

# Identification, Biology and Control of Cockroach



Ent-307



# Cockroaches

**T.N:** *Periplaneta americana* (Linnaeus)

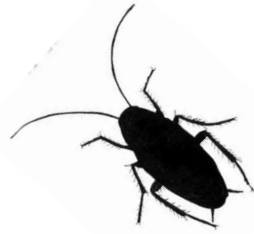
**Family:** Blattidae

**Order:** Dictyoptera/Blattodea

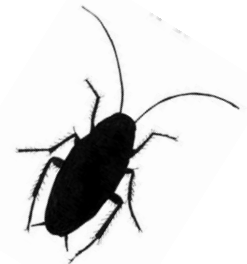
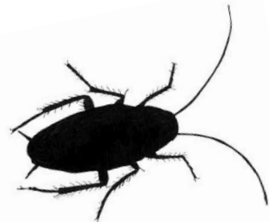


# Outline

- 🐞 What they are
- 🐞 What they eat
- 🐞 Where they live
- 🐞 Life History
- 🐞 Prevention and control



Also known as...  
*roaches*  
*cucarachas*

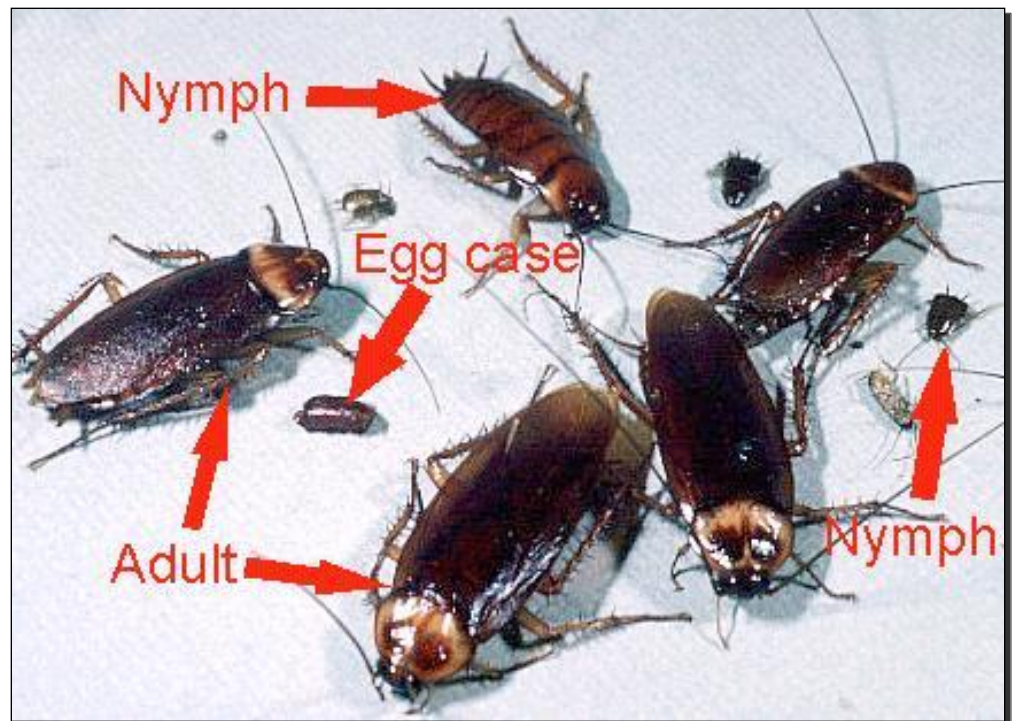


# What is a cockroach?

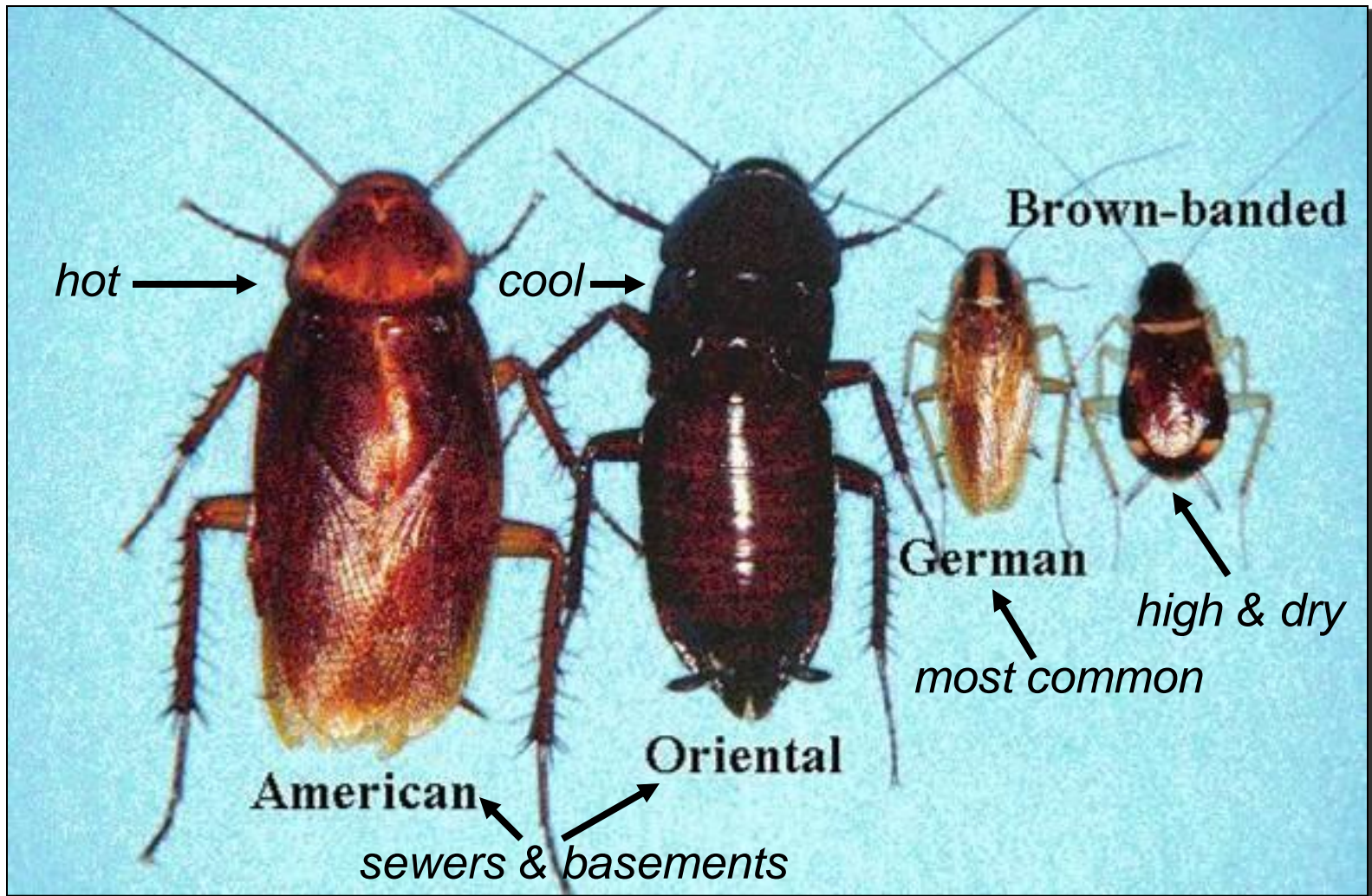
- 🪳 An insect
- 🪳 Lives in areas where humans provide food and water
- 🪳 Active at night
  - If you see cockroaches during the day, the infestation is serious

# What is a cockroach?

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



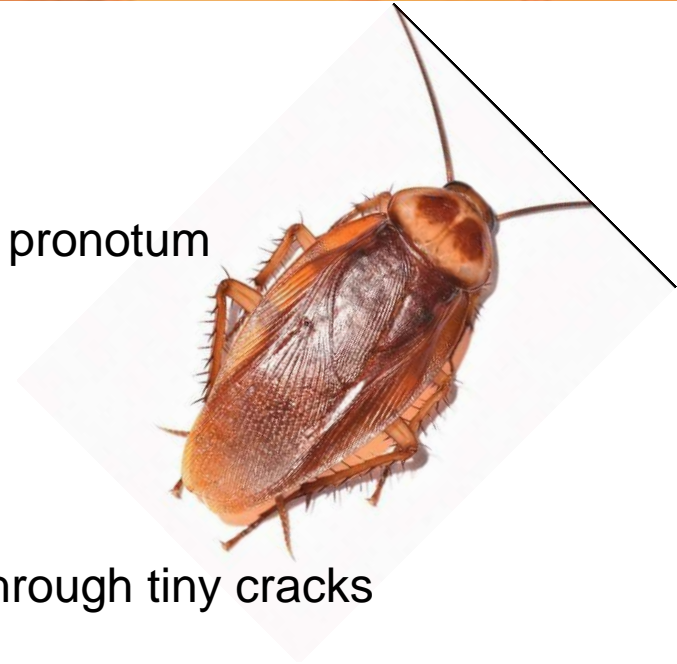
# Common cockroaches



# American cockroach

## Adults:

- Shiny, flattened, reddish brown
- Light brown margin around side and back edges of pronotum
- Pronotum shield is yellowish brown
- Head downwards
- Male and female have wings – 30 mm length
- Long antenna as tactile organ
- Head, body and legs arrange in a manner – pass through tiny cracks



## Nymphs

- Smaller, wingless, resemble to adult

## Eggs

- Capsule/ootheca is bean shaped, dark brown or blackish
- 14-16 eggs in each capsule

# Life History

- ✦ Active in hot and humid season
- ✦ Female lay eggs in capsule – once in a week
- ✦ 14-16 eggs/capsule – 15-90 capsule/female
- ✦ Incubation period 100 days in winter and 3-4 weeks in summer
- ✦ Nymphs moulting 13 times
- ✦ Nymphal period 3-10 months depending on temperature
- ✦ Adult live 1-3 years





# Signs of cockroaches

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

# Cockroaches are health hazards

## Cockroaches and their frass

- 🪳 Make asthma worse in sensitive people
- 🪳 Cause asthma in preschool-aged children
- 🪳 Cause allergies
- 🪳 Contaminate food, dishes, and counters
- 🪳 Damage old books and leather articles
- 🪳 Important vector of diseases like Chlorea, Dysentry, Typhoid and others
  
- 🪳 Are unwelcome in places where we work and play

# Live cockroaches



# Frass



Door



Wall clock



Under a  
cabinet  
shelf



Behind the  
wall clock

# Where cockroaches live

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











# What cockroaches eat

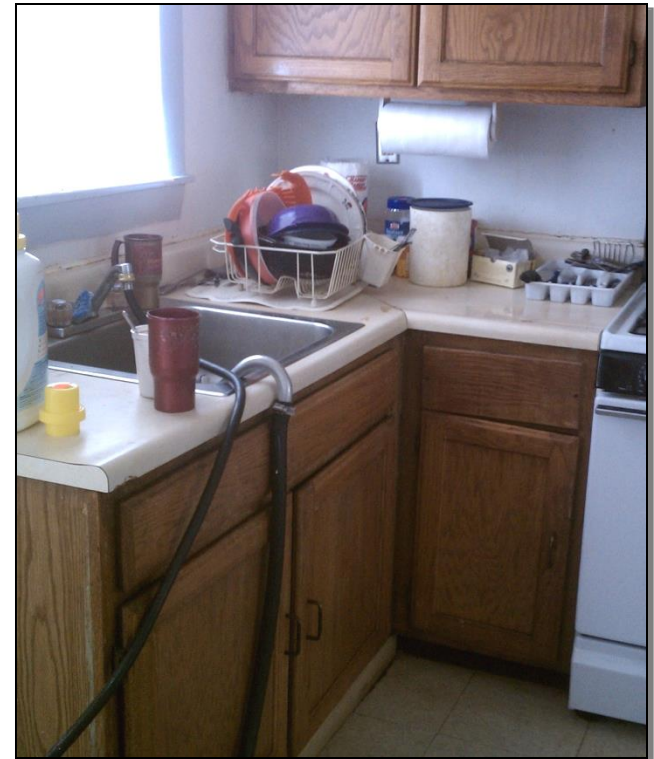
- 🪳 Trash
- 🪳 Cardboard glue
- 🪳 Just about anything



**Under the bag in a trash can**

# Where cockroaches drink

- 🪳 Sinks
- 🪳 Counters
- 🪳 Floors
- 🪳 Pet bowls
- 🪳 Sweaty pipes
- 🪳 Refrigerator drip pans
- 🪳 AC units



**Sources of water  
in a kitchen**

# IPM practice

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



# Stove

Take a stove apart for cleaning



# 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 food, and water



# Prevention and control: Sanitation

- 🪳 Good, detailed sanitation makes pest control work
- 🪳 Eliminate hiding spots, food, and water available at night by
  - cleaning the kitchen
  - 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

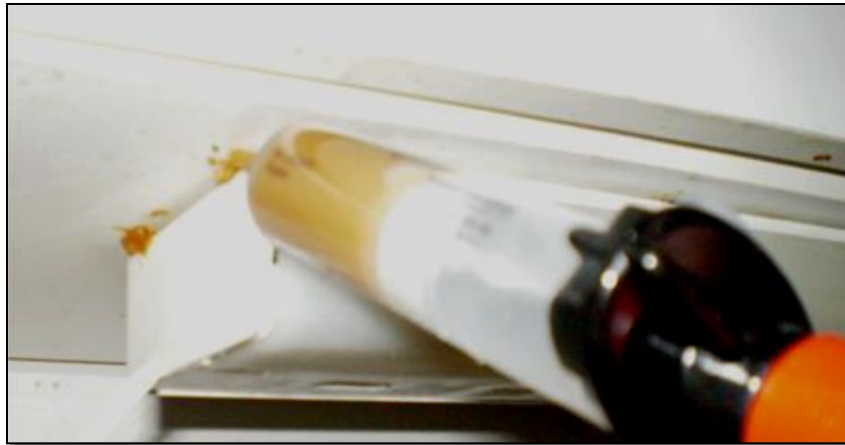


# Prevention and control: Targeted chemical use

- 🕷 Sanitation first!
- 🕷 Spraying should be a last resort
- 🕷 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 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



**Gel bait applied under a drawer**

# 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

# Chemicals

- 🐜 Malathion/chlorpyrifos 0.5%
- 🐜 Carbaryl 0.5%
- 🐜 Dichlorovos 0.5%
- 🐜 Permethrin 0.1%
- 🐜 Cypermethrin 0.5%