



Appalachian Cottontail Rabbit

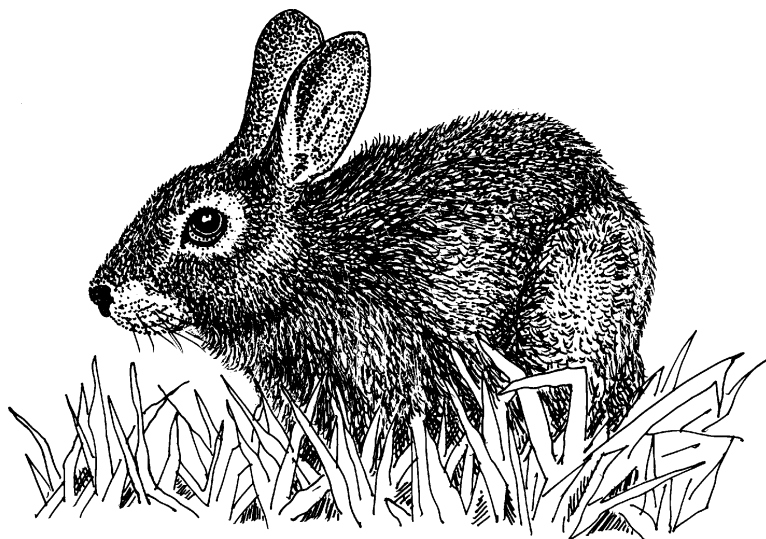
Sylvilagus obscurus

The Appalachian cottontail rabbit was first described as a distinct species in 1992. No, this is not a mysterious species of rabbit discovered in some remote location! It has been ranging across the mountains in western North Carolina for thousands of years. However, it required scientists with their electron microscopes, precise measuring instruments and powerful statistical tests to identify this “new” species of rabbit.

The problem in recognizing the Appalachian cottontail as a distinct species stems from its similarity in appearance to the New England cottontail, which ranges through the New England states. Until 1992 both species were lumped together and called New England cottontails. However, after studying chromosome numbers, taking measurements from hundreds of specimens, and discovering no evidence of hybrids, scientists decided that the two were indeed separate species.

History and Status

Populations of Appalachian cottontails peaked early this century. At that time many of our mountain forests had been recently harvested, providing optimum food and cover conditions for rabbits over vast expanses, and the rural farm population of the western part of the state was at its peak. Rural residents cleared their land and controlled predators, activities that favored a high rabbit population. The farm family benefited because rabbits were an important food as well as a



trade item during that period. In recent years forests have matured, many mountain farms have been abandoned and the habits of North Carolina hunters have changed. Consequently the importance of the Appalachian cottontail as a game species has declined.

Little is known about the movement of rabbits between populations. Since the Appalachian cottontail is restricted to higher elevations, individual populations apparently persist as if they lived on islands, separated from nearby populations by lower-elevation valleys inhabited by eastern cottontail rabbits. These isolated populations are potentially vulnerable to habitat alterations and development that may make a mountaintop unsuitable to the rabbits.

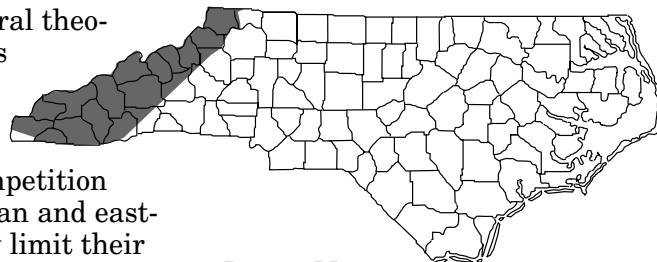
We also don't understand the mechanism that restricts the population to high elevations. Why do Appalachian cottontails fail to colonize lower-elevation areas? Among several theories are suggestions that they may not be able to cope with warmer temperatures; that competition between Appalachian and eastern cottontails may limit their populations; or that the species is unable to tolerate some disease

or parasitic organism that inhabits lower-elevation areas.

Description

The Appalachian cottontail is a medium-sized brown rabbit. It is smaller than the common domestic rabbit, averaging 2½ pounds in weight. The species cannot be conclusively distinguished externally from the eastern cottontail. However, slight color differences, consisting of a grizzled appearance of the fur in the cheek region and the presence of a black spot between the ears of the Appalachian cottontail, provide clues to distinguishing the two species.

A more reliable method of distinguishing between Appalachian cottontails and eastern cottontails is to compare the skulls of the two species. A number of skull characteristics can be used to distinguish the species. The most obvious identification can be made by carefully examining



Range Map:
Occupied range ■

**WILD
Facts**

the skull from above. The suture line where the nasal, or nose, bones attach to the skull forms an irregular or jagged line in the Appalachian cottontail, while in the eastern cottontail the line formed by the joint is smooth and regular.

Habitat and Habits

The species inhabits brushy habitat and woodlands in the high mountains. The rabbits are sometimes especially abundant in five- to 10-year-old clear-cuts, laurel and rhododendron thickets, and around the brushy edges of mountain balds and pastureland.

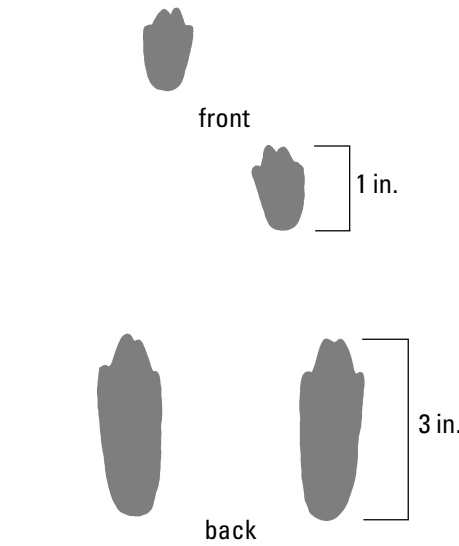
Appalachian cottontails breed throughout the spring and summer and are capable of producing several litters of young during one season. The average litter size is about 3.5 but ranges from two to 8. Young are placed in shallow nests made from leaves or grasses and lined with fur from the mother. The young are blind and naked when born, but they develop quickly. They open their eyes at six or seven days and leave the nest in 12 to 14 days.

Range and Distribution

In North Carolina the Appalachian cottontail is restricted in distribution to high-elevation forests in western counties. Most cottontails encountered above 2,500 feet will be Appalachian cottontails. The species ranges from central Pennsylvania to the southern extent of the Appalachian mountains in northern Alabama.

People Interactions

Steep topography, limited access and cold winter temperatures found in high elevations of western North Carolina protect many Appalachian cottontail populations from intense hunting pressure. Appalachian cottontails are hunted and box trapped by Mountain residents,



but the more accessible eastern cottontail populations in mountain valleys receive more hunting pressure. Visitors to high elevations may see the Appalachian cottontail along grassy roadsides and the edges of woodland openings.

References

Sharpe, T. L. *North Carolina Rabbits: Natural History and Management* (Raleigh: N.C. Wildlife Resources Commission, 1994).
 Chapman, J. A., K. L. Cramer, N. J. Dippenaar and T. J. Robinson. "Systematics and Biogeography of the New England Cottontail, with the Description of a New Species from the Appalachian Mountains," *Proceedings of the Biological Society*, vol. 105, no. 4 (1992), pp. 841-866.

Credits

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APPALACHIAN COTTONTAIL RABBIT

Classification

Class: Mammalia
 Order: Lagomorpha
 Family: Leporidae

Average Size

Weight: about 2½ lbs.

Food

Low-growing succulent vegetation, as well as the bark of shrubs and saplings.

Breeding

The species breeds from the first warm periods in February through October. Early-born young are capable of reproducing during the later parts of their first summer. They are so prolific that females are receptive to breeding immediately upon giving birth, greatly shortening the interval between litters.

Young

Average 3.5 per litter. Normal range is from 2 to 8 young. Young are born blind, naked and helpless but grow quickly on the high-fat milk produced by the mother. Within two weeks their weight increases by 400 percent and they are able to leave the fur-lined nest. By the end of a month the young are on their own and the female is preparing to give birth to the next litter.

Life Expectancy

Short! Most live less than one year. The species prospers under such heavy mortality because of its incredible productivity.