

### Long-eared Owl *Asio otus*

William E. Haas

There is no sound in San Diego County’s woodlands more haunting than the caterwauling of the Long-eared Owl during the breeding season—a usually two-noted lingering moan given by the female when a trespasser approaches her active nest. In San Diego County the Long-eared Owl is a rare resident in shady oak woodlands and broad riparian forests. Ideal habitat includes a closed canopy, nearby open habitats for foraging, and a good supply of abandoned raptor and corvid nests or debris platforms for nesting. Another enhancement is an abundance of prey—the California vole, the big-eared or dusky-footed woodrat, or, in the desert, spiny pocket mice. Although widespread in San Diego County the Long-eared Owl is limited by the paucity of forest, reduction of adjacent grasslands, and human disturbance. Recent study suggests 50–200 pairs currently nesting within the county, far more than previously suspected. Atlas observers found nonbreeding birds surprisingly widespread in the Anza–Borrego Desert.

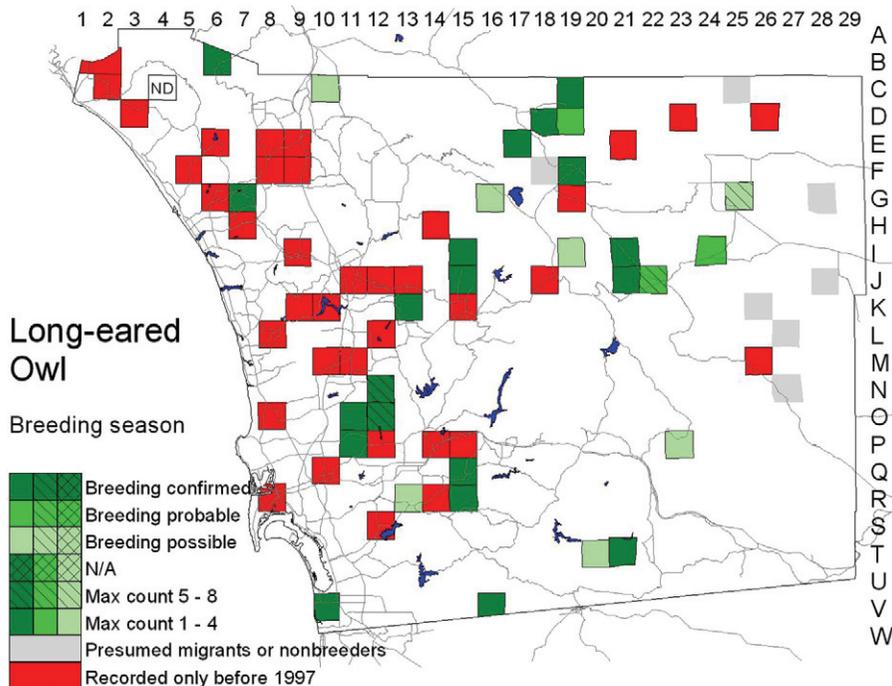
**Breeding distribution:** The Long-eared Owl occurs in all parts of San Diego County. Its breeding distribution sug-

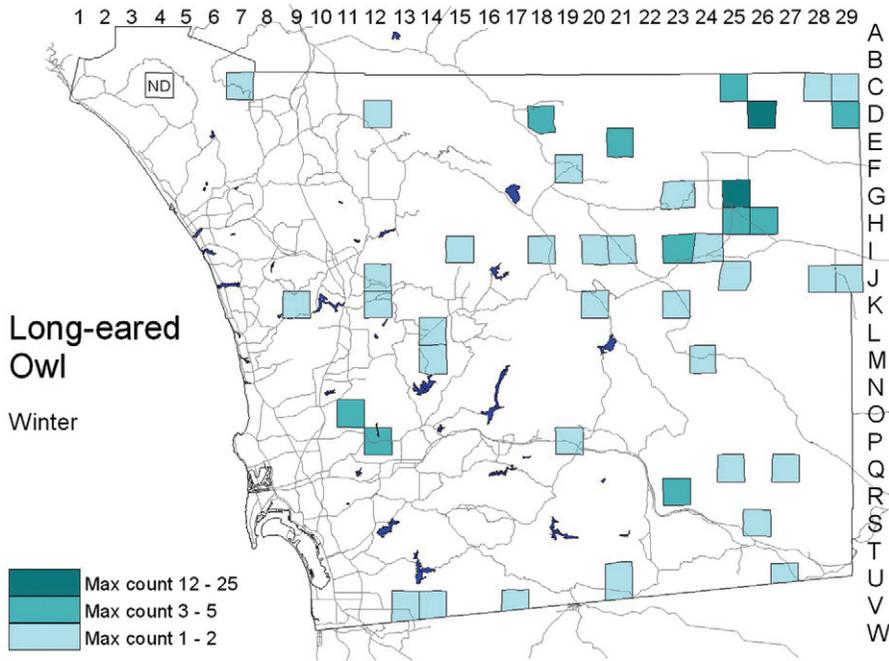


Photo by Anthony Mercieca

gests that away from the coast it favors oak woodlands. Near the coast, riparian forest is its habitat of choice, though few remain in the latter habitat. Few colonies remain of the often colonial species; perhaps the largest is that of five to eight pairs in Sycamore Canyon (N12/O12) 1997–2002 (W. E. Haas). Nests have been found most frequently in the foothills and inland valleys, but they range as near the coast as Guajome Lake (G7; two fledglings 13 April 1999, S. Grain) and the Tijuana River Valley near the west end of Sunset Road (V10; three active nests 22 April 2000, W. E. Haas). The Long-eared Owl probably persists at some of the sites in Camp Pendleton where Bloom (1994) reported it 1974–92, here all mapped in red. Atlas observers did not cover Camp Pendleton at night. The highest elevations at which we found the Long-eared Owl nesting were 4286 feet in Johnson Canyon (D19; two calling males 14 March 1998, W. E. Haas) and 4320 feet at the more eastern of Twin Lakes (C19; adult with fledgling 2 June 2001, P. D. Jorgensen).

During the atlas period 1997–2002 we did not confirm Long-eared Owl breeding in the Anza–

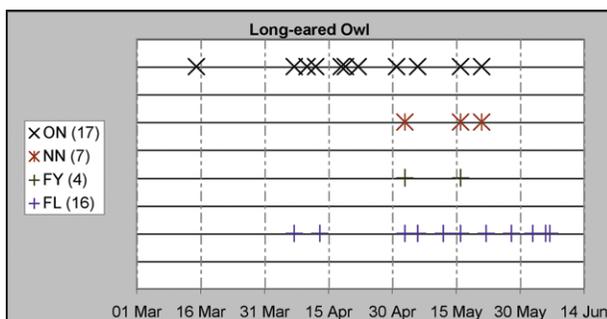




Borrego Desert, perhaps because of the drought conditions prevailing over most of this interval. Previously, however, breeding was known at Tamarisk Grove (I24; nested frequently at least 1964–95, ABDSP database, Massey 1998) and Clark Dry Lake (D26; nested 1993–95, M. L. Gabel in Massey 1998). In 1998 a pair remained at Tamarisk Grove as late as 5 April but failed to nest (P. K. Nelson, P. D. Jorgensen). In 1999, three remained in the mesquite bosque of the Borrego Sink as late as 15 April; in 1993, six were there 8 May (R. Thériault).

Unexpected were four scattered sightings of single Long-eared Owls in sparsely vegetated desert 1–13 April 2000 (R. and S. L. Breisch, J. R. Barth, M. B. Mulrooney). These are mapped as presumed nonbreeding, though the birds might nest in crevices in eroded badlands, as does the Great Horned Owl. Also mapped as presumed nonbreeding are two additional sites of Long-eared Owl pellets found in late April and May (D. C. Seals).

**Nesting:** In San Diego County, the Long-eared Owl nests typically in abandoned raptor nests in willows and oaks and atop woodrat nests and accumulations of debris trapped in the crotches of large oaks. Of 69 egg sets collected 1889–1961 and summarized by Bloom (1994), 57 were in oak, willow, or cottonwood, but four were in euca-



lyptus and one was in an orange tree. At Tamarisk Grove the birds nested in the athel tamarisks. Nests may be a variety of heights, from the ground (rarely) to 40 feet up in trees. Higher nests are probably unsuitable because they lack sufficient cover or leave the young vulnerable to the wind; nests of the Long-eared Owl are rarely if ever improved, so the eggs and young typically develop in a shallow depression or on a platform of sticks or debris rather than in a more protected cup-like nest (Marks et al. 1994). The increase in San Diego County of the American Crow, Cooper’s Hawk, and Red-shouldered Hawk has augmented the supply of nest sites; the owl uses all of these, as well as old nests of the Red-tailed Hawk and, formerly,

Swainson’s Hawk (Bloom 1994, W. E. Haas).

Strengthening the pair bond before the breeding season, the male Long-eared Owl frequently begins broadcasting its advertisement calls in December or January—in San Diego County earlier than recorded farther north, as in Idaho and Montana (Marks et al. 1994). Egg-laying occurs from February to May. Dates of 66 egg sets collected 1889–1961 range from 7 February to 4 May; Sharp (1907) reported eggs on 10 May. Our dates for occupied nests range from 24 February (1998) to 26 May (also 1998—the breeding season was most extended in the wettest year of the atlas period). Our dates of fledglings range from 28 April to 10 June. These records are within the Long-eared Owl’s normal breeding season in North America (Marks et al. 1994).

**Migration:** In San Diego County, the Long-eared Owl is at least partially migratory. Some pairs remain year round near nest sites; others move short distances. For example, owls banded in Bandy Canyon (K13) 16 May 2001 were found in winter in the nearby San Pasqual Valley (J12/ K12), and some from the oaks of Sycamore Canyon were found in winter in the riparian forest near Kumeyaay Lake (P11; W. E. Haas). Young may migrate much greater distances: a bird banded in Escondido 22 April 1934 was found at Corbeil, Ontario, Canada, 9 October of the same year (Lincoln 1936a). At many breeding sites Long-eared Owls cannot be found once fledglings become independent. This may be the result of migration and dispersal but also because the birds go nearly silent once the breeding season has ended. The migration schedule, if any, is obscured by the several sightings of apparently nonbreeding birds through the breeding season.

**Winter:** Winter records for the Long-eared Owl range from single individuals to relatively large communal roosts. Roost sites and the number of owls using them

change from year to year. Communal roosting is common in this nomadic species; in Europe but not in North America it has been linked to fluctuations in the abundance of prey (Hagen 1965, Korpimäki and Nordahl 1991). Long-eared Owls roosted in Sycamore Canyon continuously from November 1997 through the following breeding season, corresponding to heavy rain and a population explosion of the California vole, which far outweighed all other prey items taken by the owls during that period.

Communal winter roosts are known mainly from the Anza-Borrego Desert, especially in rows of athel tamarisk near Clark Dry Lake (D26; 12 on 3 January 2002, S. Bell) and the Borrego Sink (G25; 25 on 8 February 1999, R. Thériault; 30 on 22 December 1991, G. L. Rogers). In natural desert habitats aggregations are smaller, up to five in Wonderstone Wash (D29) 10 January 2002 (P. D. Jorgensen), three in an isolated palo verde at the north end of Clark Valley (C25) 1 December 2001 (H. E. Stone). On the coastal slope a former roost in Rancho Otay (U12) had up to 12 on 15 December 1979 (B. Cord). But in this area wintering Long-eared Owls are more frequently solitary, roosting in a wide assortment of tree species including willows, oaks, eucalyptus, and tamarisk.

**Conservation:** The Long-eared Owl has experienced a steep decline in southern California during the 20<sup>th</sup> century, usually attributed to the loss of riparian and grassland habitats (Marti and Marks 1989, Bloom 1994). Historically, the Long-eared Owl was common in riparian forests along the coast (Cooper 1870, Sharp 1907). By 1944 their declining numbers had been noted, “in the main probably as a result of clearing of bottomlands” (Grinnell and Miller 1944). Garrett and Dunn (1981) considered the species “rare coastally, and virtually eliminated there as a breeder.” In 20 years of monitoring birds of prey in Camp Pendleton, Bloom (1994) located only seven territories, three of which had been abandoned by the early 1990s. It should be noted that Bloom’s data on

the Long-eared Owl were incidental to his other work with raptors; he undertook no focused surveys for the species in San Diego County.

Although the original data presented here suggest that the Long-eared Owl has made a comeback of sorts since the early 1990s, none of the recent records even faintly echoes the size of historic breeding colonies. Most breeding locations are sites of single pairs only, rarely clusters of three to eight territories. The Long-eared Owl’s ability to tolerate nearby development and other types of disturbance is low—all currently known nest sites are secluded from human dwellings. Bloom (1994) suggested that this species rarely tolerates disturbance within one kilometer of a breeding territory. Most of our records during the atlas period support this hypothesis. Where the hypothesis did not hold true, a mitigating factor could be found; for example, the nest in Mission Trails Regional Park (P11) was isolated from nearby development by a steep canyon—and abandoned after 1998.

Continued loss of and encroachment near riparian woodlands will surely reverse what gains the species has made during the past decade. Conversely, maintenance and enhancement of existing riparian corridors and oak groves and preservation or restoration of adjacent lands to grassland will be needed to provide breeding habitat sufficient to ensure a reasonably stable breeding population within the county. Bloom (1994) emphasized that in ever decreasing patches of natural habitat the Long-eared Owl loses out in competition for territories and nesting sites with other large birds, suffering predation by hawks, crows, and ravens.

**Taxonomy:** In North America, the Long-eared Owl has been divided into two subspecies, *A. o. wilsonianus* (Lesson, 1830) in the east and the paler *A. o. tuftsi* Godfrey, 1947, in the west. Kenneth C. Parkes (in Rea 1983) and Marks et al. (1994), however, questioned the validity of this distinction, which seems unlikely in view of the species’ highly nomadic tendencies.