

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

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RED KNOT

*Calidris canutus*

Family: SCOLOPACIDAE  
B180

Order: CHARADRIIFORMES

Class: AVES

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#### DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Uncommon to common during fall and spring migrations along coastal estuarine habitats (Cogswell 1977, McCaskie et al. 1979, Garrett and Dunn 1981). Prefers estuarine sand or mud flats; found less often on sandy beaches on the outer coast. In winter, rare along the coast except at San Francisco and San Diego bays, where may be very common at times (Cogswell 1977, McCaskie et al. 1979, Garrett and Dunn 1981). At the Salton Sea, fairly common in spring, but uncommon in the fall (Garrett and Dunn 1981). Elsewhere in California, higher numbers apparently pass through in fall migration than in spring (Cogswell 1977, Page et al. 1979). Small numbers occur in the Central Valley in migration. Formerly less common in California, but in the past 50 yr apparently have increased use of the Pacific migration route (Cogswell 1977). Does not breed in the state.

#### SPECIFIC HABITAT REQUIREMENTS

**Feeding:** Feeds by surface pecking and probing. On the breeding grounds, takes mostly insects, particularly flies and beetles. Early in the nesting season, may take grass and sedge seeds and seedlings, and saxifrage buds (Bent 1929, Johnsgard 1981). During migration along the eastern U.S. coast, feeds on rich, concentrated food sources such as mussel spat, horseshoe crab eggs, and *Macoma* and *Coquina* clams (Harrington and Twichell 1982). Migration apparently is timed such that migratory flocks reach stop-over points when these prey populations are at their peak (Harrington and Twichell 1982). Often feeds in closely-packed flocks of up to several hundred or several thousand individuals. Other prey include snails, mussels, small crustaceans, polychaete worms, and insects (Bent 1929, Johnsgard 1981).

**Cover:** Requires undisturbed areas for roosting that are above high tides (Cogswell 1977).

**Reproduction:** Breeds in northern Alaska and Canada in a variety of dry, upland tundra habitats including ridges, slopes, and flats. Favored habitats are dominated by *Dryas*. Nest sites vary from dry hummocks in marshy areas, to patches of gravelly soil (Johnsgard 1981). The nest is a hollow, thickly lined with lichens (Palmer 1967).

**Water:** No additional data found.

**Pattern:** During migration, requires estuarine habitats with sand or mud substrates and dense concentrations of prey.

#### SPECIES LIFE HISTORY

**Activity Patterns:** Yearlong, circadian activity. Migrates at night, and in estuarine habitats may feed at night when tidal conditions are favorable.

**Seasonal Movements/Migration:** During fall migration, passes through California from early August to early October; spring migrants are present from early April to mid-May (Cogswell 1977). Migrations, and the stopping points along the routes, are timed to take advantage of concentrated prey populations that often are available for only short periods (Harrington and Twichell 1982). As with most shorebirds, adults arrive on the migratory grounds before the immatures (Page et al. 1979). Makes regular daily movements from tideflat feeding areas to roosting areas that are used during high tide.

**Home Range:** Density on the breeding grounds generally is 1 pair/km<sup>2</sup> (1 pair/0.38 mi<sup>2</sup>), but it may reach several pairs per km<sup>2</sup> (Johnsgard 1981).

**Territory:** Male advertises on the nesting territory by singing during a hovering flight. An area as wide as 1.6 km (1 mi) in diameter may be covered in one of these flights (Johnsgard 1981). Not territorial during migration, or on the wintering grounds (Myers et al. 1979, Myers and Myers 1979).

**Reproduction:** Arrives on the breeding grounds in early June, and by late June nests with full clutches are found. Monogamous; average clutch is 4 eggs, and pair is single-brooded (Harrison 1978). Incubation is by both parents and lasts about 21 days. Precocial young leave the nest within hours of hatching, and are attended by both parents. Young can fly at about 21 days (Palmer 1967, Johnsgard 1981).

**Niche:** Concentrates in large, dense flocks at migratory stop-overs, making it more susceptible than other shorebirds to oil pollution or other forms of environmental degradation. Additionally, use of specific estuaries as migratory staging areas (especially in the eastern U.S. and Great Britain) makes it vulnerable to any type of habitat loss.

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