



## WHERE HAS ALL THE BIRDSEED GONE?

By Nanette Londeree , Marin Master Gardener

Rats. The mere utterance of their name conjures up negative images - sneaky, dirty, skulking, wary and just plain creepy. These beady-eyed, scurrying swarms of four-legged fur can wreak havoc wherever they go. They're not the cute little critter your son or daughter had as a caged pet in the second grade, nor the clever, good-natured chef Remy from the movie "Ratatouille." Neither are they the macabre things of horror movies with glowing red eyes, sharp pointy fangs, ready to pounce for the taste of human flesh. Rats are serious home and garden pests that can do significant harm if not controlled – damaging structures and property, devouring food and spreading disease. And just like us, they thrive here in marvelous Marin.



The pitter-patter of little feet across your roof at dusk or dawn, birdseed that seemingly disappears overnight, tomatoes with chunks missing, or trails of large comma-shaped droppings – all are indicators of rats. And you'll not likely see them, just their damage. They eat nearly any type of food – fruits, nuts, pet and bird food, fresh grain, meat and fish, even slugs and snails. They can gnaw through food and feed containers, electrical wires, doors, walls and insulation. Burrowing types can undermine building foundations and slabs, damage garden crops and ornamental plantings. Rats can also transmit diseases to humans or livestock, most notably bubonic plague, but also leptospirosis, trichinosis, salmonellosis (food poisoning), and ratbite fever.

There are two non-native types that call Marin home - roof rats and Norway rats. The larger Norway rat (*Rattus norvegicus*), also known as brown, sewer or wharf rats, are stocky, with a blunt nose and a tail shorter than their body. Roof rats (*Rattus rattus*), sometimes called black or tree rats, are slightly smaller than Norway rats. With a pointed muzzle, the roof rat has a tail that is longer than its head and body combined. Native wood rats (genus *Neotoma*) are generally not pests. They are about the size of the Norway rat, have a hairy tail and large ears. They build nests above ground from sticks, twigs, plant materials and man-made debris, hence their common name of pack rats.

Roof rats are very agile climbers and usually live and nest above ground in shrubs, trees (they particularly like palms), and dense vegetation such as ivy, honeysuckle and blackberries. With their excellent sense of balance, they run along overhead utility lines or fence tops at night, traveling up to 300 feet for food.. Inside, they can be found in attics, walls, false ceilings, and cabinets. Moving in an area up to 150 feet in diameter, Norway rats burrow along building foundations, beneath rubbish or woodpiles, and moist areas in and around gardens and fields. . Indoors, they usually frequent the ground floor or the basement. Mostly nocturnal, their poor eyesight is offset with keen senses of hearing, smell, taste, and touch. They constantly explore and learn about their environment, memorizing pathways, obstacles and locations of food and water.

Successful rat management involves sanitation, exclusion, and when necessary, elimination. The most effective means for controlling rat populations is through prevention. Start with home and garden sanitation – harvest or pick up fruit, nuts and vegetables as they ripen; feed your pets during daylight and remove uneaten food right away. Keep garbage and recycling cans covered, and store bulk foods, birdseed and dry pet food in rat-proof, covered metal containers.

Next, get rid of rat habitat. Remove excess garden debris, trim trees, shrubs and vines so they are at least four feet away from roofs and utility poles; thin heavy vegetation from around buildings or fences, eliminating hiding places. Stack wood and household items at least 18 inches above the ground and 12 inches from fences and walls. Rodent-proof your home and storage buildings by sealing any opening one-half-inch (about the size of a dime) or larger using rodent-proof materials (metal, hardware cloth, mortar, concrete, or copper mesh wool) where pipes, cables and wires enter walls and foundations. Weatherstrip front, side and garage doors so they close tightly and repair damaged ventilation screens.

If you need to eliminate existing populations of rats, trapping is environmentally safe and effective. Large snap traps are inexpensive and can be used repeatedly. Location is crucial to their effectiveness; place them in natural travel ways so the rodents will have to pass over them. Put the short side of the trap containing the trigger against the wall or runway. Setting multiple traps 10 to 20 feet apart will improve the chances of catching one. Bait the trap with nuts, dried fruit, pet food or bacon, and secure it to the trigger with light string, fine wire or even glue. Leaving traps unset with unsecured bait until the bait has been taken at least once can improve trapping success.

There are many readily available poison bait products that kill rats or any other animal that may consume it directly (like a dog or cat). It can also inadvertently injure or kill animals that may eat a poisoned rat and symptoms of poisoning may take hours to days to see. University of California Cooperative Extension Horticulture Advisor Steven Swain emphasizes that “baits cause a lot of collateral damage.” When used indoors, the animal may die within wall or attic spaces resulting in significant odor problems.

Barn owls can devour a third of their body weight a night, and a family of five can consume 3000 rodents in a breeding season. You can encourage natural rodent control by providing habitats for these owls by erecting nest boxes. The Marin-based Hungry Owl Project (HOP), operating under the non-profit WildCare, promotes the use of barn owls and other predators in natural pest control, reducing the need for dangerous poisons and pesticides. “Owls are just part of a 4th and last step approach to successful rodent control” says Alex Godbe, HOPs Executive Director. “Excluding rodents, preventing rodents and trapping are first needed, and only if all these measures are taken along with the owls, will it be a true long term and safe solution.”

Place a dead rat in a plastic bag, seal it, and dispose in your garbage can. As potential vectors of disease, do not touch a trapped rat with bare hands and wash thoroughly after handling traps.

*Photo courtesy UC IPM website.*