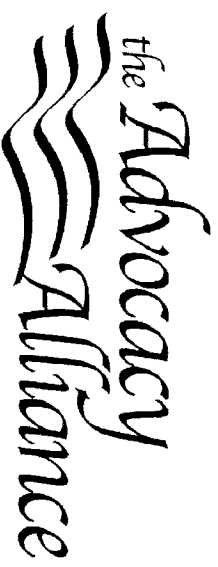


BED BUGS



Presented by

Health Care Quality Units

Disclaimer

- ❖ The information presented to you today is intended to increase your awareness.
- ❖ This information is not intended to replace medical advice.
- ❖ If you are in need of medical advice, please contact your physician.

Objectives

By actively participating, the learner will be able to:

- ❖ Define and identify bed bugs.
- ❖ Review historical perspective.
- ❖ Discuss the life cycle of bed bugs.
- ❖ Identify hiding spots and signs of infestation.
- ❖ Discuss prevention and treatment of bed bugs.

What Are Bed Bugs?

Bed bugs are small wingless insects that feed on humans and blood. They are usually active at night when people are asleep. They are small (1/4 inch long), oval, flat, reddish-brown insects. They give off a distinctive musty, sweetish odor.

- ❖ Males – Pointed abdomen.
- ❖ Females- Rounded abdomen.



Historical Perspective

Bed bugs were first noticed in society by Americans in the early 1700's. Many problems with bed bugs can be found in literature from this time period all throughout North America.

Many believe sail boats returning from Europe were found to be infested with bed bugs. Many of the sailors complained of being attacked by these bugs as they slept in their cabins.

Historical Perspective

Bed bugs have made a recent comeback. Some research indicates that up to 25% of residents in some cities have reported problems with them. For residents bed bugs are not only a nuisance, but a problem bordering on epidemic levels. History has never seen such widespread and intense bed bug infestations.

A marked decrease in the numbers of bed bugs was experienced when DDT was introduced in the 1950s. The use of DDT as a pesticide was banned in the 1970s.

Historical Perspective

With increased world travel, bed bugs are again making their presence known. Bed bugs are transported from one country and introduced to another country through international transport on clothing, luggage, and the human body.

Historical Perspective

Bed bugs can be found anywhere they have a host to thrive on. They make no discrimination in regard to social standing or status.

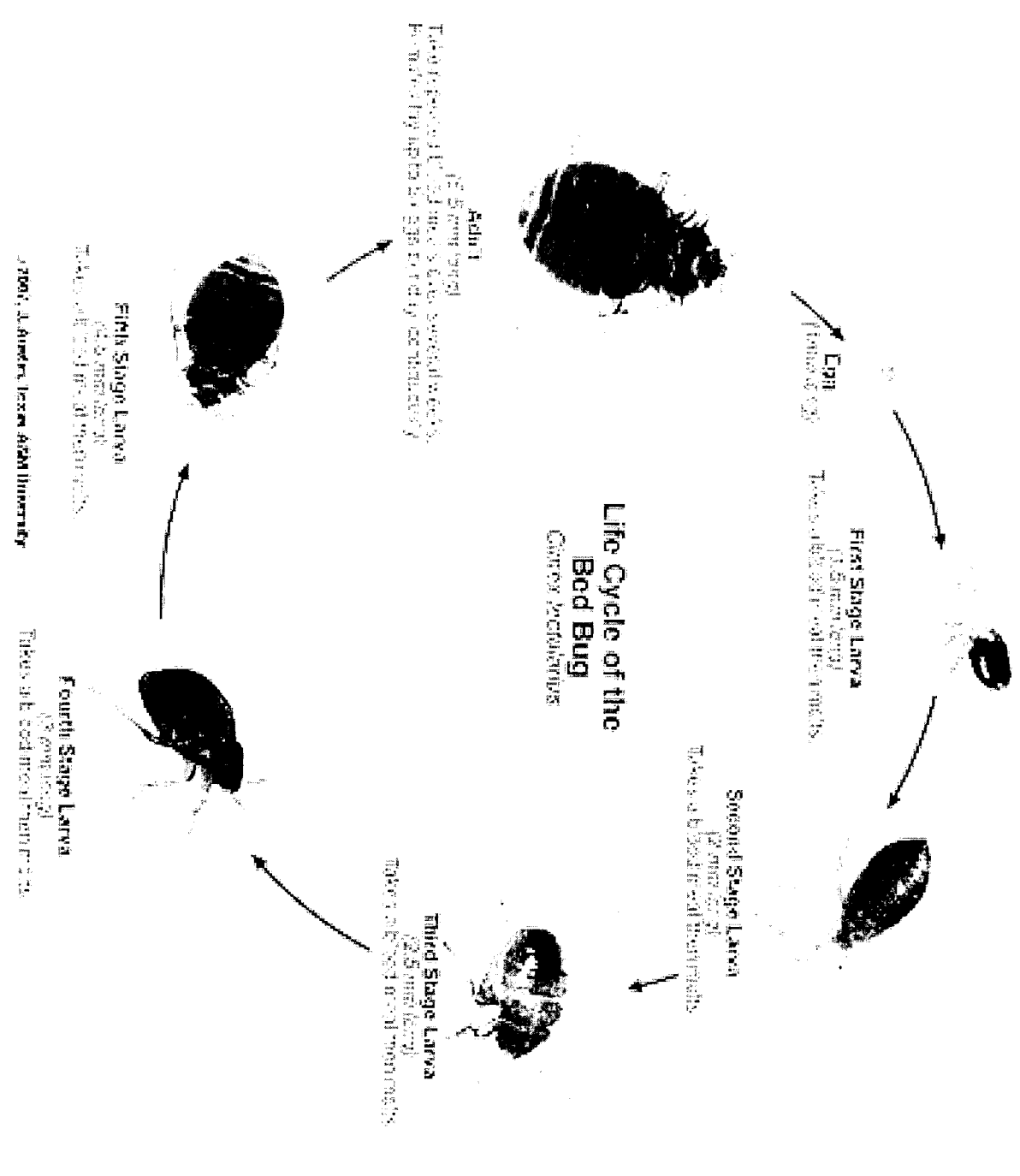
At one time, bed bugs were primarily found in barracks, camps, jails, rooming houses, homeless shelters, old hotels, and other shared sleeping quarters.

Today, bed bugs are found in hotels, apartments, schools, private homes, hospitals, trains, planes, buses, cruise ships, theaters, and moving vans.

Bed Bug Lifecycle

- ❖ May live 12-18 months.
- ❖ Total developmental time takes 21 days.
- ❖ Nymphs and adults can survive for more than a year without food.
- ❖ Females can lay 1-12 eggs per day.
- ❖ Deposited on rough surfaces or in cracks and crevices.
- ❖ Hatch in 16-17 days.

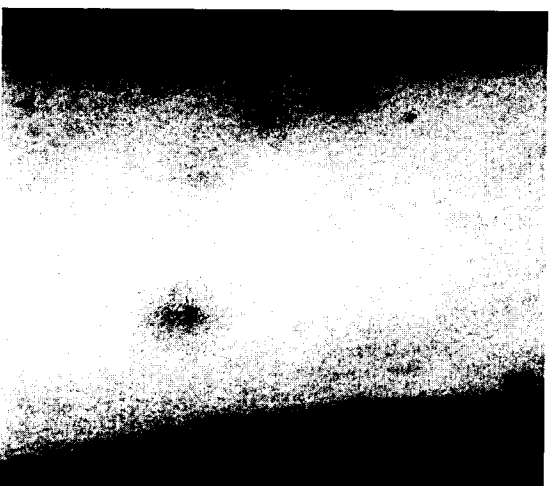
Bed Bug Lifecycle



© 2001, The American Legion Asian University

Bed Bug Bites

- ❖ Red, often with a darker red center.
- ❖ Itchy welt that may last 2-3 days.
- ❖ Arranged in a rough line or cluster.
- ❖ Located on face or any exposed extremity.



Bed Bug Bite Treatment

Most bed bug bites do not require medical treatment.

Redness and itch goes away within 1-2 weeks on their own.

Symptom control:

- ❖ Oral antihistamine.
- ❖ A skin cream with hydrocortisone.

Bed Bug Hiding Spots

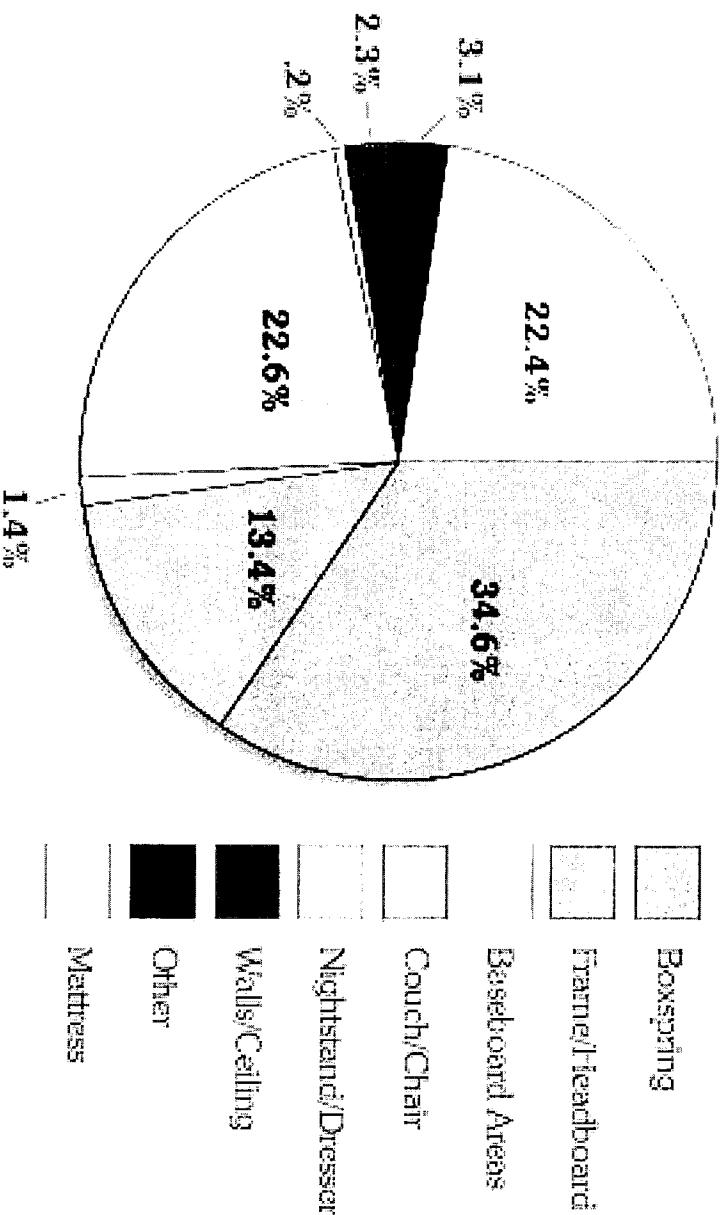
- ❖ Small crevices in structure or furniture.
- ❖ Mattress, box spring, bed frames, head boards.
- ❖ Under peeling paint or loose wall paper.
- ❖ Upholstered furniture seams.
- ❖ Under light switch plates and electrical outlets.
- ❖ Window and door frames.
- ❖ Wall hangings.
- ❖ Drapery pleats.
- ❖ Carpet tact boards and ceiling moldings.
- ❖ Prefer dry fabric, wood, and paper surfaces.

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Bed Bug Hiding Spots



BED BUG HIDING SPOTS



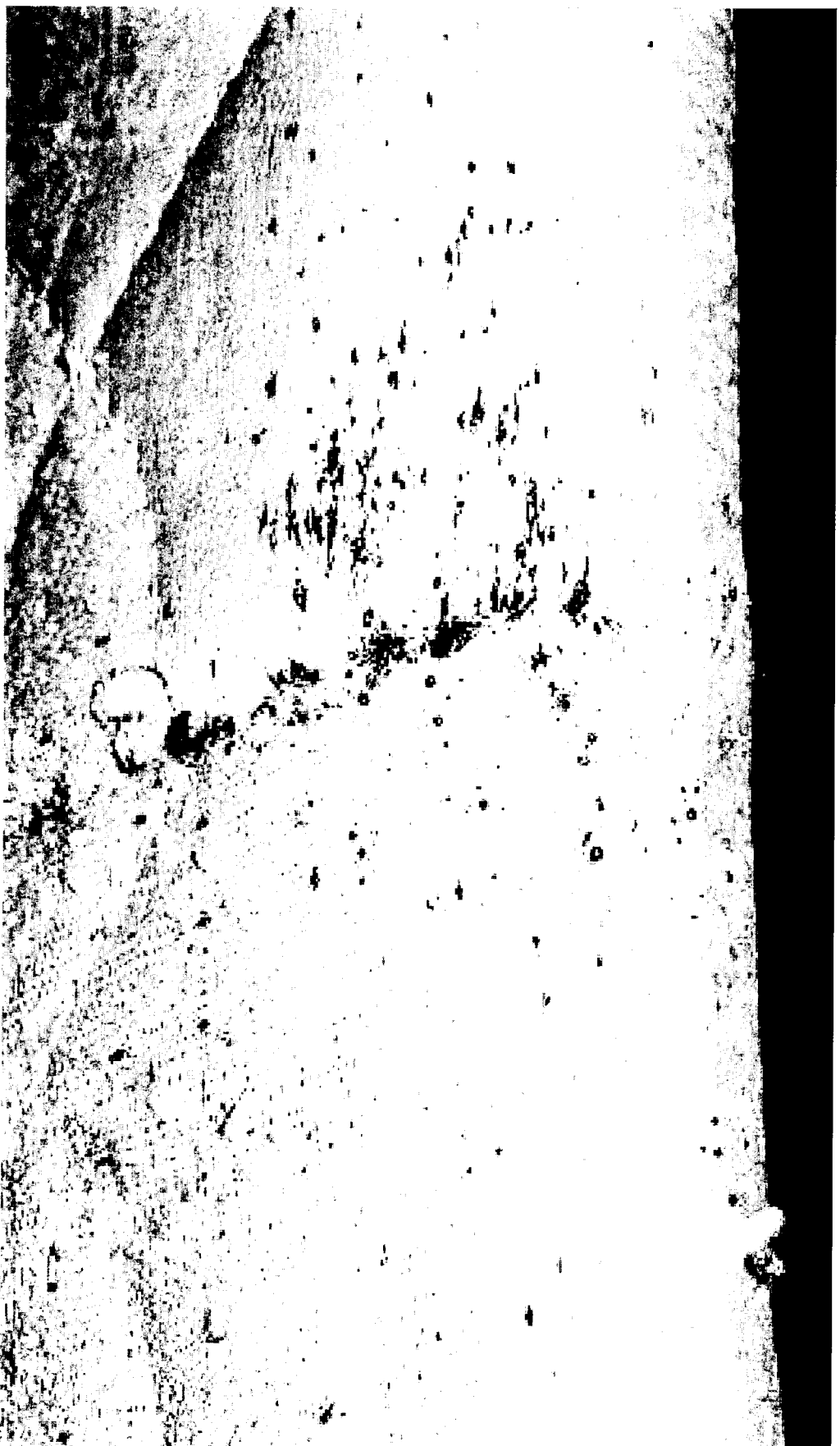
Distribution of bed bugs found in 13 infested apartments

Source: University of Kentucky

Signs of a Bed Bug Infestation

- ❖ Actual bed bugs are seen.
- ❖ Dark specks are bed bug feces, found along mattress seams.
- ❖ Bed bugs molt 5 times in their lifetime. Molted areas are seen as light brown empty exoskeletons.
- ❖ Bloody smears can be found if accidentally crushed.
- ❖ Offensive, sweet, musty odor.
- ❖ Itchy skin welts.

Signs of a Bed Bug Infestation



Signs of a Bed Bug Infestation



Prevention of Infestation

- ❖ Carefully inspect secondhand items such as mattresses and upholstered furniture.
- ❖ Always take hotel precautions and check mattress seams and place luggage on tables or dressers.
- ❖ Eliminate nests for birds or bats close to your building.

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Treatment of Infestation

Hire a reputable professional who can use a combination of pesticides and non-chemical treatments.



Treatment of Infestation

- ❖ Bed bugs are very sensitive to heat and can be easily killed when exposed to temperature over 100°F (or above 38°C).
- ❖ In addition, a bed bug steamer can also be used to kill bed bugs and their eggs in hard to reach places, plus it can also help clean and sterilize toys, stuffed animals, shoes, luggage, or any other items that cannot be easily wash with hot water.

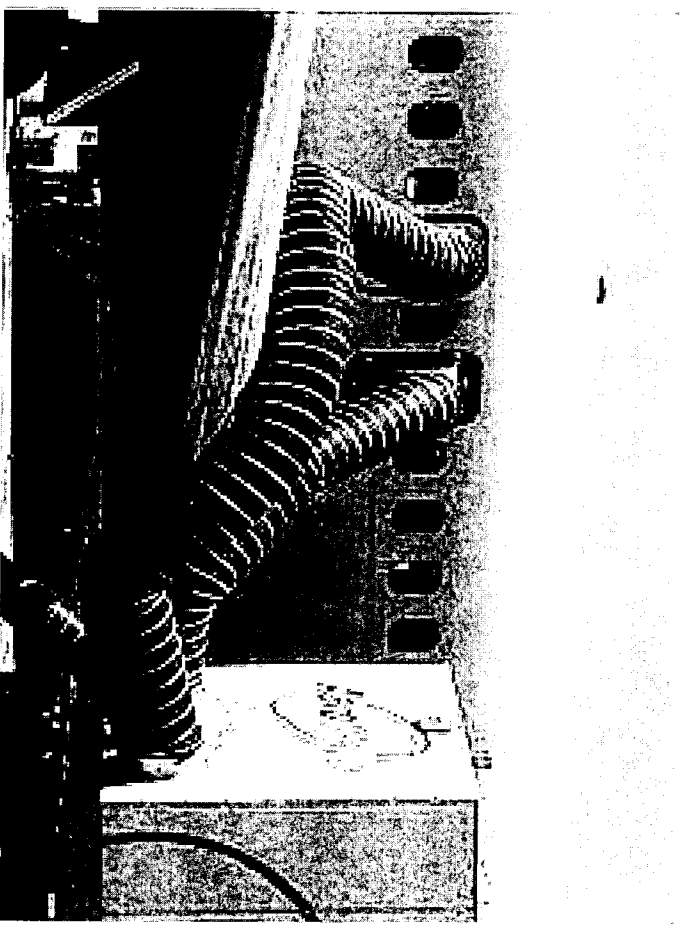
Treatment of Infestation

- ❖ Scrub Mattress seams.
- ❖ Several Residual Pyrethroids are labeled for crack and crevice treatment.
- ❖ Encase mattress and pillows in plastic covers.
- ❖ Permethrin repellent.
- ❖ Vacuuming.
- ❖ Wash clothing and linens in hot (120 F).
- ❖ Dry clothes in a hot dryer for at least 20 minutes.

Treatment of Infestation

- ❖ Leave items outdoors in temperatures below 32F or bagged in a freezer for several days.
- ❖ Dispose of heavily infested items.
- ❖ Repair plaster cracks and loose wallpaper.
- ❖ Mark all furniture as “infested” before disposal to prevent more household infestations.
- ❖ Landlords and property owners have a legal obligation to provide safe and habitable accommodations for tenants.

Treatment of Infestation



Heat treatment of an entire airplane infested with bed bugs.

Photo by M. Hofeld, Seminole Mag

Resources

<http://www.mayoclinic.com/health/bedbugs/DS00663>

<http://www.hsph.harvard.edu/bedbugs/>

www.ca.uky.edu/entomology/entfacts/ef636.asp

www.nclh.org/potrals/0/contents/Bed_Bug_Report_2-12-10.pdf

<http://www.badbedbugs.com/>

<http://www.bedbugcentral.com>

<http://www.terminixwestmich.com>