

BANK SWALLOW

Riparia riparia

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Management Status: Federal: None
California: Threatened (CDFG, 1998)

General Distribution:

The Bank Swallow is one of the most cosmopolitan of swallows; its Holarctic breeding range extends across North America, Europe (where it is called Sand Martin) and Asia. In North America, Bank Swallows breed from western Alaska across Canada to southern Labrador and Newfoundland, and south to central California, western Nevada, northern Utah, Colorado, southern New Mexico, southern Texas, Arkansas, Tennessee, northern Alabama, central West Virginia, east Virginia, and south-central South Carolina. Bank Swallows winter in South America, India, southeast Asia, and tropical Africa (AOU, 1998; Turner and Rose, 1989).

The species has declined throughout its historic breeding range in California. Colonies on the Sacramento and Feather rivers in northern California account for most of the current breeding population (see Population Status, below). The Bank Swallow has been extirpated as a breeding bird in southern California (Small, 1994).

Distribution in the West Mojave Planning Area:

There are no nesting records of the Bank Swallow in the WMPA. The species is a fairly common spring and fall migrant through the California deserts, and uncommon (spring) to rare (fall) migrant along the coast (Garrett and Dunn, 1981). Bank Swallows migrate through the WMPA in a broad front, and, with other migrating swallows, concentrate over marshes and ponds, such as Piute Ponds and Harper Lake, and over agricultural fields. (Kaufman, 1996; Rosenberg et al., 1991).

Natural History:

Bank Swallows are distinguished from other brown-backed, white-bellied swallows by the presence of a distinct brown breast band. They are slightly smaller than other North American swallows at 5 in. (13 cm) in length and have a wingspan of 10-11 in. (25-28 cm). The tail is squarish or slightly notched. Males and females are not separable by plumage. In North America, confusion with Northern Rough-winged Swallows (*Stelgidopteryx serripennis*) and juvenile Tree Swallows (*Tachycineta bicolor*) is possible; the distinct breast band of the Bank Swallow, which often has a dark "spike" extending down from the middle, is the best field mark (Lethaby, 1996).

Bank Swallows are diurnal aerial insectivores. Studies of stomach contents by Beal (1918) and Stoner (1936) indicate that the diet includes many insects injurious to crops (Bent, 1942).

Bank Swallows are highly colonial nesters. Nests are typically in clusters of burrows (sometimes as close together as one foot) in earthen banks of sand, dirt, and gravel, usually near flowing water (AOU, 1983). Because nesting habitat is typically associated with eroded banks

near flowing water, Bank Swallows are considered a riparian species (hence the scientific name *Riparia riparia*), although they are not dependent on riparian vegetation (Garrison et al., 1987).

Bank Swallows nest in California from late March to early July (Thelander, 1994). The male begins excavating the burrow, and is assisted by the female after the pair bond is formed. Both birds build the cup nest in the burrow (1-5 ft deep), usually using rootlets, grass, weed stems, and feathers (Bent, 1942; Ehrlich et al., 1988; Thelander, 1994). Both parents incubate four to six white, unmarked eggs for 12-16 days; nestlings fledge in 18-24 days. In western North America, Bank Swallows are typically single-brooded; in other parts of the species vast range a second clutch is not uncommon (Stoner, 1936; Ehrlich et al., 1988; Turner and Rose, 1989). Colonies are vacated between late June and early August and the swallows fly south to the wintering areas in South America, mostly east of the Andes (AOU, 1983). Bank Swallows are considered casual in southern California in winter (Garrett and Dunn, 1981; Rosenberg et al., 1991).

Although Grinnell and Miller (1944) were unable to find a "well-substantiated record ... from the southeastern deserts south of Owens Valley and east of Cushenbury Springs, San Bernardino County...", Garrett and Dunn (1981) stated that Bank Swallows are "fairly common spring and fall transients through the interior." This discrepancy probably demonstrates more of a change in ornithological effort than a change in the species' status in the last fifty years.

The spring migration of Bank Swallows in southern California peaks in April and early May. The southward movement through the deserts spans the period of mid-July to late September, with mid-August to mid-September being the peak period. Records from the Los Angeles County Museum of Natural History files indicate that observations of migrants in the Lancaster area are usually of less than 10 birds per day, with high counts of 50 for spring (26 April 1989, Piute Ponds) and 25 for fall (6 September 1981, Piute Ponds).

Habitat Requirements:

Garrison et al. (1987) noted that although Bank Swallows are often considered a riparian species, they have not been shown to be dependent on riparian vegetation. Schlorff (1992) describes critical breeding habitat for Bank Swallows as "eroding river bank."

Nests are typically placed high on vertical or near vertical banks, cliffs, bluffs, and roadcuts. The selected site must have fine-textured, sandy or loamy soil suitable for burrowing (Schlorff 1992, Thelander, 1994). Erosion by water and wind is important in creating and maintaining banks and bluffs suitable for Bank Swallow nesting. The transient nature of the nesting habitat causes the species to be less site tenacious than swallows with more stable nest sites (Turner and Rose, 1989).

Proximity to water is important at all seasons. During migration and in winter, wetlands provide a steady source of insects and a buffer against extreme temperatures (Elphick, 1995). In the WMPA, Bank Swallows are most often seen over open water.

Population Status:

Grinnell and Miller (1944) reported that "in aggregate numbers this species is the least numerous of all species of swallow in the State."

It has been estimated that since 1900 the breeding range of the Bank Swallow in California has decreased by 50%, and, as of 1992, "the population is declining throughout the state" (Schlorff, 1992). Garrett and Dunn (1981) stated that the species was "formerly widespread and

numerous as a breeder" but they know of only one recent nesting in southern California (Ventura County). Remsen (1978) reported that Bank Swallows no longer breed in much of their former range in California, and attributed the losses, in part, to flood control and bank protection projects.

A statewide survey in California conducted in 1987 reported a total of 111 colonies. Seventy to eighty percent of the California breeding population nests on the banks of the Sacramento River in 50-60 colonies between Shasta County and Sacramento County (Garrison et al., 1987). Other colonies occur at Crowley Lake (approximately 2000 pairs; Gaines 1988), along the central coast north to San Francisco Bay, and in the Lower Klamath Lake and Honey Lake regions (Remsen, 1978). There are no known breeding colonies remaining in southern California (Small, 1994).

There are no records of Bank Swallows nesting in the WMPA. There are no known roost sites used by migrant Bank Swallows in the WMPA.

Threats Analysis:

The very specific characteristics of nest sites and their colonial nesting habits render Bank Swallow populations in California vulnerable to a variety of public works projects. The loss of nesting habitat is the main reason for the decline of Bank Swallows in California; habitat has been lost to bank stabilization and flood control projects throughout the state. Schlorff (1992) stated that "Bank Swallows were eliminated from southern California because virtually every river and natural waterway was converted to flood control channels." Since 1975, many colony sites on the Sacramento River have been lost to flood control and bank stabilization projects, including the installation of riprap. "The riprapping of natural stream bank associated with bank protection is the single most serious threat to long-term survival of the Bank Swallow in California" (Schlorff, 1992). The Sacramento River Bank Protection Project has affected almost 133 miles of river bank since 1960 (Schlorff, 1992). Garrison et al. (1987) estimated a total breeding population of 16,000 pairs along the Sacramento River in 1986; by 1990 this population was reduced to about 4500 pairs (Small, 1994). Human disturbance impacts many colonies throughout northern California (Thelander, 1994).

Friedman (1963) knew of only one case of nest parasitism of Bank Swallows by Brown-headed Cowbirds (*Molothrus ater*), which mainly parasitize open cup nesting birds.

Biological Standards:

Management priorities throughout California should include the protection and monitoring of nesting colonies and the identification and protection of potential nesting habitat.

In the WMPA, localities known to concentrate migrant Bank Swallows can be protected by ensuring that open water and wetland habitats persist through the migratory periods of April-May and July-September at sites known to concentrate migrating swallows. These areas include Harper Lake, China Lake, and Piute Ponds.

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