



## Woodrat (*Neotoma magister*)

### Common Name

Allegheny Woodrat

### Scientific Name

*Neotoma magister*

### Status

The U.S Fish and Wildlife Service considers the Allegheny woodrat a **Species of Concern**.

### West Virginia Status

The Allegheny woodrat is more abundant in W.V. than the states to the northeast although it may be declining in the easternmost counties (Berkeley and Jefferson) of the state.

### Description

The Allegheny woodrat is a medium-sized rodent with a long, hairy tail. It can be distinguished from the comparably-sized Norway and black rats by its soft, silky fur, large ears and eyes, blunt nose, and hairy, bicolored (dark on top, light underneath) tail. The adult woodrat ranges from 38 to 47 cm. (15 to 19 in.) from the end of its nose to the tip of its tail, and weighs up to 480 grams, (approximately 1 pound). Its fur is brownish gray above and whitish gray beneath. The tidy, meticulous habits of this rodent (also known as packrat) further distinguish the woodrat from its urban cousins.

### Habitat

Allegheny woodrats live almost exclusively in rocky areas such as caves, deep crevices, and large boulder fields. Most woodrat dwellings are located in or around hardwood forests that have an abundance of oaks and other mast-bearing trees. The woodrat is also known to occur in northern hardwood (beech, birch, maple) and oak-pine forests. Woodrats are seldom found in agricultural or residential areas.

### Threats and Prospects

Scientists have identified several factors that may be contributing to the decline of the Allegheny woodrat. Some cite the gypsy moth, which has been spreading south into the oak forests where woodrats live, as the culprit. Defoliation by gypsy moth larvae can

severely weaken oak trees, reducing the acorn crops on which woodrats rely for food in the winter. A second threat to the woodrat is a parasite, the raccoon roundworm (*Baylisascaris procyonis*), that is carried by raccoons. The raccoon roundworm, which does not severely harm raccoons, causes death in woodrats by attacking their central nervous systems. With their tendency to collect debris, including the scats of other animals, woodrats are especially susceptible to contracting this disease from raccoon feces. Habitat degradation and fragmentation may also be playing a role in the woodrat's decline throughout much of its range. Because of their tendency to inhabit remote places, woodrats generally have not been severely impacted by human activities. Scientists in other states are experimenting with vaccines to reduce the occurrence of raccoon roundworm in their natural hosts. In West Virginia efforts have begun to control gypsy moths with insecticides. However, until more is known about the exact mechanisms that are suppressing woodrat populations, little more than monitoring can be done.



(Photo by Craig Stihler)

Biologists with the West Virginia Division of Natural Resources are monitoring several woodrat populations to obtain long-term data on population trends.

### Range

Historically, the Allegheny woodrat occupied a range extending from southwestern New England along the Appalachian Highlands to northern



Alabama and across eastern Tennessee and Kentucky into southern Ohio and Indiana. The woodrat has declined swiftly and severely in the northern part of its range--Pennsylvania, Maryland and New Jersey--and is now considered to be absent from Connecticut and New York.

### **Life History**

Woodrats are active throughout the winter. Around March they mate, and after approximately thirty-five days the female gives birth to between two and four young. During their early days the young, eyes closed and naked, cling firmly to their mother. Their eyes open within 20 days and they are weaned within four weeks of birth. Females typically have two to three litters per year. Most woodrats do not reach sexual maturity until their second year. Except for periods of breeding and young rearing, woodrats are solitary animals and often defend their territories against intruders. They construct "houses" that consist of one or two nests, caches of acorns and other food items, and piles of debris found in the area. It is thought that these piles of leaves, twigs, and litter help to alert the woodrats when predators or other woodrats come around. Woodrats have glands on their ventral (stomach) sides that secrete an odor allowing them to mark their territories. Woodrats are primarily nocturnal, meaning that they are most active at night. They exit their quarters after

dark to forage and gather nest materials. Their acute senses of smell and hearing, large eyes, and long whiskers allow these animals to effectively navigate through their dark, underground caverns. It has been suggested that woodrats mark their trails with urine and use the odor to retrace their way to and from their quarters. Predators of the woodrat include owls, foxes, raccoons, opossums, and large snakes.

### **Diet**

Woodrats are herbivores: they rely almost exclusively on plant materials for their food. Among their favorite foods are acorns and other nuts, berries, twigs, leaves and fungi. Occasionally they may feed on snails, insects or other invertebrates. In Autumn woodrats habitually cache (store) large quantities of acorns, twigs, leaves, and other edible vegetation to ensure a constant food supply throughout the winter months.

### **Help**

If you see a rat-like mammal in what appears to be woodrat habitat, do not harm the animal; let it go about its business. Please report any woodrat sightings with a map to Woodrat Sighting, WVDNR, P.O. Box 67, Elkins, WV 26241 or call (304) 637-0245. This will help us better determine this animal's range in West Virginia