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The California clapper rail is an *endangered species*. Endangered species are plants and animals that are in immediate danger of becoming extinct.

Threatened species are plants and animals whose population numbers are so low that they may become endangered in the future.

The U.S. Environmental Protection Agency's (EPA) Endangered Species Protection Program (ESPP) will help ensure that pesticide use does not jeopardize the survival of listed species.

Rallus longirostris obsoletus

California Clapper Rail

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Description and Ecology

Status Endangered, listed October 13, 1970.

Critical Habitat Not designated.

Appearance The California clapper rail measures 13–19 inches from bill to tail. That males are slightly larger than females is the only difference between them. The upper body parts are olive brown; the breast is a solid cinnamon-buff. The dark flanks are crossed with white bars, and white undertail coverts are often visible when the California clapper rail is agitated. The bill is long, and curves downward slightly. Legs appear strong, as do the long toes. Juveniles have a paler bill, and a darker body; gray, with blackish flanks and sides. Their white bars and undertail coverts are faint.

Range Populations of the California clapper rail now live almost exclusively in the marshes of the San Francisco estuary (San Mateo, Santa Clara, Alameda, Contra Costa, Solano, Napa, Sonoma, and Marin Counties). Thousands of California clapper rails were eliminated by market hunters from the time of the Gold Rush until the passage of the Weeks-McLean Law in 1913, which was a precursor to the Migratory Bird Treaty Act and was designed to stop commercial market hunting and illegal shipment of migratory birds from one state to another. Since that time diking and filling for conversion to agriculture, urban development, and salt production have reduced the San Francisco Bay tidal marshes by 84% or more. Originally the salt marshes of South San Francisco Bay had the largest populations of California clapper rails. Now, populations there are found in remnant salt marshes such as those on Bair and Greco Islands, along Coyote Creek, and throughout the marshes in the Don Edwards San Francisco Bay National Wildlife Refuge. Smaller populations have been and still are located in western Contra Costa, eastern Marin, and northern Alameda Counties. California clapper rails are also found in northern San Pablo Bay, along the Petaluma River as far north as Schultz Creek, along major creeks and marshes in both Sonoma

and Napa Counties and on Bull Island on the Napa River. The extension of range further east in Suisun Marsh and northern Contra Costa County may bear some relationship to reductions in Sacramento-San Joaquin Delta freshwater outflow and increases in salinity.

Habitat California clapper rails inhabit a range of salt and brackish water marshes. Typically they utilize salt marshes dominated by both pickleweed (*Salicornia virginica*) and Pacific cordgrass (*Spartina foliosa*). Originally these marshes had vegetation zones that included both high, middle, and low marshland. High marsh zones functioned as refugium for many salt marsh animals escaping high tides, particularly winter flood tides, but these have largely been eliminated by the dyking required for fill and land conversion. Some lower marshes are being lost to erosion, and some middle marshes lost to subsidence.

Clapper rails use a network of small tidal sloughs for foraging and quick escape. They construct nests near them (within 10 meters), canopied with either pickleweed or cordgrass, sometimes gum-plant, salt grass, or drift materials. Density of cover, floatability of materials, height above tides, and annual climate changes are all variables of successful nesting. California clapper rails also construct "brood nests" on higher ground to protect their young from storm tides. These are usually simple floatable, platforms of twigs or stems, without a canopy.

Biology and Behavior California clapper rails nest from mid-March into July. Nesting peaks occur in late April–early May and late June–early July. The second peak may include late nesters and pairs attempting to overcome initial nesting failure. These failures most often result from inundation by high tides and by Norway rat predation. Norway rats also prey upon young rails. The increasing presence of non-native red foxes is further impacting the rail population. The predators of adult rails include northern

California Clapper Rail

harriers, red-tailed hawks, and peregrine falcons.

California clapper rails eat spiders, amphipods, yellow and striped shore crabs, clams (*Macoma balthica*), and the introduced horse mussel. The horse mussel may sometimes trap the foot or bill of a rail attempting to pry it open.

California clapper rail juveniles can disperse a sufficient distance to be found in both residential and agricultural areas east of San Francisco Bay and along the open coast.

Recovery Plan The U.S. Fish and Wildlife Service (FWS) developed a recovery plan for the California clapper rail in 1984. Recovery plans outline reasonable actions that FWS believes are required to recover or protect listed species. FWS prepares recovery plans, sometimes with the assistance of recovery teams, contractors, state agencies, and others. Recovery plans do not necessarily represent the views nor the official positions or approvals of any individuals or agencies, other than FWS, involved in the plan formulation. Approved recovery plans are subject to modification as dictated by new findings, changes in species' status, and the completion of recovery tasks.

California Clapper Rail Information Sources

Primary Reference Beacham, Walton, Castronova, Frank F., and Sessine, Suzanne (eds.), 2001. Beacham's Guide to the Endangered Species of North America, Gale Group, New York. Vol. 1, pp. 348–350.

Listing Notice U.S. Fish and Wildlife Service, 1970. Federal Register 35, No. 199, pp. 16047-16048. http://ecos.fws.gov/docs/federal_register/fr27.pdf

Recovery Plan U.S. Fish and Wildlife Service, 1984. Salt Marsh Harvest Mouse and California Clapper Rail Recovery Plan. U.S. Fish and Wildlife Service, Pacific Region, Portland, Oregon. 141 pp. http://ecos.fws.gov/docs/recovery_plan/841116.pdf

Species Account U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office. http://www.fws.gov/sacramento/es/animal_spp_acct/ca_clapper_rail.pdf



Colma Marsh habitat/Steven Schwarzbach, USGS WERC



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California clapper rail outfitted with radio transmitter. Toby Rohman/USGS Western Ecological Research Center