

### Cockroaches

#### General Information:

Cockroaches are one of the most difficult structural pests to eliminate. They hide well, reproduce quickly, and can be resistant to many commonly used insecticide sprays and baits. Using an integrated pest management (IPM) approach can greatly improve roach control and minimize roach allergens within schools.

#### What Do They Look Like?

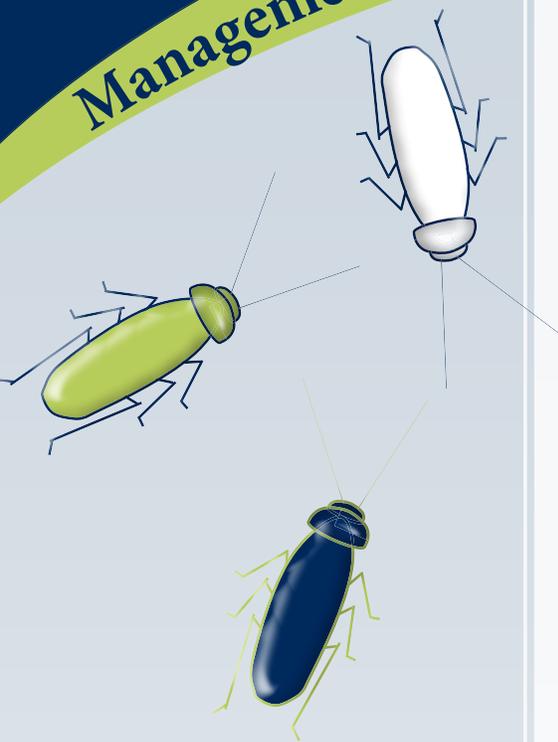
In general, cockroaches are flat, oval-shaped, have long, filament-like antennae, chewing mouthparts, and leathery wings with visible veins (wings not present on immatures and some species of adults). The head is only partly visible from above. Adult roaches range in size from about 1/2" to 2" depending on the species (Figs. 1-2).

#### Life Cycle

Egg (ootheca = egg sac), wingless immatures (nymphs) that appear as smaller adults, and winged or wingless adults, depending on species. Life cycle length varies with roach species, temperature, humidity, sex, availability of food and water, etc., but can range from months to years.

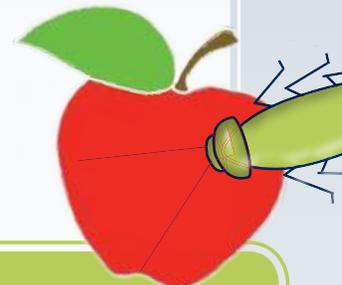
#### Common Utah Cockroaches

There are 3 primary cockroaches in Utah: 1) German cockroach (*Blattella germanica*), 2) American cockroach (*Periplaneta americana*), and 3) Oriental cockroach (*Blatta orientalis*).



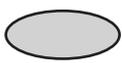
**Above:**  
Figure 1. German cockroaches: Adults, nymphs, and egg sac.

**Right:**  
Figure 2. American cockroaches: Adults, nymphs, and egg sac.



#### Did You Know?

- Roach feces can cause allergic reactions and asthma in children and adults.
- Roaches can harbor and transmit diseases.
- Roaches are most active at night.
- Roaches spend over 75% of their life hiding in cracks and crevices.
- Commonly used insecticides and baits may repel roaches or be ineffective at killing roaches.
- Baits and inorganic dusts are the best chemical options when coupled with non-chemical control methods.

Cockroach	Adult Cockroach Size	Egg Sac Size
German		
Oriental		
American		

**Above:**  
Figure 3. Approximate size of adult cockroaches and egg sacs.

Most cockroaches prefer humidity and warmth, but one, the Oriental cockroach, prefers cooler areas with high humidity. Roaches feed on almost everything from grease stains to pet food, to the glue holding furniture together! Immature roaches can feed on feces from other roaches. All stages of cockroaches spend about 75% of their time hiding together in small cracks that can be small as their low-profile, flat bodies.

Cockroaches talk to each other using chemicals (pheromones). Pheromones can be given off through the body or fecal material. Attractive pheromones cause cockroaches of the same species to be highly attracted to a particular female, male, or site where food and water are plentiful. Attractive baits and traps can be used to aid in control when roach populations are low, or continually for monitoring high-risk areas.

Cockroaches need moisture, food, and shelter to survive. Cleanliness, exclusion, habitat modification, and minimizing available water and food sources are critical aspects to any cockroach management program.



## Managing Cockroaches with Integrated Pest Management

- Inspect and monitor all areas where food is prepared, stored, or eaten, and where moisture and heat are present. Monitor using cockroach traps to locate areas with high roach densities. Traps will not eliminate an infestation, but can be used to determine roach species, harborage location, and movement.
  - Habitat modification (eliminate food and moisture):
    - fix leaky plumbing
    - empty freezer drip trays weekly
    - store food in air tight containers
    - vacuum and wash all areas where food is prepared, stored, or eaten
    - minimize humidity
    - protect drains with fine metal screen
    - clean up food and crumbs daily
    - do not store wet dish rags and sponges where roaches have access
  - Exclusion (reduce hiding places and entry points):
    - caulk or seal foundation or wall cracks > 1/16" and where plumbing or wiring comes through walls
    - install door sweeps and weather stripping
    - reduce clutter in classrooms and storage areas
  - Chemical control: (use low toxicity baits and dusts):
    - diatomaceous earth (dust)
    - silicate dusts
    - boric acid (do not use where children can access)
    - baits (slow-acting but effective)
- \* Contact the Utah Plant Pest Diagnostic Lab for more information on using baits, or visit the listed roach resources.

For more info, check out:

**Utah State Univ.: Cockroaches**

<http://extension.usu.edu/files/publications/factsheet/cockroaches2010.pdf>

**Colorado State Univ.: Cockroaches**

<http://www.ext.colostate.edu/pubs/insect/05553.html>

**Univ. Nebraska Lincoln: Cockroaches**

<http://lancaster.unl.edu/pest/cockroaches.shtml>

