

SHRIKES — FAMILY LANIIDAE

Loggerhead Shrike *Lanius ludovicianus*

The Loggerhead Shrike is famed as the “butcher bird,” preying on large arthropods or small vertebrates, then skewering them on thorns, stiff twigs, or barbed wire for butchering or storage. In San Diego County the shrike is an uncommon year-round resident in grassland, open sage scrub and chaparral, and desert scrub. Its numbers are on the decline over most of North America. Until the 1980s this trend did not affect coastal San Diego County greatly, but in the 1990s it accelerated alarmingly.

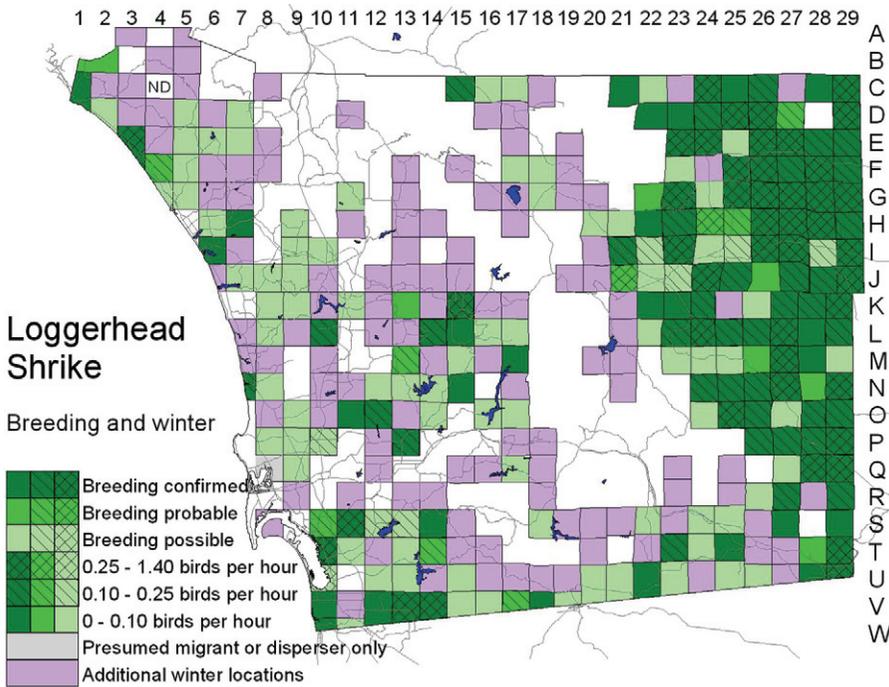
Breeding distribution: In San Diego County, the Loggerhead Shrike is most numerous in the Anza-Borrego Desert, where it is widespread on both the desert floor and in desert-edge scrub on the east slopes of the mountains. It is absent, however, from the pinyon woodlands in the higher elevations of the Santa Rosa and Vallecito mountains. It prefers washes with scattered trees or shrubs, or valley floors with scattered thickets of mesquite or saltbush. The shrike’s habitat requirements include plants that can protect and conceal a nest and much open ground for foraging. Even in good habitat the species occurs in low density; high counts in one atlas square per day are of 10 in the Elephant Tree area (K29) 18 April 1999 (M. D. Hoefler), 10 in Chuckwalla Wash (J24) 18 April 1998 (S. D. Cameron, S. M. Wolf), and 14 in the Borrego Valley (F25) 7 May 1998 (P. D. Ache). Elevationally, the shrike ranges in the breeding season up to about 4000 feet, as near Ranchita (G22) and Live Oak Springs (S25).

In northern and central San Diego County forest and thick chaparral break the shrike’s distribution, but in the south it extends over the Tecate Divide onto the Campo Plateau and almost continuously along the Mexican border to the coast. The best remaining site for the shrike on

Photo by Anthony Mercieca

the coastal slope is Otay Mesa, mainly the less developed eastern end at the base of Otay Mountain (V14), where daily counts ranged as high as nine on 16 May 1999 (S. D. Cameron). The shrike’s distribution farther north on the coastal slope is much fragmented. Even in Camp Pendleton and Marine Corps Air Station Miramar we found no breeding shrikes in some atlas squares having suitable habitat and lacking urban development.

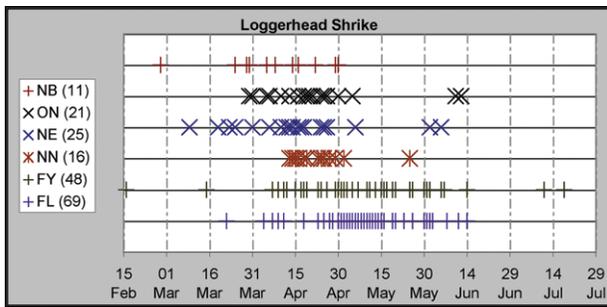
Nesting: The ideal nest site for a Loggerhead Shrike is a dense-foliaged thorny shrub or small tree, one that can offer protection as well as concealment from predators. In the Anza-Borrego Desert, thorny plants described as nest sites encompassed mesquite (7 nests), desert lavender (4), palo verde (3), and catclaw (1), plus clumps of mistletoe in mesquite or catclaw (2). But some nests were in plants that lack spines, such as jojoba (2), and juniper (1). On the coastal slope thorny shrubs are less prevalent, and we found nests in an elderberry, an olive tree, and unidentified ornamental shrubs, though two were in redberry, and one was in an orange tree, one was in a California desert thorn, and one was in a saltbush, all more or less



Loggerhead Shrike

Breeding and winter

- Breeding confirmed
- Breeding probable
- Breeding possible
- 0.25 - 1.40 birds per hour
- 0.10 - 0.25 birds per hour
- 0 - 0.10 birds per hour
- Presumed migrant or disperser only
- Additional winter locations



spiny. Along the coast these last two shrubs offer the shrike its best nesting habitat.

Toilet paper figures prominently in the lining of many Loggerhead Shrike nests; even in the most remote wildernesses of the Anza-Borrego Desert shrikes are able to find it.

We found that shrikes began nesting considerably earlier in the one wet year of the atlas period, 1998, than in the other four. This is shown best in the data for fledglings, our most frequent means of confirmation of shrike nesting. In 1998, we observed fledglings regularly beginning in early April, with one family near the West Butte of Borrego Mountain (H27) as early as 22 March (M. L. Gabel), corresponding to egg laying in mid February. A pair of shrikes feeding a fledgling near Halfhill Dry Lake (J29) on 16 and 18 February (L. J. Hargrove) implies egg laying even in mid January. In the other four years we saw no shrike fledglings earlier than 23 April, corresponding to egg laying in mid March. Bent's (1950) range of 126 California egg dates is 24 February–1 July.

Migration: The Loggerhead Shrike does not appear to engage in long-distance migration in southern California, but the birds disperse considerably in their nonbreeding season. One raised in captivity and then released on

San Clemente Island, as part of the recovery program there, was later found dead along the Silver Strand (T9; Patten and Campbell 2000).

Winter: We found the species in 93 more atlas squares in winter than in spring and summer. Postbreeding dispersal takes a few birds to even higher elevations than they reach in the breeding season, up to 4600 feet in the basin of Lake Cuyamaca (L21; up to two on 29 February 2000, J. K. Wilson). The species' numbers in winter, however, are much the same as in the breeding season (maximum in one atlas square 14 on Otay Mesa, V13, 1 February 1998, P. Unitt; other counts of nine or fewer). On the coastal slope, areas of extensive grassland, even if now dominated by European annuals (Camp Pendleton, Warner Valley, Santa Maria Valley, Otay Mesa, Marron Valley), show clearly as important shrike habitat.

nated by European annuals (Camp Pendleton, Warner Valley, Santa Maria Valley, Otay Mesa, Marron Valley), show clearly as important shrike habitat.

Conservation: The Loggerhead Shrike retreats from urbanization and is now failing to sustain its numbers even in undeveloped areas on the coastal slope. The decimation is documented by Christmas bird counts: on the San Diego count, for example, the average from 1966 through 1975 was 106 shrikes per count, but from 1997 through 2001 it was only 11. On the Oceanside count, the average from 1976 through 1985 was 81.5, but from 1997 through 2001 it was only 6. Even within the five-year period the decrease was noticeable, with lower numbers 1999–2001 than in 1997 and 1998. In southeast San Diego, the last pair in atlas square S10, with a territory between Greenwood Cemetery and the Educational Cultural Complex in 1997, was eliminated when a Home Depot store with its accompanying vast parking lot were built on the site. At San Elijo Lagoon (L7), King et al. (1987) found the shrike a fairly common resident and yearly breeder from 1974 through 1983, with no trend. By 1997, however, it was a rare winter visitor only (A. Mauro et al.). In the Anza-Borrego Desert the shrike may be stable; since 1984 Christmas bird counts show no trend. But atlas observers found the species scarce or absent during the breeding season from the main developed areas of Borrego Springs (F24/G24).

The suddenness with which the shrike's decline hit San Diego County raises questions about the factors affecting it and the scales on which these factors operate. The species' decline in undeveloped areas suggests that it is susceptible to the ill effects of habitat fragmentation, as are many other grassland birds. Occupying a rather high position on the food chain, it occurs naturally in low density, heightening this sensitivity. Intensive work with the

shrikes on San Clemente Island since the early 1990s has shown how difficult reversing a decline in this species can be. The Loggerhead Shrike could easily be extirpated from coastal southern California early in the 21st century.

Taxonomy: Rea (in Phillips 1986) identified the Loggerhead Shrikes breeding in coastal San Diego County as the dark-backed *L. l. grinnelli* Oberholser, 1919, and this is amply supported by specimens in SDNHM. The San Diego sample averages even darker than a sample from the range of *grinnelli* as originally delimited in northern Baja California. As measured by a Minolta CR300 electronic colorimeter, 15 fresh-plumaged specimens from coastal San Diego County, collected from late September to early March, have values of *L* for the back of 32.5–37.1, mean 34.9, against 34.9–37.7, mean 36.0, for seven from the core range of *grinnelli*. Higher values of *L* represent paler colors, lower values darker ones. Whether *grinnelli* can be adequately diagnosed from *L. l. gambeli* Ridgway, 1887 (or *L. l. mexicanus* Brehm, 1854) needs further testing; the range in *L* of ten specimens from northern California and Oregon is 36.3–40.0, overlap-

ping somewhat with *grinnelli*. A discriminant function designed to distinguish the Channel Islands subspecies of the shrike did not yield good separation between *grinnelli* and *gambeli* (Patten and Campbell 2000).

Only two specimens have been collected on the desert side of the mountains in San Diego County. One from La Puerta (= Mason) Valley (M23) 7 December 1912 (SDNHM 1849) is paler than *grinnelli* and typical of *gambeli* (*L* = 37.7), whereas the other, from “San Felipe Cañon” 22 March 1895 (SDNHM 1290) is on the dark side even for *grinnelli* (*L* = 33.0). There is one specimen from San Diego County matching the pale desert subspecies *L. l. sonoriensis* Miller, 1930, which is a synonym of *L. l. excubitorides* Swainson, 1832, according to Phillips (1986). It is SDNHM 1287, collected at Santa Ysabel (J18) 5 March 1890. It has the long white supercilium typical of this subspecies, and the value of *L* for its back is 40.3; 32 specimens from the Colorado River east to New Mexico average 40.4 in this variable. The validity and ranges of all mainland subspecies of the Loggerhead Shrike need further quantification and testing; those proposed by Miller (1930) appear to be too finely split.