

Integrated Pest Management in Section 8 Multifamily Housing

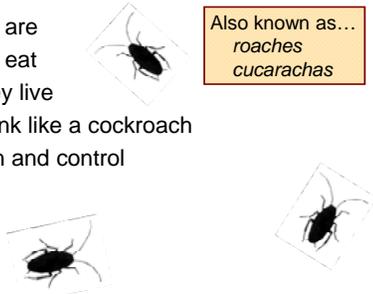
Cockroaches

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Outline

- * What they are
- * What they eat
- * Where they live
- * How to think like a cockroach
- * Prevention and control

Also known as...
roaches
cucarachas



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Cockroaches are health hazards

Cockroaches and their frass

- * Make asthma worse in sensitive people
- * Cause asthma in preschool-aged children
- * Cause or aggravate allergies
- * Contaminate food, dishes, and counters
- * Are unwelcome in places where we work and play

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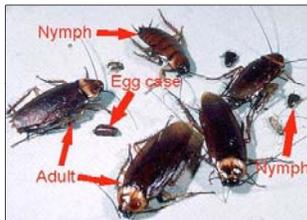
What is a cockroach?

- An insect
 - Lives in areas where humans provide food and water
 - Active at night
- If you see cockroaches during the day, the infestation is serious

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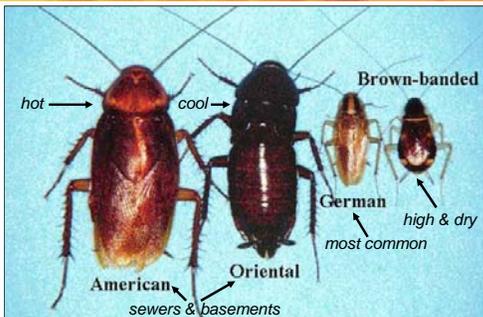
What is a cockroach?

- * Multiple eggs in each egg case
- * Many eggs means many nymphs (babies)
- * Nymphs look like small versions of the adults



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Common cockroaches



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German cockroach

- Medium size (3/4"), bronze, with "racing stripes" behind the head
- Found everywhere, but likes warmth, moisture, and darkness
- Reproduces quickly
- Mother carries eggs to term even if she is dead
- Eats almost anything



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Brown banded cockroach

- Small size (1/2") with side-to-side stripes
- Found in warm and dry spots, often up high
- Lives in scattered locations, often behind pictures and appliances



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American cockroach

- a.k.a. "palmetto bugs" or "water bugs"
- Large (1-1/2"); brown color
- Glides in the air
- Lives in sewers and basements
- Likes it hot

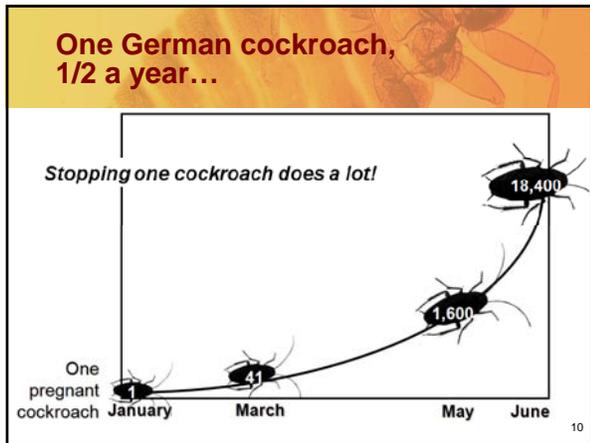


Oriental cockroach

- a.k.a "water bugs"
- Large (1"); black color
- Lives in sewers, basements, and mulch
- Likes it cool



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- ### Signs of cockroaches
- * Live cockroaches
 - * Dead cockroaches and their parts
 - * Frass
 - * Egg cases
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Dead cockroaches

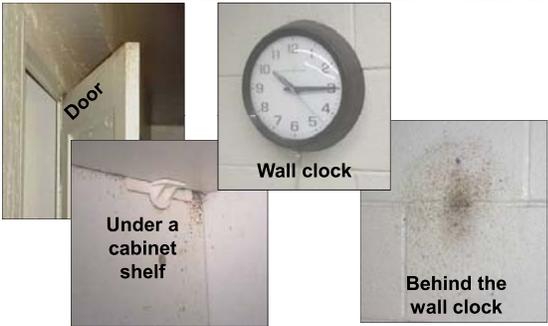


German cockroaches on a sticky trap

Brown banded cockroaches by a door hinge

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Frass



Door

Under a cabinet shelf

Wall clock

Behind the wall clock

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Where cockroaches live

- * Anywhere in a building
- * Prefer spots near water but also need food and warmth
- * In cracks and crevices where their bodies touch surfaces above and below



University of Nebraska
Department of Entomology

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What cockroaches eat

- Crumbs
- Grease
- Trash
- Cardboard glue
- Just about anything



Under the bag in a trash can

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Where cockroaches drink

- Sinks
- Counters
- Floors
- Pet bowls
- Shower stalls
- Sweaty pipes
- Refrigerator drip pans and gaskets
- AC units

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Think like a cockroach

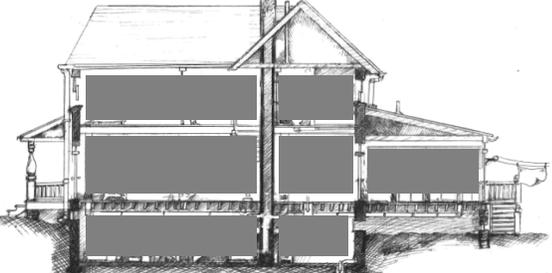
We think of a building as rooms, hallways and stairwells



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Think like a cockroach

To a cockroach, a building is the spaces between walls and around and in appliances



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Think like a cockroach



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IPM practice

Cockroaches

- ✦ Need food and water
- ✦ Are most active at night



- ✦ What's the problem here?
- ✦ How would you fix it?

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Got cockroaches? Now what?

There is not just one answer

- ✦ First find out:
 - What kind?
 - How many?
 - Where?
- ✦ Then use solutions that provide:
 - Most effective prevention and control
 - Least risk to residents and staff

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Inspect

- ✦ Using a flashlight, look for evidence where cockroaches would find food, water, or a hiding spot: up, down, behind, and under
- ✦ Think like a cockroach – look in hidden areas



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Inspect

Monitor by placing sticky traps near areas where cockroaches might travel—at corners and near warmth, food, and water



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Prevention and control: Sanitation

- * Good sanitation makes pest control work
- * Eliminate hiding spots, food, and water available at night by
 - cleaning the kitchen
 - reducing clutter
 - throwing away dead cockroaches
 - cleaning frass and areas where there were cockroaches with simple soap and water



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Prevention and control: Exclusion

Seal or fix cracks, peeled wallpaper and shelf liners, or holes that cockroaches could get through
Use

- * silicone caulk
- * copper mesh
- * screens
- * door sweeps—always on boiler rooms and exterior doors



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Prevention and control: Targeted chemical use

- * Sanitation first!
- * Maintenance staff and residents should not spray. Spraying should be a last resort and done only by a PMP
- * Read the ENTIRE pesticide label before buying, using, storing, or disposing of a product
- * The label is the law!
- * Follow the label directions closely

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Prevention and control: Baits

- * The most effective pesticide option
- * Won't work if contaminated by strong-smelling cleaners or other chemicals, pesticide sprays or foggers, or nicotine from cigarette smoke
- * Use in every room where inspection finds evidence



Gel Bait



Bait Station

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Prevention and control: Baits

- * The bait needs to be the only food in the area—sanitation first!
- * Slow to kill: Cockroaches feed on the bait and take it back to their hiding spots where other cockroaches live



PMP's gel bait applied under a drawer

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Prevention and control: Insecticidal dusts

- * Least toxic active ingredients you may know:
 - boric acid
 - diatomaceous earth
- * How they kill cockroaches:
 - A stomach poison
 - Dry them out
 - Contact kill
- * Long-lasting if dry

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Prevention and control: Insecticidal dusts

- Effective if used correctly
- Light dusting—never piles
- Use in walls before fixing them if infestation exists
- Unit location may justify application under and behind cabinets at turnover or when making large repairs...
but clean first!



Incorrect use of insecticidal dust ³¹

Prevention and control: Insect growth regulators (IGRs)

- Interfere with cockroach growth and egg hatching
- In baits, sprays, aerosols, and powders
- Take a month to work
- Stay effective for a long time
- Compatible with other IPM methods; may enhance baits

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A review of IPM tools

- Sanitation
- Exclusion
- Pesticides:
 - Bait
 - Insecticidal dusts
 - IGRs

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Don't use over-the-counter sprays and foggers

- Over-the-counter sprays and foggers are not part of IPM in multifamily housing
- They are not compatible with baits
- Cockroaches develop resistance



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Questions?



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