

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

KILLDEER

Charadrius vociferus

Family: CHARADRIIDAE
B158

Order: CHARADRIIFORMES

Class: AVES

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

A widespread, year-round resident of California; locally fairly common in summer and very common in winter (Cogswell 1977). Breeds and winters on the shores of lacustrine, riverine, and, less commonly, estuarine habitats, and on nearby alkali scrub, herbaceous, and cropland habitats with low or sparse vegetation. Also occurs in such habitats away from water, or near springs or seeps. Moves downslope in winter from montane regions; rarely nests above 2400 m (8000 ft) (Gaines 1977b).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Forages in typical plover manner of quickly running forward, stopping, and suddenly seizing prey from the surface. Gleans, and probes shallowly. Forages in open fields, muddy shores, and on lawns. Commonly feeds at night and in daylight. Takes a wide variety of invertebrates, especially insects. Beetles and grasshoppers are prominent in the diet. Takes large numbers of grasshoppers during outbreaks (Bent 1929). Also takes flies, mosquitos, weevils, crustaceans, worms, mollusks, and some seeds (Bent 1929).

Cover: Relies on camouflage for protection, and takes flight if predators approach too closely.

Reproduction: Uses natural and human-made habitats with low or sparse vegetation for nesting. These include pastures, gravel river banks, sparsely-vegetated salt flats, salt pond dikes, gravel pits, roadsides, plowed fields, golf courses, airports, suburban lawns, and sometimes flat, gravelled rooftops (Johnsgard 1981). Nest may be some distance from water. During pair formation, male digs a number of scrapes in the ground. The nest is merely a shallow depression, often lined with small pebbles or other nearby objects.

Water: Probably drinks fresh water.

Pattern: Open habitats with low or sparse vegetation, often close to water, are used year-round.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, circadian activity.

Seasonal Movements/Migration: Some individuals migrate 30-60 km (50-100 mi), or possibly much farther, but most are year-round residents. Moves out of southeastern deserts before nesting season, and out of high mountains after breeding season (Cogswell 1977). Numbers increase on coastal estuaries in non-breeding season from an influx of individuals from nearby upland habitats (Page et al. 1979).

Home Range: Mace (1978) calculated breeding density (by 2 methods) of 30-33 pr/100 ha (247 ac) on open parts (99 ha; 245 ac) of a university campus and fairgrounds in Minnesota; but only 14 pr/100 ha (247 ac) on fields with growing crops (14 ha; 35 ac). Nickell (1943) reported 3 pr with nests 110-210 m (360-690 ft) apart in Michigan. May travel to feeding locations up to 1.5 km (0.9 mi) from nest. In nonbreeding season, semigregarious and may form loose flocks of as many as 50 (Cogswell 1977).

Territory: In Manitoba, nesters chased off conspecifics when they came within 100 m (330 ft) of nest (Phillips 1972). Both sexes vigorously defend nest territory. Stoner et al. (1963) reported 7 territories in a 14 ha (35 ac) plot of marsh and grassland at South Hampton Bay, near Benicia. Gaines (1974a) reported a breeding density of 25 territories/km² on an 8.2 ha (20 ac) gravel bar in the Sacramento River near Glenn. At Santa Cruz, Greenberg and Schilt (1973) found 4 territories within an 8.5 ha (21 ac) plot that was mostly marsh and willows, but included 1.2 ha (3 ac) of recently dredged pond.

Reproduction: Nesting season late February into August (Cogswell 1977). A monogamous, solitary nester. Mean clutch size 4 eggs, and both parents incubate (Cogswell 1977). Incubation about 25 days. Chicks precocial, and follow parents to feeding areas within several hr of hatching. Fledgling period about 30 days (Johnsgard 1981). Two broods may be raised in 1 season (Palmer 1967). Probably begins breeding at 1 yr.

Niche: Adults probably taken by large predatory birds; eggs and young by various ground predators. Preferred habitats and foraging methods indicate competition for food with robins, pipits, blackbirds, and other passeriforms; but little overlap with any other shorebird.

REFERENCES

- Bent, A. C. 1929. Life histories of North American shorebirds. Part 2. U.S. Natl. Mus. Bull. 146. 412pp.
- Cogswell, H. L. 1977. Water birds of California. Univ. California Press, Berkeley. 399pp.
- Gaines, D. 1974a. A new look at the nesting riparian avifauna of the Sacramento Valley, California. West. Birds 5:61-80.
- Gaines, D. 1977b. Birds of the Yosemite Sierra. California Syllabus, Oakland. 153pp.
- Greenberg, R., and C. Schilt. 1973. Cat-tail marsh with willow edge. Pages 1017-1018 in W. T. Van Velzen, ed. Thirty-seventh breeding bird census. Amer. Birds 27:955-1019.
- Johnsgard, P. A. 1981. The plovers, sandpipers, and snipes of the world. Univ. Nebraska Press, Lincoln. 493pp.
- Mace, T. R. 1978. Killdeer breeding densities. Wilson Bull. 90:442-443.
- Nickell, W. P. 1943. Observations on the nesting of the killdeer. Wilson Bull. 55:23-28.
- Page, G. W., L. E. Stenzel, and C. M. Wolfe. 1979. Aspects of the occurrence of shorebirds on a central California estuary. Pages 15-32 in F. A. Pitelka, ed. Shorebirds in marine environments. Studies in Avian Biol. No. 2. Cooper Ornithol. Soc. Lawrence, KA. 261pp.
- Palmer, R. S. 1967. Species accounts. Pages 143-267 in G. D. Stout, ed. The shorebirds of North America. Viking Press, New York. 270pp.
- Phillips, R. E. 1972. Sexual and agonistic behavior in the killdeer (*Charadrius vociferus*). Anim. Behav. 20:1-9.
- Stoner, E. A., M. M. Elmore, and J. D. Graham. 1963. Brackish marsh and adjacent grassland. Aud. Field Notes 17:507.