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

BROWN PELICAN *Pelecanus occidentalis*
Family: PELECANIDAE Order: PELECANIFORMES Class: AVES
B043

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

The brown pelican is found in estuarine, marine subtidal, and marine pelagic waters along the California coast. Rare to uncommon on Salton Sea from July to September. Breeds on Channel Islands: Anacapa, Santa Barbara, and Santa Cruz (Garrett and Dunn 1981) from March to early August; most numerous then within 20 km (12 mi) of those islands (Briggs et al. 1981). In southern California, common along coast from June to October, especially within 30 km (19 mi) of shore, but regularly out to 175 km (109 mi) (Briggs et al. 1981). Fairly common the rest of year, with lowest numbers April to May (Garrett and Dunn 1981). In northern California, fairly common to common June to November, rare to uncommon December to February and May, and very rare and irregular March and April (Anderson and Anderson 1976, Cogswell 1977, McCaskie et al. 1979).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Forages mainly in early morning or late afternoon, or when tide is rising. Feeds almost entirely on fish, caught by diving from 6-12 m (20-40 ft) in the air, and occasionally from up to 20 m (66 ft). May completely, or only partially, submerge and water may be shallow or deep. Occasionally feeds on crustaceans, carrion, and young of its own species (Palmer 1962).

Cover: Usually rests on water or inaccessible rocks (either offshore or on mainland), but also uses mudflats, sandy beaches, wharfs, and jetties. Evidently does not roost overnight on water, but concentrates at a few traditional roosts on mainland or islands (Briggs et al. 1981).

Reproduction: The nest is a small mound of sticks or debris on rocky, or low, brushy slopes of undisturbed islands (Cogswell 1977); usually on the ground, but less often in bushes (Palmer 1962).

Water: No additional data found.

Pattern: Needs undisturbed islands adjacent to good marine fishing areas.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity.

Seasonal Movements/Migration: After breeding, beginning as early as mid-May, individuals leave colonies in the Channel Islands and in Mexico, and disperse along the entire California coast. Small numbers visit the Salton Sea and Colorado River reservoirs. Most return to breeding colonies by March or April.

Home Range: During nesting season, most numerous within 20 km (12 mi) of nesting

islands (Briggs et al. 1981).

Territory: Nests are spaced a minimum distance "equivalent to 2 birds' necks plus bills" (Palmer 1962).

Reproduction: Present at nesting islands March to early August, and lays eggs March to April, but perhaps as late as June (Palmer 1962). Clutch size usually 3 eggs, sometimes 2; single-brooded. Incubation lasts about 4 wk. Young are altricial and tended by both parents; first fly at 9 wk, and are independent sometime later. Young breed first at about 2-3 yr.

Niche: Gulls, especially the Heermann's, frequently steal fish from pouches of brown pelicans immediately after a dive. Contamination of food supply by DDT and other chlorinated hydrocarbons reduced nesting productivity in California nearly to zero in 1969-71, from eggshell thinning and altered parental behavior. Since then, contamination has been reduced and productivity has increased, but it is too low for population stability (Anderson 1977). The California population is augmented by individuals moving north from Mexico each year. Gulls and vultures are typical nest predators, and eggs and nestlings sometimes are lost in storms (Palmer 1962).

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Life history accounts for species in the California Wildlife Habitat Relationships (CWHR) System were originally published in: Zeiner, D.C., W.F.Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Depart. of Fish and Game, Sacramento, California. Updates are noted in accounts that have been added or edited since original publication.