Bed Bugs in Colorado
ID and Control

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Key Points

Both bed bugs and bat bugs may be found in Colorado homes.

Control for these insects varies depending on species.

Many chemical controls will have limited effectiveness.

Heat treatment is the most effective strategy for bed bug control.
Bug – Bugbear - Bogeyman

Signified a ghost or goblin

Applied to the bed bug
The “Bed Bug Complex” in Colorado
Bat Bugs  (*Cimex pillosellus, Cimex adjunctus*)

www.batguys.com
Hair longer than width of eye
BAT BUG

Hair shorter than width of eye
BED BUG

BadBedBugs.com
Swallow Bug *(Oeciacus vicarius)*
“The” Bed Bug

Cimex lectularius
Simple Metamorphosis
Bed Bug Egg Shells
Early stage nymphs are small and paler than older bed bugs

Gary Alpert photograph
Bed Bugs will feed at least once during each life stage. Adults will feed repeatedly.
Cast Skins Following Bed Bug Molting
Bed bugs feed for about 10-15 minutes.

They are attracted to CO₂ produced by the host.

Peak feeding is between 2-5 AM.
Bed Bug Feeding

Two minutes after feeding initiated

Five minutes after feeding initiated

Nine minutes after feeding initiated

Eleven minutes after feeding initiated

14 minutes – All done!
Important Note:

Bed bugs do not transmit any human pathogens.

27 agents of human disease have been found in bed bugs. None of these agents reproduce or multiply within bed bugs, and very few survive for any length of time inside a bed bug.

There is no evidence that bed bugs are involved in the transmission (via bite or infected feces) of any disease agent.

Source: Purdue University: Medical Entomology
http://extension.entm.purdue.edu/publichealth/insects/bedbug.html
Bite Reaction Variable

Typical bite reaction

Atypical bite reaction

Next pictures not for the squeamish!!
Bed Bug starved (left) and after blood meal (below)

Fecal Dropping
Bed bug fecal spot (Photo by Gary Alpert)
After feeding bed bugs return to some type of harborage to digest their blood meal.

Looking for fecal dropping, cast skins, and eggs is the best way to spot an infestation.
Bed Bug Control

- Monitoring
- Chemical based products
- Non-chemical based products
- Temperature based techniques
- Exclusion
Bed Bug Monitoring Devices – A Key to Control
Bed Bug Monitoring Basics

- Harborage
- CO2 (carbon dioxide)
- Heat
- Moisture
- Other purported attractants
BB Alert Passive Monitor – Harborage based system

To make certain of your continued wellbeing this environmental monitor has been installed as an early warning system. Your comfort and wellbeing is very important to us.
BB Alert Active Monitor –
Harborage based system + Heat
Beacon – harborage based system + Carbon dioxide generating monitor
Control

Must treat all infestation sources simultaneously

-Chemical based treatments

-Chemical treatments must directly contact the bed bug

-Available insecticides will NOT effectively kill the egg stage

-Most over the counter products will have limited usefulness

-Bug “bombs” will NOT work
Control

Must treat all infestation sources simultaneously

-Non-chemical based treatments

-Non-chemical treatments must directly contact the bed bug

-Will NOT effectively kill the egg stage

-May move bed bug harborage to inaccessible areas
Control

Must treat all infestation sources simultaneously

- Temperature based treatments
  - Steam
  - Dry Ice/Freezing

Preventative

http://www.terminixwestmich.com
http://www.packtite.com
Control

Must treat all infestation sources simultaneously

-Temperature based treatments

Heat Remediation
Control

Must treat all infestation sources simultaneously

-Temperature based treatments
Control

Must treat all infestation sources simultaneously

-Exclusion devices
Control

-Ultrasonic Devices

These devices DO NOT work to control bed bugs

Furthermore, they DO NOT control fleas, mosquitoes, dust mites or MOST other insects.

Don’t waste your money!!!
Shameless self promotion

SLEEPING ALONE?
ARE YOU SURE?
THERES AN APP FOR THAT!
Bat Bugs, Bed Bugs and their Relatives

www.ext.colostate.edu
Bite the BedBugs Back!
Cherry Creek Ace Hardware is your Pest Control Headquarters!

Questions?