

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

BIG-EARED WOODRAT

Neotoma macrotis

Family: MURIDAE
M233

Order: RODENTIA

Class: MAMMALIA

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

The big-eared woodrat is common in California. It is found in both the Coast Ranges and interior. Also widespread along the western slope of the Sierra Nevada, mostly below 2150 m (7000 ft). Once a subspecies of *N. fuscipes*, *N. macrotis* has been elevated to species status (Matocq 2002a, 2002b). Its range is what was once considered the southern part of the range of *N. fuscipes*. (Note: Because *N. fuscipes* and *N. macrotis* are still undergoing taxonomic revision, the range of the federally-endangered subspecies *N. fuscipes riparia* in has been mapped in CWHR as part of the range of both species.) Generally absent from cultivated land and open grasslands of Central Valley. Common to abundant in forest habitats of moderate canopy and moderate to dense understory. Can be abundant in chaparral habitats.

SPECIFIC HABITAT REQUIREMENTS

Feeding: Feeds mainly on woody plants, especially live oak, maple, coffeeberry, alder, and elderberry when available (Linsdale and Tevis 1951). Other woody plants eaten elsewhere; English (1923) listed 37 species of plants eaten by the dusky-footed woodrat. Also eats fungi, flowers, grasses, acorns. Forages on ground, in bushes, and in trees.

Cover: Prefers moderate canopy in a variety of habitats. Houses are built of sticks and leaves at the base of, or in a tree, around a shrub, or at the base of a hill. Houses may measure 2.4 m (8 ft) in height and 2.4 m (8 ft) in diameter (English 1923).

Reproduction: Nests are located in the stick house, and are constructed of shredded grass, leaves, and other miscellaneous materials (e.g., bird feathers). Vestal (1938) reported the following average dimensions: 112 mm (4.4 in) x 101 mm (4 in) with a depth of 85 mm (3.4 in). Abundance probably limited by availability of nest-building materials. Competition for houses is constant and intense (Linsdale and Tevis 1951).

Water: Drinks water, but may be sustained by leafy vegetation and fungi.

Pattern: Prefers forest habitats with moderate canopy, year-round greenery, a brushy understory, and suitable nestbuilding materials. Well-developed understory at base of a single evergreen may be suitable for a single individual.

SPECIES LIFE HISTORY

Activity Patterns: Mostly nocturnal. May reduce activity on moonlit or rainy nights. Active year-round.

Seasonal Movements/Migration: None.

Home Range: In Sonoma Co., home ranges averaged 0.23 ha (0.58 ac) for males, 0.19 ha (0.48 ac) for females, and 0.17 ha (0.43 ac) for juveniles; densities reached a peak of 20 individuals/ha (8/ac) in late summer (Cranford 1977). In Monterey Co., an individual may confine its lifetime activity around a single tree, or range over 18.7 ha (46.2 ac) (Linsdale and Tevis 1951). In chaparral habitat, density was reported to reach 18.8/ ha (7.5/ac) (Bleich 1973).

Territory: The nest is defended against competitors.

Reproduction: Breeds from December to September, with a peak in mid-spring. Litter size averages 2-3 young (range 1-4) (Linsdale and Tevis 1951, Verner and Boss 1980). One to 5 litters per yr. Females probably are promiscuous.

Niche: Species is heavily preyed upon by owls, coyotes, bobcats, hawks, and perhaps snakes. Other small mammals and amphibians and reptiles are known to use woodrat houses. Cattle grazing probably reduces carrying capacity for woodrats by removing cover. Wildfires and prescribed burning are likely to be detrimental by destroying houses.

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