

- Snap or glue traps should be placed only in areas of recognized activity. When using rodenticides, do not expect rodents to go out of their way to locate the bait. Bait stations placed in protected areas under cover adjacent to travel ways or suspected harborage sites are more successful than those located in open areas.
- The number of bait stations placed will depend on the suspected number of rodents in the area. Monitor bait stations regularly. If bait disappears rapidly, place additional stations. Multiple-dose rodenticides must be consumed over a number of days to produce mortality, and the interval between feedings should not exceed 2 days.
- It is important to the success of the control program that stations provide bait continuously during the duration of the program and until no new signs of rodents are observed.

SAFETY PRECAUTIONS

Always use safety precautions when cleaning rodent infested areas and discarding dead rodents and traps. Disinfect trapped rodents and contaminated materials and surfaces by thoroughly wetting them down with any general household disinfectant. Wear rubber gloves. Remove disinfected materials with dampened paper towels or cloth, place in a plastic bag, tightly seal it, place in a second plastic bag, seal it, and dispose of it in the trash. Disinfect the rubber gloves prior to removing them and dispose of in the trash. Wash hands thoroughly with soap and water.

This pest bulletin is distributed by:



COUNTY OF LOS ANGELES
DEPARTMENT OF
Public Health

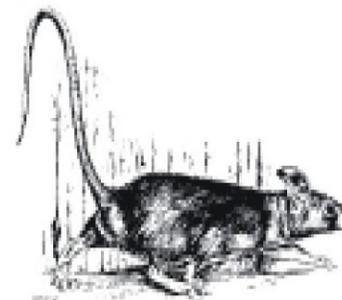
Vector Management Program

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For additional information on rats or arthropod pests call the number above or visit our website at: www.lapublichealth.org/eh

ARE YOU ATTRACTING RATS AND MICE TO YOUR YARD?



SIGNS OF RODENTS

- **Seeing them** - When rats are present, they can be observed in trees, on wires and fences, or running along pathways in vegetation. Mice are more often observed inside a structure than outside.
- **Droppings** - Fecal pellets, shown below, are most often seen around nesting sites, runways, or feeding areas.



House mouse



Roof rat

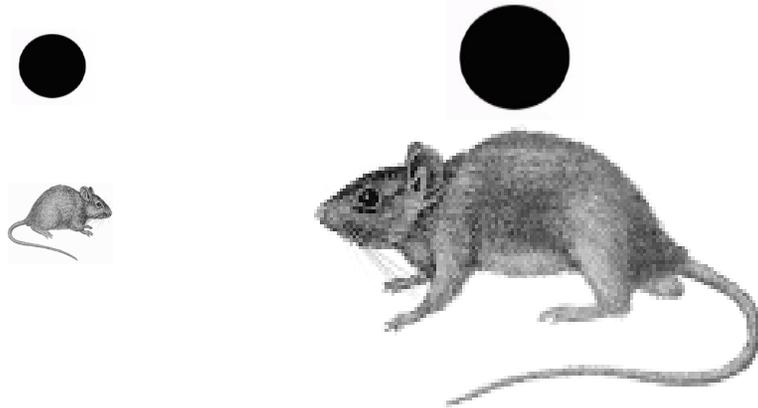


Norway rat

- **Noise** - Rats can be heard running within the walls, ceilings or attics, and also make scraping, gnawing, or squealing sounds.
- **Damage** - Rodents like to chew and gnaw on objects, so look for teeth marks on fruit or branches, and inspect for chewed wood, cloth, plastic, or paper.
- **Smudges** - Black, greasy marks on exposed runways or walls are made when a rat rubs its dirty hair against a surface.
- **Runways** - Rodents repeatedly use the same pathways between their nests and food sources. Rat runways are easier to detect than mouse paths and show up outdoors in ivy and other ground covers as smooth, well packed paths free of vegetation.
- **Tracks** - Watch for foot prints in dust or mud.

FACTS ABOUT RATS AND MICE

- Young mice can enter through openings slightly larger than 1/4" in diameter and juvenile rats can enter openings as small as 1/2" in diameter.



- The house mouse, roof rat, and Norway rat can reproduce year-round when adequate food, water, and harborage are available.
- The average female house mouse can produce up to 8 litters per year with an average litter size of 4 to 7 pups. Rats can reproduce up to 6 times a year with litters averaging from 4 to 8 pups each.
- Each night, rats can travel from 100 to 300 feet from the nest in search of food. House mice can search for food and nesting materials in an area as small as 10 feet from the nest or as far as 50 feet away.
- Roof rats are extremely agile and can swing beneath rafters, jump as far as 4 feet from branches to roof tops, and climb pipes and wires.
- Roof rats usually enter and nest in the upper portions of buildings. They also frequently find harborage in plants such as Algerian ivy, bougainvillea, and the dead fronds of palm trees.
- Rats and mice are nocturnal with most activity taking place between approximately one half hour after sunset to about one half hour before sunrise.

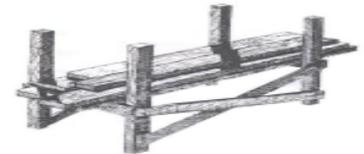
FOOD SOURCES

- Garbage is an excellent food source for rodents. Store garbage and rubbish in rodent-proof containers. Receptacles should be rust resistant, water tight, and have tight fitting lids.
- Rats and mice feed on a variety of fruits including oranges, avocados, peaches, lemon, and figs. They are fond of walnuts, almonds, and peanut butter. All fallen fruit and nuts should be regularly removed and discarded in the trash.
- Rodents also feed on bird seed, snails, garden vegetables and dog droppings. Store pet food in metal containers with tight fitting lids. Feed pets away from vegetation and harborage areas. Do not leave pet food out overnight.



ELIMINATE RODENT HARBORAGE

- Elevate stored items, salvageables, and fire wood a minimum of 18" above cleared ground and store 12" from walls and fences. Dispose of non-usable items. The garage should be cleaned regularly and all items organized and elevated.
- Avoid double fencing. It is difficult to maintain and provides dead spaces where weeds can grow and trash can accumulate, providing excellent rodent harborage.
- Trim and thin ground covers such as ivy and ice plant. Trim shrubbery to allow at least 12" of open area beneath the plants. Remove dead palm fronds.
- Trim tree limbs at least 4' away from roofs, attic vents, eaves, and utility wires.



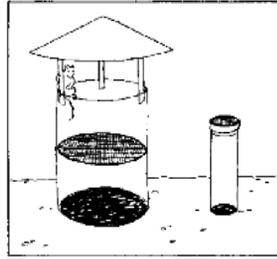


Managing Rodents on Your Property

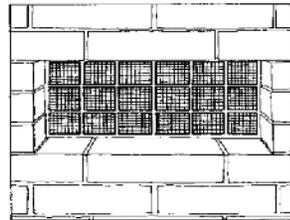
- 1 Remove all dead palm fronds.
- 2 Trim tree limbs and tall plants six feet away from roof, attic vents, eaves, and utility lines. Thin ivy and other thick vegetation, and leave clearance beneath bushes to prevent harborage for rodents.
- 3 Remove ripe and fallen fruits and nuts.
- 4 Avoid double fencing.
- 5 Remove dog droppings daily and feed pets away from vegetation and harborage areas. Do not allow food to set out over night.
- 6 Use 1/4" galvanized hardware cloth for vents and crawl spaces. Frames should fit snugly with no gaps.
- 7 Install door sweeps or heavy weather stripping on all exterior doors. Close all openings greater than 1/4".
- 8 Bait stations can be made out of half gallon or one gallon plastic containers such as bleach bottles and placed in trees for roof rats. Cut two holes in container on opposite sides, about 1 1/2 to 2" in diameter. Secure in place with wire to avoid spillage.
- 9 Remove old vehicles and non-salvageable items from property. Elevate stored items at least 18" off the ground.

BUILDING MAINTENANCE

- It is much easier to control rodents outside of the structure rather than within, so the most successful and permanent form of rodent control is to “build them out”.

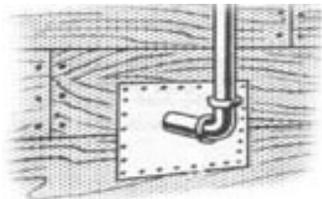


- Use materials that are rodent “gnaw-proof” such as sheet metal, expanded metal, perforated metal, iron grills, hardware screen, and cement mortar. Materials having an opening of 1/4” or less will exclude both rats and mice.



- Seal all exterior openings greater than 1/4” in size to exclude mice and rats. Don’t forget roof vents.

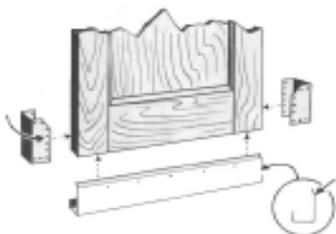
- Use approved 1/4” galvanized hardware screen (16 to 20 gauge) or heavy gauge sheet metal with a rust resistant surface or concrete with 1/4” hardware screens to cover attic, foundation and crawl space vents.



- Eliminate gaps around pipes, cables, and wires by covering with sheet metal or sealing with cement mortar.



- Properly seal roof vents, roof eaves, roof intersections, and where the chimney intersects with the roof with 1/4” hardware screen.



- Install heavy gauge sheet metal at the bottom and sides of doors.

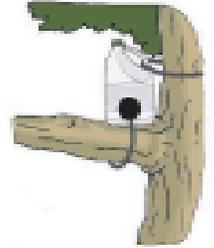
- Attach heavy weather stripping to the base of the garage door.

CONTROL METHODS

- Trapping is an effective means of controlling rodents. Snap and glue traps can be purchased at nurseries and hardware stores and are most effective when placed in rodent runways between harborage and feeding areas. Avoid using glue traps in wet or dusty environments.

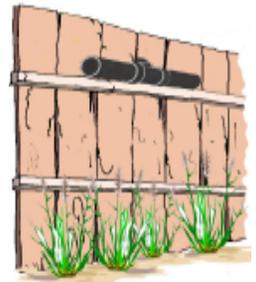


- Snap traps work well on both rats and mice. When trapping for rats it is best to place the traps unset but baited for several days to allow the rats to become accustomed to the traps. Set the trap only after the bait has been taken. Mice will readily investigate snap traps, and little balls of cotton tied to the trigger work well as “bait”.



- If using poison baits, read and follow all label instructions before use. Use tamper resistant bait stations that are properly secured so they can’t be carried away or moved. Place them out of reach of children and non-target animals. Bait stations should not be placed in the open, but hidden behind shrubbery or other objects where evidence of rodent activity has been observed.

- Anticoagulant baits that require several feedings are very effective and can be purchased at nurseries, drug and hardware stores.



- Bait stations can be made out of 1/2 gallon or 1 gallon plastic containers. Cut 2 holes in each container on opposite sides, about 1 1/2’ to 2” in diameter. Place adequate amounts of bait in each container and maintain the bait stations 10 to 14 days and refill as necessary.

- Bait stations can also be made of 2” diameter black ABS pipe, designed specifically for outdoor use. These stations can be easily secured and hidden in landscape plants and can be fastened to walls, fences and tree limbs.

