

## LARKS — FAMILY ALAUDIDAE

### Horned Lark *Eremophila alpestris*

The coastal strand, arid grasslands, and sandy desert floors are home to the Horned Lark in San Diego County year round. The birds seek open ground, walking in search of seeds and insects. Plowed fields, bayfill, and land graded in preparation for building attract them—disturbance only enhances a habitat from the Horned Lark's point of view. But typically such disturbances precede landscaping and paving, which exclude the larks permanently. As a result, the Horned Lark is in retreat, to the extent that the coastal subspecies *E. a. actia* is now regarded as a bird of special concern by the California Department of Fish and Game.

**Breeding distribution:** The Horned Lark's patchy distribution in San Diego County reflects the fragmentation of its habitat. One of these habitats is the coastal strand, including salt flats around lagoons and fills in Mission and San Diego bays. Thus the larks share nesting sites—and threats—with the Least Tern and Snowy Plover. They are generally uncommon in this habitat, though counts range up to 30 around the southeast corner of Mission Bay (R8) 18 May 1998 (B. C. Moore) and 29 at Las Flores Creek mouth (E3) 14 March 1999 (R. and S. L. Breisch). The coastal mesas and inland valleys were once the center of Horned Lark abundance in San Diego County. Sometimes the birds are in areas that are sparsely vegetated naturally, but usually they are where some disturbance has thinned the vegetation or created openings. Grazing, the maintenance of firebreaks, and grading preceding development are common factors. The firebreaks tracing the ridgelines of Air Station Miramar are now a population center for the Horned Lark in the coastal lowland (40 in square O12 and 35 in N12 on 3 May 1998, I. S. Quon,



Photo by Anthony Mercieca

W. E. Haas). Grading can lead to large but temporary concentrations (50 along the north edge of Mira Mesa, N9, 6 May 1999, A. G. and D. Stanton).

Currently, Warner Valley is the Horned Lark's primary population center in San Diego County (175 around Lake Henshaw, G17, 18 June 2000, P. Unitt; 165 around Swan Lake, F18, 24 June 2000, C. G. Edwards). Substantial numbers also inhabit the upper basin of Lake Cuyamaca (M21; 20 on 16 June 1998, P. D. Jorgensen) and Santa Maria Valley (K14; 20 on 25 June 2000, G. and A. Kroon). Better access allowing more thorough surveys might reveal the population in the Santa Maria Valley (Ramona grasslands) to rival that of Warner Valley. Over large areas of central San Diego County unbroken chaparral and rugged topography exclude Horned Larks.

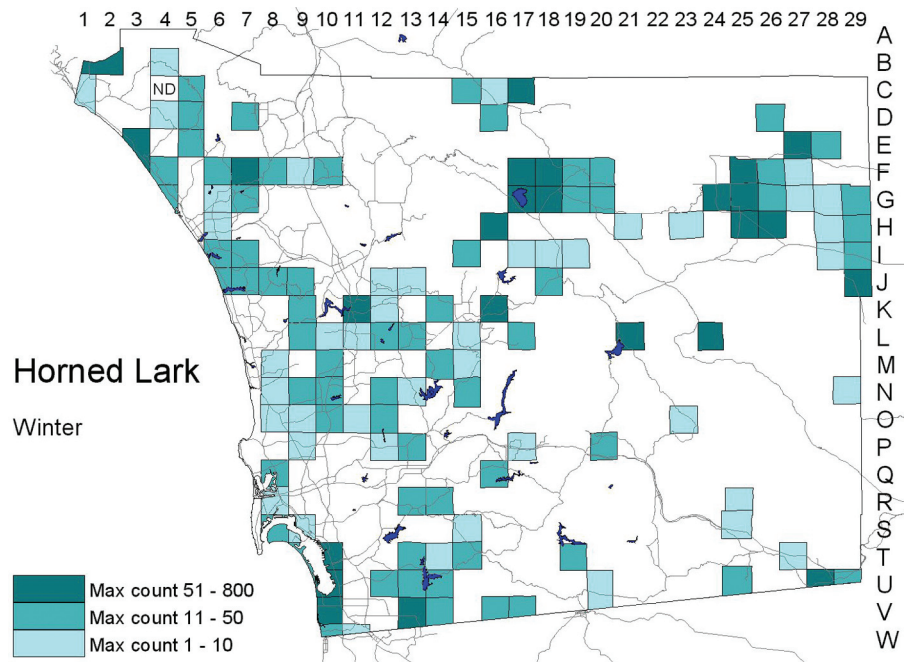
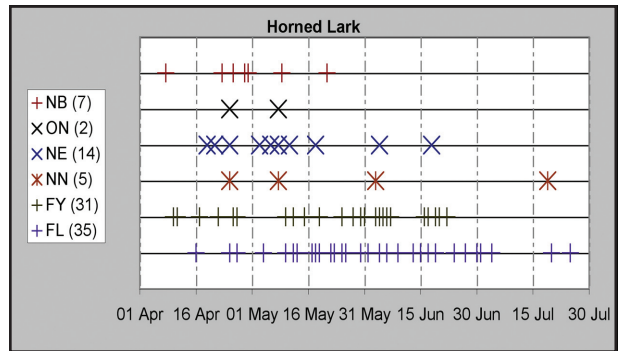
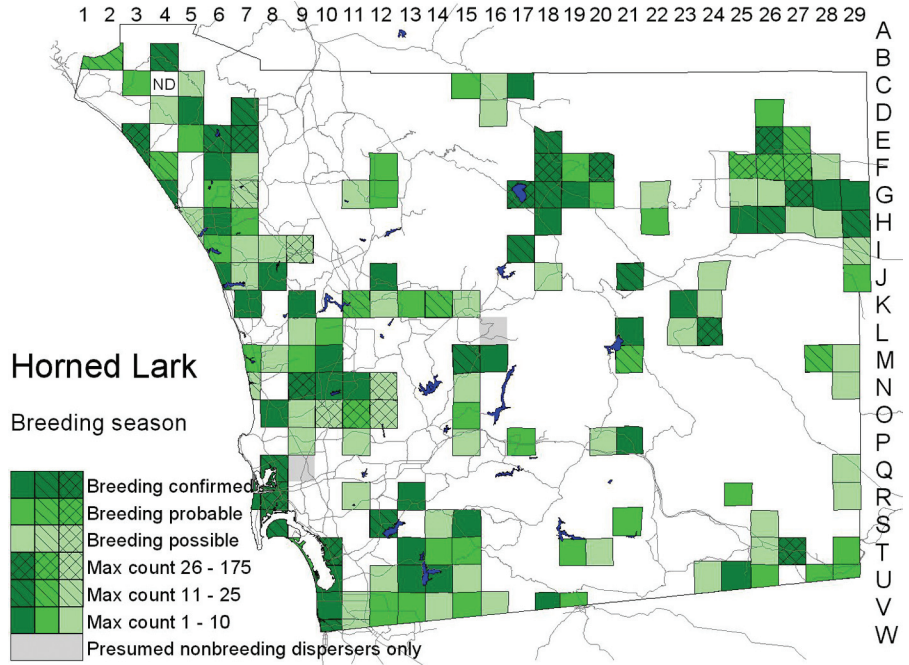
Yet another region that supports the Horned Lark is the Anza-Borrego Desert. Here the birds occur largely in dry lake beds and on sandy valley floors, occasionally in broad sandy washes. Numbers vary with rainfall. During the five-year atlas period the Horned Lark's numbers in the Anza-Borrego Desert were low in 1997, peaked in 1999, one year after El Niño rains, then declined

sharply as drought set in. High counts for the desert during the breeding season were 52 in Blair Valley (L24) 3 April 1998 (R. Thériault), 70 near Font's Point (F27) 10 April 1999 (G. Rebstock, K. Forney), and 85 east of Peg Leg Road (F26) 31 March 1999 (D. C. Seals).

**Nesting:** Horned Larks nest on the ground, digging or selecting a small hollow so the nest is sunken slightly below ground level. Often a small plant, clump of grass, or rock shelters the nest on one side. The nesting season recorded by atlas observers was slightly broader than the 5 April–20 June attested by 35 collected egg sets from San Diego County but little different from the 20 March–23 June attested by 106 from all of California (Bent 1942). Rainfall stimulates the birds to nest; all the early activity we observed, implying laying in late March or the first week of April, followed the wet winter of 1997–98. An exceptionally late nest, its eggs laid no earlier than the last day or two of June, had three chicks on 19 July 2001 (south side of Tijuana River estuary, W10, R. T. Patton).

**Migration:** The Horned Lark appears to be largely nonmigratory in San Diego County, but during the nonbreeding season the birds gather into flocks. These flocks may remain together as late as 9 March (1999, 120 on the D Street fill in San Diego Bay, T10, R. T. Patton). Later, the flocks break up into pairs and the males establish territories. Specimens suggest some degree of population interchange between the desert and coastal slope (see Taxonomy).

**Winter:** The small differences between the breeding and winter distribution of the Horned Lark in San Diego County suggest only short-distance dispersal away from breeding sites. In winter, however, because of its flocking, the species appears appreciably more abundant. As in the breeding season, the largest numbers occur in Warner Valley, San Diego County's largest grassland (up to 800 around Lake Henshaw 29 December 1997, J. O. Zimmer). Sites of other large flocks included the upper basin of Lake Cuyamaca (L21; 300 on 27 January 2000, J. K. Wilson), Blair Valley (L24;



550 on 5 December 1998, R. Thériault), and Little Clark Dry Lake (E27; 370 on 7 December 2000, R. Thériault). Paralleling the pattern in the breeding season, winter numbers in the Anza–Borrego Desert peaked one year after the wet winter, in 1998–99. I noted Horned Larks twice in winter at Big Laguna Lake (O23), elevation 5400 feet (3 on 18 January 1998, 10 on 24 December 2001), where we did not find them during the breeding season.

**Conservation:** Nearly a century ago, C. S. Sharp (1907) called the Horned Lark the commonest bird at Escondido. Today, it persists only on that city's outskirts. Because the gentle topography the Horned Lark inhabits is easy to build on, cities have already spread over much of the terrain the bird once occupied in coastal southern California. The Horned Lark is subject to the increased risk of predation run by all ground-nesting birds as they are restricted to ever smaller patches of habitat. San Diego County atlas results suggest the Horned Lark is sensitive to habitat fragmentation, even though it retains the capability to colonize new sites. Previous studies of the effects of habitat fragmentation in San Diego, focusing on birds of sage scrub, have neglected grassland and open-country species, even though these species' sensitivity to fragmentation appears even greater. If judged simply by the number of atlas squares in metropolitan San Diego from which the species is lacking, the Horned Lark's sensitivity to fragmentation is similar to that of the Greater Roadrunner and Western Meadowlark and higher than that of the Rufous-crowned Sparrow.

**Taxonomy:** *Eremophila a. actia* (Oberholser, 1902) occupies the coastal slope of San Diego County, extending east to Montezuma Valley (Ranchita), Mason Valley, and Jacumba, the last being the subspecies' type locality. *E. a. actia* has the back streaked with dark on a medium warm brown background, an essentially unstreaked breast, and a cinnamon nape in the male. A few specimens from the coastal strip look like intergrades with *insularis* (Townsend, 1890) of the Channel Islands, which is distinguished by its darker upperparts and dusky streaking on the underparts.

Of six specimens picked up (poisoned by pesticide?) in the Tijuana River valley 15 October 1978, four appear intermediate between *actia* and *insularis*, and one is typical of *insularis* (SDNHM 41285). Behle (1942) reported four August specimens from Imperial Beach (V10) and one from San Diego as *insularis* also. Presumably the frequent fog and overcast along the coast are responsible for dark variants being selected for in this area.

*Eremophila a. leucansiptila* (Oberholser, 1902) has the back feathers edged with pinkish-buff, paler than in *actia*. In the male, the nape is tinted with a delicate vinaceous color. This subspecies inhabits the Colorado Desert and extends west to the lower elevations of the Anza–Borrego Desert, as attested by a specimen from “below Borrego Springs” 29 April 1896 (SDNHM 670). Occasionally it wanders into the range of *actia* and the two may interbreed, as Behle (1942) reported at Pamo Valley (H15/I15). Behle (1942), also reported two specimens of *leucansiptila* collected at Jacumba (U28) 17 March 1921, and Frank Stephens collected two there 10 January 1918 (SDNHM 2021, 2022). Apparently, however, the biogeographically simple distributions of the two subspecies are now being disrupted. Twenty-six specimens from the Imperial Valley collected since 1985 are highly variable, but most are darker than specimens from the same area taken early in the 20th century (Patten et al. 2003). Presumably irrigation and cultivation darkened the valley's general background color to the point where the paleness of *leucansiptila* was no longer adaptive. With the Anza–Borrego Desert intervening between the range of *actia* and the Imperial Valley, and birds shifting between cultivated areas and natural desert, a similar change could be affecting eastern San Diego County.

A few San Diego County specimens match *E. a. ammophila* (Oberholser, 1902), intermediate between *actia* and *leucansiptila*. Some of these may be migrants from the Mojave Desert, the breeding range of *ammophila*, but more likely they are variants of *actia* or intergrades *actia* × *leucansiptila*. The validity of the distinction between *actia* and *ammophila* needs to be reevaluated.