



Shaku Nair and Dawn H. Gouge
Department of Entomology, University of Arizona

Pack rats

Pack rats (also called wood rats or trade rats) are medium sized rodents belonging to the genus *Neotoma*. The white-throated (*N. albigula*), desert (*N. lepida*), dusky-footed (*N. fuscipes*), Mexican (*N. mexicana*), bushy-tailed (*N. cinerea*) and Stephen's (*N. stephensi*) pack rats are commonly encountered in Arizona and other parts of the desert southwest.



Figure 2. Bushy-tailed wood rat.
Photo: U.S. National Park Service.

Adult pack rats are much larger than house mice and resemble roof rats in general size and shape but can be distinguished by the long tail covered with fur or long hairs, larger eyes and ears, and a generally clean, soft appearance. Their fur is soft and may be colored cinnamon, brown, gray, yellowish gray, or creamy buff on the upper side of the body. The lower side of the body and feet are generally much lighter. The tail fur may be slightly darker than the rest of the body and is paler on the underside. External ears are large, rounded, and hairy; eyes are large and dark and somewhat slanting and deeply set into the face. Body sizes range from 12-14 inches including the tail, the body alone can be 6-7 inches in length.

Pack rats can be a nuisance, largely due to their gnawing and nesting habits (Figure 3), but also because their middens (nests) are common breeding sites for kissing bugs. If their midden is under or against a home, the bugs can sometimes crawl in through cracks and crevices and will bite humans. People who are sensitive to the bites can develop increasingly severe allergic reactions that can become life-threatening. Additionally, white-throated pack rats are reported to be carriers of arenaviruses that can infect rodents and occasionally, humans. People become infected by breathing in the virus after rodent urine, droppings, or nesting materials are disturbed during cleanup efforts or structural modifications of buildings. Pack rat nests are also known to harbor many parasitic mites, ticks, fleas, and other ectoparasites on their bodies and in their nests. Pack rats sometimes feed on and damage garden and landscape plants. Occasionally they cause damage to vehicles and wiring in homes.



Figure 3. Pack rat midden among cactuses.
Photo: Cliff Hutson.

Pack rats are primarily nocturnal and solitary animals, except when mating or rearing young. However, they are known to build nests close together, forming a community. They are proficient diggers and climbers, usually building extensive above-ground dens but will sometimes opportunistically move into the attics and walls of houses. Their nests, called dens or 'middens', are complex structures consisting of several chambers, with piles of stored food and debris. They can be built on the ground, among rocks or tree bases, or among tree branches, or in abandoned nests and burrows of other animals. In the desert, packrat dens are common in cholla cactus bases, using the cactus spines as a protection from predators (Figure 3). Ground dens measure 3 to 5 feet in height and diameter; tree nests are somewhat smaller. One animal may inhabit several nests, and in good feeding areas, a den may be occupied for several years or a lifetime. Packrats are known to use aromatic plant leaves to line their nests to keep out parasites. They are also very attracted to small, bright, shiny objects such as coins, small pieces of jewelry, broken bits of mirrors, metal spoons, etc. and often pick these up, leaving sticks, nuts, cactus pieces or other materials in 'trade'. Breeding usually occurs in early summer and females can produce up to 5 litters per year, each with 4-5 young. The young ones become sexually mature in 2 months. The average lifespan is about 1-2 years.

How to manage non-commensal rodents?

Native rodents are classified as nongame mammals protected by Arizona state law. However, controls can be implemented in some instances when they cause significant damage to property or potential pathogen carriers are infesting buildings. There are a number of endangered species in Arizona and other areas of the desert southwest so the emphasis is placed on sealing up buildings and places vehicles are housed to keep rodents out.

Populations of non-commensal rodents around community environments can fluctuate depending on various factors. Regularly inspect landscape plants such as chollas and cacti to ensure that these rodents do not take up residence under them. Keep yards clean and free of fallen fruit, leaves and twigs and other debris, which could all serve as food and shelter sources for these rodents. Make sure landscape irrigation systems are functioning properly and repair leaks promptly.

Pest-proofing homes and buildings is the best way to keep rodents out. Make sure to seal all cracks and gaps around doors and windows, along foundations, under eaves or roofs, and around entry points of utility lines. Read more in our publication on pest proofing here:

<https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1677-2015.pdf>



Figure 9. Pest-proofing is the best way to keep rodents out. Photo: Adobe Stock Images.

If you notice or suspect non-commensal rodent activity in a building or structure, make sure to follow proper disinfection and cleanup protocols. The Centers for Disease Control and Prevention provide detailed information on rodent cleanup here:

<https://www.cdc.gov/healthypets/pets/wildlife/clean-up.html>

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