



U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Species Account
SALT MARSH HARVEST MOUSE
Reithrodontomys raviventris



CLASSIFICATION: Endangered
Federal Register 35:16047; October 13, 1970

CRITICAL HABITAT: None designated

RECOVERY PLAN: FINAL
[Salt Marsh Harvest Mouse and California Clapper Rail Recovery Plan](#), November 16, 1984 ,
ecos.fws.gov/docs/recovery_plan/841116.pdf
(Both species will be included in the Tidal Marsh Ecosystem Recovery Plan, which is under construction.)



DESCRIPTION

The salt marsh harvest mouse (*Reithrodontomys raviventris*), also known as the "red-bellied harvest mouse," is a small native rodent in the Cricetidae family, which includes field mice, lemmings, muskrats, hamsters and gerbils.

There are two subspecies: the northern (*R. r. halicoetes*) and southern (*R. r. raviventris*). The northern subspecies lives in the marshes of the San Pablo and Suisun bays, the southern in the marshes of Corte Madera, Richmond and South San Francisco Bay.

The scientific name *Reithrodontomys raviventris* means "grooved-toothed mouse with a red belly." Both subspecies do have grooved upper front teeth but generally only the southern subspecies has a cinnamon- or rufous-colored belly.

Both subspecies, particularly the northern one, look very similar to the widely-distributed western harvest mouse (*R. megalotis*), from which they may have evolved. Field identification is difficult. The underside of the western harvest mouse, including its tail, ranges from white to dark gray. As mentioned above, the belly of the southern salt marsh harvest mouse subspecies tends to be cinnamon- or rufous-colored. The other parts of both species are buff or brown. The backs and ears of the salt marsh mice tend to be darker. Both species have a combined head and body length of around 3 inches and an average weight of less than half an ounce.

Salt marsh harvest mice are critically dependent on dense cover and their preferred habitat is pickleweed (*Salicornia virginica*). Harvest mice are seldom found in cordgrass or alkali bulrush. In marshes with an upper zone of peripheral halophytes (salt-tolerant plants), mice use this vegetation to escape the higher tides, and may even spend a considerable portion of their lives there. Mice also move into the adjoining grasslands during the highest winter tides.

Salt marsh harvest mice probably live on leaves, seeds and stems of plants. In winter, they seem to prefer fresh green grasses. The rest of the year, they tend toward pickleweed and saltgrass. They have longer intestines than the western harvest mouse, which is a seed eater. The northern subspecies of the salt marsh mouse can drink sea water for long periods but prefers fresh water. The southern subspecies can't subsist on sea water but it actually prefers moderately salty water over fresh.

Although salt marsh harvest mice are active mainly at night, they are sometimes active during daylight hours. They swim very well, in contrast to the western harvest mouse, which is a poor swimmer.

Breeding goes on from spring through autumn. However, each female usually has only one or two litters per year. The average litter size is about four. Nests are quite minimal, often built over old birds' nests. Members of the southern group often don't make a nest at all.

DISTRIBUTION

Salt marsh harvest mice are found only around the San Francisco, San Pablo and Suisun Bays. The water in the wetlands and marshes of the Sacramento-San Joaquin Delta was probably too fresh to support the mice, therefore the Collinsville- Antioch area is the eastern limit of their distribution.

THREATS

Of the 193,800 acres of tidal marsh that bordered San Francisco Bay in 1850, about 30,100 remain. This represents an 84 percent reduction. Furthermore, a number of factors influencing remaining tidal marshes limit their habitat values for salt marsh harvest mice.

Much of the East Bay shoreline from San Leandro to Calaveras Point is rapidly eroding. In addition, an estimated 600 acres of former salt marsh along Coyote Creek, Alviso Slough, and Guadalupe Slough, has been converted to fresh- and brackish-water vegetation due to freshwater discharge from South Bay wastewater facilities, and likely no longer supports salt marsh harvest mice.

The suitability of many marshes for salt marsh harvest mice is further limited, and in some cases precluded, by their small size, fragmentation, and lack other habitat features. In addition, the difference between high and low tides is much greater in the south Bay than in San Pablo or Suisun bays. Many marshes are completely submerged during high tides and lack sufficient escape habitat, likely resulting in nesting failures and high rates of predation. Larger tracts of habitat are needed to maintain stable populations.

REFERENCES FOR ADDITIONAL INFORMATION

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Photo Credit: Salt marsh harvest mouse, Howard Shellhammer

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