look like adults but are smaller in size.
- Nymphs must molt 5 times to reach maturity & need a blood meal each time they molt.



Life Cycle

- Development can be completed in 1 month if conditions are favorable (70-90°F)
- Adults can live for 6-12 months. However, there are reports of bedbugs living longer, up to 1-2 years

Feeding

- Bed bugs feed at night (most active 3-6 am)
- They are attracted to heat & CO₂.
- Can complete a blood meal in 3-10 minutes
- Bed bugs prefer to feed on humans, but can feed on other warm-blooded animals, including pets
- Adult bed bugs can live more than a year without a blood meal

Therefore...Starvation is not a control strategy

Disease Potential

“Although they can harbor pathogens, disease transmission by bed bugs to humans is considered highly unlikely.”*

- Actual time spent **feeding** is **too short**.
- **Times** between each feeding are **long** enough periods that most viruses are too short lived to survive.

* Source: PCT article “Your Guide To Bed Bugs” August 2004

Reactions to bites?

- Mild to severe...depending on the person's sensitivity, much like a spider bite or a bee sting



Harborage

- During daytime, bed bugs prefer to hide near where people sleep (bed frames, head boards, mattresses, night stands, etc.)
- Flat bodies allow them to hide in very tiny crevices
- If necessary, they will move more than 100 feet to obtain a blood meal



Signs of an infestation

- Dark spotting or staining
 - This is dried excrement of the bed bugs
- Eggs
- Molted (shed) skins of maturing nymphs
- Blood spots on sheets or mattress
- Actual bed bug sightings



Picture by Ohio State Extension

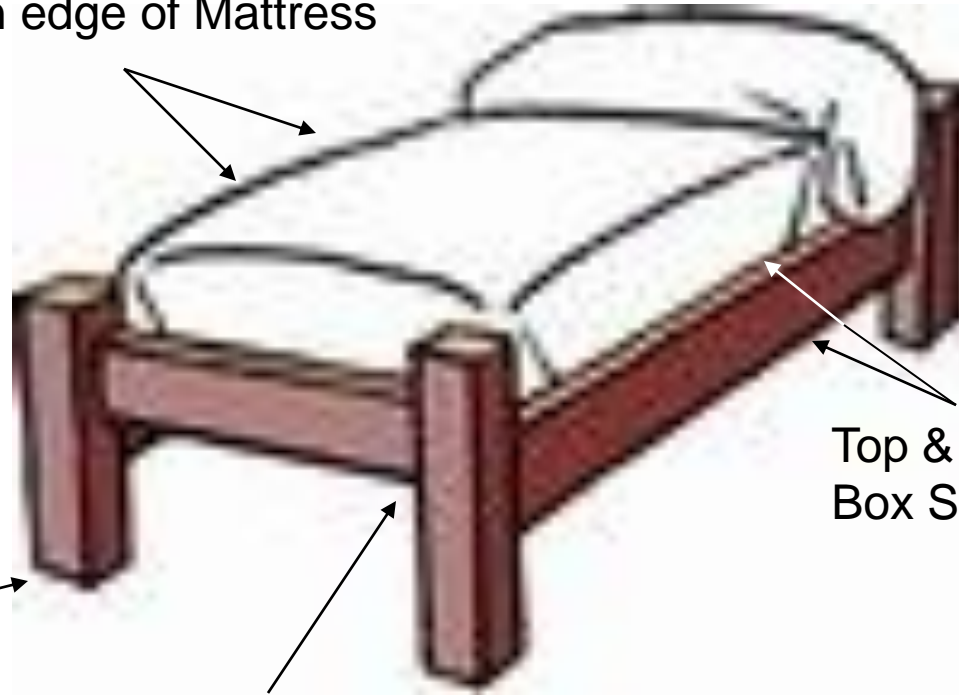


Signs of an Infestation: All Life Stages



Common Harborage Spots- Inspecting your room

Seams on edge of Mattress



Top & Bottom of
Box Spring

Around
Legs

Cracks in Frame

Don't forget your flashlight!

- The only tool you will need to inspect a room is a flashlight.
- A few minutes of inspecting could save you countless hours.

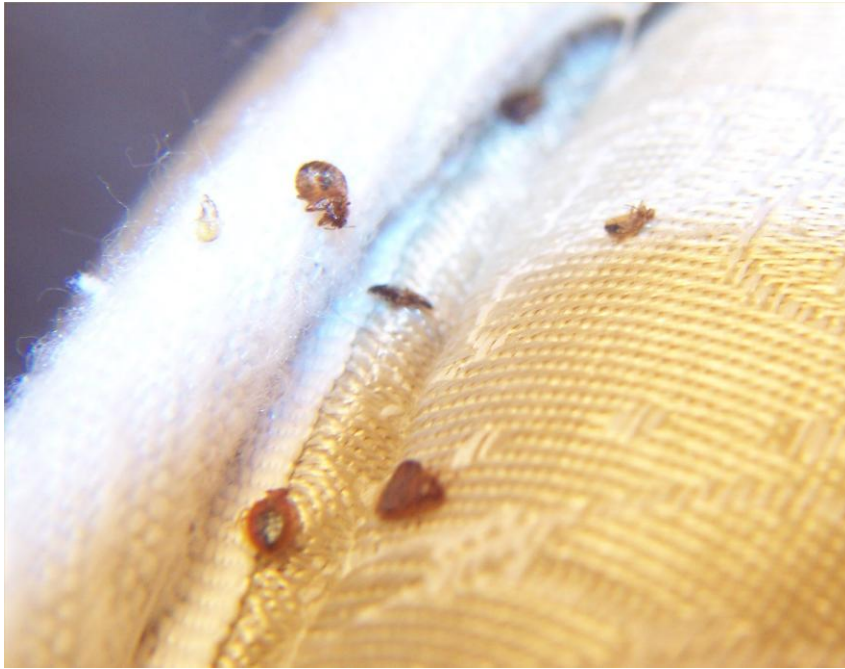
How to prevent bed bugs from getting into your luggage

- When inspecting a room, put your luggage into the tub in the bathroom.
- Place your luggage on stands after inspecting them
- Place your luggage in bed bug luggage encasements

Signs of an infestation in a mattress



Common Harborage Spots



Bed Bugs on a Mattress



Signs of Bed Bugs on a Mattress

Common Harborage Spots



Bed Bugs on Headboard
Screw



Bed Bugs on a Headboard

Signs of Bed Bugs in a bed frame



Common Harborage Spots

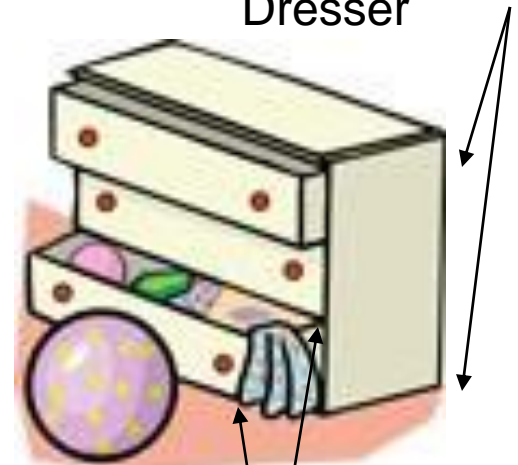
Behind Pictures & Mirrors



Around Legs

Under & Between Cushions

Under & Behind Dresser



Inside & Outside Corners of Drawers

Common Harborage Spots

Bed Bugs in a Night Stand



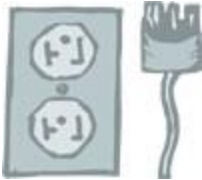
Bed Bugs In a Sofa



Common Harborage Spots



In grooves of baseboards, door moldings and other moldings, especially loose moldings



Behind plug and switch plates



Around windows & drapery pleats & Inside curtain rods.

Common Harborage Spots



Under loose wallpaper



Under or in telephones



Under or in clocks



Under or in lamps



Closet or storage areas where luggage and clothing is kept

Don't Be Afraid to Ask Questions

- Ask the front desk “What is your bed bug protocol?”
- Ask them if they have quarterly inspections performed by a canine.
- Check bed bug registry online.

Returning Home

- Check all luggage for signs of infestations including live or dead bugs
- Put clothes directly into the dryer on high heat to kill any possible bed bugs that may have gotten into your clothing
- If you find something that resembles a bed bug, try to put the bug in a bag and contact a Willow Valley employee.

Thank you!

Questions??