

# Bed Bug Inspections



California Department of Public Health  
Vector-Borne Disease Section

[www.cdph.ca.gov](http://www.cdph.ca.gov) search word: bed bugs



# **Part 1:**

# **Bed Bug Basics**

Bed bugs are tiny insects that feed on the blood of warm-blooded animals, including humans.



Bed bugs do not spread diseases to humans.





**Adult bed bugs are very small and difficult to see with the naked eye**



Unfed



Blood-fed

- Adult bed bugs are about  $\frac{1}{2}$  the size of a penny
- Unfed bed bugs are flat with a circle shaped abdomen
- Blood-fed bed bugs are elongated with a long, tapered abdomen



# Bed Bugs



- Bed bugs shed their skin to grow
- Egg - nymph (5 molts) - adult
- Duration: 5 weeks to four months
- Can live up to 18 months or longer without a blood meal
- Adults live about 10 months



# FACT OR FICTION?

After being bitten by a bed bug, it may take 14 days for a reaction at the bite site to develop?



# FACT!

Although most bite reactions occur immediately after feeding, a reaction may take as long as 14 days to develop.\*



\* Feingold et al. 1968





# **Part 2: Bed Bug Inspections**

# Bed Bug Inspection

- Quick inspection for travelers
- Detailed inspection in:
  - Homes
  - Hotels
  - Transportation
  - “Alternative Lifestyle” bed bugs
- Preventative inspections



# Quick Bed Bug Inspection for Travelers



## Step 1: Mattress

Pull back sheets and inspect mattress seams and box spring for bed bugs. Look for blood spots and dark pen-like spots.



# Quick Bed Bug Inspection for Travelers

## **Step 2: Headboard and Nightstands**

Inspect behind the head board by sliding a card or piece of paper along the edge. Inspect inside the nightstand drawers.

## **Step 3: Luggage**

Place on a luggage stand, a hard surface, or in the bathroom

## **Step 4: After Your Stay**

Wash clothes and dry them on the hottest setting



# Detailed Inspections

# Pest Control Operators

- When possible, inspect the area with a Pest Control Operator (PCO)
- The pest control company will often charge for the time it takes to inspect the infested room.
- Hotel, building staff, or homeowner should provide assistance.



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# Bed Bug Inspection Tools

- Flashlight
- Plastic baggies
- Gloves (optional)



**Do not bring extra items into potentially infested rooms!!!**



# Inspection Tips

- Do not remove anything from the room before inspection or treatment\*
- Assume all clutter around bed is infested
- Inspect likely hiding spots first (5 - 10 feet around sleeping area)
  - Mattress
  - Boxsprings
  - Bed Frame/Headboard
  - Dresser Table

**\*Follow guidelines from PCO (Pest Control Operator)**





# Where to Look

Likely hiding places may include, but are not limited to:

- Seams in mattresses
- Cracks in bed frames and head boards
- Crevices in box springs
- Behind loose wallpaper
- Any clutter around or under the bed



# Where to Look

- Under baseboards and carpet
- Wall/floor or wall/ceiling junctions
- Within clock radios, irons or telephones
- Within desks, bed stands or dressers
- Within curtain rods and folds of drapes



# Homes: Other Inspection Sites

- Luggage and luggage storage areas
- Hampers, laundry rooms
- Pet sleeping areas
- “Couch Potato” sites



# Suspicious bites around your head?



**Reports of bed bugs infesting coat racks!**



# Transportation



Bed bugs have also been found on public transportation living underneath cloth seats.



# Alternative Lifestyle



Bed bugs can survive in backpacks.



# What to Look For



- Bed bugs
- Blood spots, fecal stains
- Shed exoskeletal skins
- A sweet or musty odor





# Rusty Blood Spots/Fecal Stains

- Bed bugs try to feed every 3 to 7 days
- Most bed bugs double their weight with every blood meal
- $\frac{1}{2}$  of blood meal is lost by defecation in the first 5 hours after feeding





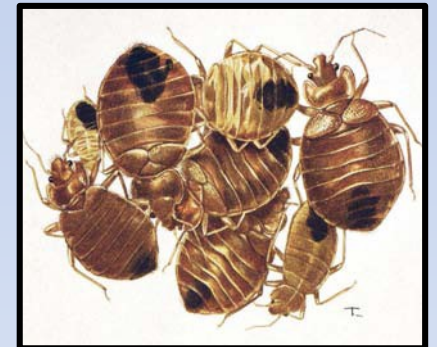
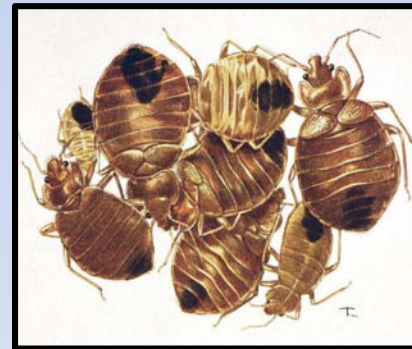
# Bed Bug Odor

Bed bugs emit a unique sweet, musty odor.



# Population Density

In 70°F conditions, 40 bed bugs can produce over 5,900 offspring in six months!



# Bed Bug “Brood Center”

Fecal matter, egg shells and cast exoskeletons  
accumulate in brood centers



**If you find one brood center, don't stop looking as there  
may be more!**



# Keep in Mind

- Bed bug inspections are tedious and can take 1-2 hours for a standard size bedroom
- Bed bugs are exceedingly wary...their hiding places tax the patience and ingenuity of all in search of their presence!\*

\*Mallis, Handbook of Pest Control



# Keep in Mind

- Bed bug brood centers are found in a dark, sheltered location
- Bed bugs prefer to feed at night, during the day they are found hiding in cracks and crevices
- Bed bugs do not like drafts
- Bed bugs must walk to get from place to place (or are moved on linens, sheets, furniture)



# How Far Do Bedbugs Travel?

- Literature sources report bed bugs traveling from 2-100+ ft
- Think about what this means for a:
  - Hotel
  - University dorm room
  - Prison
  - Hospital
  - Residence





Be ready to tear the room apart!



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# “Rusty Spots” on Mattress



©2005 Department of Medical Entomology, Westmead Hospital,  
Westmead.



# Mattress (especially seams)



©2005 Department of Medical Entomology, Westmead Hospital, Westmead.

# Mattress (especially seams)





# Bed Bugs & Rusty Spots on Sheet



# Survey Sites: Box Frame



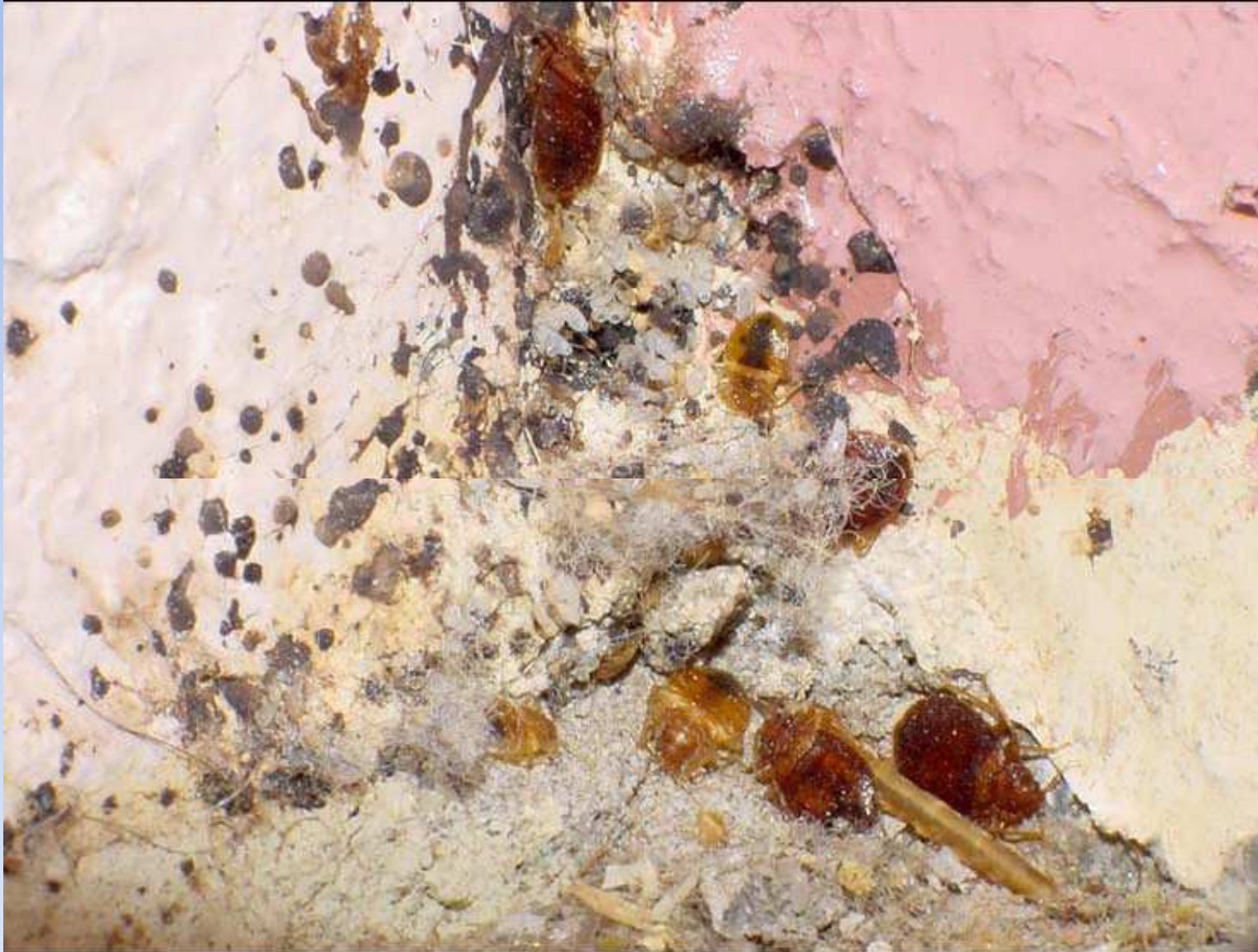




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# Base of Wall Covering



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# Bed Bugs Will Stain Walls



© Heinsohn/NPMA





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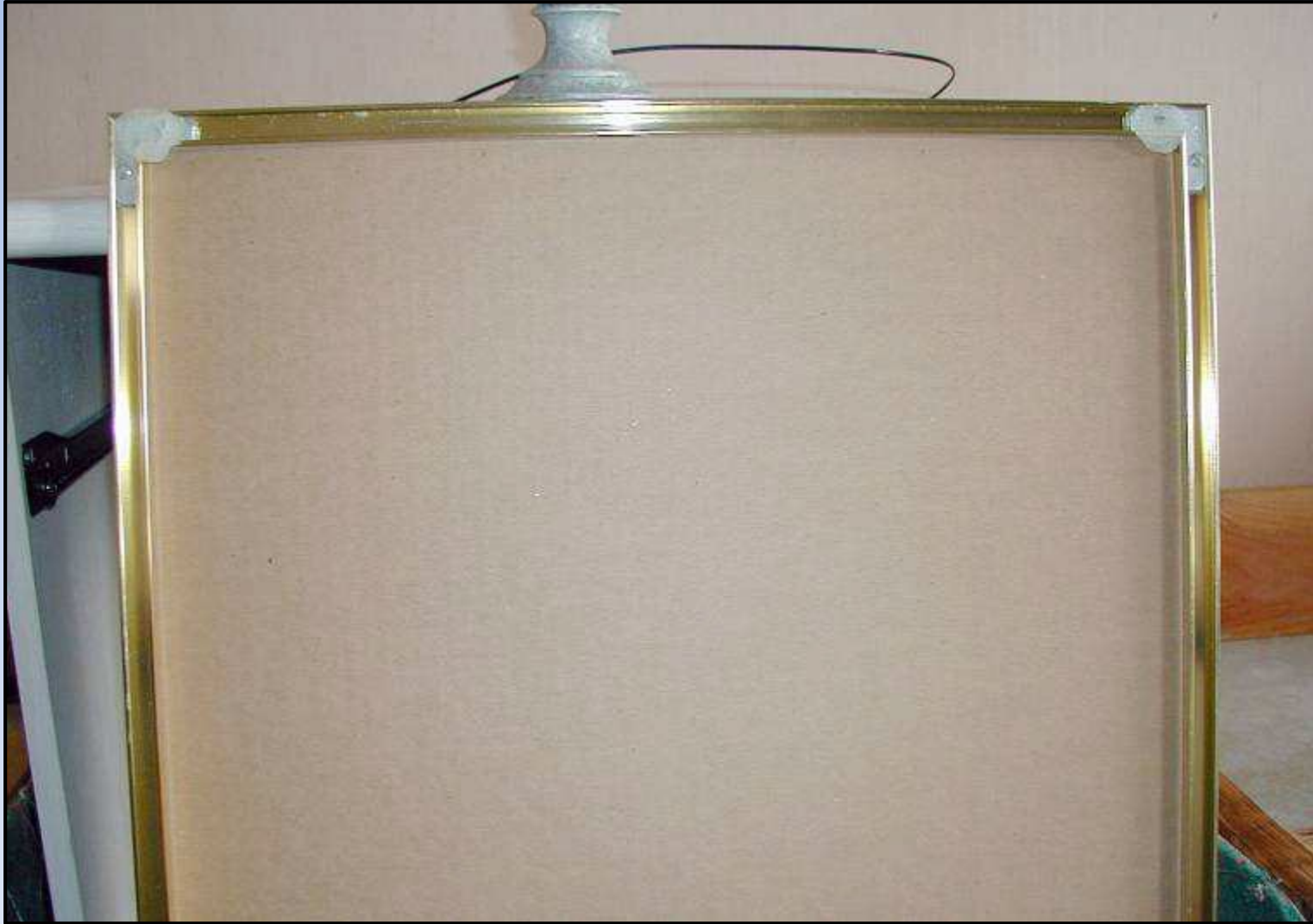
# Upholstered Chairs



# Window Curtains & Frames



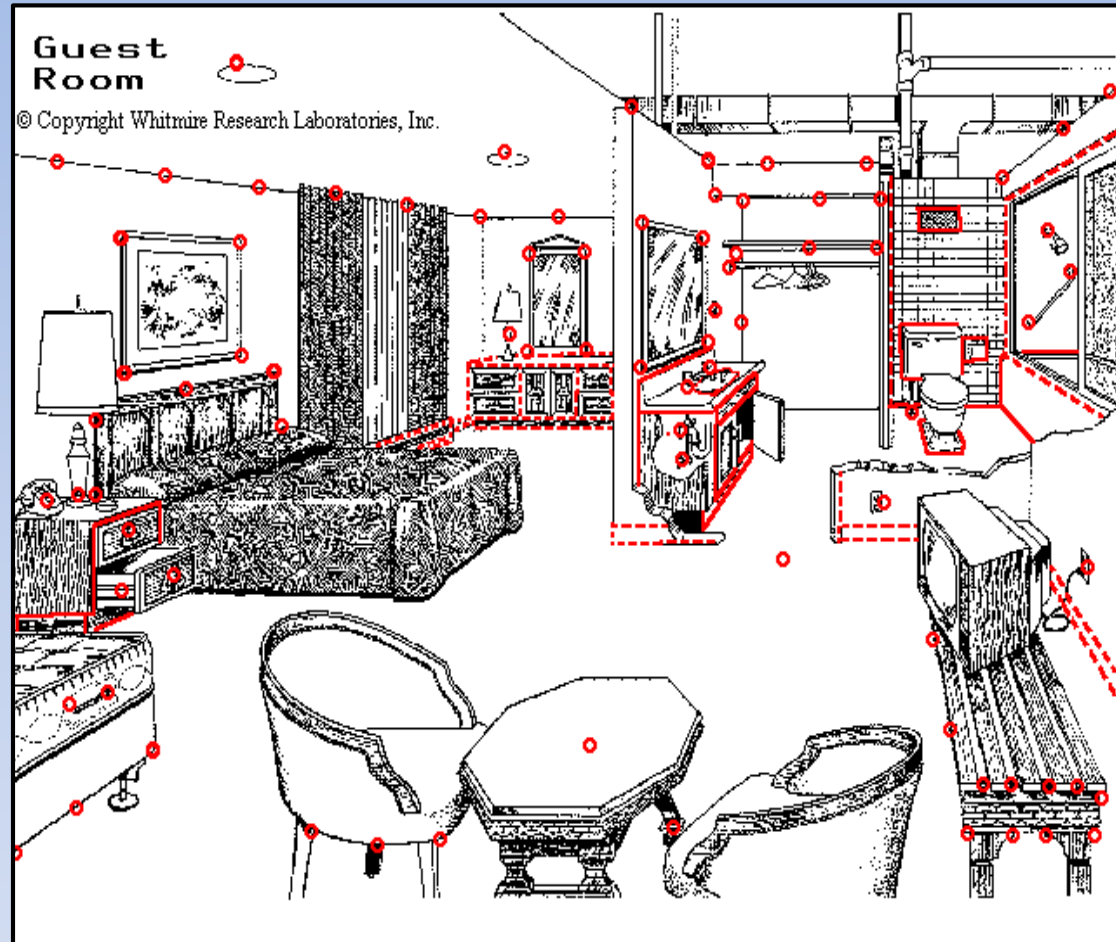
# Picture Frames



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# Inspection In Hotels

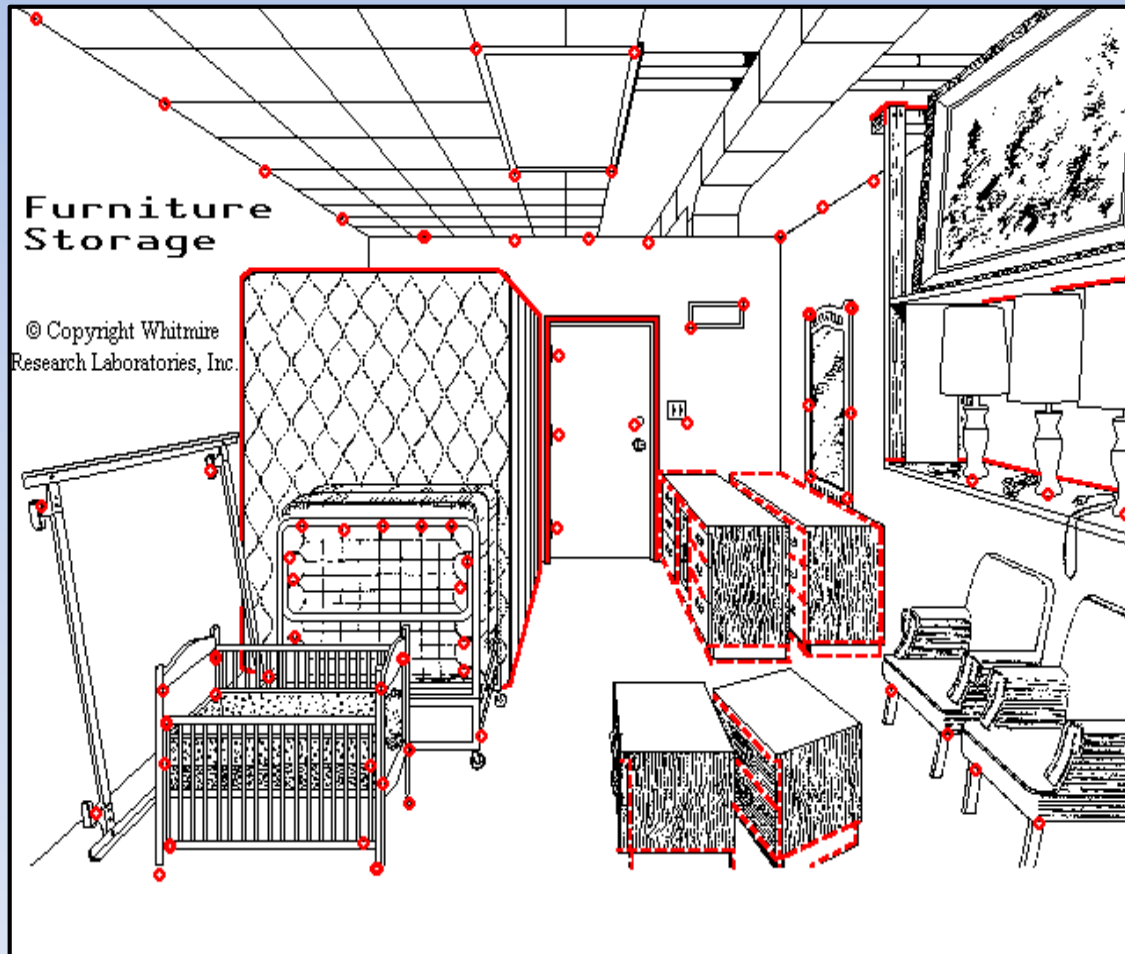


Inspect rooms adjacent to infestations

– Rooms above and below infestations



# Hotels: Storage Areas and Service Carts

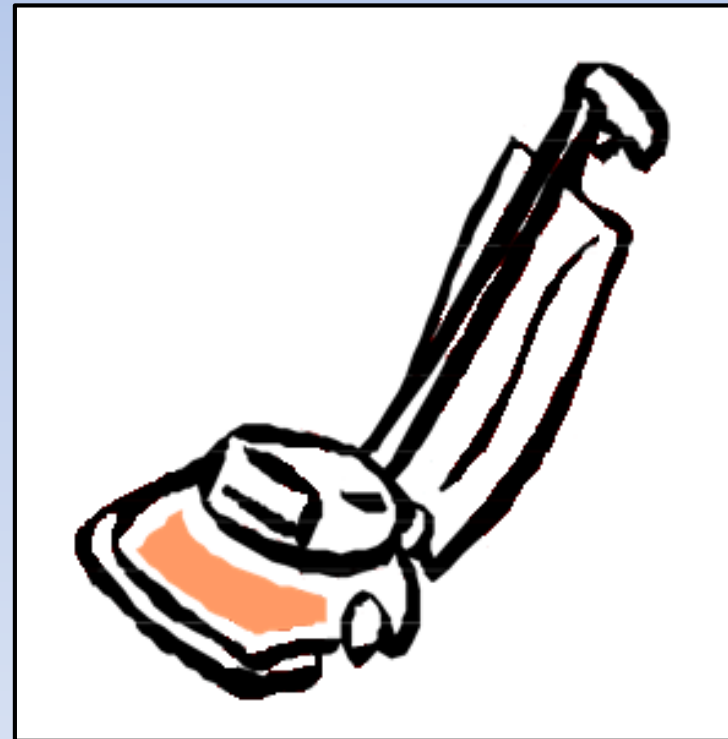


- Inspect furniture storage areas where extra items are kept
- Service carts should be inspected and treated as necessary



# Hotels and Homes: Throw Out Vacuum Bags

- Vacuum the infested room and throw away bag
- Clean all other vacuum components with hot water and detergent



# **Part 3:**

# **Bed Bug Prevention**



# Prevent Reinfestation: Don't Get Them Again!

- Educate household members or housekeeping staff about the signs of infestation
- Follow-up on all household or customer complaints
- Change bed lines frequently and inspect for rusty spots/insects/cast exoskeletons
- Follow advice of pest management professional, schedule follow-up visit after treatment
- Glue boards or similar devices placed under beds may aid in bed bug collection



# Monitoring

- Place glueboards under bed for monitoring purposes



For additional information, please visit:

[The California Department of Public Health](#)

[The U.S. Centers for Disease Control and Prevention](#)