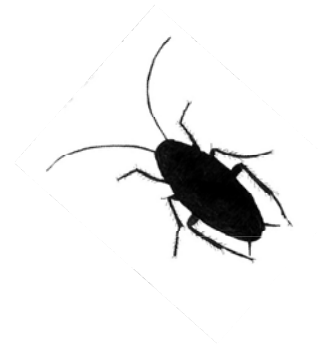


Cockroaches

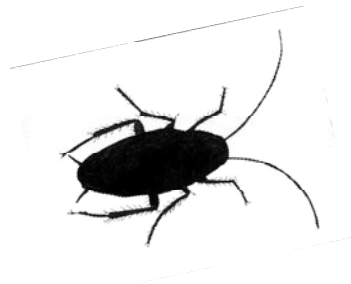


Outline

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



Also known as...
roaches
cucarachas



Cockroaches are health hazards

Cockroaches and their frass

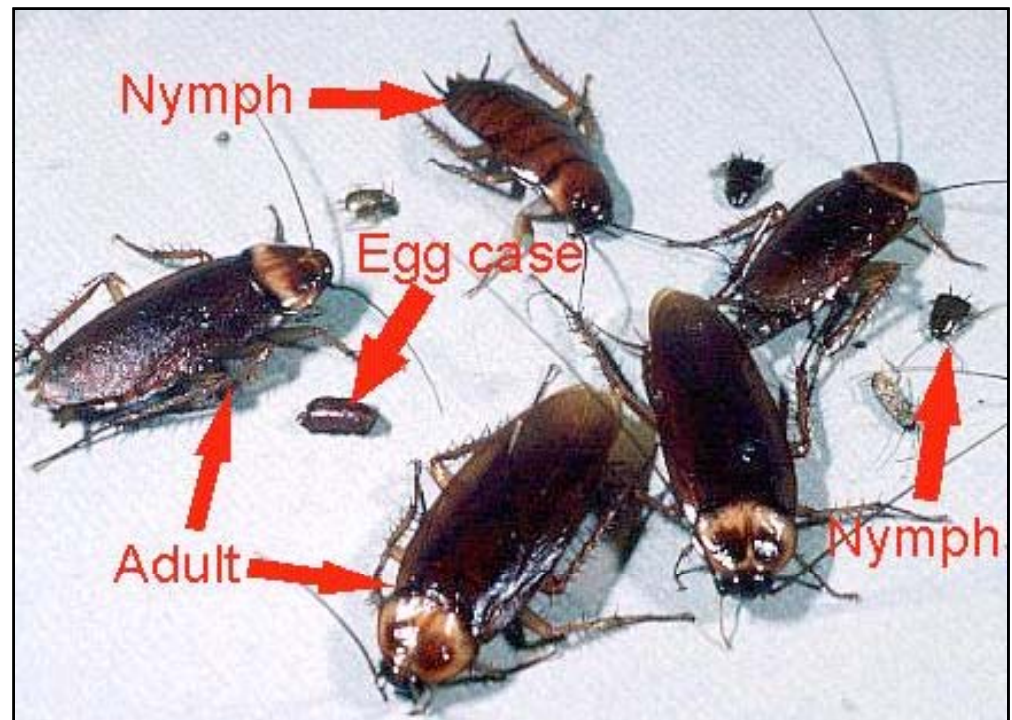
- ✖ Make asthma worse in sensitive people
- ✖ Cause asthma in preschool-aged children
- ✖ Cause or aggravate allergies
- ✖ Contaminate food, dishes, and counters
- ✖ Are unwelcome in places where we work and play

What is a cockroach?

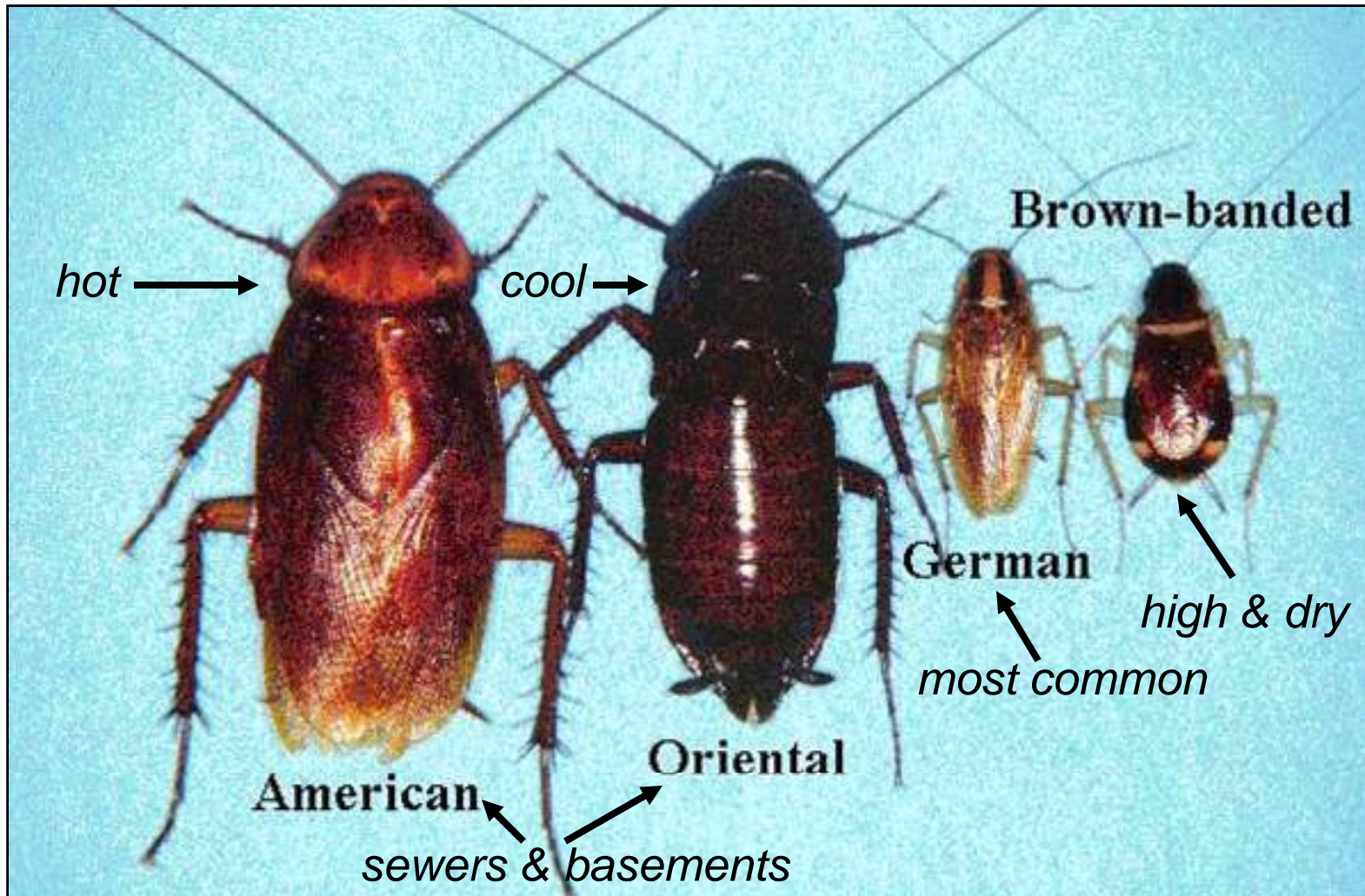
- An insect
- Lives in areas where humans provide food and water
- Active at night
 - If you see cockroaches during the day, the infestation is serious

What is a cockroach?

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



Common cockroaches



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



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



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

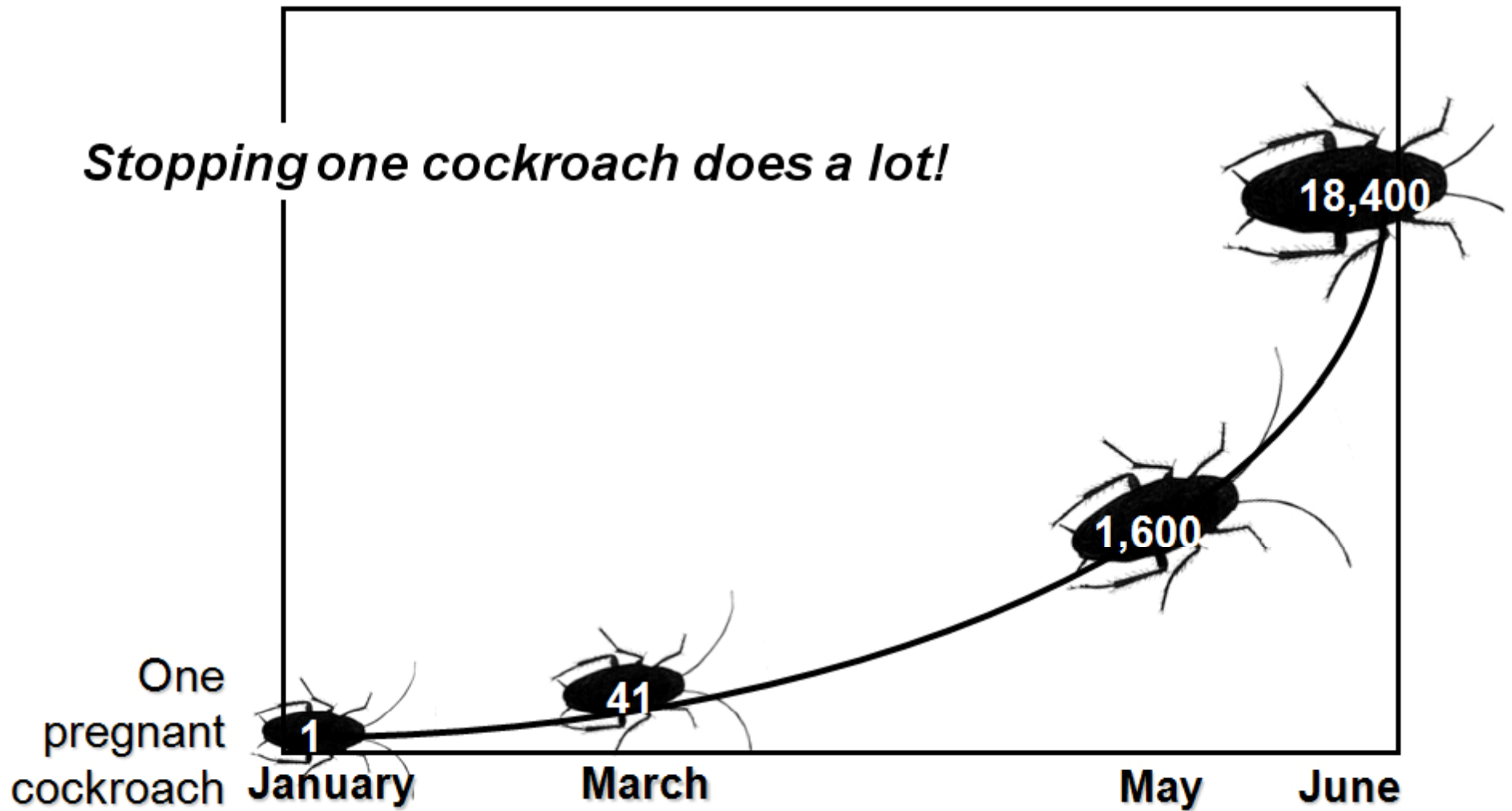


Oriental cockroach

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



One German cockroach, 1/2 a year...



Signs of cockroaches

- Live cockroaches
- Dead cockroaches and their parts
- Frass
- Egg cases

Live cockroaches



**American
Cockroaches**



**German
Cockroaches**



Dead cockroaches



**German cockroaches
on a sticky trap**



**Brown banded
cockroaches
by a door hinge**

Frass



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



What cockroaches eat

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



Under the bag in a trash can

Where cockroaches drink

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

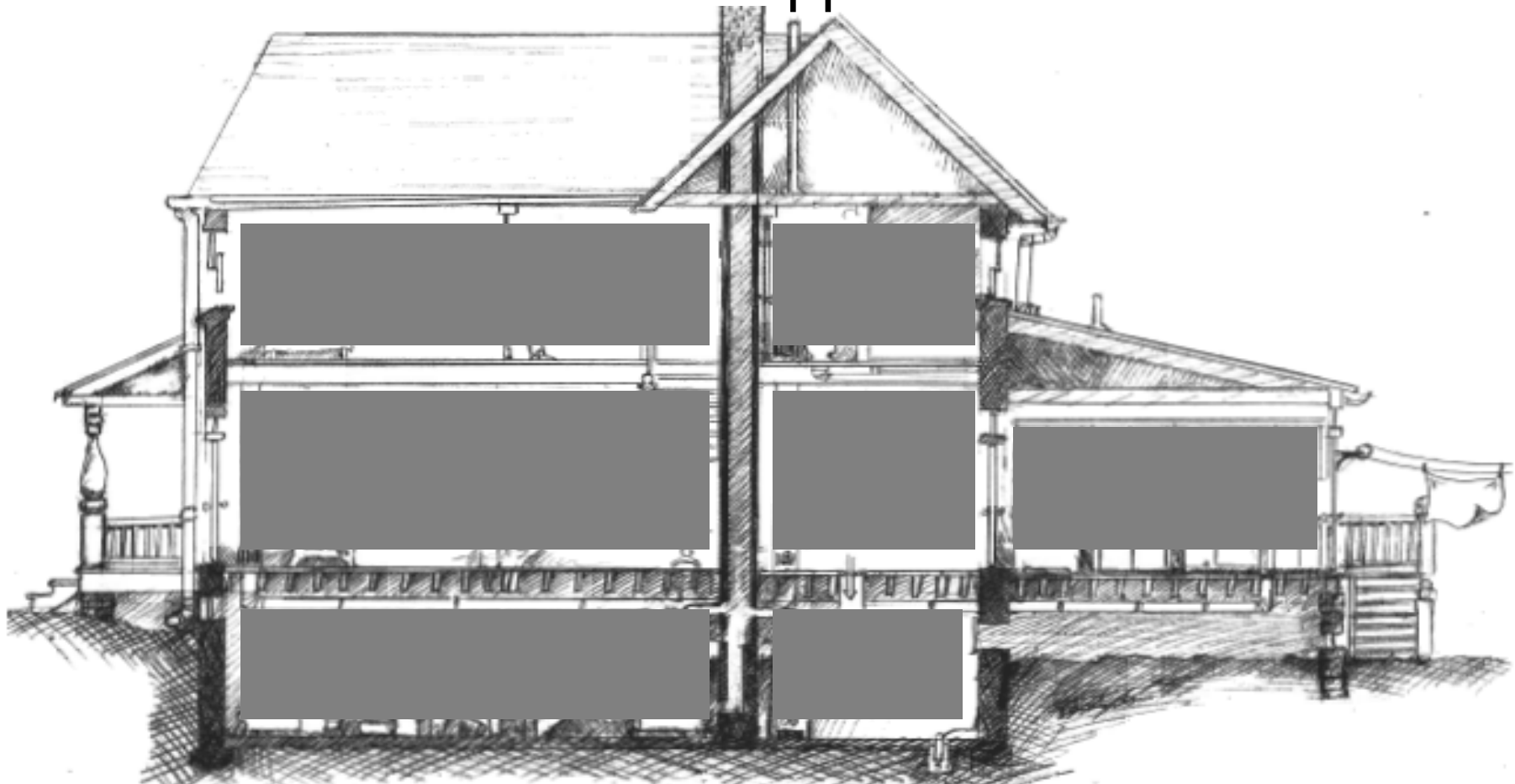
Think like a cockroach

We think of a building as rooms, hallways and stairwells

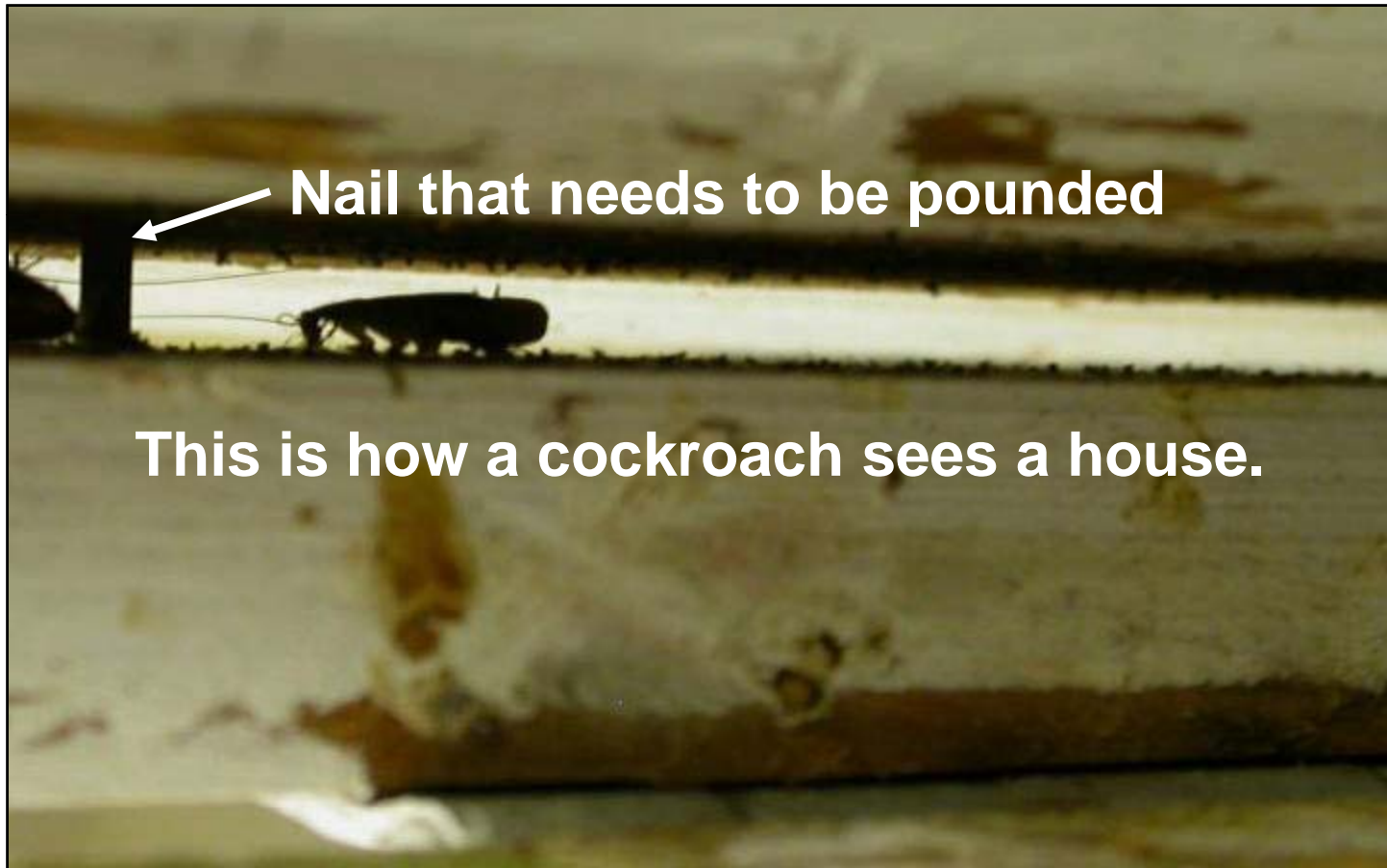


Think like a cockroach

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



Think like a cockroach



IPM practice

Cockroaches

- 🐞 Need food and water.
- 🐞 Are most active at night.



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

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

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.



Inspect

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



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.



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; or
- door sweeps on boiler rooms and exterior doors.



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.

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.



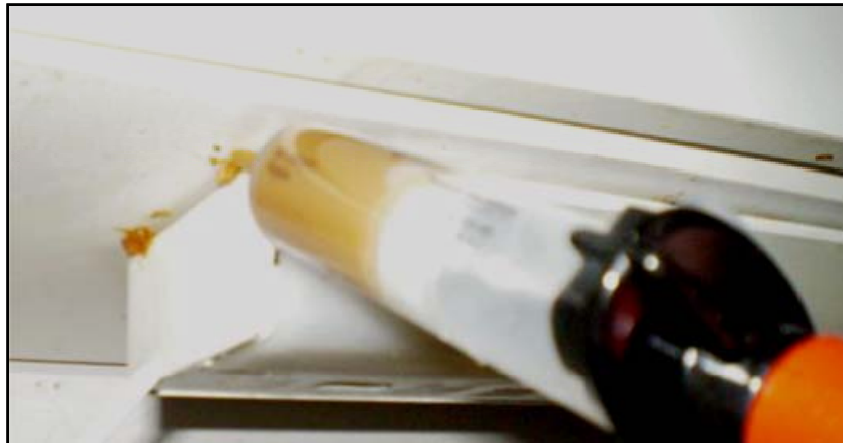
Gel Bait



Bait Station

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.



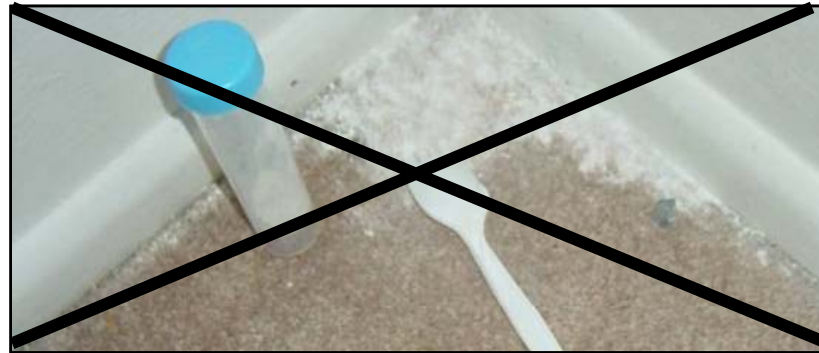
PMP's gel bait applied under a drawer

Prevention and control: Insecticidal dusts

- Active ingredients may be boric acid or diatomaceous earth
- How they kill cockroaches:
 - Scratch their outer layers
 - Dry them out
- Long-lasting if dry

Prevention and control: Insecticidal dusts

- Effective if used correctly.
- Light dusting instead of piles.
- Use in walls before fixing them.
- Under and behind cabinets at turnover or when making large repairs...but clean first!



Incorrect use of insecticidal dust

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

A review of IPM tools

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

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



Questions?

