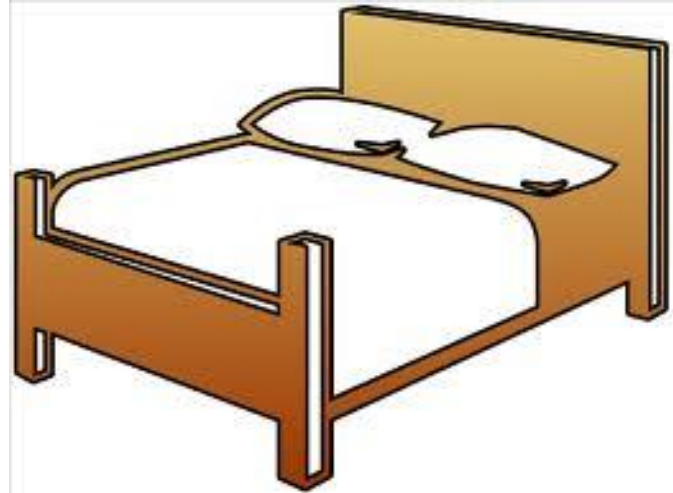


BED BUGS 101

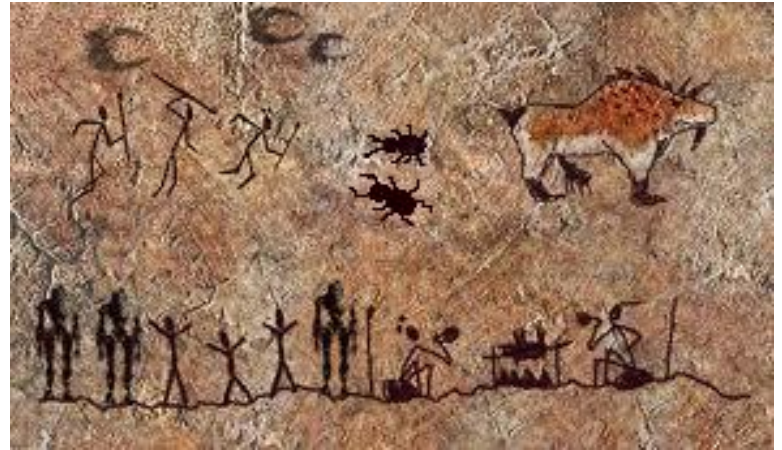
El Paso County Public Health
Communicable Disease Program



Bed Bugs 101 - Overview

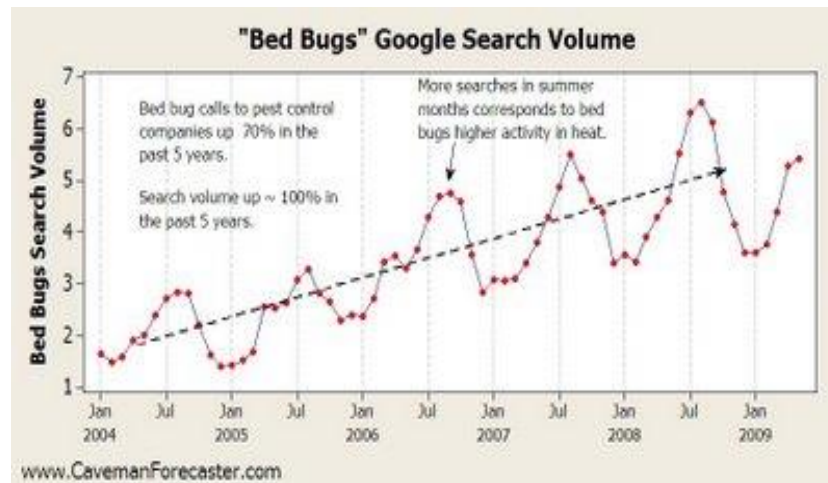
- Brief History
- The Bug
- How Do you Know You Have Bed Bugs?
- Control Measures
- Risks of Pesticide Misuse
- Bed bugs in Schools and Child Care
- Useful References

Bed Bug History



Bed Bugs:

- Have been around since ancient times.
- Were thought to have medicinal properties.
- Have influenced modern bed design.
- Became more prevalent in early 20th century with introduction of central heating.
- Decreased during the second half of the 20th century due to potent pesticides.



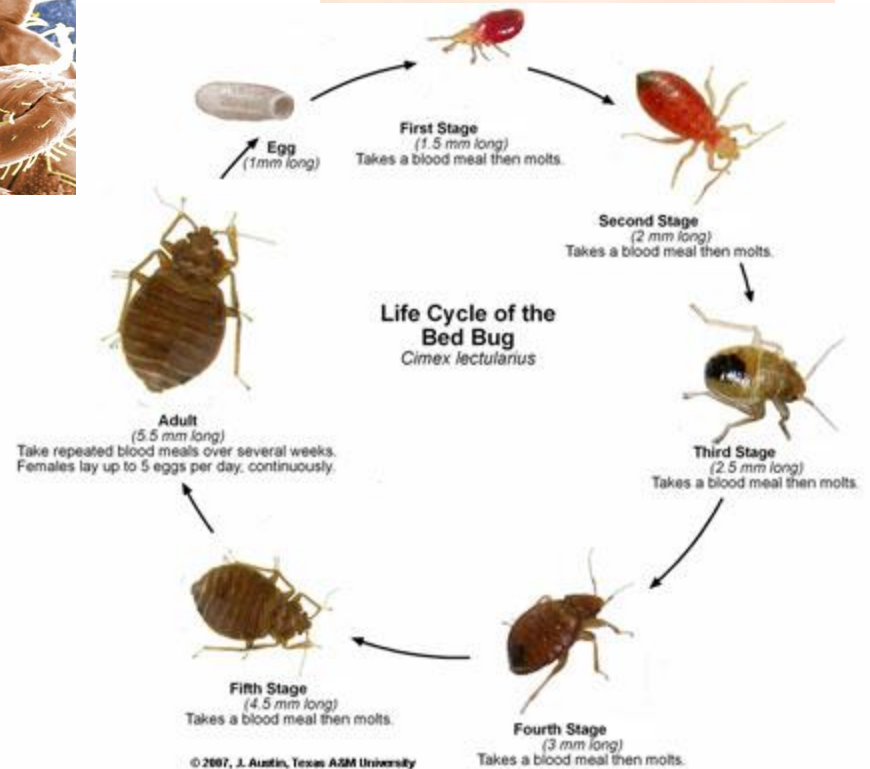
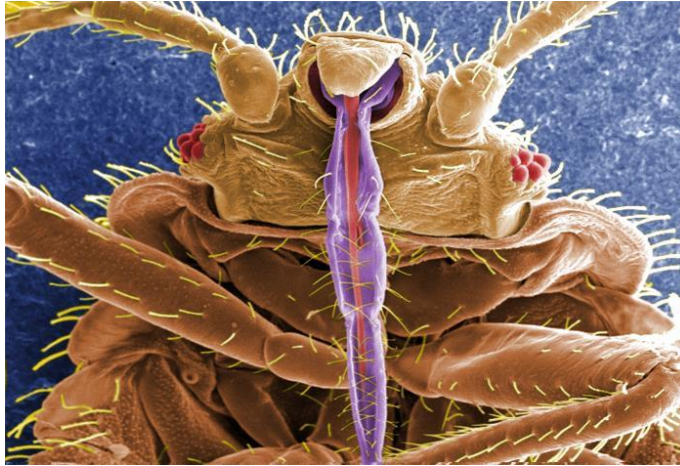
- There has been a bed bug resurgence in the last decade or so. Possible explanations:
- Elimination of some pesticides for safety
 - Increased resistance to remaining pesticides
 - More international & domestic travel
 - Fewer state & local pest control programs
 - Lack of knowledge due to prolonged absence

The Bug

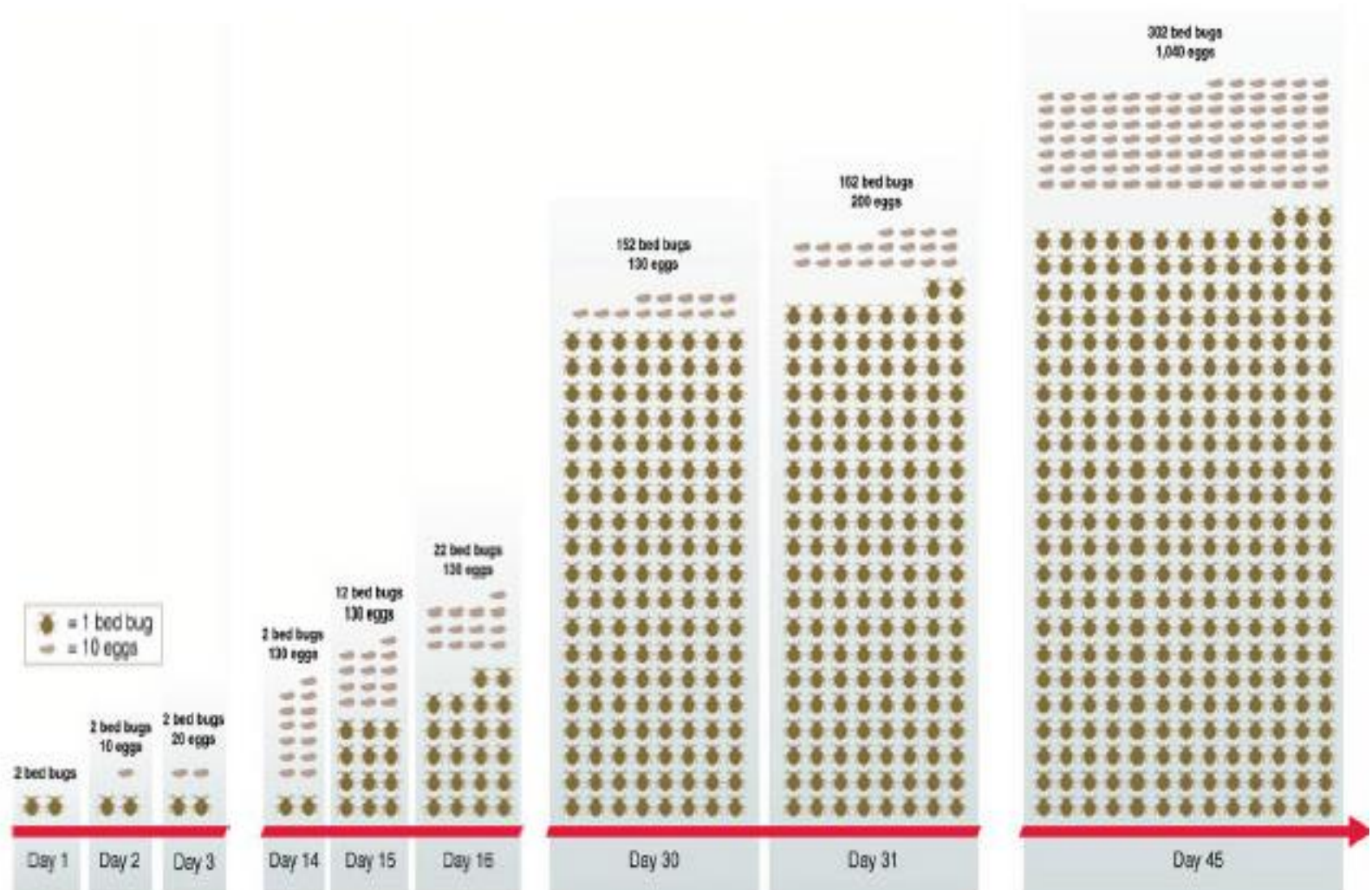


- AKA *Cimex lectularius*
- Flattened, oval shaped, size of an apple seed
- Feed on blood of sleeping people & animals
- Nocturnal, active mainly at night & just before dawn
- No functional wings; do not fly or jump
- Live 6-12 months, prefer 60-70° temps
- No proven disease transmission

Bed Bug Gallery



Bed bug reproduction





How do you know you have Bed bugs?

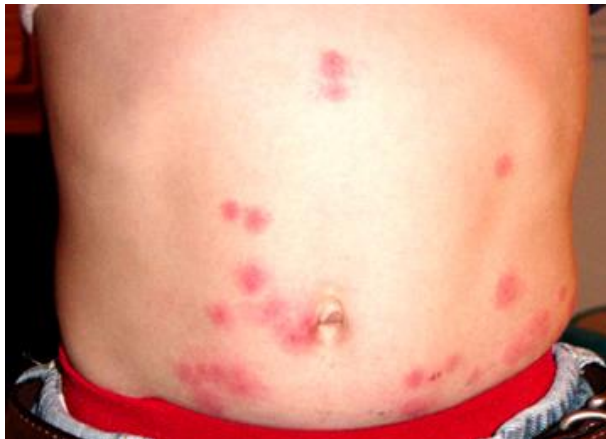
- Bites on the skin
- Seeing actual bugs
- Other evidence of infestation in the bed, bedroom, rest of house

Bed bug bites



- Bites on the skin may or may not be from bed bugs
- Most bites are initially painless, but later may turn into large itchy welts
- Bites may be secondarily infected from scratching
- Some people may not react at all to bed bug bites.

Appearance of bites can vary



Evidence of bed bugs



- Live bugs may be seen, but when not feeding, they are usually hiding.
- Eggs and shed skin castings, fecal spots or stains from crushed bugs
- More often in the bedroom, but can be in any part of a house or structure
- Numerous hiding places in the environment – if a crack will hold a credit card, it could hide a bed bug

Bed Bug Hangouts



Other bed bug detection methods



Bed bug control measures

- Prevention
- Non-chemical treatments
- Chemical treatments



Bed bug prevention

- Education – become knowledgeable
- Reduce clutter and seal cracks and crevices to reduce hiding places
- Regular laundering of bedding and of clothing that touches the floor
- Thorough vacuuming
- Protective encasements for mattresses and box springs
- Careful inspection of used furniture
- Travel precautions

Non-chemical treatments

- Prevention measures (such as cleaning, laundering, sealing cracks, vacuuming) can also help reduce numbers of bugs if already infested
- Temperature methods – freezing and heat/steam
- Non-chemical pesticides such as diatomaceous earth

Chemical treatments

- Over 300 products are registered with the EPA for use against bed bugs
- Pyrethrins / pyrethroids, botanicals, growth regulators, organophosphates
- Many can be used by consumers; safety is an issue if not used correctly
- Involving pest management professionals, may be safer, quicker and more effective

Integrated Pest Management

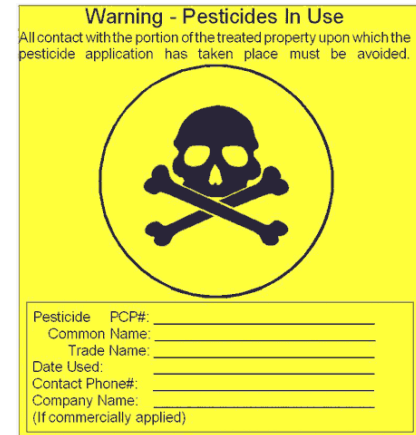
- IPM – “an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices” (CDC)
- A concept that was originally developed for use in agriculture
- Promotes using information + available, appropriate control methods to achieve pest management that is the most effective and economical, and least hazardous to people, property and the environment

Pesticide misuse



- Increase in bed bug populations = increase in misuse of pesticides
- Increased calls to the NPIC (National Pesticide Information Center) re:
 - ✦ Exposures, spills, misapplications
 - ✦ Use of outdoor pesticides indoors
 - ✦ Use of legally banned pesticides
 - ✦ Reports of mild to serious health effects, including one death

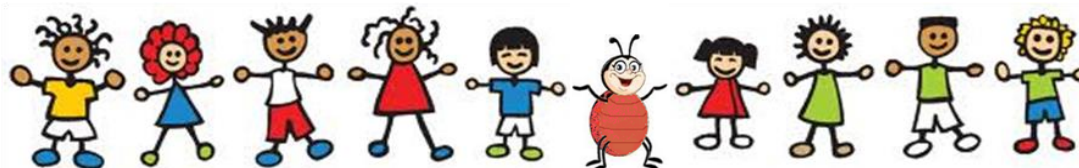
Prevention of Pesticide Misuse



- Make sure you are treating the right pest.
- No use of outdoor pesticides indoors
- Always follow label instructions
- Consider hiring a professional (licensed and certified to apply pesticides)
- Know brand name of pesticide and of active ingredient in case someone gets ill

Bed Bugs in Schools and Child Care

- “Bed Bugs: What Schools Need to Know”
– Michigan Bed Bug Working Group:
- Basic bed bug info
- What if I find a bug on a student?
- Eliminating bed bugs from a classroom
- What if student has infestation at home?
- School response flowchart\
- Sample parent notification letters



Resources



- EPCPH bed bug fact Sheet - <http://www.elpasocountyhealth.org/sites/default/files/files/services/infectious-diseases/BedbugsFactsheet2011.pdf>
- Centers for Disease Control - <http://www.cdc.gov/parasites/bedbugs/>
- Environmental Protection Agency - <http://www.epa.gov/pesticides/bedbugs/>
- Michigan Bed Bug Working Group - http://www.michigan.gov/documents/emergingdiseases/Bed_bugs_schools_293498_7.pdf

Questions?

B.C. By Hart

