## Peregrine Falcon Falco peregrinus

The Peregrine Falcon was decimated in the 1950s and 1960s by DDT poisoning, which prevents birds from depositing adequate calcium in their eggshells. San Diego County's small population of about 12 breeding pairs of Peregrines was extirpated. Then, with the ban on DDT in 1972 and an ambitious reintroduction program, the falcon recovered, enabling two of its three North American subspecies to be removed from the federal endangered-species list by 1999. By 2004, five pairs had recolonized San Diego County, nesting at both artificial and natural sites (Wildlife Research Institute 2004). Since the 1980s the number of winter visitors has increased as well, with about 15 to 35 being seen in the county annually by the beginning of the 21st century.

Breeding distribution: The reestablishment of the Peregrine Falcon in San Diego began with a captivebred female, released at Point Loma (S7) in 1986, that mated with a wild male and began nesting annually at the San Diego end of the San Diego Bay bridge (S9) in 1989 (Pavelka 1990). She died at the age of at least 17 in 2000. Another pair nested on a crane along the waterfront of National City (T10) at least from 1995 to 1997 (A. Mercieca). Yet another pair colonized the cliff at the tip of Point Loma, nesting repeatedly, including at least 1997 and 1999; one of the birds from National City shifted to Point Loma in 1997 (A. Mercieca). A fourth pair nested in Ysidora Gorge along the lower Santa Margarita River (G5) in 2000, reoccupying a site used regularly before 1950 (S. Buck). In 2003, a pair nested on a ledge of the U. S. Grant hotel in downtown San Diego (S9; M. Sadowski).

Other nest sites are so far unconfirmed but possible. At Torrey Pines State Reserve (N7/O7), an apparent pair



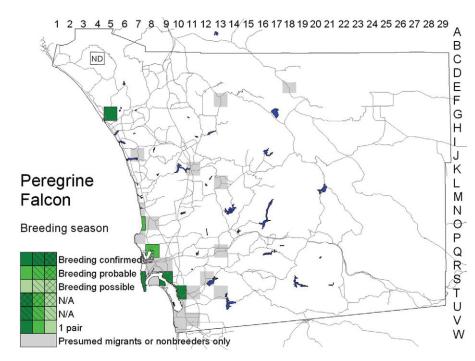
Photo by Anthony Mercieca

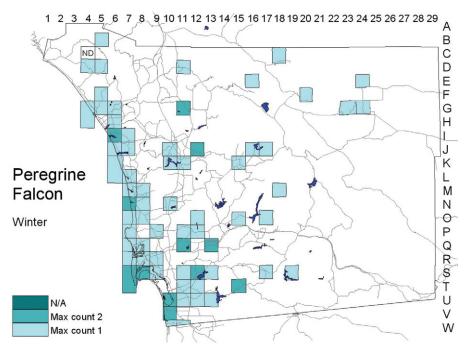
was calling to each other, one bird in display flight, 23 March 1998 (B. C. Moore), two were regular through the winter of 2000-01 (K. Estey), and one was harassing ravens repeatedly in February 2002 (S. E. Smith). In lower Tecolote Canyon (Q8) 16 April 1998 an apparent pair was in courtship flight, then flew off together toward Mission Bay (E. C. Hall). From 22 to 26 April 1998 an apparent pair along the Chula Vista bayfront (U10) was carrying Mourning Doves toward the salt works (B. C. Moore). An apparent pair was at the California Center for the Arts, Escondido (J12), 19 February 1999 but did not remain later in the breeding season (C. Rideout). Two birds were together around the courthouse in El Cajon (Q13) 5 December 1997-19 January 1998 (A. Mercieca), but only a single individual remained into the spring, staying at least until 30 March 2001 (K. Neal). A pair, including a bird escaped from a falconer, was back at this site in spring 2004 (D. Bittner).

Nesting: The Peregrine Falcon's traditional nest site is on a cliff ledge, sometimes in an old nest of another bird of prey or a raven, more often in just a scrape in debris (White

> et al. 2002). With recolonization and adaptation to urban living, the falcons have adopted manmade structures like buildings, cranes, and bridges. The nest on the Coronado bridge in 1989 was on a ledge 12 to 14 inches wide, in a scrape in about 1 inch of pigeon feces and dust (Pavelka 1990). Sites recorded with collected eggs in San Diego County include cliffs of granite, clay, and eroded earth overlooking the ocean, as well as old nests of the Golden Eagle and Common Raven. A pair commonly rotates among nest sites on a single cliff, and some sites, including those in San Diego County, have been used for generations.

> Dates of San Diego County egg sets, collected 1894-1950 or reported in the literature, range





from 8 March to 25 May. The current population begins nesting somewhat earlier. In 1997 the clutch at Point Loma hatched around 3 April, in 1999 around 6 April (A. Mercieca), corresponding to egg laying in the last week of February. Similarly, Pavelka (1990) estimated the young on the Coronado bridge to be one and a half to two weeks old on 18 April 1989, corresponding to egg laying around 1 March. These young fledged from 14 to 20 May.

Migration: On the basis of recoveries of banded birds, Anderson et al. (1988) demonstrated substantial migration of Peregrines along the Pacific coast. They reported an immature banded as a nestling near Aristazabal Island, British Columbia, found stunned on a hotel balcony in San Diego seven months later. With the species' recolonization, its migration schedule in San Diego County is less clear. Nevertheless, the Peregrine still occurs here mainly as a winter visitor, being most frequent from October to February. There are still few sightings away from known or possible nest sites during the breeding season from March through June.

Winter: Wintering Peregrines are most numerous along the coast, where prey like shorebirds and ducks concentrate. San Diego Bay serves as a nucleus for the wintering birds as well as the breeding population. San Diego Christmas bird counts have returned up to 11, on 16 December 2000; no other San Diego County count has had more than three. The species is usually seen singly; from 1997 to 2002 our maximum count per atlas square per day was two.

Away from the coast, the Peregrine Falcon is seen most often around lakes, such as Sweetwater Reservoir (Wildlife Research Institute 2004), but occasionally far from water. During the atlas period we did not encounter the species in the higher mountains, on the Campo Plateau of southeastern San Diego County, or anywhere in the Anza–Borrego Desert except the Borrego Valley.

**Conservation:** In the early 20<sup>th</sup> century the Peregrine nested regularly in San Onofre Canyon (C3), at Las Flores (E3), in Ysidora Gorge, near Pala (D10), in Bandy Canyon (K13), at Torrey Pines, and at Point Loma. John Oakley estimates about 12 historic Peregrine territories in San Diego County. No nesting was reported between 1950 and 1989, corresponding to the widespread use of DDT beginning in the 1940s (Fyfe et al. 1987). By 1960 the falcon was nearly if not completely extirpated as a breeding bird from Santa Barbara to San Diego, including the Channel Islands (Walton et al. 1988). From 1956 to 1980 the San Diego Christmas bird count averaged just 0.4 per year. In 10 years of monthly counts at San

Elijo Lagoon 1973–83 King et al. (1987) saw only two. An increase in wintering Peregrines became noticeable in the mid 1980s, and by 1997–2002 the average on the San Diego Christmas bird count was 6.3. The Wildlife Research Institute (2004) estimated 20 wintering in the southwestern quadrant of San Diego County in 2002.

The effort to restore the Peregrine Falcon through reintroduction included San Diego County, with 12 birds released at Point Loma 1982–88 (Pavelka 1990). Only the one nesting on the bridge, however, originated from these releases. With most or all of the historic sites still intact, and many new possible sites on man-made structures, San Diego County's Peregrine population could easily grow beyond its historic level. Though there is less habitat for shorebirds than formerly, the introduction of the Domestic Pigeon and the continued abundance of the Mourning Dove, staples of the falcon's diet, assure its food supply. A return to a small, stable population is likely unless new environmental poisons or other challenges intervene.

**Taxonomy:** The resident subspecies of the Peregrine Falcon in California, and most migrants, are the widespread medium-dark F. p. anatum Bonaparte, 1838. The very dark and, in immatures, heavily streaked subspecies of the Pacific Northwest, F. p. pealei Ridgway, 1873, migrates in some numbers to northern California (Anderson et al. 1988, Earnheart-Gold and Pyle 2001). Two have been reported from San Diego County, a specimen from San Diego Bay 31 March 1908 (Swarth 1933, CAS 11694) and the bird banded in British Columbia reported by Anderson et al. (1988). The pale F. p. tundrius White, 1968, likely occurs rarely, though there is yet no specimen or conclusive report from San Diego County. It nests in the tundra and migrates far to the south. White (1968) reported one specimen from Los Angeles County, and Earnheart-Gold and Pyle (2001) reported 10 sightings from Southeast Farallon Island.