California Wildlife Habitat Relationships System

California Department of Fish and Wildlife California Interagency Wildlife Task Group

LOGGERHEAD SHRIKE Lanius ludovicianus

Family: LANIIDAE Order: PASSERIFORMES Class: AVES

B410

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

A common resident and winter visitor in lowlands and foothills throughout California. Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. Highest density occurs in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats. In the Great Basin, from Inyo Co. north, population declines markedly from November through March. Rare on coastal slope north of Mendocino Co., occurring only in winter. Occurs only rarely in heavily urbanized areas, but often found in open cropland. Sometimes uses edges of denser habitats (Grinnell and Miller 1944, McCaskie et al. 1979, Garrett and Dunn 1981).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Eats mostly large insects; also takes small birds, mammals, amphibians, reptiles, fish, carrion, and various other invertebrates. Searches for prey from a perch at least 0.6 m (2 ft) above ground (Grinnell and Miller 1944), often much higher. Usually flies directly to prey on ground or in a shrub; sometimes hovers. Frequently skewers prey on thorn, sharp twig, wire barb, or forces it into a crotch to feed on or to cache for feeding later. Sometimes hawks aerial insects.

Cover: Often uses shrub or small tree (Bent 1950).

Reproduction: Builds nest on stable branch in densely-foliaged shrub or tree, usually well-concealed (Miller 1931, Bent 1950). Nest height 0.4 to 15 m (1.3 to 50 ft) above ground, occasionally higher (Harrison 1978). Nearly all of 77 nests found by Porter et al. (1975) in Colorado were below 4.5 m (15 ft).

Water: Not reported drinking in desert areas, although often seen near water (Miller and Stebbins 1964, Smyth and Coulombe 1971). Drinks and bathes in captivity (Miller 1931, Bent 1950), although captives can live on a meat diet without water (Bartholomew and Cade 1963).

Pattern: Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low or sparse herbaceous cover.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity.

Seasonal Movements/Migration: A large portion of population in Great Basin, south to Inyo Co., departs for winter. In areas of residence, winter numbers augmented by visitors from north, and species is even more widespread than when breeding.

Home Range: Apparently same as territory. According to Bent (1950), forages within territory year-round.

Territory: Ten territories in open shrubland in Contra Costa and Kern cos. averaged 7.6 ha (18.7 ac), and varied from 4.5 to 16 ha (11-40 ac) (Miller 1931). A central or "headquarters" area within each territory, containing lookout perches, feeding areas, and a roost site, was defended vigorously. Territory defended by solitary individuals through nonbreeding season. Breeding territory usually a winter territory of parents. Smith (1973) also observed territory defended aggressively year-round. In Colorado, 77 nests were at least 400 m (1300 ft) apart, and territory was much smaller in diameter (Porter et al. 1975).

Reproduction: In California, lays eggs from March into May, and young become independent in July or August. A monogamous, solitary nester; clutch size 4-8 (Porter et al. 1975). May be double-brooded, (Harrison 1978), but among 77 nests in Colorado, Porter et al. (1975) found no second broods. Incubation lasts 14-15 days. Altricial young tended by both parents and leave nest at 18-19 days. Young may be driven off parents' territory 2-3 mo later (Miller 1931). Probably breeds first at 1 yr (Harrison 1978).

Niche: In Idaho sagebrush, substantially reduced density of nesting passerines by harassing and preying on adults and nestlings (Reynolds 1979). In southern Illinois, where population had declined, Anderson and Duzan (1978) found a correlation between DDE contamination and eggshell thinning, but no decline in nesting success; DDE may have reduced survival. Morrison (1979) found no evidence of eggshell thinning in California or Florida. Largest source of nest failure in Colorado was predation, probably by magpies (Porter et al. 1975).

Comments: Although populations have declined elsewhere, they have remained fairly stable in the Pacific states (Morrison 1981). L. I. mearnsi, the San Clemente loggerhead shrike, is Federal Endangered (California Department of Fish and Game 1989).

REFERENCES

- Anderson, W. L., and R. E. Duzan. 1978. DDE residues and eggshell thinning in loggerhead shrikes. Wilson Bull. 90:215-220.
- Bartholomew, G. A., and T. J. Cade. 1963. The water economy of land birds. Auk 80:504-539.
- Bartholomew, G. A., and W. R. Dawson. 1953. Respiratory water loss in some birds of southwestern United States. Physiol. Zool. 26:162-166.
- Bent, A. C. 1950. Life histories of North American wagtails, shrikes, vireos, and their allies. U.S. Natl. Mus. Bull. 197. 411pp.
- California Department of Fish and Game. 1989. 1988 annual report on the status of California's state listed threatened and endangered plants and animals. Sacramento. 129pp.
- Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp.
- Grinnell, J., and A. H. Miller. 1944. The distribution of the birds of California. Pac. Coast Avifauna No. 27. 608pp.
- Harrison, C. 1978. A field guide to the nests, eggs and nestlings of north American birds. W. Collins Sons and Co., Cleveland, OH. 416pp.
- McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1979. Birds of northern California, an annotated field list. 2nd ed. Golden Gate Audubon Soc., Berkeley. 84pp.
- Miller, A. H. 1931. Systematic revision and natural history of the American shrikes (Lanius). Univ. Calif. Publ. Zool. 38:11-242.
- Miller, A. H., and R. C. Stebbins. 1964. The lives of desert animals in Joshua Tree National Monument. Univ. California Press, Berkeley. 452pp.
- Morrison, M. L. 1979. Loggerhead shrike eggshell thickness in California and Florida. Wilson Bull. 91:468-469.
- Morrison, M. L. 1981. Population trends of the loggerhead shrike in the United States. Am.

- Birds 35:754-757.
- Porter, D. K., M. A. Strong, J. B. Giezentanner, and R. A. Ryder. 1975. Nest ecology, productivity, and growth of the loggerhead shrike on the shortgrass prairie. Southwest. Nat. 19:429-436.
- Reynolds, T. D. 1979. The impact of loggerhead shrikes on nesting birds in a sagebrush environment. Auk 96:798-800.
- Smith, S. M. 1973. Aggressive display and related behavior in the loggerhead shrike. Auk 90:287-298.
- Smyth, M., and H. M. Coulombe. 1971. Notes on the use of desert springs by birds in California. Condor 73:240-243.

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