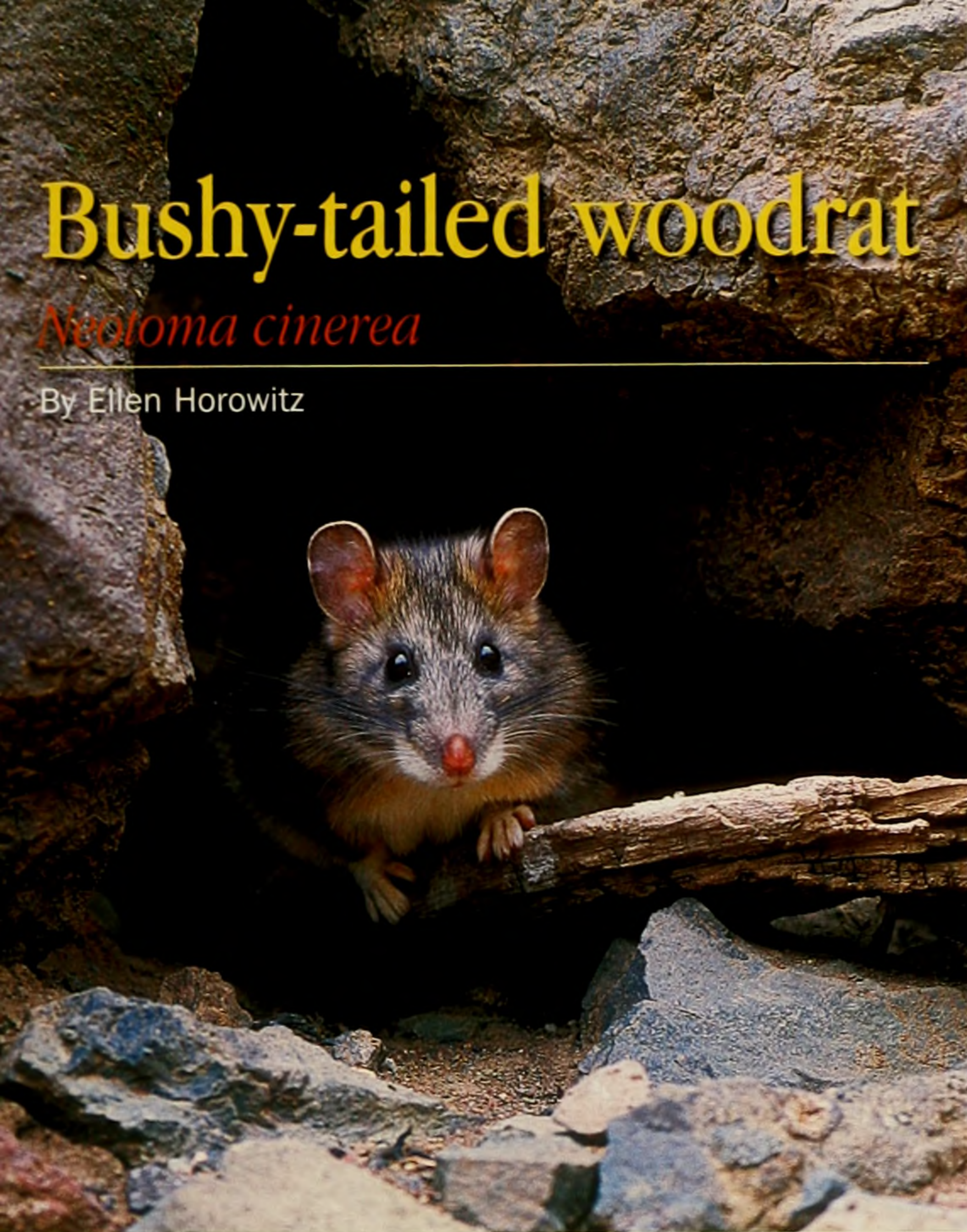


# Bushy-tailed woodrat

*Neotoma cinerea*

By Ellen Horowitz



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A recent rain had intensified the piney scent of the woods. As I walked through the forest, the fresh air encouraged deep breathing and deep thinking. Then a pungent, musky odor roused me from my daydreaming like a slap in the face. That's when I noticed the buckled logs and roofless ruins of a homestead cabin beneath a forest of ponderosa pines. I peered through the dilapidated walls and saw among the rubble a breadbox-sized mound containing sticks, pine needles, leaves, a chewing tobacco can lid, and a piece of yellow nylon strap. Judging by that odd collection and the pervasive aroma, I knew I had entered the domain of a bushy-tailed woodrat.

**IDENTIFICATION:** Though commonly known as the pack rat, the bushy-tailed woodrat is actually more closely related to the deer mouse than to what many people think of as a rat—those scaly-tailed residents of big city sewers. This dapper-looking rodent has large round ears, long whiskers, soft buff-gray fur, big onyx eyes, white feet, and a bushy, squirrel-like tail. From nose to tail tip it measures roughly 15 inches.

**RANGE:** The bushy-tailed is one of eight woodrat species in North America. Of the seven in western states and provinces, the bushy-tailed is the most widely distributed and the only species found in Montana. Except for the far northeastern corner, it can be found statewide, in prairies, high mountain forests, and alpine talus slopes.

**HABITS AND HABITAT:** Woodrats are expert climbers that seek cliffs, caves, canyons, and rocky areas for their dens, as well as hollow trees, buildings, and other man-made structures. They make nests within complex

structures built of sticks, bark, rocks, bones, animal droppings, and leaves gathered during nightly forays. These materials provide insulation against temperature extremes and offer protection from owls, weasels, bobcats, bears, and other predators. According to Kerry Foresman, professor of wildlife biology at the University of Montana, the structure is known as a midden and can be more than 10 feet tall and 10 feet wide. "Generation after generation of woodrats will add on to a midden," he says. Dens contain nests made of soft fibrous materials for sleeping and raising young. In late summer, woodrats begin gathering and drying leaves, along with mushrooms, berries, and seeds, which they store in their den to eat during winter.

The distinctive odor emanating from woodrat living areas comes from the animal's urine or the musky secretions produced from glands on a male's belly. Like many animals, pack rats use urine to mark territory and post personal information. The stench and the ramshackle midden structure create the impression that woodrats are messy, dirty creatures. But Foresman stresses that woodrats keep their nests immaculate. "They prefer to defecate and urinate in places separate from where they eat and sleep," he says.

**WHAT THE WOODRAT PACKS:** In addition to natural materials, bushy-tailed woodrats gather tinfoil, bottle caps, broken glass, and other shiny objects. From this insatiable urge to collect comes the nickname pack rat. (The woodrat is also known as the trade rat for its habit of dropping one item in favor of another.) Pack rat middens can contain all sorts of valuables. When diamond earrings and a diamond ring valued at \$1,000 disappeared from a cabin west of Kalispell several years ago, police said a pack rat was their prime suspect. In 2003, a rusted .22-caliber gun and penny were found in a woodrat midden close to an unidentified human skull west of Kalispell. Detectives considered the gun's serial number and the date on the penny as valuable clues, but were unable to solve the case.

**FAMILY LIFE:** Bushy-tailed woodrats live alone or in harems of one male and one to three females. On average, a litter contains two to four young. The newborns have specialized teeth that allow them to grip the female's nipples, and for the first three weeks she literally drags her youngsters wherever she goes. After eight weeks the young woodrats leave the den (and the mother likely breathes a great sigh of relief).

**OTHER SIGNS:** Cliffs and rock ledges that have been occupied by woodrats for a long time, sometimes hundreds of years, contain black or dark brown deposits that resemble geologic formations. Biologists have humorously named these formations, composed of metamorphosed pack rat droppings and urine, "amberat" and "ratite."

**ECOLOGICAL IMPORTANCE:** Pollen, leaves, animal bones, and other natural items trapped in the rocklike urine formations have been preserved as though in amber for thousands of years. Scientists who study amberat in the arid Southwest and Yellowstone National Park are learning much about changes in plant and animal communities over time. 🐭

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