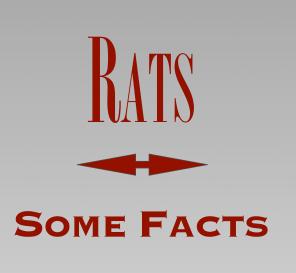
- ✓ Remove any source of food. When food is available, rats will make themselves at home. Fruits and vegetables left to rot in the garden can also be a source of food for rats.
- ✓ Remove hiding places. The Norway rat likes to dig beneath objects to build its nest. Removing piles of trash or cutting grass and brush removes cover for rats and discourages their activity.
- √ Eliminate rats with traps and poisons.
 - When done properly, trapping can be a good way to control rats. Successful trapping depends on knowing the habits of rats. Remember, rats tend to use the same runway. Traps placed in the runway are most likely to work. Trapping may be more successful if the trap is left unset for several days since rats are shy of new objects, but not human odor. If baited. remember that rats prefer fresh food. Peanut butter, apples or cheese make good rat baits. If there are only a few rats, trapping may be the quickest and safest way to remove them. The more traps used the better. Be careful where traps are placed to make sure children or pets will not get into them.
- Rats can be poisoned using one of the products sold in stores. Two types of poisons, or rodenticides, are available: those that require several feedings or those that work after a single feeding. Most of those poisons work by preventing blood from clotting (anticoagulants). Generally, the single-feeding poison will give quicker results. The rat is more likely to feed on the poison if other food items are first removed. Rat poisons must be placed where children, pets or other animals cannot reach them. If this cannot be done, rat poison must be placed into a specially designed 'tamperresistant' bait box. When using rodenticides, be sure to read and carefully follow the label directions.
- ✓ When large numbers of rats are present in a neighborhood, a community effort is needed to control the rat problem.



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North Carolina Mosquito & Vector Control Association



RATS ARE UNWANTED
GUESTS IN OUR HOMES.
RATS EAT OUR FOOD
AND CONTAMINATE IT
WITH HAIR, FECES AND
URINE. THEY DAMAGE

OUR PROPERTY BY BURROWING AND GNAWING. RATS MAY SPREAD DISEASE AND THEY WILL BITE. TO CONTROL THEM, IT'S IMPORTANT TO KNOW SOME FACTS ABOUT RATS.

RAT BIOLOGY

Rats have excellent senses of smell, hearing, taste and touch. They see well at night, but are color blind. Rats can climb, swim, jump and dig. A rat can fit through an opening that is just one half inch wide. Rats need to chew in order to keep their teeth from growing too long and can chew through many types of building materials.

Rats build nests from soft materials such as paper, cloth and straw. They live in family groups and defend their area from other rats. The average rat lives about one year. During this time, a female rat may have seven litters, each with 6-12 young.

Rats are most active at night and will travel about 100 feet from their nest in search of food and water. Rats

like to live as close as possible to their food source. They will eat almost any type of food, but prefer it to be fresh. Rats may become accustomed to eating one type of food and choose it over others. They will stop eating any food that has made them ill.

Each time the rat leaves the nest, it travels the same path, called a runway. Outdoors, the runway may look like a trail in the grass or dirt. Indoors, the runway may show 'rub marks' where oil and dirt from the fur has been left on the walls and floors. Rats like to have body contact with solid objects, so they travel close to walls or other upright surfaces. Noises, droppings, rub marks, tracks, gnaw mark, fur and burrows may all be signs of rat activity. Rats are very shy of new objects placed into their environment, making them difficult to trap or poison. Rats commonly live near people and are not scared by the odor of humans.

The rat most commonly found around homes in North Carolina is the Norway rat (*Rattus norvegicus*). An adult Norway rat has brown fur and is about seven to ten inches long (not including the tail). It has a blunt nose, small ears, small eyes, and a hairless tail that is shorter than the length of the body. Norway rats are good diggers and build their nests in holes made around the foundations of buildings, in

stream banks, and under piles of wood and trash.

Much less common is the roof rat (*Rattus rattus*). The adult roof rat has gray or black fur and is about six to eight inches long. It has a pointed nose, large eyes, large ears, and a hairless tail that is longer than the length of the body. Roof rats are very good climbers, building their nests above the ground in attics, tress and wall spaces.

Other types of rats live in fields and woods and are usually not a problem around homes.

RATS AND DISEASE

Rats can transmit diseases to humans. These include leptospirosis, salmonella, trichinosis and rate-bite fever. The fleas on rats may carry murine typhus or plague. Despite common belief, rats are not known to carry rabies.

RAT CONTROL

Rat control around the home takes four steps:

✓ Prevent rats from entering the home. Sheet metal and hardware cloth are very effective for 'rat proofing'. Remember a rat can get through holes that are only about one inch wide.