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## The Groundhog, Our Underground Architect

By Erika K. Yery, Licensed Wildlife Rehabilitator

The groundhog is known by several names. The most common one is the woodchuck (*Marmota monax*). Two long, chisel shaped, ever growing incisors indicate that the groundhog belongs to the rodent family. Groundhogs have muscular bodies and sturdy claws to assist them in digging, which they accomplish extremely well. Groundhogs also have very keen senses of sight, smell and hearing. Sensory organs are located near the top of the head, enabling the animal to check for danger by sticking its head out of the burrow.

Groundhogs spend most of their time in their underground burrows, which have one main entrance that can be identified by a large mountain of excavated soil immediately outside the entrance hole. The burrow also has one to four auxiliary entrances. All groundhog burrows are basically laid out in the same way. When digging a burrow, the groundhog starts digging inward for several feet, then inclines the tunnel upward for a few feet. After that, digging will proceed horizontally for 15-25 feet. This architectural design will prevent the tunnel from flooding.

From the main tunnel, two to three side tunnels are dug, leading to separate areas. One of these areas is used exclusively as a

latrine. The groundhog is a very clean animal and will deposit all its waste in this latrine area. After the latrine is full, the area is sealed off and another latrine area is dug. At times, the groundhog will remove the dried excrement and bury it outside the burrow. The other areas are used as actual dens, used for raising the kits, sleeping and hibernating.

Adult groundhogs may weigh as much as 14 pounds, but usually weigh between 11 and 12 pounds. The weight attained by a groundhog at the time it starts hibernation is critical to ensure survival through spring. The minimum weight before hibernation for juvenile males is about seven pounds; for juvenile females six pounds. Animals weighing less cannot be released until the following year or they will not survive. Groundhogs live 4-5 years in the wild, but can live ten



or more years in captivity.

Groundhogs are herbivorous and love almost all vegetable matter. Clover and alfalfa are probably their favorite foods. Dandelion greens, weeds, grasses, herbs and fruits, and vegetables of all kinds are also enjoyed. Groundhogs live in open woodlands, thickets, open fields,

meadows and pastures, and are often seen along highways and in old cemeteries. They usually change habitats according to the season. In spring and summer, they prefer open fields, suburban backyards, and areas near vegetable gardens. In fall and winter, they prefer wooded areas. Groundhogs rarely move more than ½ mile from their burrow.

As usual, man is the groundhog's greatest enemy. Most injured groundhogs received by rehabilitators have been injured by dogs, which are their greatest threat. At times, a fox or bobcat may take a groundhog and juveniles are sometimes snatched by a large hawk or owl.

## A Year in the Life of a Groundhog

According to popular folklore a groundhog can predict winter's end by emerging from hibernation on February 2 and going back to sleep for six weeks if it sees its shadow. In reality it is too early for spring in this part of the country (Virginia, Maryland and Pennsylvania) where the publicity about Groundhog Day started. The majority of males come out of their burrows in mid- to late February; females appear from late February to mid-March.

Mating takes place in late February through March. The period from mid-March through April is a time of ravenous appetite and activity, as groundhogs hurry to mate and raise a litter by June. The young must have enough time to prepare for hibernation. Babies born after the end of April have little chance to survive the winter. That is why the breeding season is so short. Thirty to thirty-two days after conception, three to six groundhog kits are born. The one-ounce babies are blind,

naked, and completely helpless. They are four inches long and have very short, fine whiskers. Within a week, the infants double their birth weight and show soft hair. When they are about twenty-eight days old, their eyes open. At about six weeks of age, the kits are about ten inches long and weigh around eight ounces. They become very active and start to follow their mother. The groundhog mother first emerges from the burrow to check the area carefully for enemies. If enemies are around, or the mother is startled, she will emit a shrill whistle of alarm. If the coast is clear, she will soon emerge from the burrow with her brood. The first outing is a great adventure for groundhog kits, because until that time their entire life was spent in total darkness in their burrow underground. While in the burrow, the kits nurse from their mother, but once they have emerged from the den the mother forces them to start eating grasses and other available vegetable matter. They usually refuse so it can take considerable time to get the babies weaned. Groundhog mothers are excellent teachers, making certain the kits learn the danger of enemies. She whistles to indicate danger and the brood disappears into the burrow.

In early June, the groundhog's metabolism slows; food intake also decreases, but their weight increases by 100 percent. July is a hyperactive period of greatest weight gain; metabolism slows and food is converted to body fat in preparation for hibernation. Most of the groundhogs' energy goes to producing the fat deposits on which they will live during hibernation and after emerging from their burrows in late winter when fresh grass and vegetables are not available. In September, ten days to two weeks before

going underground for hibernation, the groundhog stops eating and slowly enters hibernation. By mid October, they will be asleep in their burrows and will hibernate through January or early February, when the next cycle begins.

Groundhogs truly hibernate. Bears are "pseudo-hibernators," as their winter body temperature remains at near normal levels, while the groundhog's falls to 40 degrees. They would freeze if their burrows were not below the frost line. Normal temperature of a groundhog is 100 degrees, but will gradually drop as low as 37 degrees. In this coma-like state, the groundhog is more dead than alive and will not wake if touched.

My first experience with the underground architect came one day when a neighbor started complaining about some animal digging in her yard. We watched and observed, but never saw the culprit although a large mound of earth appeared next to the opening. One day I got a call that a beaver was in the neighbor's yard and I should come and get it. After a mad dash across the street I did not see a beaver but a roly-poly groundhog sitting on its haunches and munching on a peach held in its front paws. After a while the "beaver" ran off into the opening next to the large mound of earth. Groundhogs, especially kits, are often mistaken for beavers, so I always am very dubious when I get beaver calls in areas without a source of water. It took some doing to persuade my neighbor to let the unwelcome intruder stay, but after a while the groundhog was an admired part of the community until he disappeared in early fall, just before the hibernation period. Quite a few calls are received from homeowners who want to get rid of groundhogs that have

burrowed under houses, porches, or outbuildings. Sometimes a beach ball left to move across the lawn or a pinwheel or scarecrow sitting next to the burrow may intimidate the groundhog and make it leave an area.

Other calls received are from people with horses, worried the horses may step in a groundhog burrow and break a leg. After talking with several people who raise horses, I was told that horses are too smart to step into a groundhog hole. Mostly people complain that groundhogs are harvesting their fruits and vegetables. Since groundhogs are good climbers, fences are effective only if the area to be protected is small. The fence should be buried about one foot underground to prevent tunneling under it and 3-4 feet above ground and protected by a single strand of electrified wire placed immediately in front of it at a height of 4-5 inches. (*Pocket Guide to the Humane Control of Wildlife in Cities*, The Humane Society of the United States)

Occasionally a groundhog will climb a tree to sun itself or to escape a predator, and it is quite funny to observe the groundhog climbing a tree and stretching out on a large branch to enjoy the safety and sun. However, most groundhogs are observed along highways, in grassy areas, meadows, and median strips, eating and always on alert. As more and more habitat is destroyed, these sightings become more unusual. Enjoy nature's architect while he is still around, enhancing our landscape.

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