

Spotted Owl *Strix occidentalis*

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In San Diego County the Spotted Owl lives year round in shady woodlands of oaks and conifers on steep to moderate slopes. Ideal habitat is a stand of mature oaks with a closed canopy, a source of permanent water, and an ample supply of rotted-out cavities, abandoned raptor nests, or debris platforms. An abundance of the owl's favored prey, the big-eared or dusky-footed woodrat, enhances the habitat as well. Although the Spotted Owl uses a wide range of forest types, in San Diego County it is limited by the paucity of forest: probably only 25–50 pairs currently reside here.

Breeding distribution: In San Diego County the Spotted Owl typically breeds at elevations above 2500 feet and is most frequent between 4000 and 6000 feet, where oak woodlands and dusky-footed woodrats are common. Recent known nest sites range from about 5800 feet elevation in the Laguna Mountains down to 2100 feet in Black Canyon (I16; nest in 1994, Cleveland National Forest data). They may be on moderate slopes or in steep ravines within conifer-dominated woodlands (e.g., in upper Agua Tibia Canyon, C13, Cleveland National Forest data). A nest near Espinosa Creek (R20) 24 May 1999 (W. E. Haas) is the southernmost known for the California subspecies of the Spotted Owl; the Spotted Owl's occurrence in Baja California is based on only three sight records from the Sierra San Pedro Mártir.

On the basis of a survey in 1988, Gutiérrez and Pritchard (1990), estimated a population for all of Palomar

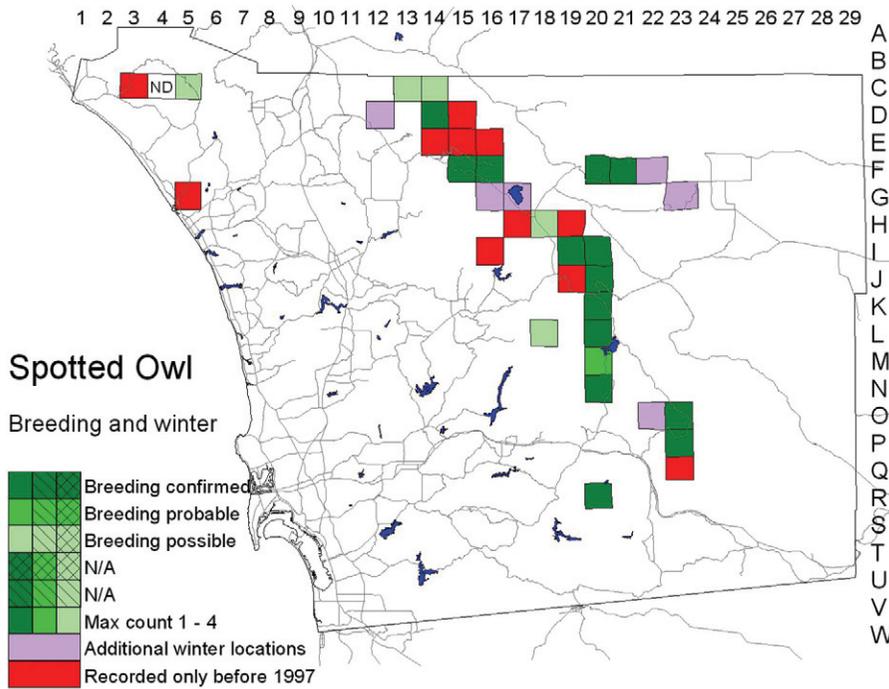
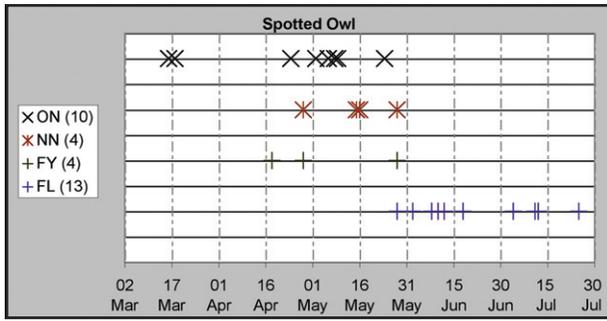


Photo by Anthony Mercieca

Mountain to be 21 individuals, distributed among 13 locations.

Albert M. Ingersoll collected a set of two Spotted Owl eggs from a cliff ledge “near Oceanside” (= Ysidora Gorge, G5, along the Santa Margarita River?) 24 March 1894, and B. P. Cole collected another from a hole in a sycamore in San Onofre Canyon (C3/C4) 20 March 1908 (Willett 1912, WFVZ 21133, 69985). One recent sighting suggests a few Spotted Owls could persist in the Santa Margarita Mountains: one at 2350 feet elevation 1.3 miles south of Margarita Peak along a tributary to San Onofre Creek (C5) 14 August 1997 (J. M. Wells).

Nesting: In San Diego County, the Spotted Owl nests in abandoned raptor nests, in tree cavities, atop accumula-



tions of debris trapped in the crotches of large oaks, and probably in broken tree trunks, if sufficiently high above the ground. Large trees (tall, and of large diameter) and a closed canopy are characteristic of all nest sites in San Diego County. At breeding sites throughout the species' range, high canopy closure is common (Gutiérrez et al. 1992), and the presence of large trees is critical (Gutiérrez et al. 1995). Historically, however, Spotted Owls also nested on cliffs (Bent 1938, Gutierrez et al. 1995), as attested by the eggs collected near Oceanside.

The Spotted Owl frequently begins broadcasting its advertisement calls in December, when pair bonds are strengthened prior to the breeding season. It evidently lays eggs from mid March to April, though actual egg data from San Diego County are confined to the two collected sets mentioned above. Our dates for occupied nests range from 16 March to 24 May; our dates of fledglings range from 28 May to 25 July. At one nest in Cuyamaca Rancho State Park (N20) followed by Betty Siegel in 1999, the chicks were still all downy 16 May, then fledged with only the heads still downy 25 July. These records are within the Spotted Owl's normal distribution of breeding activities rangewide (Gutiérrez et al. 1995).

Migration: The Spotted Owl is nonmigratory in San

Diego County. Occurrences at lower elevations outside of the breeding season are few, just a couple of reports by Eleanor Beemer in the mid 20th century (Unitt 1984). Young Spotted Owls may disperse short distances from their natal territories, but climate-driven altitudinal migration as reported from the Sierra Nevada (Verner et al. 1992) is probably unnecessary in San Diego County, where there is no evidence for it. A report of one at the San Diego Sports Arena (R8) 19 November 1973 (Gould 1977) seems unlikely and lacks supporting details.

Winter: Winter records for the Spotted Owl are similar in location to those for the breeding season, as expected for a nonmigratory species. One at 2200 feet elevation in Agua Tibia Canyon (D12) 20 February 2002 (K. L. Weaver) was calling territorially. Some records from the upper San Luis Rey River valley (F15/F16), including one of a juvenile, may have been the result of displacement from breeding sites at higher elevations nearby that were burned in the fire of November 1999 (W. E. Haas).

Conservation: Data adequate to demonstrate a trend in the Spotted Owl population are not available for San Diego County, but elsewhere in southern California it is declining (LaHaye et al. 1994). Gutiérrez and Pritchard (1990) found the

species' density on Palomar Mountain in 1988 to be unusually high and suggested that a wildfire the previous year was responsible for driving birds away from former territories and concentrating them in the remaining habitat. Because of its low numbers and need for woodlands with a closed canopy, the Spotted Owl may be especially susceptible to habitat loss to fires. Many of the owl's known sites burned between 1999 and 2003. High fidelity of adults to their territories, low survivorship of young, and lack of knowledge about dispersal of juveniles (see Gutiérrez et al. 1995) mean that the owl's reoccupation of burned habitat is uncertain, even if the trees recover adequately.

Although the Spotted Owl is found in areas of relative isolation, the burgeoning of San Diego County's human population into rural areas may affect this rare species. Many of the observations during the atlas period were on public lands, suggesting inherent protection. However, the health of the forests is related to availability of ground water during the dry season and extended droughts. Demands for ground water to provide for the needs of the human population expansion into the back country, in addition to drawdown of the water table for bottled drinking water, may lead to the extirpation of this

species from all but the most remote natural areas. The owl's ability to tolerate nearby development may be low; all currently known nest sites are secluded from human dwellings.

Taxonomy: The California Spotted Owl, *S. o. occidentalis* (Xantus, 1859) is the subspecies of Spotted Owl in San Diego County, as elsewhere in southern California. It

is intermediate between the darker, more finely spotted Northern Spotted Owl, *S. o. caurina* (Merriam, 1898), of the Pacific Northwest and the paler, more coarsely spotted Mexican Spotted Owl, *S. o. lucida* (Nelson, 1903), of the southern Rocky Mountains. The subspecies differ in mitochondrial DNA sequences as well as in plumage (Gutiérrez et al. 1995).