

**California Wildlife Habitat Relationships System**  
**California Department of Fish and Wildlife**  
**California Interagency Wildlife Task Group**

---

WHITE-THROATED WOODRAT

*Neotoma albigula*

Family: MURIDAE  
M125

Order: RODENTIA

Class: MAMMALIA

Written by: P. Brylski

Reviewed by: H. Shellhammer

Edited by: R. Duke

Updated by: CWHR Program Staff, May 2000

#### DISTRIBUTION, ABUNDANCE, AND SEASONALITY

*Neotoma albigula venusta* is the only representative subspecies of *Neotoma albigula* regularly occurring in California. The white-throated woodrat is found in extreme southeastern San Bernardino Co., central and eastern Riverside Co., eastern San Diego Co., and throughout Imperial Co. Common in many desert habitats and in pinyon-juniper habitat. Its distribution is strongly influenced by the availability of den-building materials (Matson 1976). Northern and elevational limits of distribution may be influenced by its relatively low tolerance for cold temperatures (Brown 1968).

#### SPECIFIC HABITAT REQUIREMENTS

**Feeding:** Eats mainly succulent plant material such as cacti, mesquite, and some yucca, but little or no grass or animal matter (Vorhies and Taylor 1940). In creosote mesquite habitat in New Mexico, the diet consisted mainly of yucca leaves, other green vegetation, and heads of composites (Wood 1969, Macedo and Mares 1988).

**Cover:** Dens are of 2 types. In rocky areas, plant litter is piled around a crevice. Favored materials include litter of spiny plants (cholla, prickly pear, mesquite, and catclaw), probably because of the added protection from predators they afford. The nest itself is located in the rear of the crevice. Dens also may be constructed against, or beneath shrubs, preferably shrubs or cacti having much cover near the ground. Such dens can become quite large, reaching 1 m (3 ft) high and 3 m (10 ft) in diameter. A grassy nest is located below the ground surface in these dens.

**Reproduction:** Nests reaching about 20 cm (8 in) in diameter are constructed of grasses and other soft plant material and situated inside the den. The interior of the nest is hollowed out for occupancy (Vorhies and Taylor 1940, Turkowski and Watkins 1976).

**Water:** Water is obtained chiefly from succulent vegetation. As much as 90% of the diet is comprised of water rich cacti during the driest months of the year (Macedo and Mares 1988).

**Pattern:** Desert scrub with cacti or mesquite, with or without rock outcrops. Abundance of white-throated woodrats is correlated with the abundance of suitable shrubs for supporting dens (Vorhies and Taylor 1940, Turkowski and Watkins 1976). Often associated with presence of prickly pear (*Opuntia*; Armstrong 1972).

#### SPECIES LIFE HISTORY

**Activity Patterns:** Mainly nocturnal. Diurnally active within the den (Macedo and Mares 1988). Active yearlong.

**Seasonal Movements/Migration:** None.

**Home Range:** In New Mexico creosote and mesquite habitats, density averaged 0 to 2.5/ha (0 to 1/ac) (Wood 1969). Densities in pinyon-juniper woodland averaged 0.2 to 2.5/ha (0.1 to 1/ac) (Turkowski and Watkins 1976). In southeastern Arizona creosote flats, densities averaged 0 to 0.4/ha (0 to 0.16/ac) (Chew and Chew 1970). Boggs (1974, as cited in Macedo and Mares 1988) estimated the minimum home range in a cholla-forest habitat to be approximately 161 +/- 19 sq m, or 486 +/- 49 sq m, assuming home ranges were circular. Distance between nests in a cholla-forest habitat was estimated to be 12 m (40 ft).

**Territory:** White-throated woodrats are solitary and asocial.

**Reproduction:** Breeds from January into July in creosote-mesquite habitat in southern California (Schwartz and Bleich 1975). Gestation lasts 37 days, perhaps 38 (Richardson 1943 as cited in Macedo and Mares 1988). Litter size ranges from 1-3 young. Presumably, two litters per season are raised (Baker 1956 as cited in Macedo and Mares 1988). Weaning occurs at 27-40 days of age (Schwartz and Bleich 1975). Females may reproduce at 80-87 days, males by 100 days of age.

**Niche:** Predators include coyotes, ringtails, bobcats, foxes, hawks, owls, and snakes. Woodrat dens are frequented by a variety of arthropods, and some white-throated woodrats are parasitized by bot fly larvae, fleas, and blood-sucking assassin bugs.

## REFERENCES

- Armstrong, D. M. 1972. Distribution of mammals in Colorado. Monogr. Mus. Nat. Hist., Univ. Kansas, 3:1-415.
- Baker, R. H. 1956. Mammals of Coahuila, Mexico. Univ. Kansas Publ., Mus. Nat. Hist., 9:125-335.
- Boggs, J. R. 1974. Social ecology of the white-throated woodrat (*Neotoma albigula*) in Arizona. Unpubl. Ph.D. dissert., Arizona State Univ., Tempe, 134 pp.
- Brown, J. H. 1968. Adaptation to environmental temperature in two species of woodrats, *Neotoma albigula*. Univ. Mich. Mus. Zool., Misc. Publ. No. 135. 48pp.
- Chew, R. M., and A. E. Chew. 1970. Energy relationships of the mammals of a desert shrub (*Larrea tridentata*) community. Ecol. Mongr. 40:1-21.
- Macedo, R. H., and M. A. Mares. 1988. *Neotoma albigula*. Mammalian Species 310:1-7. American Society of Mammalogists.
- Matson, J. O. 1976. The distribution of rodents in Owens lake region, Inyo Co. Calif. Nat. Hist. Mus. Los Angeles Co., Sci. Contrib. No. 276. 27pp.
- Richardson, W. B. 1943. Wood rats (*Neotoma albigula*): their growth and development. J. Mamm. 24: 130-143.
- Schwartz, O. A., and V. C. Bleich. 1975. Comparative growth in two species of woodrats, *Neotoma lepida intermedia* and *Neotoma albigula venusta*. J. Mammal. 56:653-666.
- Turkowski, F. J., and R. K. Watkins. 1976. White-throated woodrat (*Neotoma albigula*) habitat relations in modified pinon-juniper woodland in southwestern New Mexico. J. Mammal. 57:586-591.
- Vorhies, C. T., and W. P. Taylor. 1940. Life history and ecology of the white-throated woodrat, *Neotoma albigula albigula* Hartley, in relation to grazing in Arizona. Univ. Ariz. Agric. Exp. Sta. Tech. Bull. 86:453-529.
- Wood, J. E. 1969. Rodent populations and their impact on desert rangelands. New Mexico State Univ. Agric. Exp. Stat. Bull. No. 555. 17pp.