

## SWALLOWS — FAMILY HIRUNDINIDAE

### Purple Martin *Progne subis*

A rare and declining summer visitor now restricted almost entirely to the mountains, in California the Purple Martin struggles for survival. Its preferred nest site is specialized: holes in prominent isolated dead trees. It is loosely colonial, several pairs sometimes nesting in a single cavity-ridden snag, but in the Southwest it has failed to make the shift to the multicompartment birdhouses that now are its mainstay in the eastern U.S. In our area the European Starling, a more aggressive secondary-cavity nester, has now taken over most of the martin's nest sites. Even as a migrant the Purple Martin is now very rare here.

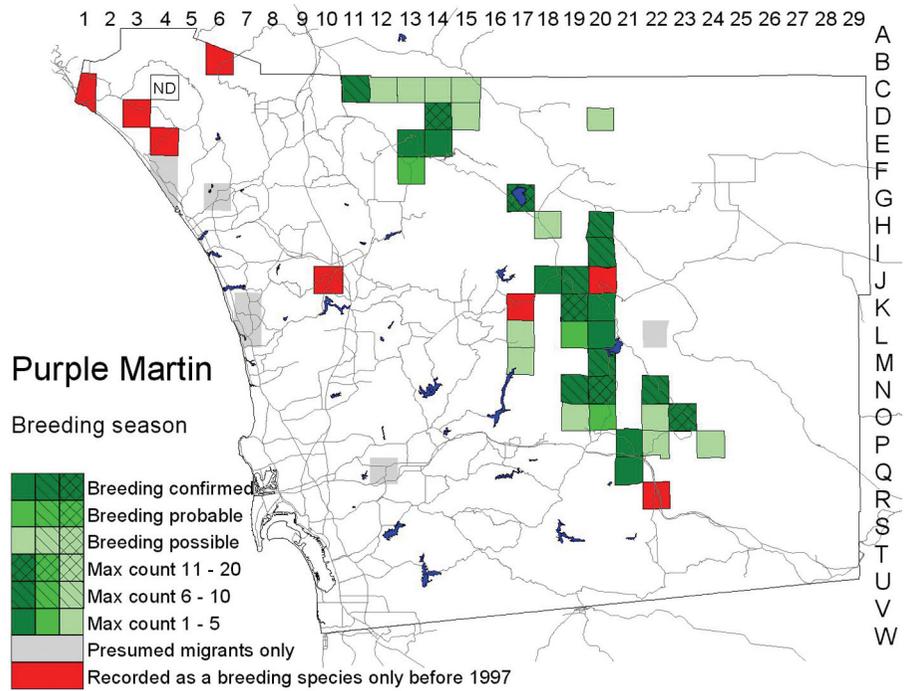


Photo by Anthony Mercieca

**Breeding distribution:** The Purple Martin now nests only on and around San Diego County's higher mountain ranges, and the birds are few and scattered. On Palomar, they occur not only at the higher elevations but at a few places around the base as well: along Magee Rd. (C11; up to six, with one or two pairs nesting annually in holes in a power pole, J. M. and B. Hargrove), Cutca Trail in Long Canyon (C14/15; one on 16 May 1999; J. M. and B. Hargrove), and near Rincon Junction (F13; four, including at least one pair, 12 June 1999, E. Wallace). Purple Martins are also widely but thinly distributed through the Volcan, Cuyamaca, and Laguna mountains. In this area, they may nest downslope as far as Santa

Ysabel (J18; five, including fledgling, 17 July 2001, J. R. Barth), possibly down into the gorge of the San Diego River above El Capitan Reservoir (L17, two on 14 June 1997; M17, one the same day, R. C. Sanger). The only site south of Interstate 8 is in Rancho Corte Madera near Long Valley Peak (Q21; four, including at least one occupied nest, 20 June 1998, M. U. Evans). Around Hot Springs Mountain, the county's highest peak, the only record is of a single female circulating among snags at the Lost Valley Boy Scout camp (D20) 25 June 1998 (P. Unitt). At least in 1998, there must have been a colony near Lake Henshaw (G17); the site was not located, but up to 20 birds, including adults feeding fledglings, were there from 17 to 19 July (C. G. Edwards, K. L. Weaver).

Colony sites shift with the availability of suitable snags and, undoubtedly, the intensity of competition for them with other hole-nesting birds. Over the years, Cuyamaca Peak has been the most consistent site. From 1997 to 2001, numbers here ranged up to 20 on 18 April 1998 (N20; possibly including some migrants on this date, E. Siegel), 10 (including fledglings) 14 July 2001 (M20; J. R. Barth), and 8 on 14 June 2000 (M20; P. D. Jorgensen). The only other areas with likely more than two pairs were near Lake Henshaw, Pine Hills (K19; 18 on 26 June 2001, M.

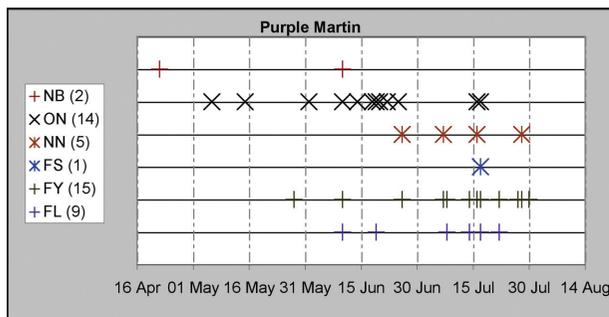


B. Stowe), Mt. Laguna (O23; up to 16 on 13 and 14 June 1999, C. G. Edwards), and Volcan Mt. (H20/I20; up to eight, including apparent juveniles, 16 July 2000, A. P. and T. E. Keenan). The total San Diego County population during the atlas period was probably about 100 pairs.

**Nesting:** The Purple Martin is a secondary-cavity nester, in southern California usually selecting tall isolated trees, dead or partly dead, for its nest hole. The trees are typically on the upper third of a slope, in open woodland of under 20% canopy cover (Williams 2002). The cavities may be natural, the result of decay following a fire or lightning strike, or excavated by woodpeckers. The only artificial sites reported by our atlas observers were those along Magee Rd. and in a telephone pole in Sherilton Valley (N19; G. and R. Wynn). Only once has use of a birdhouse been reported in San Diego County, by three or four pairs at Palomar Mt. in June 1985 (J. Robinson, AB 39:963, 1985).

Observations in the mountains of nest building (the birds carry material into their cavities) on 22 April and feeding young on 28 May suggest the martin may lay there as early as the first half of May. At low elevations nesting starts even earlier, though by 2000 there may have been only a single pair left to exemplify this. In 1905 and 1906, respectively, at San Onofre (C1) Dixon (1906) found a nearly completed nest in a sycamore on 27 March and the birds selecting nest sites on 31 March. Our latest record of young in the nest, on 28 July, agrees with eggs laid in mid June; collected egg sets (WFVZ) are dated 3, 18, and 22 June.

**Migration:** Currently, the Purple Martin usually returns to southern California in April. From then through mid May migrants are rarely seen far from nesting sites. The earliest date recorded by our atlas observers, 22 March 1998 (one along Magee Rd., J. M. and B. Hargrove),



matched the earliest reported previously (Unitt 1984) and, notably, was from the lowest elevation where the birds are currently known to nest. The latest in spring the Purple Martin was noted away from nesting habitat from 1997 to 2002 was 25 May (2000, one in Oriflamma Canyon, L22, J. R. Barth), but past records of stragglers extend to 6 June. Locally breeding birds may remain to 15 August (1999, seven in Sherilton Valley, G. and R. Wynn). Fall migrants from the north pass through mainly in September, and there is still only one record for October.

**Conservation:** The Purple Martin has long been in decline in southern California (Garrett and Dunn 1981). Our atlas effort revealed several new sites for one or two pairs but no large colonies. The martin's decrease on Palomar Mountain is particularly alarming. As recently as 1983 Roger Higson reported 45 pairs nesting there (AB 37:1028, 1983), with a colony in a snag just north of the observatory. That site is now deserted, and the largest one-day count on Palomar 1997–2001 was of a single family. In 2002, though, larger numbers returned to Lower French Valley (D14), where Paul Jorgensen saw 20 on 31 May, entering at least four cavities in three tall Jeffrey pines, and local resident Tony Jaramillo reported 60. The former low-elevation population in northwestern San Diego County, never large, known mainly from Dixon (1906) and Alice Fries' observations from 1967 to 1978, was last reported in the latter year.

The central factor in the Purple Martin's decline is generally acknowledged to be competition for nest sites with the European Starling. Williams (2002) reviewed the species' California distribution and found that it survives only where starlings are rare or absent. Willett (1933) reported the birds' beginning to nest in crevices in buildings in the Los Angeles basin, but this adaptation failed to reach San

Diego before the starlings arrived in the early 1960s, and now has disappeared throughout southern California. Unfortunately, the martins' predilection for nest trees with some open country surrounding them usually means the trees are in the middle of good foraging habitat for the ground-feeding starling. Any effort to encourage the martin to recover will have to entail aggressive starling control, accompanied by habitat enhancement that builds on what little remains. The species' social system implies that its apparent coloniality is a by-product of the scarcity of suitable nest sites, not of innate gregariousness (Brown 1997). Therefore, the population could be rebuilt through the production of isolated pairs; the loss of larger colonies is not the irreversible calamity it would be with more social birds like the Tricolored Blackbird and Least Tern. The martins' beginning to use nest boxes in the Pacific Northwest (Brown 1997) implies that enhancement in southern California could begin with the providing of nest boxes in or near existing nest trees, followed by monitoring and elimination of any starlings. Such boxes need not be the elaborate apartment houses now traditional in the eastern U.S., just a few simple wooden boxes installed in trees or snags that meet the martins' criteria and as remote as possible from foraging starlings. Williams' (2002) study in the Tehachapi Mountains suggests this distance should be at least 1 km from residential development, which favors starlings. Unfortunately, these criteria mean rugged terrain where the installation and monitoring of the boxes will be difficult.

**Taxonomy:** In their medium size and dusky-throated females, the Purple Martins of southern California are consistent enough with *P. s. subis* (Linnaeus, 1758) of the eastern U.S. to be called the same subspecies (Grinnell 1928a, Unitt 1984).