



U.S. Fish & Wildlife Service  
Sacramento Fish & Wildlife Office  
Species Account  
CALIFORNIA CLAPPER RAIL  
*Rallus longirostris obsoletus*



CLASSIFICATION: Endangered  
Federal Register 35:16047; October 13, 1970  
[http://ecos.fws.gov/docs/federal\\_register/fr27.pdf](http://ecos.fws.gov/docs/federal_register/fr27.pdf)

CRITICAL HABITAT: Not designated

RECOVERY PLAN: Final  
Salt Marsh Harvest Mouse and California Clapper Rail  
Recovery Plan, 1984. This plan is outdated. Both species  
will be covered under the Tidal Marsh Ecosystem Recovery  
Plan.



#### DESCRIPTION

The California clapper rail (*Rallus longirostris obsoletus*) is one of the largest rails (family Rallidae), measuring 13-19 inches from bill to tail. It is characterized by its hen-like appearance, a long, slightly downward-curving bill, olive-brown upper parts, a cinnamon-buff colored breast, dark flanks crossed by white bars and white undertail coverts which are often exposed when the bird is agitated.

Male and female rails differ only in size. In general, males are slightly larger. Juveniles have a paler bill and darker plumage, with a gray body, black flanks and sides, and indistinct light streaking on flanks and undertail coverts.

Clapper and Virginia rails (*Rallus limicola*) are morphologically similar and may co-occur in marshes. Clapper rails are larger and lack the gray cheeks that are characteristic of Virginia rails. In addition, the brown back feathers of clapper rails are edged with gray, while the back plumage of Virginia rails is chestnut colored. Virginia rails are common residents of freshwater and brackish marshes throughout the country. They also found in some coastal salt marshes.

The breeding season of California clapper rails begins by February. Nesting starts in mid-March and extends into August. The end of the breeding season is typically defined as the end of August, which corresponds with the time when eggs laid during re-nesting attempts have hatched and young are mobile. Clutch sizes range from 5 to 14 eggs. Both parents share in incubation and rearing.

Clapper rails are secretive and difficult to observe in dense vegetation but once flushed, they can frequently be approached. When evading discovery, they typically freeze, hide in small sloughs or under overhangs, or run rapidly through vegetation or along slough bottoms. They prefer to walk or run over other forms of locomotion, and generally walk upright. When flushed, they normally fly only a short distance before landing. They can swim well, although swimming is only used to cross sloughs or escape immediate threats at high tide.

Clapper rails are most active in early morning and late evening, when they forage in marsh vegetation in and along creeks and mudflat edges. They often roost at high tide during the day.

Throughout their distribution, California clapper rails occur within a range of salt and brackish marshes. In south and central San Francisco Bay and along the perimeter of San Pablo Bay, rails typically inhabit salt marshes dominated by pickleweed (*Salicornia virginica*) and Pacific cordgrass (*Spartina foliosa*). Pacific cordgrass dominates the middle marsh zone throughout the south and central Bay.

In the north Bay (Petaluma Marsh, Napa-Sonoma marshes, Suisun Marsh), clapper rails also live in tidal brackish marshes which vary significantly in vegetation structure and composition. Use of brackish marshes by clapper rails is largely restricted to major sloughs and rivers of San Pablo Bay and Suisun Marsh, and along Coyote Creek in south San Francisco Bay. Clapper rails have rarely been recorded in nontidal marsh areas.

## DISTRIBUTION

California clapper rails are now restricted almost entirely to the marshes of San Francisco estuary, where the only known breeding populations occur. In south San Francisco Bay, there are populations in all of the larger tidal marshes.

Distribution in the North Bay is patchy and discontinuous, primarily in small, isolated habitat fragments. Small populations are widely distributed throughout San Pablo Bay. They are present sporadically and in low numbers at various locations throughout the Suisun Marsh Area (Carquinez Strait to Browns Island, including tidal marshes adjacent to Suisun, Honker, and Grizzly Bays).

## THREATS

Of the 193,800 acres of tidal marsh that bordered San Francisco Bay in 1850, about 30,100 acres remain. This is an 84% reduction. Furthermore, a number of factors limit the habitat value of the remaining tidal marshes.

Much of the East Bay shoreline from San Leandro to Calaveras Point is rapidly eroding, and many marshes along this shoreline could lose their clapper rail populations in the future, if they have not already. 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 is of lower quality for clapper rails.

The suitability of many marshes for clapper rails is further limited by their small size, fragmentation, lack of tidal channel systems and 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. This probably results in nesting failures and high rates of predation. Larger tracts of habitat are needed to maintain stable populations.

Throughout the Bay, the remaining clapper rail population is besieged by mammal and bird predators. At least twelve native and three nonnative predator species are known to prey on the clapper rail or its eggs. Encroaching development not only displaces predators from their natural habitat, but also adversely affects higher order predators, such as coyotes, which would normally limit population levels of middle and lower order predators, especially red foxes. The

proliferation of nonnative red foxes into tidal marshes of the South Bay since 1986 has had a serious effect on clapper rail populations.

Nonnative Norway rats (*Rattus norvegicus*) are predators of clapper rail nests. Placement of shoreline riprap favors rat populations, which results in greater predation pressure on clapper rails, especially in narrow, linear strip marshes.

Predation impacts are made worse by a reduction in high marsh and natural high tide cover in marshes. Hunting intensity and efficiency by raptors on clapper rails also is increased by electric power transmission lines, which crisscross-cross tidal marshes and provide otherwise-limited hunting perches.

At this point, it is unclear whether the West Nile virus will impact the California clapper rail. See the University of California Davis web page [Potential Effects of West Nile Virus on California Wildlife](#)

Mercury accumulation in eggs is perhaps the most significant contaminant problem, with the South Bay containing the highest levels. Mercury is extremely toxic to bird embryos.

## REFERENCES FOR ADDITIONAL INFORMATION

Albertson, J. 1998. [Restoring salt marsh habitat for the recovery of California clapper rails](#). Tidelines. U.S. Fish & Wildlife Service. [Don Edwards San Francisco Bay National Wildlife Refuge](#). Newark, CA.

Thelander, C. ed. 1994. Life on the edge: a guide to California's endangered natural resources. BioSystem Books. Santa Cruz, CA. p 158-159.

Photo Credit: Mike Boyland, U.S. Fish & Wildlife Service

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