

# Bed Bugs in an Office Setting

## What Facility Managers Need to Know

**Everything you always wanted to  
know about **Bed Bugs** \*  
\* **BUT WERE AFRAID TO ASK****

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**THE GENERAL PEST CONTROL CO.**

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# Questions



**“Bed bugs **are** the pest of the 21<sup>st</sup> century,  
no question about it”**

**Dr. Michael Potter, Urban Entomologist,  
Univ. of Kentucky**



...and so does Cleveland

## Top 15 Cities with Bed Bugs (2009-2010)

- |                 |                    |                      |
|-----------------|--------------------|----------------------|
| 1. New York     | 6. Denver          | 11. Boston           |
| 2. Philadelphia | 7. Columbus        | 12. Indianapolis     |
| 3. Detroit      | 8. Dayton          | 13. Louisville, KY   |
| 4. Cincinnati   | 9. Washington D.C. | <b>14. CLEVELAND</b> |
| 5. Chicago      | 10. Los Angeles    | 15. Minneapolis      |

and cruise ships, theaters, stores, nursing homes,  
college dorms, libraries, military bases, public housing



...and so does Cleveland

### Top 15 Cities with Bed Bugs (2011 – 2012)

- |                 |                     |                  |
|-----------------|---------------------|------------------|
| 1. Chicago      | <b>6. Cleveland</b> | 11. Richmond, VA |
| 2. Los Angeles  | 7. Dayton, OH       | 12. Raleigh, NC  |
| 3. Columbus, OH | 8. Washington D.C.  | 13. Dallas       |
| 4. Detroit      | 9. Denver           | 14. Syracuse     |
| 5. Cincinnati   | 10. Indianapolis    | 15. Atlanta      |

and cruise ships, theaters, stores, nursing homes,  
college dorms, libraries, military bases, public housing



### Top 15 Cities with Bed Bugs (2013 - 2014)

- |                     |                     |                      |
|---------------------|---------------------|----------------------|
| 1. Chicago          | 6. Dallas-Ft. Worth | 11. Indianapolis     |
| 2. Detroit          | 7. Cincinnati       | 12. Houston          |
| 3. Columbus         | 8. Denver           | 13. Seattle - Tacoma |
| 4. Los Angeles      | 9. Richmond, VA     | 14. Washington DC    |
| <b>5. CLEVELAND</b> | 10. Dayton          | 15. Milwaukee        |

and cruise ships, theaters, stores, nursing homes,  
college dorms, libraries, military bases, public housing

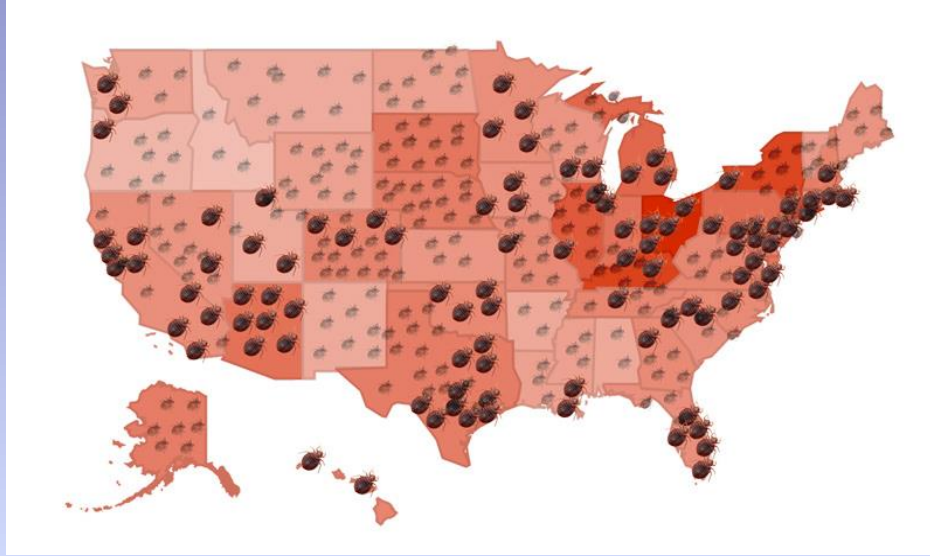


## Top 15 Cities with Bed Bugs (2015)

- |                     |                     |                   |
|---------------------|---------------------|-------------------|
| 1. Detroit          | 6. Chicago          | 11. Denver        |
| 2. Philadelphia     | 7. Columbus         | 12. Toledo        |
| <b>3. CLEVELAND</b> | 8. Cincinnati       | 13. Oklahoma City |
| 4. Los Angeles      | 9. Dallas-Ft. Worth | 14. Baltimore     |
| 5. Dayton           | 10. San Francisco   | 15. New York      |

and cruise ships, theaters, stores, nursing homes, college dorms, libraries, military bases, public housing offices, clinics, call centers,

# The Spread – how do you stop it?



## Top 15 Cities with Bed Bugs (2017 – Jan – June)

- |                     |                  |                   |
|---------------------|------------------|-------------------|
| 1. <b>CLEVELAND</b> | 6. Houston       | 11. Baltimore     |
| 2. Cincinnati       | 7. Phoenix       | 12. Pittsburgh    |
| 3. Detroit          | 8. Indianapolis  | 13. Washington DC |
| 4. Las Vegas        | 9. Oklahoma City | 14. Tucson        |
| 5. Denver           | 10. Philadelphia | 15. San Francisco |

and cruise ships, theaters, stores, nursing homes,  
college dorms, libraries, military bases, public housing  
offices, clinics, call centers,

# THE PLAIN DEALER

MORE THAN 1.3 MILLION READERS IN PRINT AND ON CLEVELAND.COM WEEKLY | 75¢ NEWSSTAND 56¢ HOME DELIVER

## THE BEDBUG BOOM

### Cleveland, prepare to do battle: The little bloodsuckers are here



Bedbugs are multiplying, and strict measures are needed to prevent and eradicate infestations

AMANDA GARRETT  
*Plain Dealer Reporter*

The first waves of bedbugs have already burrowed deep into Greater Cleveland.

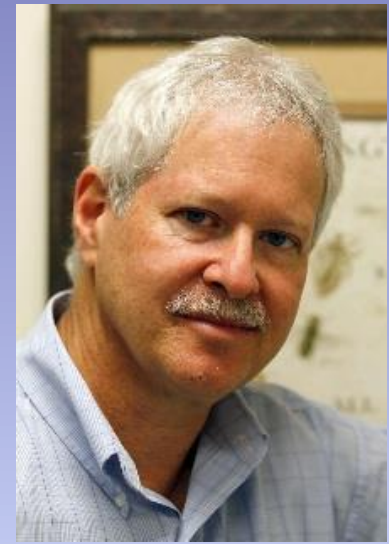
Now local schools, libraries, businesses and others are bracing for what's almost certain to come next — a tsunami of the tiny human blood-suckers.

“a tsunami of tiny blood suckers”

# What the university researchers are telling us:

“Bed bugs are **the pest** of the 21<sup>st</sup> century”

“The bed bug problem is alive and well and I just do not see any way we are going to get out of this thing anytime in the near future.”

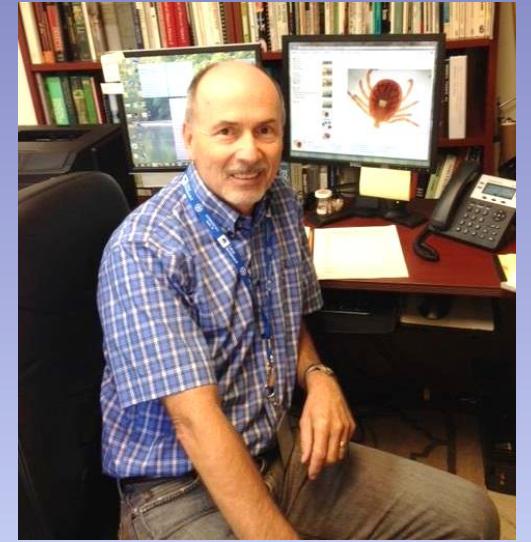


Michael Potter, PhD  
Univ. Of Kentucky



# What the university researchers are telling us:

“There is no "silver bullet" for bed bugs”

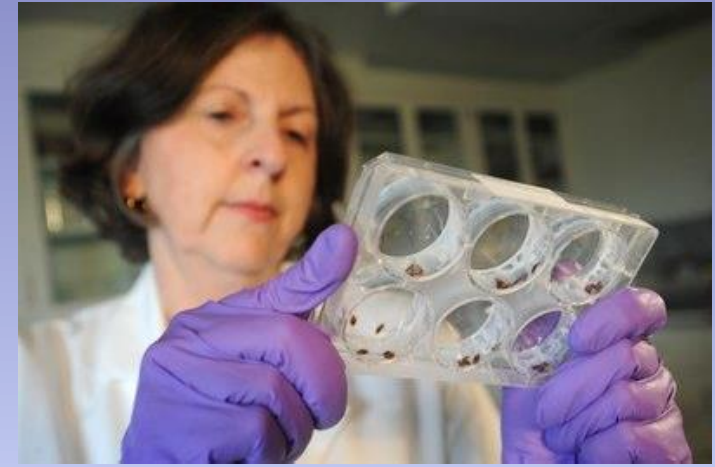


Mike Merchant, PhD  
Texas A & M Univ.



# What the university researchers are telling us:

"This little blood-sucking insect is here, and it's here to stay. There's absolutely no end in sight. This is a pest we'll likely be living with for the rest of our lives."



Susan Jones, PhD  
The Ohio State University

# What the university researchers are telling us:

Bed bugs are going to be with us for a long time. This is not going away. This is our future forever.



Dini Miller, PhD  
Virginia Tech

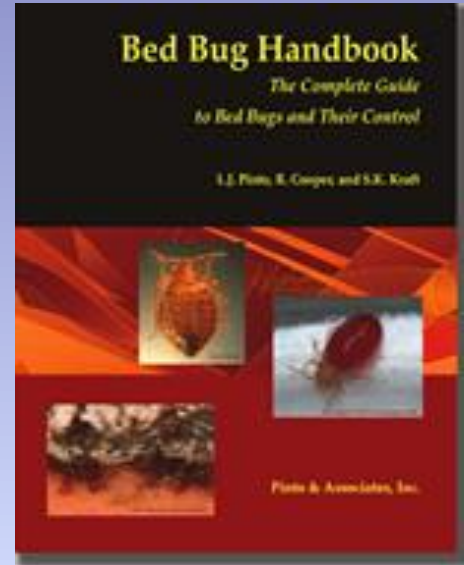
## This is one tough pest!



# Offices (and other commercial sites) What's the problem?

*"Detection and control of bed bugs in office settings have proven to be time consuming, complicated, frustrating, and expensive"*

1. Early detection is rare
2. Visual inspection is difficult
3. Bed bugs may disperse into other areas
4. Identifying the point of introduction is challenging
5. Reintroduction of bed bugs is a constant threat
6. Some items in office settings are difficult and expensive to treat
7. Complex human resource (HR) issues



Larry Pinto, M.S.  
Sandra Kraft, M.S.  
Rick Cooper, PhD.

# Bed Bugs

## Some Quick Facts



F

M



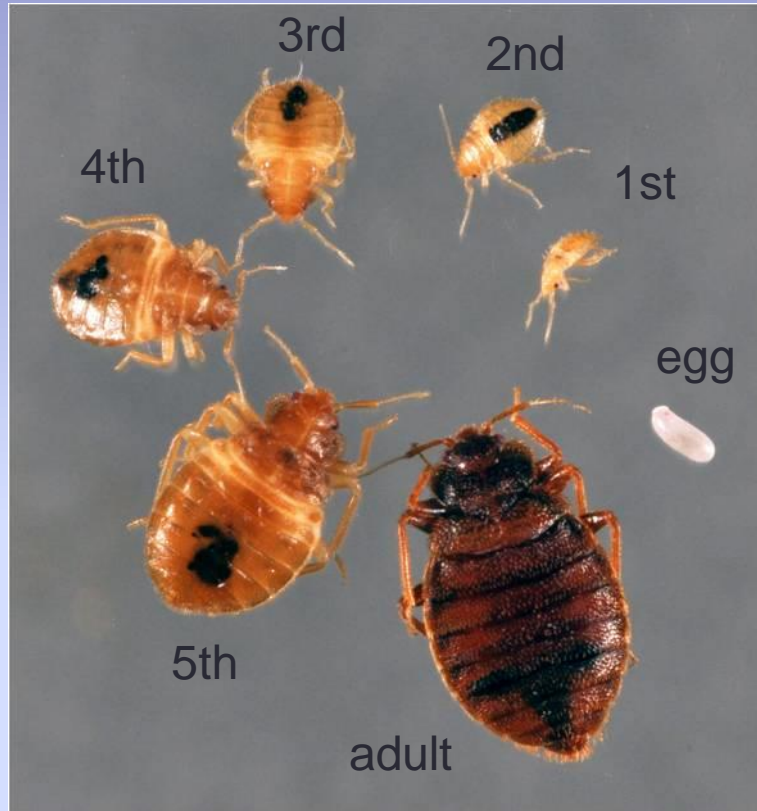
eggs

- 1/8" to 1/4" in length
- They crawl, do not jump or fly
- 200 – 500 eggs laid in lifetime  
(3 to 5 at a time – spread around)
- Active mainly at night  
(but will adjust to human activity)
- Hitchhiker Extraordinaire
- Can survive two to three months without blood meal at normal room temperatures
- Not known to transmit disease

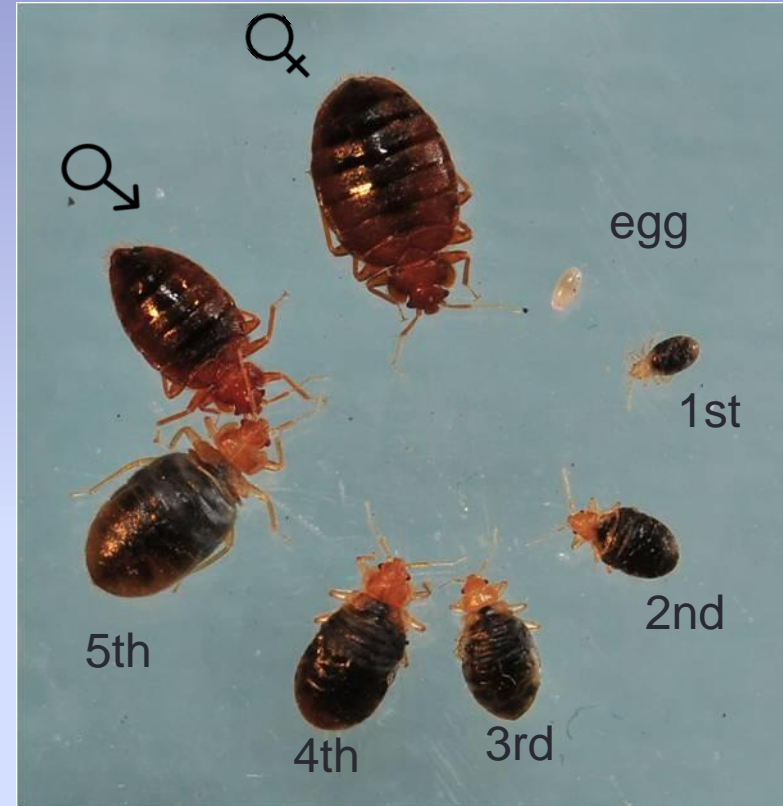


# Bed Bug Life Cycle

## Unfed



## Fed



### Egg to Adult

@ 86°F - 21 days

@ 65°F - 120 days

*the warmer the temperature the faster they reproduce*

# Bed Bug Feeding



Actual  
Feeding Time  
5 to 10 minutes



# Introduction vs Infestation

An **Introduction** occurs when a single or a few bed bugs are accidentally carried in on clothing, a backpack, luggage, etc.

- a. Casual Introduction
- b. Continual Introduction

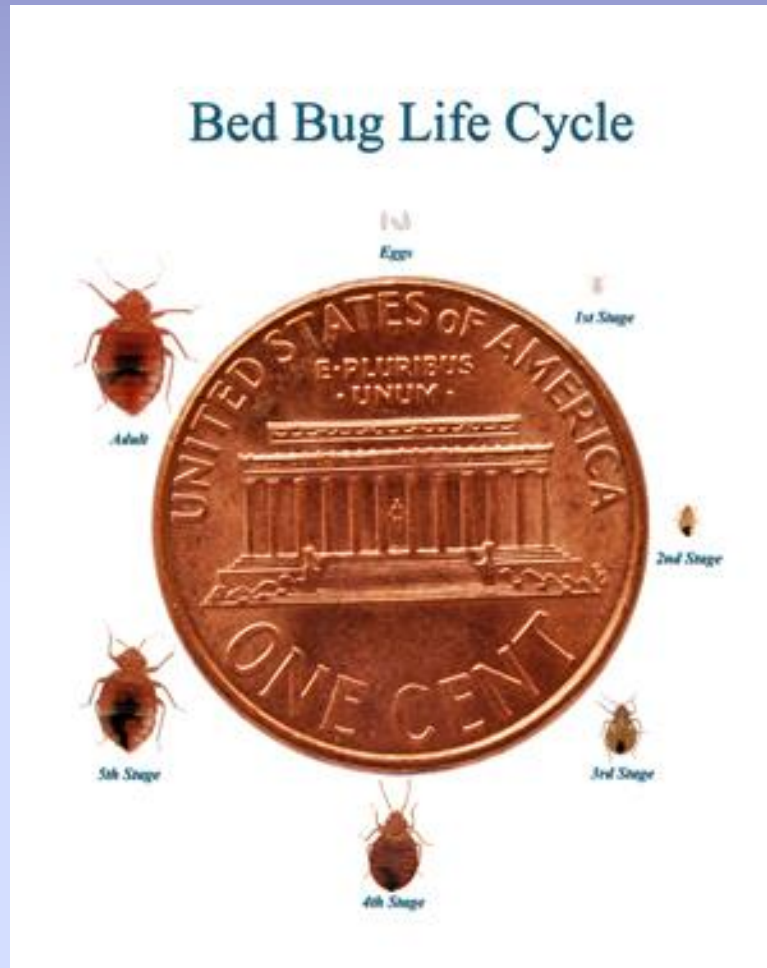
An **Infestation** results when bed bugs feed, grow, and reproduce on a chair in an office, locker room, vehicle, etc. usually as a result of a “continual” introduction.

# The Question Becomes –

How does it get into:

- office
- school
- clinic
- car
- store
- theater
- library
- locker room

This is one tough pest!



# How do bed bugs get into buildings?



most likely carried in on personal belongings, bags, boxes, etc.

....and by anyone who brings “stuff” into your building



....and by anyone who works in your building



# We carry bed bugs around on our stuff



Computer carrying case - suit case - gym bag



# Bed Bugs are Great Hitchhikers

## How they spread



# You may have employees or clients living with bed bugs



.....or sleeping with bed bugs



.....or sitting on bed bugs at home



# And then.....sitting on bed bugs at WORK



50 live bed bugs & eggs found on the underside of this chair

# We bring “stuff” from home to work



# How do you stop the invasion?



Home



Apartment



Office



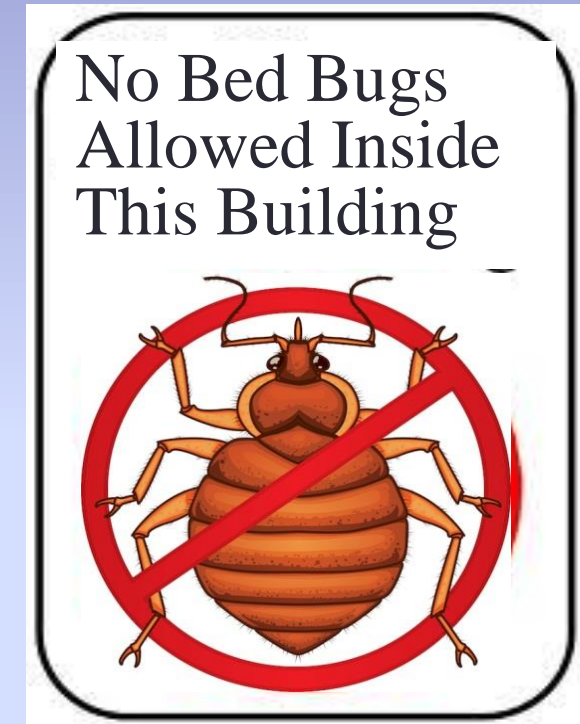
Work

# How do you stop the invasion?

## ....without alarming everyone



# The Simple Solution



# How do you stop the invasion?

The three most important steps to preventing bed bugs are:

Education!

Education!

**Education!**

Bed Bugs are not a big secret anymore!!

Like it or not, **they are** ~~becoming~~ **part of our way of life.**



# Introduction vs Infestation

An **Introduction** occurs when a single or a few bed bugs are accidentally carried in on clothing, a backpack, luggage, etc.

- a. Casual Introduction
- b. Continual Introduction

An **Infestation** results when bed bugs feed, grow, and reproduce on a chair in an office, locker room, vehicle, etc. usually as a result of a “continual” introduction.

# Typical Situations:

1. A client arrives for a consultation and a suspicious insect is seen crawling on their clothes.

(casual introduction)



2. Shared office space or cubicles. A staff person has bed bugs at home.

(continual introduction)



# What do you do when someone finds a bed bug?

## Have A Plan

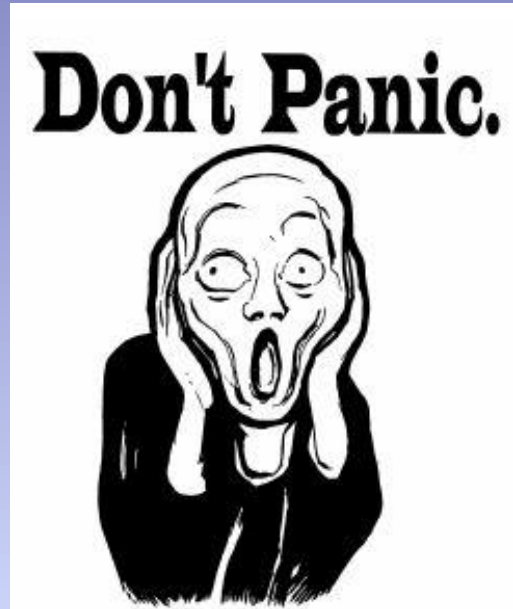
1. Don't Panic
2. Collect a sample
3. Immediate Response
4. Involve Management & HR Department
5. Gather Information
6. Professional Inspection

# 1. Don't Panic

Most sightings are an Introduction not an Infestation

Introduction: Somebody carried one or two bed bugs into the office. (casual or continual ??)

Infestation: There is a population that is feeding, growing, and reproducing as a result of the continual infestation.



## 2. Collect a Sample

**Show me the bug!**

Collect a sample by:

- Stick the sample on a piece of tape.
- Put it in a ziploc bag.
- Put it in a cup or mug, and tape over the top.
- Put it in a pill bottle.



Samples allow positive identification.

# These are NOT bed bugs



Tick



Flea



These are bed bugs



Spider Beetle



Stink Bug



Carpet Beetle



Carpet Beetle



Saw-tooth Grain Beetle



Sesame Seeds

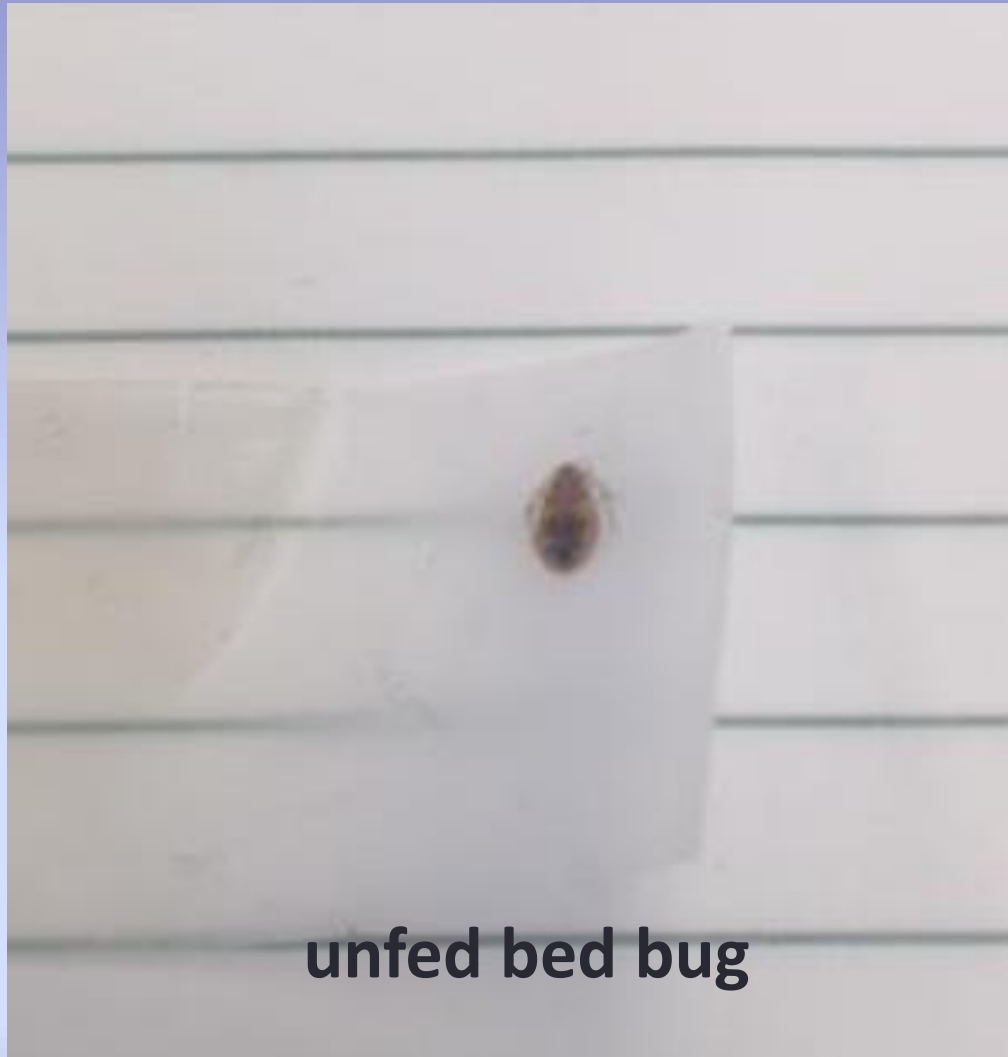


Apple Seed



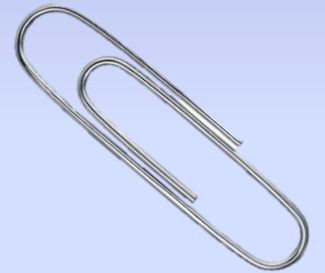
Cockroach nymph

# Positive Identification



unfed bed bug

Take a picture



### 3. Immediate Response

Doing something right away gives some peace of mind, calms people down, prevents panic, and removes bed bugs.

- ✓ Wipe desk or edges of cubicle walls or other surfaces with sanitizing wipes
- ✓ Vacuum and clean the immediate area
- ✓ Apply an approved bed bug killer to specific areas if live ones are seen



## 4. Involve Human Resource Department - immediately

Someone from HR and/or Management needs to be available to deal with issues arising from...

- a) Staff anxiety
- b) Negative perceptions about workplace
- c) Confidentiality – What information to share

## 5. Gather Information

**Assess the situation: Find out Who, What, Where, When, Why**

- a) Who saw or reported it?
- b) What did they see?
- c) Where was it seen? (on a desk, on a person, on the floor, in lobby or waiting room, in work station)
- d) When was it seen? (an hour ago, yesterday, a week ago)
- e) Why is it here?
- f) How often & how many were seen (or trapped)?

The more information you provide, the better the response.

## 6. What to Expect from your Pest Management Specialist

**Investigate First – not an Immediate Treatment**

**Your Pest Management Professional will:**

- a) Confirm the identification (if you have a sample)
- b) Inspect the areas of concern at an appropriate time to minimize disruption and embarrassment.
- c) Recommend the next step. Do you need...
  - a) further inspection
  - b) on-going monitoring
  - c) in service training for staff
  - d) treatment (if an infestation is found)

# Inspection Methods - visual



## 1. Passive Traps



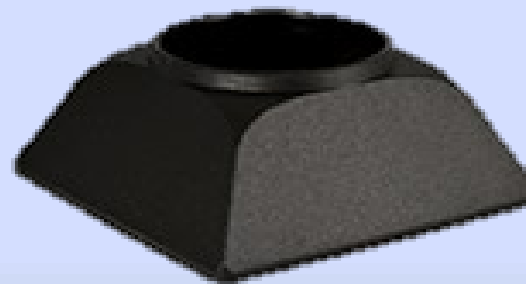
“sticky” traps



Climb Up® (interceptor) Traps

## 2. Active Traps

The Volcano Trap with  
Activ® Lure



Volcano® Trap



Activ® Lure  
(3 months)

# Visual Inspections



# Inspection Methods - scent detection



## 3. Scent Detection – with canine



# Canine Inspections

The Team: Handler, Trained Dog, Pest Professional

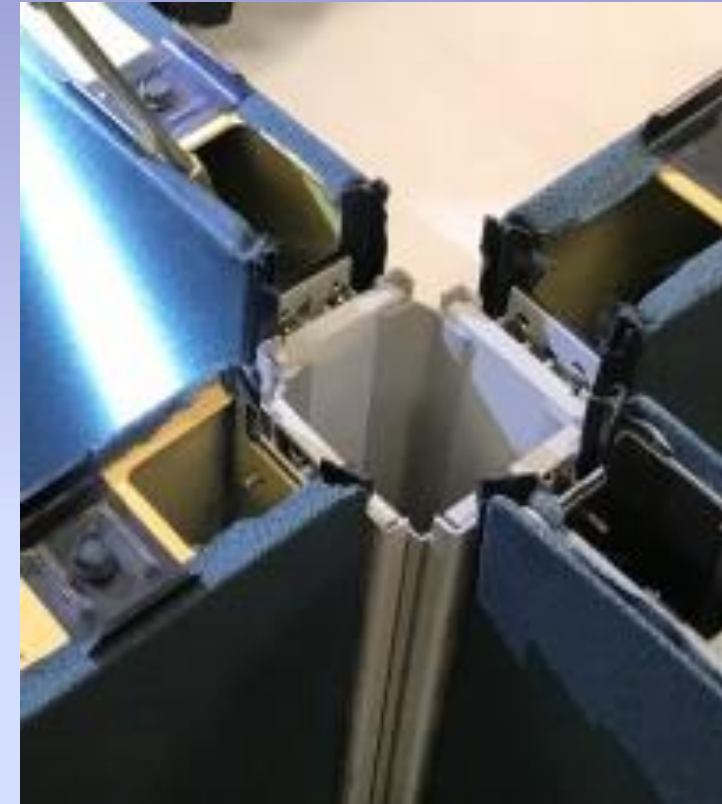
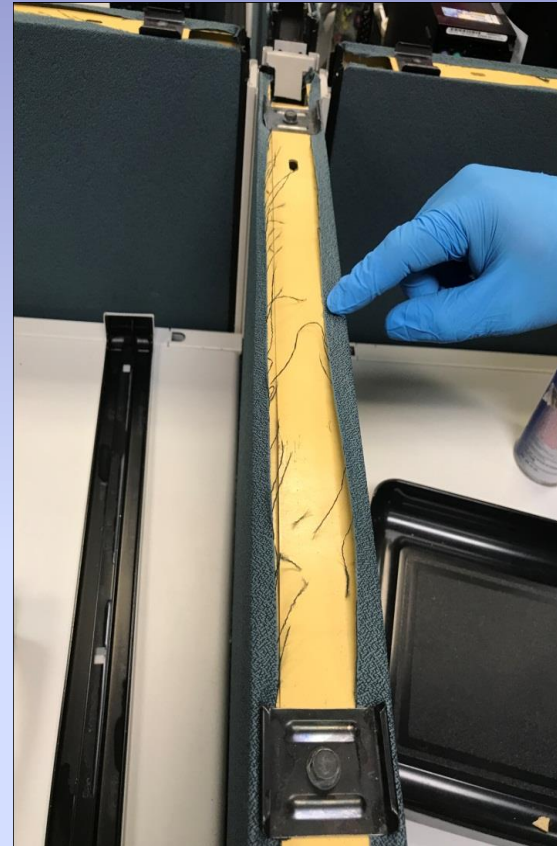


# Lessons Learned – a Case Study



Typical Call Center

# Lessons Learned – a Case Study



# Lessons Learned – a Case Study



1. Get a positive identification.
2. Don't Panic! EDUCATE!! Get out in front of the situation.
3. Explain that it is a process not an event.
4. Allow open communication without fear of retribution.
5. Expand search, within reason, beyond the target area.

# Lessons Learned – a Case Study



- 6. Bed bugs behave differently in offices, it is unlikely to be bitten while working.
- 7. Discreetly ask questions, gather facts.
- 8. Limit clutter in cubicles.

- 9. Be prepared for the “rogue” bed bug.
- 10. Consider, but do not blame, the support staff, cleaning, maintenance, etc.

# Lessons Learned – a Case Study



**NEVER UNDER ESTIMATE A BED BUG!**

# Take Home Message

## Relax!

Bed bugs are a manageable problem when you have a plan of attack that includes

- ✓ prompt response
- ✓ education
- ✓ open and honest communication

You can keep them from disrupting your workplace.

But Wait, There's More



# How do you stop the invasion?



Home



Office



Apartment



Work

# What about the other direction? from work to home



Home



Office



Work



Apartment



# Your Desk / Cubicle (workspace)



- ✓ Reduce clutter
- ✓ Limit what you bring to and from home
- ✓ Use plastic totes for personal items
- ✓ Keep the floor clear so housekeeping can vacuum and clean effectively
- ✓ Maintain bed bug traps in the most vulnerable areas of the office
- ✓ **See Something – Say Something**



# Your Vehicle



Clear out debris

Vacuum once a week

Steam clean fabric (when you have a concern)

Apply pesticides only as a last resort

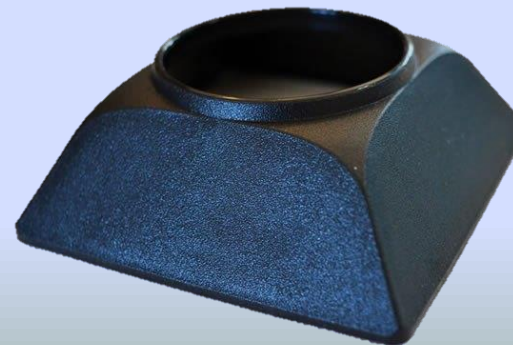
# Your Vehicle

## Some additional tips

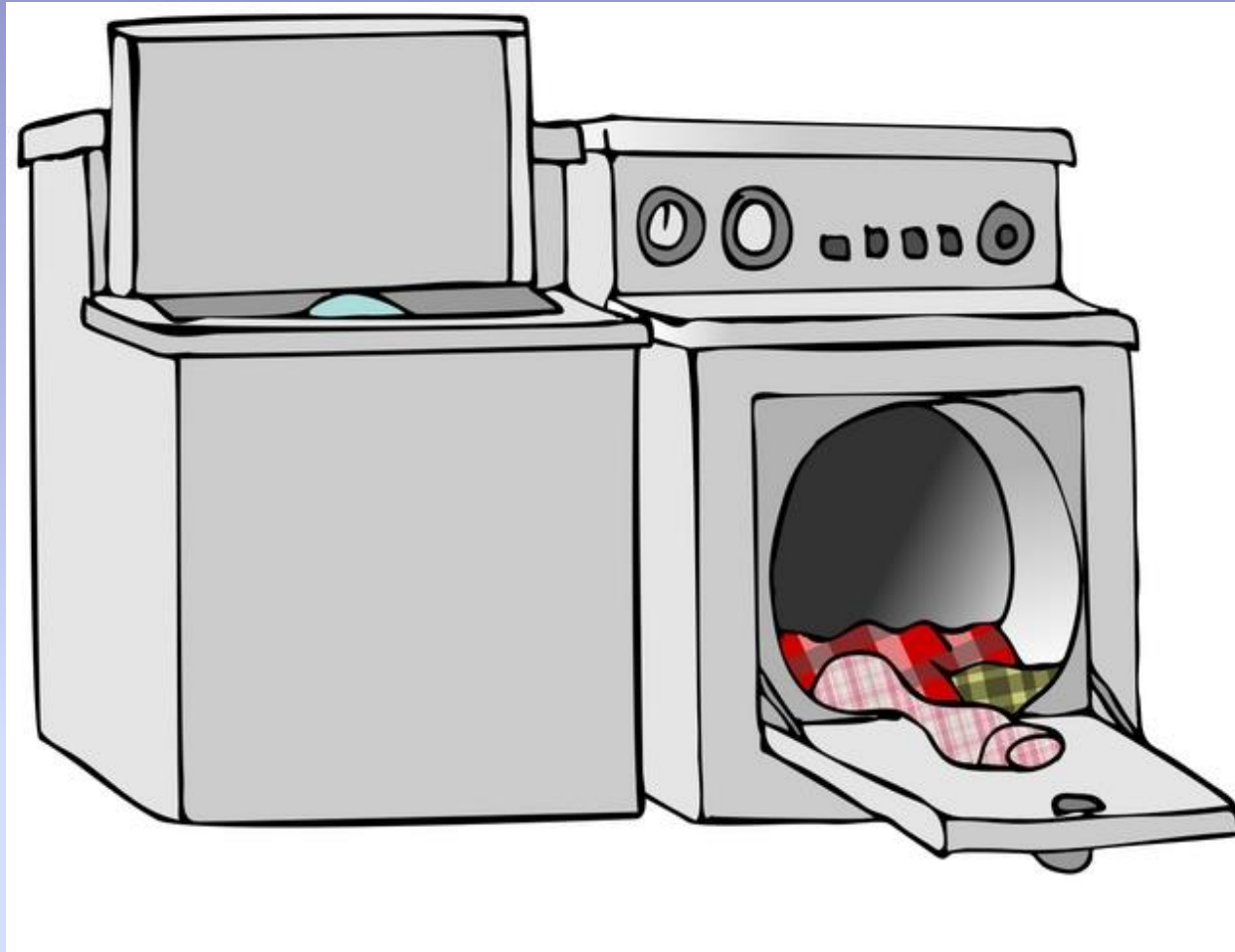
Keep a plastic tote in your vehicle

Items you take to and from work should be carried in the plastic tote.

Place insect traps under seats



# Your Clothes



**30 minutes in a hot dryer kills all stages  
(do not overload)**

# Your Bedroom / Home

## Manage & Eliminate Clutter!!



#1



#2

Which bedroom has bed bugs?

# Your Bedroom / Home

## Manage & Eliminate Clutter!!



#1



#2

Which bedroom is easier to treat?

# Your Bedroom / Home



This is real !!

# EAP

help. when you need it.

# Employee Assistance Programs

# Bed Bugs



# The Take Home Message:

Things you need to do

1. Learn about bed bugs and their habits
2. Be alert to conversations and concerns about
  - a) Unexplained bites anywhere on the body
  - b) Visual sightings of bed bugs or suspicious insects
3. Don't pretend the bed bug problem does not exist. Bed bugs are here and are spreading rapidly.
4. **See something, SAY Something!!**

**Bed Bugs are not a big secret anymore**



# Questions



**“Bed bugs **are** the pest of the 21<sup>st</sup> century,  
no question about it”**

**Dr. Michael Potter, Urban Entomologist,  
Univ. of Kentucky**

# Dealing With Misconceptions

**Myth 1: “If there’s one bed bug here, there must be thousands!”**

Response: An infestation is highly unlikely to develop from a single introduction. However, when there is a continual introduction that is not identified or treated it is possible that over time, usually several months, an infestation will develop.

# Dealing With Misconceptions

**Myth 2: “Bed bugs transmit disease.”**

Response: Based upon current research, there is no evidence that bed bugs transmit disease to humans.

# Dealing With Misconceptions

**Myth 3: “We’ll have to close the office or vacate the building until the bed bugs are gone.”**

Response: It is rarely necessary to suspend operations and send people home when a bed bug is discovered.

# Dealing With Misconceptions

**Myth 4: “They’ll never get the bugs out of the building.”**

Response: With the application of the appropriate materials and methods by a licensed, knowledgeable pest management specialist, bed bugs will be eradicated from your office or building.

# Dealing With Misconceptions

**Myth 5: “The chemicals used are really toxic!”**

Response: All of the materials used are registered with the EPA and when used according to the label directions, there are no adverse affects to people, children, or pets living or working in the treated area.



# Dealing With Misconceptions

## Myth 6: “We’re all going to carry bed bugs home!”

Response: It is almost impossible to take bed bugs from the workplace to home. Bed bugs prefer to hide during the day and look to feed on a host that is completely at rest or asleep. A few common sense practices in and around your work space will almost completely eliminate the possibility of transporting bed bugs from your office to home.