

# Module 5 - Managing Mice and Rats in and around Child Care



Integrated Pest Management for  
Child Care Settings

# Mice and rats

- Species of concern in the Northeast include the house mouse, Norway rat and white-footed mouse.



J. Rodler, SCCE



iStock.com



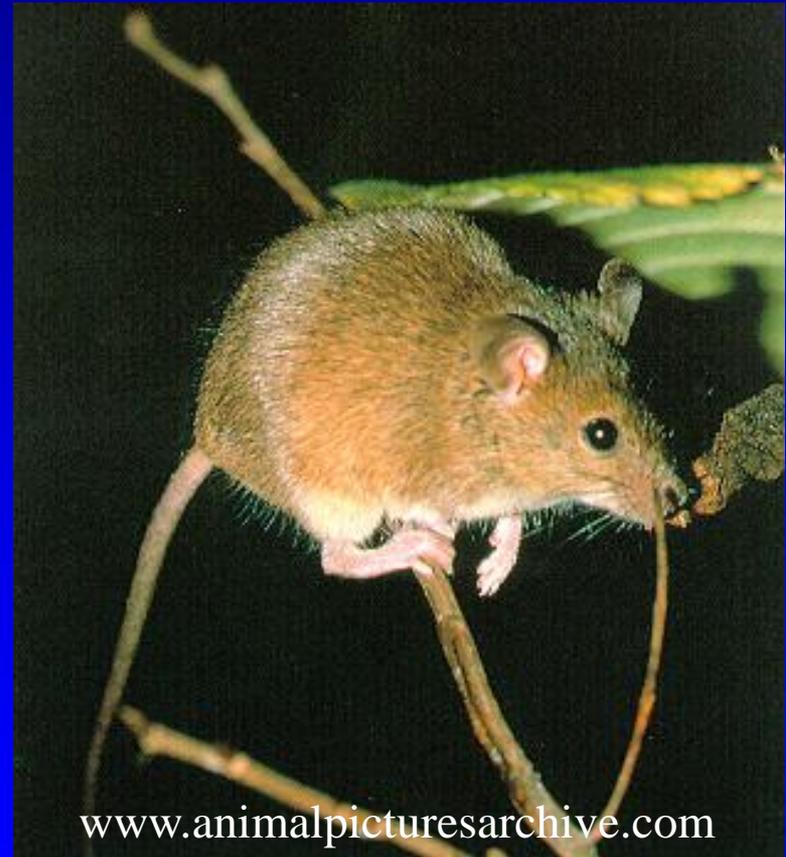
David Cappaert, Michigan State University, Bugwood.org

# Mice and rats that live in homes and buildings:

- Rely on humans for food and shelter.
- Transmit disease to humans.
- Rats will bite children and can cause injury.
- Mice and rats trigger asthma and worsen allergies.

# The house mouse

- Fur is gray to brown and lighter underneath, but not white.
- Small eyes and large ears that can be folded over the eyes.
- Tail is almost hairless



# White-footed and deer mouse

- Small gray mouse with a white belly.
- Not as common living inside buildings.
- Found in wooded areas.



Photos from Public Health Image Library, Centers for Disease Control

# Norway rat

- Large rodents (1 lb)
- Heavy body, brown color, long tail.
- Ears are small and can't be folded over the eyes.
- Young rats may be mistaken for mice.



[www.animalpicturesarchive.com](http://www.animalpicturesarchive.com)

# Correct identification is critical

Young rats

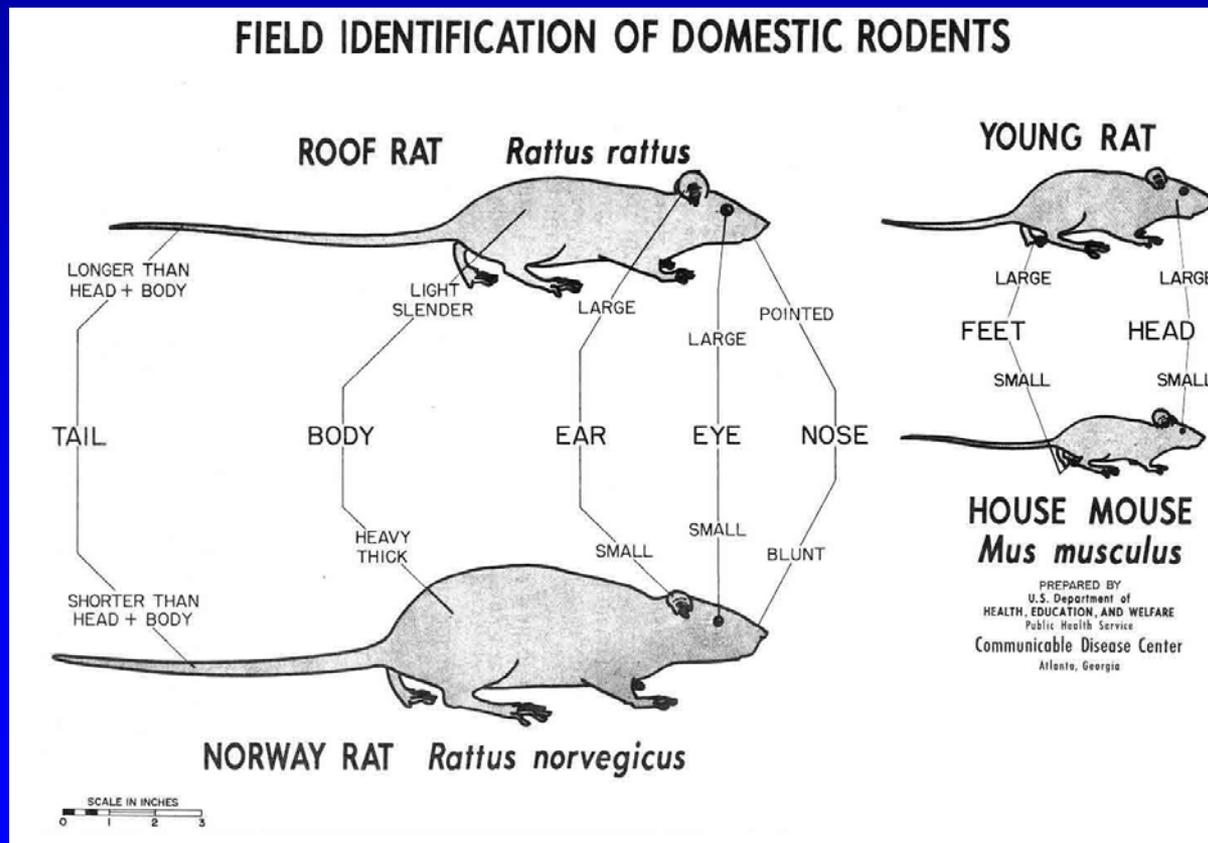


Mice



# Which type are the problem?

- Difference in appearance:



# What Mice and Rats Eat



Mice and rats eat human and animal food, usually food that has been thrown away.

Rats drink water.

Mice get enough water from their food.



# Mice and Rat Damage

Rat burrowing causes streets and structures to collapse.

Mice and rats gnaw and damage property causing internet blackouts, computer crashes, fires and human deaths.

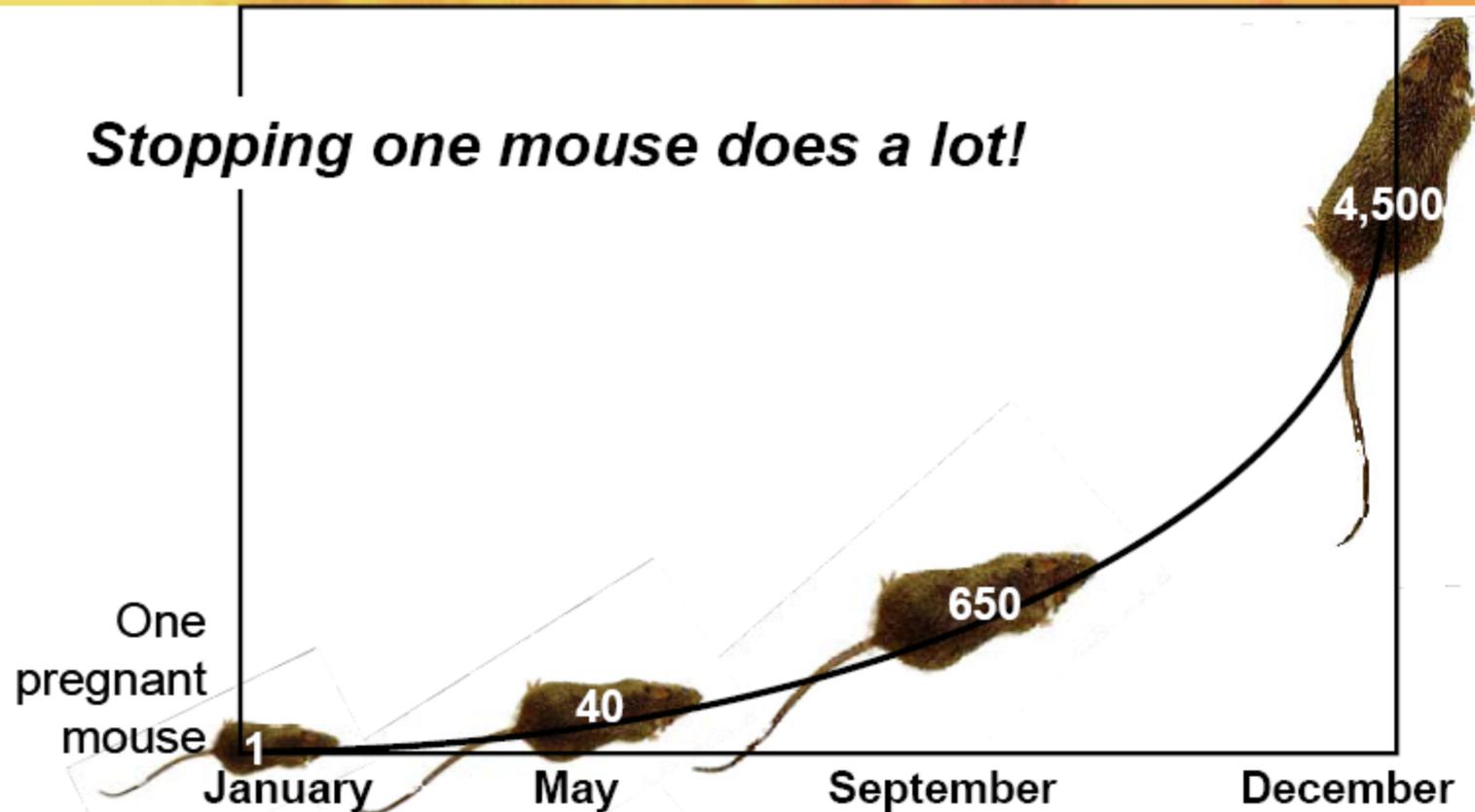
It is estimated that 25% of all fires of “unknown causes” are probably started by mice and rats gnawing on gas lines and electrical wiring.



# Mice and rats reproduce quickly



# One mouse, one year...



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# Management of mice and rats

A four-step process:

1. **Inspect for mouse or rat activity**
2. Seal openings and pathways
3. Remove food and water (sanitation)
4. Trap mice and rats inside the building and along the outside perimeter.

# Look for signs of mice and rats

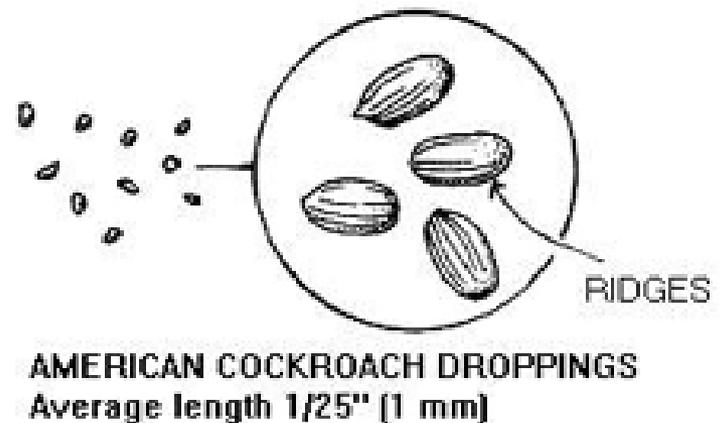
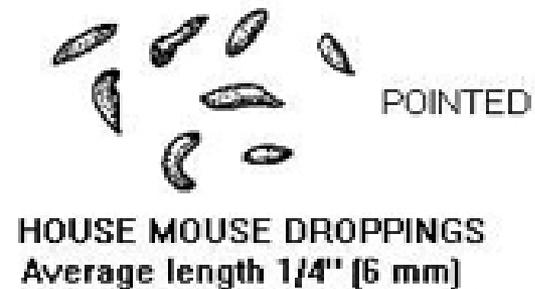
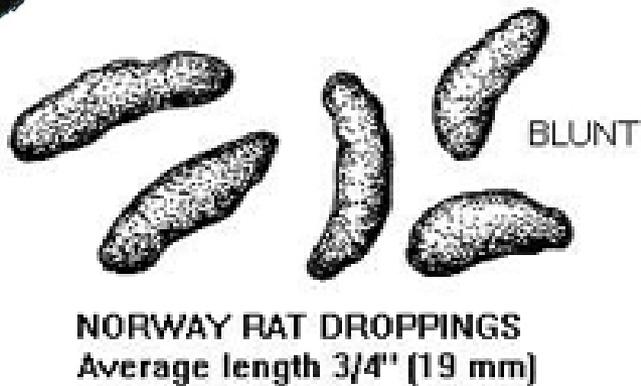
- Urine and droppings
- Trails and greasy rub marks
- Gnawing on wires, wood, pipes
- Holes in boxes and bags of stored foods
- Openings in walls, burrows in the ground
- Dead animals and flies
- Noise inside walls
- Burrows outside and along foundation

# Urine



Mice and rats leave urine everywhere they go.

# Looks like a dropping ....



Greasy rub marks show where rats travel....



# Gnaw marks

Need images  
of more  
types of  
damage from  
rodent  
gnawing



# Remember to think of lines

- Mice and rats are active at night and tend to follow lines:



# Traps can be used for monitoring

Find another image of a snap trap in use for rodent monitoring or control



# Other Signs of Mice and Rats

- Nesting materials
- Hidden pockets of edible items or toxic baits
- Damaged, shredded, and contaminated food containers.

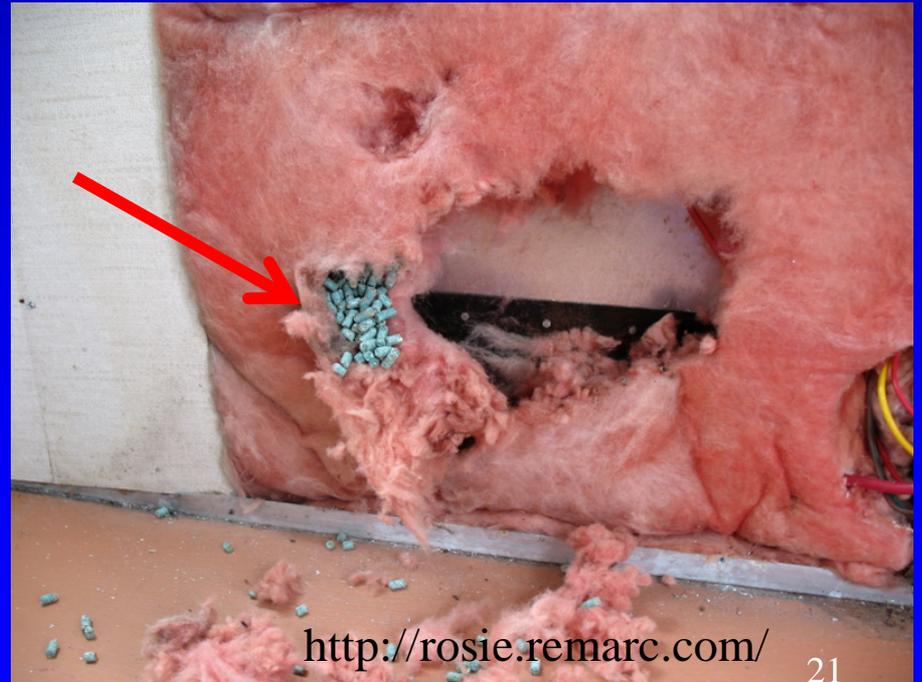


Image of container damaged by rodents

# Rat burrows indicate rats are living on the property...



# Active Rat Signs

- Live or dead rats are a “dead” giveaway that you may have a potential pest problem.



**Dead rats do tell tales!!!**

# Mouse and rat management

A four-step process:

1. Inspect for activity
2. Seal openings and pathways
3. Remove food and water (sanitation)
4. Trap mice and rats inside the building and along the outside perimeter.

# Seal entryways into and pathways within buildings

- Under doors
- Openings in walls where pipes pass
- Holes in building foundation
- Gaps around window sills and doors

# Pests will enter through cracks, holes and under doors

Seal gaps with sealant caulk.

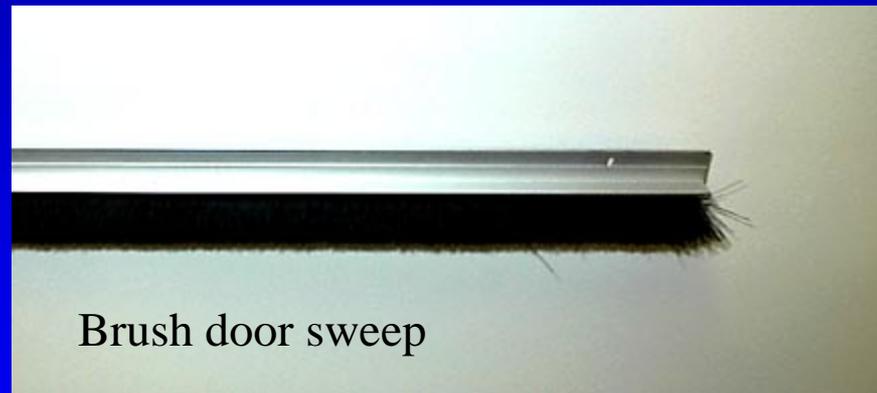


Install door sweeps. They cost little and prevent pest entry!

Especially important at back doors near garbage areas and kitchen doors.

# Door sweeps

- Brush door sweeps give better protection from rodents than flat ones.



Door sweeps are cheap and help conserve energy.

# Pipe openings in walls and by electrical sockets can allow pest entry



Pests will use pipes to move freely through a building. Block their movement by closing these holes.



Seal the holes with escutcheon plates  
(metal ring around pipe).



Check bathrooms and under sinks, as well.

# Seal openings with copper mesh and foam

- Copper doesn't rust like steel wool.
- Stuff the openings with crumpled copper wool.
- Add a foam sealant to keep it together.



Image of expanding foam and copper mesh seal for rodent proofing

# Inspect the basement, garbage chutes and boiler room.



Close up all openings with sealant or concrete patching compound. This prevents pest entry.

# Seal around windows, doors

- Learn to use a caulk gun, it's easy.
- Use flexible sealant, not caulk.
- Close gaps to prevent all types of pests.
- This saves energy, too!



Um...Close the door!



# Don't tempt them to come inside



This door needs to be repaired



Make sure all exterior doors and windows are sealed tight.

A dime-sized hole can let in a mouse or young rat. Try the #2 pencil test.



Quarter-sized hole for larger rats!

# Mouse and rat management

A four-step process:

1. Inspect for activity.
2. Seal openings and pathways.
3. **Remove food and water (sanitation), plus clutter (hiding spots).**
4. Trap mice and rats inside the building and along the outside perimeter.

# “Line of sight” sanitation

Think like a mouse or rat...



Get down and look for what they could be eating.

**This must be cleaned!**

**Kitchen filth and compactor room grease attracts pests – Look for buildup of grease and scrape/scrub it clean.**



# Cleaning greasy or soiled areas

- Use orange oil-based or enzyme cleansers to cut the grease.
- Use steel wool or plastic scrubbers.
- Clean under stove and along the walls next to the stove.
- Move appliances to deep clean these area once a week.

# Improper storage of garbage



Use garbage bins for storage, not just plastic bags. Get trash out of the building as soon as possible.

# Trash containers that are mouse and rat-proof



Eliminate access to food (trash) by isolating it.

# Dumpsters and trash compactors

- Trash compactors are best for reducing mice and rats around the building.
- Make sure the lid is in good condition or have it replaced.
- Locate dumpsters as far away from the building as possible.



Store food in solid containers. Open food in a cabinet is a food source for mice and rats.



Throw away any food that has been tampered with by rats or mice. 44

# Clutter gives mice and rats a place to hide



Ask staff to clean and de-clutter.



# So far, we have learned to...

- Identify mice, rats and their activity.
- Seal entryways and pathways.
- Clean eating and trash areas frequently.
- Store food in tight mouse or rat-proof containers.
- Empty and store trash so it is not available to mice, rats or other pests.
- Eliminate clutter inside and out.

# Mouse and rat management

A four-step process:

1. Inspect for activity
2. Seal openings and pathways
3. Remove food and water (sanitation)
4. Trap mice and rats inside the building and along the outside perimeter.

# Rats and mice are very different in behavior

- Rats are cautious and smart – they avoid traps and bait.
- Rats prefer to burrow in soil.
- Rats can swim well.
- Mice are curious and not hard to catch.
- Mice breed much faster than rats.
- Mice nest in warm places such as walls.
- Mice can climb well.



# Tips for trapping

- Anyone can use a mouse or rat trap – no license needed!
- Bait with appealing foods: bacon or fish for rats, chocolate or peanut butter for rats and mice.
- Rats and mice follow lines – look for pathways along walls, appliances, cabinets, furniture.
- Place trap trigger along the wall or vertical surfaces or back to back along the wall.

# Hints for trapping mice

- Trapping should occur after building is sealed up.
- Rearrange the area, mice will explore and encounter traps.
- Use many traps within a building.
- Large triggers prevent mice from getting away with the bait.
- Use fresh bait, such as pineapple, peanut butter, or chocolate.



# Trapping rats

- Rats are very cautious of new objects, trapping and baiting can be challenging.
- “Pre-bait” the traps –
  - Leave traps with fresh bait but do not set the trap.
  - Allow rats to become comfortable with traps.
  - Set the traps to catch rats only after they have started eating bait. This might take a week or two.

# Trapping rats

- Outdoors, rats make burrows in weedy or littered areas near buildings. Set traps near burrows.
- Place rat traps in secured rat bait boxes.
- Set box entrance where rat runways are seen.
- Always place the box along a vertical surface, such as a wall or foundation.



# Trapping rats

- Use traps that are made for rats (large).
- Remove other food and water, including bird seed and pet waste.
- Offer bacon, fish, or sweets, like chocolate.
- Indoor trapping may be needed in a basement.
- Check the traps daily (if indoors) to prevent flies and odors.

# Types of mice and rats traps available

- Snap traps, a variety of styles

“Hammer bar”  
kills instantly,  
more humane



Catches mice,  
won't break fingers



Expanded trigger is more  
effective. This type is more  
dangerous to set

# Types of traps available

- Multiple catch traps for mice are baited, then set to capture several mice.
- Mice are hidden from view.



# Rat and mouse control with poison bait

- Rodenticides (mouse and rat poison) should not be used in child care settings..... Why?
  - They are toxic to children.
  - They do not provide a long-term solution.
  - Mice and rats may die in walls causing smells and other pest problems.



Larder beetles will feed on dead rodents

# Mice and rat control review

- Adopt a plan to prevent and eliminate rodents:
  - Get rid of food sources, improve sanitation
  - Seal them out of the building
  - Close up pathways through bldg (pipe chases)
  - Use trapping to eliminate them
- Monitor the progress using snap traps and keeping count of mice or rats caught.

# Take-away messages

- Mice and rats are bad for children's health and well being.
- Sanitation and building maintenance are most important in controlling mice and rats.
- Preventing mouse and rat problems is a long-term goal.
- Trapping mice and rats is a better strategy than poisoning them.