**Common Raven *Corvus corax***

The world's largest passerine, the Common Raven is a common permanent resident of San Diego County. It occurs in all habitats, from beaches to mountaintops to desert floor. The change in the raven is less dramatic than that of the American Crow, but the raven too is on the increase, aided by increases in man-made food sources like refuse and road kills and man-made nest sites like buildings, bridges, and power-line towers.

**Breeding distribution:** After the House Finch, the Common Raven is the most widespread breeding bird in San Diego County. Field work for this atlas identified it as possibly breeding in 475 of 478 covered squares, and as confirmed breeding in 359. Ravens breed as dispersed pairs, but flocks may be seen through the breeding season. Such flocks presumably consist of immature birds; ravens do not breed until they are at least two years old (A. M. Rea). Sites of frequent large concentrations are Warner Valley (up to 175 east of Lake Henshaw, G18, 12 May 2001, T. Stands), Torrey Pines State Reserve (N7; up to 62 on 3 April 1998, K. Estey), and from Potrero to Canyon City (U20/U21; up to 180 near Canyon City 21 June 1999, D. C. Seals). In some cases, including the last, the reason for the concentration was a communal roost. The Common Raven tends to be less numerous in the Anza–Borrego Desert than on the coastal slope, but flocks can be seen through the breeding season there too, with up to 25 east of Peg Leg Road (F26) 1 May 2001 (B. Siegel) and 39 at a communal roost in palo verde trees near the northeast corner of the county (C29) 8 July 1999 (R. Thériault).

**Nesting:** Ledges and crevices in cliffs are the raven's most common traditional nest site. Atlas observers described several on cliffs of both rock and eroded earth. Large trees are also frequent nest sites; atlas observers reported raven nests in coast live oaks, palms, eucalyptus, athel tamarisks, and one in a mesquite. Many ravens now nest on man-made structures, especially bridge abutments and the towers supporting electrical lines. Following major electricity-supply lines, such as the one crossing much of southern San Diego County, often leads to an alternating succession of raven and Red-tailed Hawk nests. Ravens nest in San Diego's most distinctive landmark, the California Tower in Balboa Park (R9; J. K. Wilson).

Our observations reveal that in San Diego County Common Ravens lay mainly from early March to at least early May, with some in the Anza–Borrego Desert and along the Mexican border beginning in mid February (as implied by young already fledged at Tecate, V19, on 6 April 2000, M. and B. McIntosh). Bent (1946) listed California egg dates from only 2 March to 19 May, but Boarman and Heinrich (1999) reported laying as early as mid February. The wide spread of dates of ravens carrying nest material suggests that some birds start their nests weeks before egg laying and maintain them as long as they are occupied.

**Winter:** The Common Raven's pattern of distribution in San Diego County in winter is much the same as that in the breeding
season, with concentrations in the same areas. The highest numbers reported in winter were, with one exception, little greater than the maxima in the breeding season: 228 in Borrego Springs (F24) 20 December 1998 (R. Thériault et al.), 229 at Oak Grove (C16) 12 December 1998 (K. L. Weaver), and 395 east of Lake Hodges (K11) 2 January 2000 (C. G. Edwards). We found the Common Raven even more widely in the winter than in the breeding season, picking it up regularly in the three squares where we missed it then (up to 10 along the Silver Strand, T9, 28 February 1998, J. L. Coatsworth).

Conservation: The Common Raven is on the increase over much of its range, including California (Sauer et al. 2003). The increase includes San Diego County, though perhaps not uniformly. Christmas bird count results suggest roughly a doubling of the population from the early 1980s to the new millennium in the Anza–Borrego, Escondido, Rancho Santa Fe, and San Diego circles but no significant change in the Oceanside or Lake Henshaw circles. Factors favoring ravens include road building and increased traffic, which lead to more carrion that ravens scavenge. Man-made structures offer many new nest sites. In Idaho, Common Ravens prefer electrical-line towers over natural sites (Steenhof et al. 1993). The distribution of these towers may account in part for the pattern of raven abundance in San Diego County.

The increase of ravens can have a negative effect on other birds. The Common Raven is a major predator of Least Tern colonies in San Diego County, leading to efforts at control and experiments in aversive conditioning.

Taxonomy: The Common Ravens of San Diego County, like those elsewhere in both Alta and Baja California, are of the small subspecies C. c. clarionensis Rothschild and Hartert, 1902 (Rea 1983, Rea in Phillips 1986). A genetic study revealed a high degree of differentiation between it and others in both mitochondrial DNA and nuclear microsatellites (Omland et al. 2000).