



Cottontail Rabbit

The cottontail rabbit is one of Pennsylvania's most popular small game animals. It is one of the wild animals most often seen in towns and suburban areas. Because of its popularity and conspicuousness, the rabbit arouses interest both in those who hunt and those who simply enjoy wildlife.

Biology

The cottontail rabbit is a long-eared, small- to medium-sized mammal of the family Leporidae. It hops when running, because its hind legs are longer than its front legs. A rabbit's soft fur is brownish above and white below. It has a distinct 2-inch-diameter white tail. Some individuals have a small white blaze on the forehead. Cottontails are 15 to 18 inches long and weigh two to three pounds, with females slightly heavier than males.

Preferred habitat includes swamps, thickets, briar patches, weedy fields, brush piles, overgrown fencerows and brushy gullies. Feeding areas are rarely far from good cover. Rabbits seldom dig dens, preferring to occupy abandoned woodchuck burrows. A rabbit's home range may be a quarter-acre to 20 acres, depending on the availability of food and cover. An individual seldom leaves its home territory, where it knows food sources, cover and escape routes thoroughly.

Summer foods include leaves, herbs, legumes, fallen fruit, garden vegetables, low broad-leafed weeds, clover and grass. During the summer, some captive wild rabbits have eaten a daily amount of grass that is equivalent to 42 percent of their weight. In winter, cottontails eat blackberry and raspberry canes, bark, buds, tender twigs of bushy plants and poison ivy vines.

A rabbit has sharp hearing and a keen sense of smell. Its eyes are set well back on the sides of its head, providing a wide field of vision. Rabbits are basically nocturnal, feeding in the evening, at night, and in the early morning. Individuals shelter in thick brush or abandoned woodchuck burrows during the day. They lead solitary lives on their home ranges. Rabbits rely on a burst of speed and a zigzagging running pattern to evade predators, but they cannot run for long distances. They can swim if necessary.



Cottontail litters are usually born from March through September, with about half the total litters being born in May and June. Litter size ranges from two to nine young, with an average of five. The gestation period is about 28 days. Each mature female bears an average of four litters per year. Juvenile females born in early spring are sexually mature—and often breed—by late summer of the same year.

A cup-shaped depression about 5 inches across and 4 to 6 inches deep serves as a nest. It is lined with dried grasses and fur, which the female plucks from her chest and belly. Young are born blind, naked and helpless, but they develop rapidly and are weaned, fully furred and on their own by 16 days old. The male takes no part in raising the young. Predators, spring floods, heavy rains and farming operations are major causes of nest mortality.

Few cottontails live to be more than a year old in the wild, although their potential life span is 3 to 4 years. Rabbits are a major food source for many other types of wildlife. Like other heavily-preyed-upon species, rabbits have an extremely high reproductive rate, which maintains adequate populations.

In addition to the eastern cottontail (*Sylvilagus floridanus*), Pennsylvania is also home to the Appalachian cottontail (*S. obscurus*). Also known as woods rabbit, blue bellies, and timber hares, the Appalachian cottontail is found in the higher elevations of Pennsylvania and the Appalachian mountains. Appalachian cottontails are slightly smaller than their relatives, and reliably have a black blaze on their forehead. However research has shown that some Pennsylvanian eastern cottontails will also have black blazes. Though not much is known about this cottontail's distribution across the state, it is thought that the movement of cottontails by people and habitat fragmentation has negatively impacted the population statewide.

Population

The rabbit population in 2019 is not as large as it was in the past. The primary reason for this decline is loss of good habitat. Today's modern equipment lets farmers clean up and cultivate fencerows, swamps and brushy slopes that once held many rabbits. Expanding cities and towns, new roads and dams also reduce habitat or impact its quality.

Around the turn of the century, many forest areas were logged off. As these areas grew into brush, new rabbit habitat was formed, accounting for the tremendous cottontail populations earlier in this century. Later, low brush vegetation, which supported the large rabbit populations, began to die as it was shaded out by growing trees. This loss of low vegetation is a result of normal forest succession.

From year to year, rabbit populations fluctuate in a given area. Changes seem to follow a smooth curve, indicating gradual population increases and decreases. Hunters usually harvest less than 30 percent of the available rabbits. Studies show that even if hunters take as many as 40 percent of the rabbits available in autumn, the next year's rabbit population will not be adversely affected because of the species' tremendous reproductive potential. Young rabbits usually comprise about 80 percent of the population, but few live to see their second winter.

In summer, when litters are being born and food is plentiful, four rabbits may inhabit a single acre. Then an apparent change takes place in early fall. The summer's surplus of young rabbits has been thinned by disease, predation, accidents and parasites. During the fall, one rabbit per acre is considered a good density. The population is at its ebb in late winter after hunters, predators and winter weather have taken many rabbits.

Habitat

Habitat—also called environment, living conditions or food and cover—has more impact on the rabbit population than any other factor. Good rabbit habitat provides abundant food and

protective cover. Heavily cultivated land produces ample food, but often not enough protective cover.

Rocky field corners, gullies, poorly-drained woodland, outcrops and other areas not being farmed can be managed to promote robust rabbit populations. These areas may be planted with pines or shrubs. Cutting along woodland edges stimulates the growth of low vegetation that will provide food and cover for several years.

Individuals interested in creating more summer food for rabbits can plant seed mixes with forbs, wildflowers, clovers, and grasses. These plantings benefit from annual maintenance whether it's the removal of non-target species, soil amendments, or mechanical management and should be located near good cover.

Rabbits like to take shelter in brushpiles. Brushpiles are best made by placing smaller brush over several firm, large logs, which provide support. The larger logs also keep the brush off the ground, preventing its rapid deterioration.

Coniferous cover that is dense at ground level provides good cover for cottontails, however, plantings require maintenance to remain good cover areas.

Most of Pennsylvania's small game is produced on private land. The key to a larger rabbit population is habitat improvement by private landowners.

