

Swainson's Hawk *Buteo swainsoni*

Swainson's Hawk performs one of the most spectacular of all bird migrations: on its voyages between western North America and Argentina, almost the entire population gathers into huge flocks as it funnels through Central America. Unfortunately, the hawk has been afflicted by contraction of its breeding range in North America and mass death by poisoning with pesticides in South America. Although a fairly common breeding bird in San Diego County early in the 20th century, Swainson's Hawk no longer nests anywhere in southern California and has been designated threatened by the California Department of Fish and Game. Over most of San Diego County, Swainson's Hawk is now a rare migrant, but the Borrego Valley is an important staging site in spring.

Breeding distribution: Sharp (1902) considered Swainson's the commonest nesting hawk in the valleys of San Diego County's coastal lowland. The birds nested at the edges of riparian woodland and foraged in nearby grassland. Only one specimen, from Campo (U23) 15 July 1877 (SDNHM 337), suggests breeding above 1000 feet elevation.

The first summer sighting of Swainson's Hawk in San Diego County since 1933 was one of the least expected discoveries generated by the atlas study. Eight molting sub-adults were in Warner Valley just north of Lake Henshaw (F17) 17 June 2000 (K. J. Winter, S. E. Smith), and these had increased to 25 one week later, 24–25 June (G. Rebstock, J. R. Barth, J. E. Pike, NAB 54:423, 2000). The birds were drawn to the vast swarms of grasshoppers then overrunning the valley. There was no previous record of Swainson's Hawks in flocks in southern California in summer.

Nesting: In San Diego County, Swainson's Hawks built their nests at heights of 35 to 75 feet in cottonwoods or sycamores (Sharp 1902). These two trees account for all but one of the 33 egg sets collected from San Diego County 1900–33. They attest to the hawk's attachment in southern California to riparian woodland, an attachment maintained by the remnant population in the Central Valley (Schlorff and Bloom 1983). The egg sets range in date from 12 April to 16 May; Sharp (1907) reported eggs near Escondido as late as 1 June.

Migration: Spring dates for Swainson's Hawk in San Diego County range from 31 January (1999, one at Lakeside, P14, M. B. Stowe, NAB 53:208, 1999) and 15 February (1996, one near Leucadia, K6, K. and C. Rademaker, NASFN 50:222, 1996) to 15 May (1977, one in the Borrego Valley, E. Copper) and 28 May (1999, one at Lake Cuyamaca, M20, A. P. and T. E. Keenan), with most from mid March to late April. Over most of the county the birds are seen singly, sometimes in small flocks. The Borrego Valley is on a migration corridor, the birds stopping to roost in strips of tamarisk trees and at nurseries (F25). In 2003 and especially 2004, Hal Cohen and Paul Jorgensen



Photo by Anthony Mercieca

organized daily (2004) or nearly daily (2003) monitoring. The watch yielded 2055 Swainson's Hawks between 27 February and 26 April in 2003 and 5210 between 22 February and 24 April in 2004. In 2004 the largest single concentration was of 1000–1500 arriving on the evening of 25 March. The birds feed on flying ants or dragonflies and on the caterpillars of the white-lined sphinx moth. When thermal air currents arise in mid morning, most of the hawks head northwest through Coyote Creek canyon. A few follow other routes such as San Felipe Valley, exemplified most notably by 74 near Scissors Crossing (J22) 18 March 1999 (ABDSP database).

In fall Swainson's Hawk is less frequent than in spring, but the birds still make some use of the route across the Anza–Borrego Desert. This was illustrated most dramatically on 20 October 1999, when a flock of at least 140 roosted at Ocotillo Wells (I29; P. D. Jorgensen), perhaps the same as 130 that arrived 35 miles to the southeast near El Centro, Imperial Co., four days later (K. Z. Kurland; NAB 54:104, 2000). The only other flocks reported in San Diego County in fall were 50–60 at Warner Springs (F19) 29 October 1988 (D. MacKenzie, AB 43:167, 1989) and 78 at Borrego Springs 21 October 2001 (P. D. Jorgensen). Fall dates range from 9 September (1975, Point Loma, S7, AB 30:126, 1976) to 1 November (1986, Wilderness Gardens, D13, C. G. Edwards, AB 41:143, 1987).

Winter: For many years, Swainson's Hawk was accidental in the United States in winter (Browning 1974). Since 1990, small numbers have begun wintering in the Sacramento–San Joaquin delta (Herzog 1996), and a few wintering birds have been noted elsewhere in California. In San Diego County the only winter records are of one at Whelan Lake (G6) 27 December 1986–8 March 1987 (G. McCaskie, AB 41:328, 1987), one in the Tijuana River valley 2 December 1995 (P. A. Ginsburg, NASFN 50:114, 1996), and one in Murphy Canyon (Q10) 19 December 2000 (M. A. Patten, NAB 55:227, 2001). The last two may have been delayed fall migrants.

Conservation: Swainson's Hawk was in decline by the 1930s, when E. E. Sechrist reported to Willett (1933) that it was "now scarce near San Diego." The last eggs collected in the county are dated 1933 as well. The factors extirpating Swainson's Hawk as a breeding bird from southern California are unclear, but shooting, elimination of riparian woodland, urban development, rodenticides, and other pesticides may all have contributed. Urbanization and changes in crops threaten the remaining population in the Central Valley, estimated at about 430 pairs in 1988 (California Department of Fish and Game 1993). Given that this is the only population remaining west of the Sierra Nevada, the numbers seen in the Anza-Borrego

Desert suggest that most or all of California's Swainson's Hawks migrate across San Diego County.

After a low point from the mid 1960s to mid 1980s, numbers of Swainson's Hawk migrating through southern California have increased somewhat (Patten et al. 2003). An increase seems counterintuitive, given recent huge mortality in Argentina (Woodbridge et al. 1995). It may be related to a northward shift of the winter range to Mexico and Central America enabled by deforestation. Such a shift could account for more frequent wintering and arrival in February, another recent change. Sharp (1902) specified that Swainson's Hawk arrived in San Diego County 10–20 March.