



# What You Can Do To Prevent and Control Rodents



[www.rivcoeh.org](http://www.rivcoeh.org)

Dear Resident,

Your cooperation is requested to help control rodents in Riverside County. This pamphlet entitled, "What You Can Do To Prevent And Control Rodents," explains the elements of rodent control and the habits of rodents.

**The County is recommending that you first remove all rodent harborage, food and water sources and then control the rodents.**

Trapping and chemical control alone will not achieve long term, permanent rodent control. If the rodents can be controlled and the conditions that allow them to reproduce are removed, then we have achieved a longer lasting control. By maintaining your property free of places for rodents to live, it will become unattractive to the rodents and cause them to leave your property. The chemical control of rodents may be performed by a licensed pest control operator or you may elect to control the rodents by your own means. Remember to take the proper precautions when trapping and handling rodents. Be sure to wear the proper protective equipment and to disinfect all affected areas that could have possibly been contaminated by the rodents. The contents of this guide will give you further explanation of rodents and their behaviors and how to safely eliminate them from your property.

What else can you do? You can host a block party in your neighborhood. An effective way to get rid of rodents in your block is to work together with your neighbors. Organize and call the people in your block together. As a group, you can make a commitment to make your neighborhood a place where rodents cannot survive.

Thank you for your cooperation,









*Riverside County Vector Control*

**COUNTY OF RIVERSIDE  
DEPARTMENT OF ENVIRONMENTAL HEALTH  
VECTOR CONTROL PROGRAM**

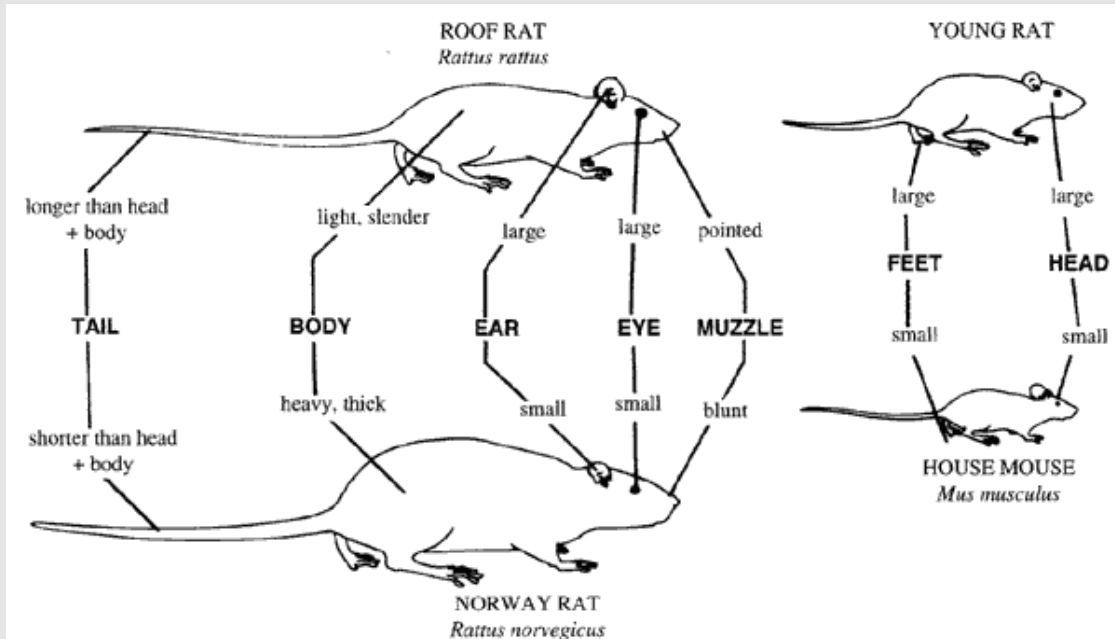
**800 S. SANDERSON, SUITE 200  
HEMET, CA 92545  
(951) 766-9454**

**[WWW.RIVCOEH.ORG](http://WWW.RIVCOEH.ORG)**

# Rodent Characteristics

Type	Description	Droppings
<p><b>Roof Rat (<i>Rattus rattus</i>)</b></p> 	<ul style="list-style-type: none"> <li>• Tail: Longer than head and body combined</li> <li>• Body: Slender</li> <li>• Ear: Large</li> <li>• Eyes: Large</li> <li>• Nose: Pointed</li> </ul>	
<p><b>Norway Rat (<i>Rattus norvegicus</i>)</b></p> 	<ul style="list-style-type: none"> <li>• Tail: Shorter than head and body combined</li> <li>• Body: Heavy, thick</li> <li>• Ear: Small</li> <li>• Eye: Small</li> <li>• Nose: Blunt</li> </ul>	
<p><b>House mouse (<i>Mus musculus</i>)</b></p> 	<ul style="list-style-type: none"> <li>• Feet: Small</li> <li>• Head: Small</li> </ul>	
<p><b>Deer Mouse (<i>Peromyscus maniculatus</i>)</b></p> 	<ul style="list-style-type: none"> <li>• Feet: Small</li> <li>• Head: Small</li> <li>• Color: Grey to brown on top and white underneath</li> <li>• Ears: Large and without fur</li> </ul>	

# Rodent Characteristics



# Reproductive Potential

Rodents have enormous reproductive potential and can bear young as frequently as every four weeks. During their average life span of one year or less, rodents may wean about 20 young each. Breeding peaks for rodents often occur in the spring and fall. Rodents reach sexual maturity two to three months after birth.



Norway rat with her litter

# Disease

Rodents and their fleas are capable of transmitting a variety of human diseases. Bubonic plague is the most serious of these maladies and while there have not been any recent outbreaks of plague in Riverside County, the potential of such an outbreak could increase if rat populations are allowed to rise. Some of the diseases that are known to be found in rodents are:

- **Salmonellosis**: A bacterial food poisoning that may be transmitted when rodents contaminate food by contact with their feces or urine.
- **Leptospirosis**: A bacterial disease that may be contracted through contact of water or ingestion of food that has been contaminated with infected rodents and/or their urine.
- **Hantavirus**: A viral disease that may be contracted through the direct contact with or inhalation of aerosolized infected rodent urine, saliva or droppings.
- **Arenavirus**: A viral disease that may be contracted through the direct contact with or inhalation of aerosolized infected rodent urine, saliva or droppings.

Rodent	Disease			
	Salmonella	Leptospirosis	Hantavirus	Arenavirus
House Mouse	X	X		
Roof Rat	X	X		
Norway Rat	X	X		
Deer Mouse	X		X	
Wood Rat	X			X

X Indicates vector known to carry disease. Rodents are not known to carry rabies.

# Rodent Habitat

Rodent survival and prosperity is dependent upon the existence of three basic conditions: shelter, food and water. By removing these conditions you can prevent rodents from making a home on your property and transmitting diseases.

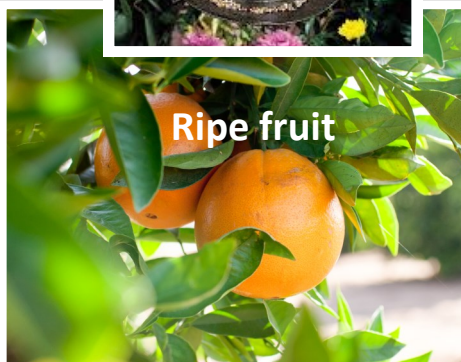
## Common Nesting Sites:

- Italian Cypress
- Algerian Ivy
- Bougainvillea
- Oleander
- Palm trees
- Wood and lumber piles left on the ground
- Storage boxes left on the ground
- Yucca
- Heavy shrubbery
- Overgrown trees/shrubs



## Rodent Food Sources:

- Ripe fruit
- Walnuts
- Bird seed
- Pet food left out over night
- Snails
- Grass seed



# Recognizing Rodent Activity

The homeowner should be alert for these signs of rodent activity:

- Rodent droppings are usually signs of significant rodent activity. The droppings are randomly scattered and will normally be found close to a rodent runway, feeding location, or near shelter. See chart on page 3.
- Damaged, partially eaten oranges, avocados, or other fruits.
- Broken snail shells under bushes, on fences, or near nesting sites.
- Signs of gnawing on plastic, wood, or rubber materials.
- Greasy rub marks caused by the rodent's oily fur coming in repeated contact with painted surfaces or wooden beams.
- Droppings found in forced air heaters, swimming pool heater covers, and water heater closets.
- Visual sightings on utility cables, tops of fences, or in trees. Rodents are nocturnal and it is more common to see rodents at night.



**Rodent Activity: Grease rub marks around the roof beams in an outdoor shed.**

# How Rodents Commonly Enter Homes



Broken screen in housing foundation

- Broken or missing foundation vents and screens.
- Vent screens on new structure where foundations are faced with brick (screens may have space at bottom and sides).
- Holes in foundation vents with poorly fitted lid.
- Outside crawl hole with poorly fitted or no tight covering.
- During construction, space not closed where two different roof planes meet (called a “bird nest” by carpenters).
- Spaces in heavy roof shakes (especially along ridge of roof).
- Attic vent screens broken or left off.
- Space between roof jack and vent pipe from stove fan (also sometimes enters kitchen cabinet along side vent pipe).
- Enters garage under or on sides of large garage door; under side door to garage where threshold is left off and through doors left open.
- Holes in exterior walls of house made by residents.
- Holes from new construction – “add-ons” around areas where new construction meets old.
- Poorly fitting outside doors, leading to garage, patio, etc. As a rule of thumb if you can see light around the door, rodents can enter.
- Brick chimneys which have settled away from houses.
- Tile roof missing end caps.



Gaps under doors can allow rodents to enter structures.



Missing end caps allow for rodent harborage.



# Rodent Control Measures

Good environmental management practices supplemented by the wise use of rodenticides, are the most effective approaches to rodent control. The homeowner can help control rodent populations by doing the following:



Eliminating gaps under doorways will prevent rodents from entering your home.

- Harvest fruit as soon as they ripen. Pick up all fallen fruit off the ground.
- Never leave uneaten pet food outside overnight. Keep pet food in sealed containers if stored in the garage or other outbuilding.



- Keep palm trees and yucca plants well trimmed. Algerian ivy, oleander, bougainvillea, and other thickly matted plants should be trimmed well away from the roof, walls, fences, utility poles, and trees.
- Store wood and lumber piles on racks at least 18 inches above the ground and 12 inches away from walls. Storage boxes should be stacked close together and in an orderly fashion. Clean up debris piles.
- Repair leaky faucets and eliminate any other unnecessary standing water.
- When renovating the yard or planning new landscaping, ground cover unsuitable for rodent harborage should be considered as a substitute for Algerian ivy.
- Tree limbs should be kept well away from the roof and walls of the home.
- Gaps around pipes and electrical conduit should be sealed and cracks around window should be weatherproofed.
- Openings such as these should be screened with 1/4" galvanized hardware cloth and inspected twice a year:
  - Basement windows and vent ports
  - Attic vents and louvers
  - Vent pipes and shafts



# Trapping

Rodent traps may be used in the yard and inside buildings with good results.

## GLUE TRAPS:

Glue trays contain a nondrying, nonpoisonous, glue that will capture and hold rodents in place. These must be used indoors in dust free areas. Place glue trays in areas where rodent activity is noticed.



Glue tray traps are ideal for situations where snap traps or poisons are considered dangerous or undesirable.

## CHEMICAL CONTROL:

Always follow all label directions, precautions and recommendations and keep them away from children and pets. Always wear personal protective equipment such as rubber gloves when applying any rodenticide. When rodenticides and other poisons are used, remember to always follow the label's directions and to consider the impact on non-target animals before placement. Rodenticides should always be secured in a tamper-resistant bait station to prevent children, pets and non-target animals from gaining access to the bait.

Bait stations should be checked on a weekly basis to ensure there is a constant supply of rodenticide for the rodent population. This also prevents the possibility of resistance. Bait stations are available in a wide variety of shapes and sizes or can be constructed by the homeowner.



# Trapping

## WOOD SNAP TRAPS:

Are inexpensive, give positive results, and eliminate the possibility of a poisoned rodent dying in an inaccessible area, creating serious odor problems.

Several traps may be set at once for maximum effectiveness. Baits which are most attractive to rodents are:

- Peanut butter mixed with oatmeal
- Nutmeats
- Bacon
- Pieces of apple

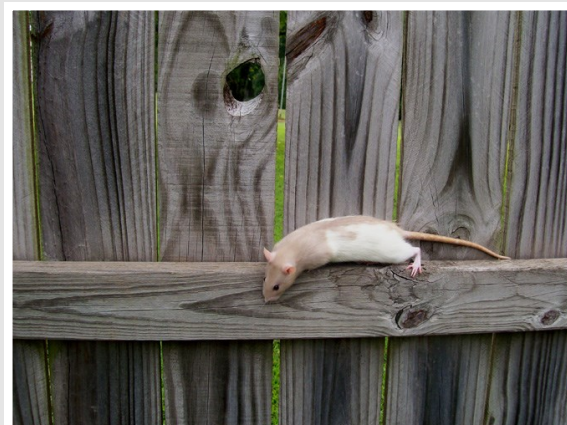
Prior to setting the traps it is always a good idea to pre-bait. Pre-baiting is when you apply food to the trap or around the trap without setting it. This allows the rodents to become familiar with the trap as a food source. After the rodents have become familiar and have been feeding on the food on the trap, you can then set the trap by pulling back the trigger.



**Known rodent runway:  
Evidence of droppings  
along fencing.**

**Caution: always be alert and safe when you are setting a trap. They do have the potential to injure you!**

Traps should be placed along known rat runways such as fence tops and walls, and securely fastened to beams and rafters in garages where rat activity is evident.



# Safe Clean Up Of Rodent Droppings and Urine

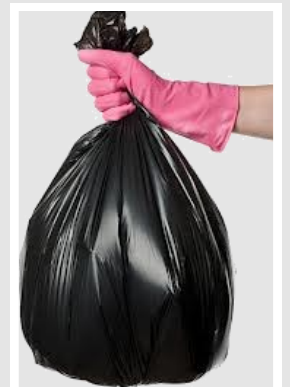
Never sweep or vacuum rodent evidence including feces, urine and nesting material. When these substances are swept or vacuumed they can transmit virus particles into the air where they can easily be inhaled, infecting the person doing the cleaning. Hantavirus and Arenavirus are transmitted in this manner.



**Do not vacuum, blow or sweep rodent contaminated areas!**

## STEPS FOR CLEANING

1. Mix a solution of one-part bleach and nine-parts water in a spray bottle or use a general purpose household disinfectant.
2. Wearing rubber gloves, spray the solution or disinfectant on the droppings, urine and nesting material.
3. After a couple of minutes, use a damp paper towel to wipe up the disinfected droppings, urine and nesting material.
4. Using the same solution or disinfectant, clean the area where the rodent evidence was present.
5. Place the paper towels and waste materials in a plastic bag.
6. Wash gloved hands with soap, warm water and disinfectant solution before removing them. Place them in the plastic bag as well.
7. Seal the bag and place it in an outside garbage can.
8. Wash the now un-gloved hands with soap and warm water.



# Recommendations for Rodent Control

## EXCLUSION (Exterior)

1. Repair foundation, attic, and gable vent screens with 1/4 inch hardware cloth, or replace vent screens.
2. Repair gaps and breaks in exterior walls.
3. Screen off voids where roof liners overlap, with 1/4 inch hardware cloth to prevent rodents from entering attic.
4. Seal gaps around pipes and wiring that enter through exterior walls.
5. Secure or replace outside crawl space door.
6. Install or replace weather stripping under or on sides of the garage or side door.
7. Keep pet doors secured at night and whenever possible during the day.
8. Screen off all openings around perimeter of decks or spas.
9. Keep sheds closed and screen off base of shed.
10. Install spark arrester on chimney.
11. Repair voids where fireplace/chimney has separated from walls.
12. Keep all doors and windows closed at dusk and until dawn.
13. Repair lateral sewer lines to prevent rodents from entering the structure.
14. Install barriers between home and fence lines, patio covers, or sheds that allow rodents to jump, climb, or travel to roof.
15. Seal all holes, gaps and openings in roof.
16. Fill holes in and under foundation walls.



Provide screens on all vent openings to prevent rodent entry



# Recommendations for Rodent Control

## EXCLUSION (Interior)

1. Seal all holes and gaps around pipes located under sinks in kitchen, bathrooms, and utility rooms.
2. Seal all voids/gaps in water heater closet, furnace A/C closet, or any other area where pipes and wiring enter walls, floors, or ceilings.
3. Inspect heater and air conditioning vents and duct work and repair if damaged.
4. Seal all gaps and holes between interior walls, floors and ceiling.
5. Seal off voids/gaps behind cabinets, shelves, bookcases, or any other built-ins that create “dead space” where rodents could rest or travel.

## FOOD

1. Keep all garbage cans, recycle bins and dumpsters secured. Keep bins tightly covered and clean up debris piles.
2. Feed pets appropriate amounts of food that will be completely consumed by your pet at each feeding.
3. Prevent pet food from falling under decks.
4. Store foods in metal containers with tight fitting lids.
5. Harvest all ripe fruit, vegetables, seeds and nuts from plants keeping produce off the ground.
6. Eliminate snail population.
7. Remove bird feeders and bird food. Discontinue wildlife feeding.
8. Use proper composting techniques to eliminate any other unnecessary standing water.



## HARBORAGE AND VEGETATION

1. Cut back all trees, vines and shrubs to be four feet from the roof.
2. Store all firewood or lumber 18 inches above the ground and 12 inches away from any structure.

# Recommendations for Rodent Control

## HARBORAGE AND VEGETATION (CONTINUED)

3. Thin out or remove ivy or any other ground cover away from fences, utility poles, walls, and trees.
4. Remove any old, unused furniture, appliances, containers, abandoned vehicles, or any other items that could harbor rodents.
5. Trim palm trees especially dead palm fronds and/or install rodent barriers to prevent rodents from crawling up tree trunks.

## TRAPPING

1. Place traps in areas frequented by rodents. Follow instructions in this rodent guide and the information provided by the vector control technician or licensed pest control service.

## BAITING

1. Place secured tamper-resistant bait stations outside, or contact this department for bait trap application and monitoring. Use only secured rodenticide bait blocks inside bait stations. Read and always follow label directions and recommendations.

## SAFETY

1. Wear rubber gloves and dust mask or respirator when removing droppings and/or dead rodent(s).
2. Remove rodent droppings and or dead rodent by first spraying with a disinfectant and then wiping up with a wet, disposable paper towel. Place droppings, dead rodent, used paper towels and gloves into a plastic bag, seal it, and place in an outside trash can.
3. Do not vacuum, sweep or blow out areas that could cause contaminants to become airborne.
4. Wear rubber gloves to handle dead rodent or pick up dead rodent with a shovel and place into a plastic trash bag. Seal the bag and place into another plastic bag as well.



If you do not want to undertake rat control measures yourself, a licensed pest control company can provide this service.

**REMEMBER! ALL CONTROL METHODS MUST BE USED TOGETHER IN ORDER TO BE EFFECTIVE.**

**For further information please contact:**

**County of Riverside  
Department of Environmental Health  
Vector Control Program**

**800 S. Sanderson, Suite 200  
Hemet, CA 92545**

**(951) 766-9454**



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