



## 6. Woodchuck

Known by many names including groundhog, whistle pig, red monk and chuck, the woodchuck is a common Pennsylvania game animal. Its taxonomic name is *Marmota monax*. Woodchucks are rodents and members of the squirrel family (Sciuridae). They are closely related to tree and ground squirrels, chipmunks, prairie dogs and marmots. These fossorial rodents dig burrows that aerate the soil and provide excellent escape hatches for many other animals but can be dangerous to livestock and farm machinery. So the woodchuck is often thought of as a “valuable nuisance”—a contradiction in terms that illustrates well this inhabitant of field and fencerow.

### Biology

The woodchuck is a mammal about 20 to 26 inches long, including a bristly, 6-inch tail. Weights of adults range from 5 to 10 pounds, with extremely large animals as heavy as 12 to 15 pounds. The weight of an individual fluctuates in a cyclic fashion throughout the year, with the animal at its heaviest by summer’s end.

Woodchucks have yellowish-brown to blackish-brown fur. Belly fur is sparse and usually paler than the fur on the back. The pelt is coarse and has little or no commercial value. Light-colored hairs in the coat give some individuals a grizzled appearance. Albinism and melanism occur infrequently. A woodchuck’s feet are dark brown or black, and its front incisor teeth are white. These two front teeth are broad and chisel-shaped like those of rabbits and squirrels and are used primarily to nip off vegetation.

Woodchucks are found throughout Pennsylvania in open fields, meadows, pastures, fencerows and woodland edges and even deep in the woods. Adults rarely move more than a half mile within their home ranges, preferring to stick close to the safety of the burrow.

Woodchucks do not generally have to move far to find food, as they eat a wide variety of vegetation—including green grasses, weed shoots, clover, alfalfa, corn in the milk stage, dandelion greens, garden vegetables such as beans, peas and carrots and, in the fall, apples and pears. These habits often get them in trouble with farmers and gardeners.



In the summer, woodchucks feed most actively during early morning and late evening. When feeding, a woodchuck usually raises its head every ten seconds or so to check for danger. A woodchuck has keen senses of sight, hearing and smell. It’s eyes, ears and nose are located the top of the head, enabling a groundhog to check its surroundings simply by sticking its crown out of the burrow.

A muscular body, short powerful legs and sturdy claws make the woodchuck an excellent digger. It uses its strong forefeet to loosen the soil, then its hind feet to kick the earth behind them. It spends much of its time underground. It piles excavated dirt at its burrow’s main entrance and often sits on this mound to view its surroundings. The burrow descends at a sharp angle below the entry hole and then levels off into a narrower tunnel. Woodchucks often dig many side tunnels and two or three back entrances. These “drop holes” are inconspicuous (they aren’t marked with dirt mounds). Woodchucks use them as lookouts or to get underground in a hurry when danger threatens. Burrows are usually located in well-drained, sloping areas and rarely get flooded.

Even though a woodchuck has short legs, it can run fairly fast for a short distance. An adult is a fierce fighter; dogs, coyotes and foxes are its main enemies, although the young are preyed upon by owls and hawks. Woodchucks climb well, ascending and descending trees head first. They have good balance and frequently walk along wooden fence rails. They use their front paws much as people use their hands, to clutch stems of clover or hold apples while feeding.

Woodchucks can produce several sounds. They often let out a sharp whistle for an alarm call. When feeding, they may make a “chuck-chuck” sound, and when angry or cornered may chatter their teeth.

Woodchucks hibernate during winter. They eat heavily throughout summer and early fall to accumulate body fat and prepare to shelter in their burrows all winter. Woodchucks begin denning up with the hard frosts of October. Few remain active past the first of November. A hibernating animal goes into a deep sleep, or a dormant state: its body temperature, heartbeat and other metabolic processes fall off drastically as the animal lives over winter on its body fat. A woodchuck’s body temperature drops from more than 90 degrees Fahrenheit into the low 40s; its heartbeat slows from more than 100 beats a minute to only four.

In the spring, males emerge from hibernation before females, and during February and March fight aggressively. Fat left over from hibernation sustains woodchucks during mating season

(late February-March), when succulent green foods are scarce. After a 28-day gestation period, females bear young in April and early May. Litters average three to four young. Newborns are blind, naked and helpless and remain in the underground nest until about a month old. By mid-June or early July, they are ready to leave the home burrows and establish their own territories. This move is a perilous one for young woodchucks, and many are killed by vehicles or predators. The young often take up residence in abandoned dens. As fall approaches, they feed more actively than the heavier adults to accumulate enough fat to last them through the coming winter.

The potential lifespan of a woodchuck is estimated at eight or nine years. In a study conducted at the Penrose Research Laboratory, Philadelphia Zoo, observers found that captive woodchucks died of many causes, including cancer of the liver, ruptured aortas, and heart attacks and cerebral strokes resulting from hardening of the arteries. It is doubtful whether many individuals in the wild live to be 8 years old. The older an adult gets the more easily it falls prey to predators.

A few groundhogs are affected by malocclusion, which occurs when the front incisors fail to meet and, therefore, cannot continually grind each other down. A rodent’s teeth never stop growing. So, this misalignment may result in an incisor growing in a complete circle, sometimes even penetrating the skull cavity and killing the animal.



## Population

The woodchuck is native to Pennsylvania and has benefited from civilization. When Pennsylvania was almost completely forested, and there were no farms, pastures or orchards, there were far fewer woodchucks than there are today, simply because there was little suitable habitat. Probably the only places where groundhogs became abundant were on formerly-forested tracts that had been swept clear by fires and were growing up again in brush.

But as these naturally-cleared areas matured, woodchuck numbers would have dwindled; population size depends on habitat, and while woodchucks can exist in wooded territory, they do not build up sizable populations there. By cutting forests, raising crops and clearing pasture land, settlers created suitable habitat. The woodchuck population expanded and today is one of Pennsylvania's most common mammals.

Woodchuck numbers vary depending on food availability, soil type, hunting pressure and predation. Sometimes populations are extremely dense, with up to six or seven individuals per acre. However, this high density is seldom reached. A population of four per acre is considered abundant, and the average is probably closer to one per acre of farmland.

In some regions, woodchucks are under heavy hunting pressure but still produce high populations year after year. This illustrates how a game species can absorb heavy local losses if it has enough good habitat. Groundhogs can damage crops and gardens and become real pests in agricultural areas where they are overabundant.

As a species, the woodchuck has a large range, extending north and northeast from Oklahoma and Alabama, and west across Canada into Alaska. The yellow-belly marmot, closely related to the woodchuck, inhabits the high country of the Rocky Mountain states.

## Habitat

Woodchucks live in many types of terrain, from farmland and old, overgrown cemeteries to orchards and suburban areas. Ideal habitat might be a thick, almost impenetrable fencerow bordering cultivated cropland. Orchards, especially if the spaces between trees are not mowed frequently, provide good habitat; woodchucks dig burrows under dead stumps or at the bases of the trees, where the roots protect den entrances. In stony areas, dens are often dug under large rocks.

A woodchuck may dig its burrow in the center of a field or pasture. But usually, the animal chooses a more protected location such as a field edge, fence, hedgerow or under a stone wall. Woodchucks do not require ground water sources and many live far from streams, lakes, creeks, and other bodies of water. Like rabbits, they get moisture from succulent plants, dew and water left standing after rainfalls.

The tunnels woodchucks dig provide habitat for skunks, raccoons and foxes, which remodel vacant burrows and use them to bear and raise young. Foxes may claim a burrow after killing its woodchuck owner. Rabbits often seek shelter in the dens especially during winter while the woodchucks are hibernating below. Animals pursued by predators or hunters also use the burrows as escape hatches.