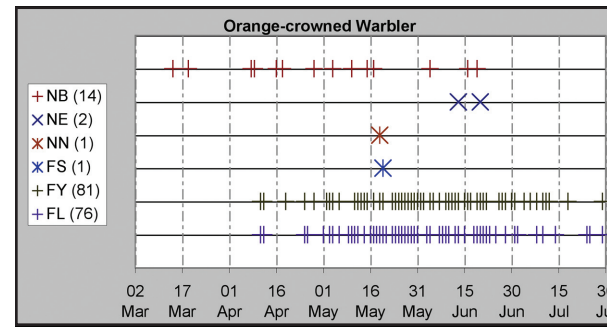
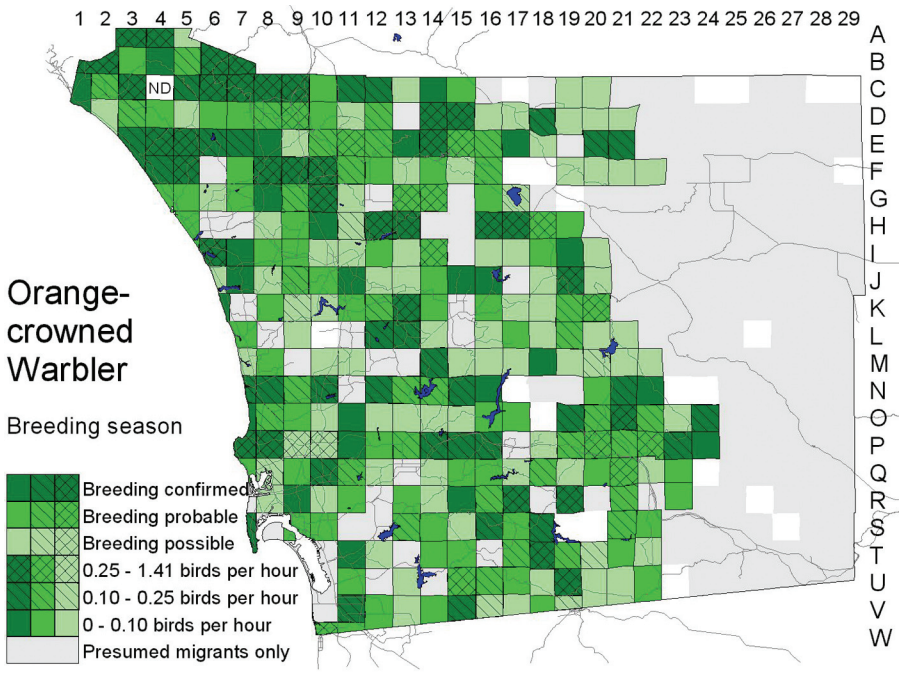
Orange-crowned Warbler *Vermivora celata*

Photo by Anthony Mercieca

An inconspicuous little green bird, the Orange-crowned is second only to the Yellow-rumped as San Diego County's commonest warbler. Because of multiple subspecies and multiple seasonal roles, its status is complex. It is common throughout the county in migration. In winter it is common in the coastal lowland, less so farther inland. As a breeding species the Orange-crowned Warbler is common in coniferous, oak, and riparian woodland, less so in ornamental shrubbery and coastal chaparral. Its status as a widespread breeding bird and winter visitor appears to have evolved just in the 20th century. Like the Western Flycatcher the Orange-crowned Warbler was a stealth invader: the change in breeding and winter status went unappreciated because the process took decades and the species was always common as a migrant.

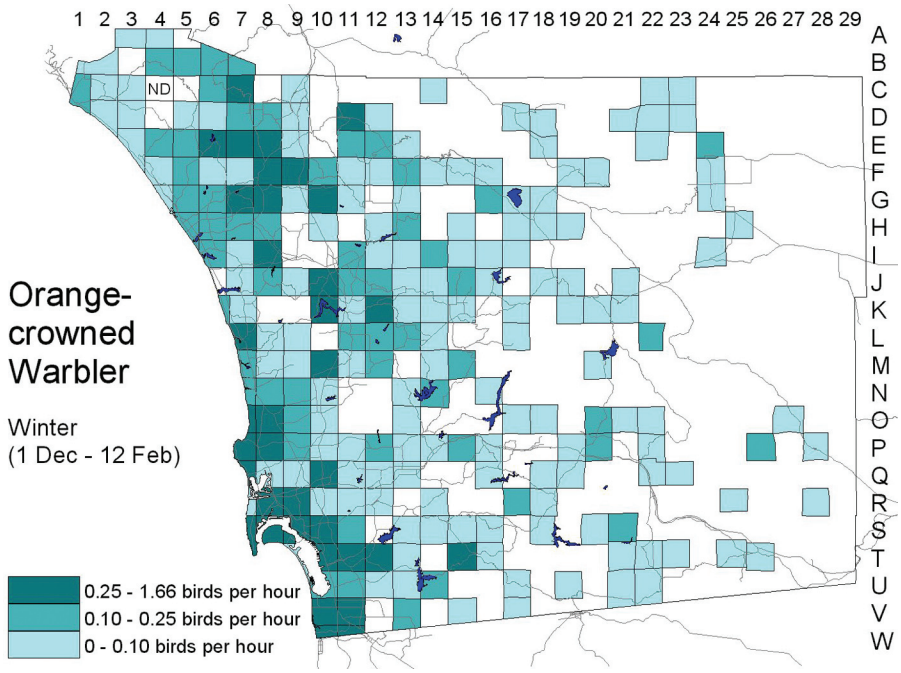


Breeding distribution: The Orange-crowned Warbler is widespread as a breeding bird in riparian, oak, and coniferous woodlands over most of the coastal slope of San Diego County, lacking only from the plateau east of Campo. The population is more concentrated along the axis of the higher mountains and in northwestern San Diego County from Camp Pendleton east to Valley Center and Bear Valley (H13). High counts are of 28 (23 singing males) along the Santa Margarita River north of Fallbrook (C8) 24 May 2001 (K. L. Weaver) and 21 in Woods Valley (H12) 19 June 1998 (W. E. Haas). There are also concentrations farther south, in canyons and on north-facing slopes, as in San Clemente Canyon (P8; 12 on 29 May 1998, C. G. Edwards) and in stands of Tecate cypress on the north slope of Otay Mountain (U15; 26 on 25 May 1999, G. L. Rogers). The breeding range only barely spills onto the east slope of the mountains where oak woodland is still thick, as at 4500 feet elevation in the middle fork of Borrego Palm Canyon (F22; two on 16 June 1999, D. C. Seals). Single birds at Lower Willows (D23) 12 June 1994 (C. Sankpill, L. Clark), 4 July 1998 (B. Getty), and 24 June 2002 (J. R. Barth) suggest the Orange-crowned Warbler is an occasional nonbreeding summer visitor at this riparian desert oasis.



Nesting: Orange-crowned Warblers usually nest on the ground, screened behind dense undergrowth, often on steep slopes or banks (Sogge et al. 1994). As a result, the nests are difficult to find. The only one described by atlas observers, though along a popular trail along Doane Creek (E14) 13 June 1999 (P. Unitt et al.), was typical in being nestled in a hollow on a cut bank.

Along the coast, Orange-crowned Warblers begin nesting in mid March, with observations of nest building as early as 14 March (near the mouth of Las Pulgas Creek, E3, R. and S. L. Breisch) and fledglings as early as 11 April (Bonita, T11, P. Unitt). Four egg sets collected along the



coast 1916–28 range from 26 March to 24 April. Nesting at higher elevations is later in the season, with egg laying continuing at least through mid June. Orange-crowned Warblers may nest late at low elevations, too, as attested by fledglings being fed at Point Loma (S7) 18 July 1998 (C. G. Edwards) and along the Santa Margarita River north of Fallbrook (C8) 29 July 1999 (K. L. Weaver).

Migration: The Orange-crowned Warbler is an early migrant. In spring, the birds begin moving through parts of the Anza–Borrego Desert, where they do not winter, in mid February. Early dates for these migrants are 15 February (1999, six in Smuggler Canyon, L25, R. Thériault) and 18 February (2000, seven in Sunset Wash, I26, L. J. Hargrove), possibly 13 February (2001, one near Little Clark Dry Lake, E27, R. Thériault). By late February the species can be numerous (up to 40 in Indian Canyon, O27, 25 February 1998, P. K. Nelson), and similar concentrations can be encountered at any time from then through early May when the weather compels migrants to pause. Peak migration is in April, with up to 80 at Agua Caliente Springs (M26) 7 April 1994 (Massey 1998). A fallout as large as the "thousands" grounded during a severe windstorm near Banner (K21) 22 April 1967 (G. McCaskie) has not been reported since, though regular monitoring of nearby San Felipe Valley, now known as a corridor for migrants, could detect such events. During May the last of the migrants continue north; late dates are 26 May (1998, four at Yaqui Flat, I23, P. K. Nelson) and 28 May (1999, one at Southwest Grove, Mountain Palm Springs, P27, D. G. Seay). Fall migrants become common in mid August but may be on the move as early as mid July, as in the Salton Sink (Patten et al. 2003).

Winter: Wintering Orange-crowned Warblers are concentrated in the coastal lowland, mainly in riparian woodland and ornamental trees and shrubbery. Maximum winter counts during the atlas' term were of 42 in Coronado (S9) 15 December 2001 (R. E. Webster), 24 in Imperial Beach (V10) the same day (C. G. Edwards), and 29 at San Elijo Lagoon (L7) 22 December 2000 (G. C. Hazard). At higher elevations the species is uncommon (maximum six at Descanso, P20, 11 December 1998, P. Unitt) but occurs widely in riparian and oak woodland. Winter records extend as high as 4600–4700 feet elevation, as near Shingle Spring (D21; one on 21 December 1999, L. J. Hargrove), on the middle fork of Borrego Palm Canyon (E22; one on 19 December 1999, P. D. Jorgensen), and at Lake Cuyamaca (M20; one on 2 December 2001, C. G. Edwards). In the Anza–Borrego Desert wintering Orange-crowned Warblers are uncommon and restricted to irrigated areas and oases. In this area the maximum daily count before 15 February is of four at Bow Willow Palms (P26) 9 January 2000 (M. B. Mulrooney).

Conservation: As a breeding species, the Orange-crowned Warbler has increased greatly in San Diego County, extending its range in the process. This change is due to the subspecies *V. c. lutescens* expanding south. Of this subspecies, Willett (1912) wrote that only "a few remain through the summer and breed in the cañons and on the brushy mountain sides" of southern California. He cited no specific breeding records as far south as San Diego County. Stephens (1919a) called *lutescens* an "abundant migrant," not mentioning any breeding, though he collected a specimen in the Cuyamaca Mountains 6 June 1889 (SDNHM 1349). The only eggs taken by the early collectors were from the breeding range of subspecies *sordida* on the coastal strip. In the 1970s breeding Orange-crowned Warblers were fairly common only at Point Loma, uncommon in montane coniferous woodland, and rare elsewhere (Unitt 1984). The species was not confirmed breeding on the mainland of Baja California until 1987 (Unitt et al. 1995). Thus the evidence suggests that *lutescens* has spread and increased vigorously over the past century.

While the breeding range of *lutescens* was expanding south, the winter range was expanding north. Stephens (1919a) did not mention any wintering by this subspecies, and Dawson (1923) wrote that it "apparently passes entirely beyond the state in winter." Brewster (1902), however, wrote that *lutescens* "winters as far north as San Diego," and the subspecies was collected in winter as early as 1904 (30 December; Witch Creek, J18, FMNH 148559). Now the species is locally common in winter, more widespread, and most of the birds appear to be *lutescens*.

The reasons for the Orange-crowned Warbler's expansion are still a mystery. The spread parallels that of the Western Flycatcher, a species of similar habitats but completely different nesting habits. The warbler is only rarely a host to the Brown-headed Cowbird (Sogge et al. 1994), giving it an advantage for much of the 20th century over other small insectivorous birds.

Taxonomy: Three of the Orange-crowned Warbler's four subspecies occur in San Diego County, and the fourth is a likely vagrant. *Vermivora c. lutescens* (Ridgway, 1872), bright yellow and lightly streaked, is the most common in migration, both spring and fall. It breeds in the Pacific coast district of North America, south to San Diego County or northwestern Baja California. It appears to be the widespread breeding subspecies and the most common in winter as well, though better specimen support for this statement is needed—most existing specimens are of migrants.

Vermivora c. orestera Oberholser, 1905, breeds in the Great Basin/Rocky Mountain region. Each sex considered separately, it is less yellow than *lutescens*, and the females have grayish heads. It reaches San Diego County as a migrant and winter visitor, uncommon or fairly common, at least from 21 August (1908, Cuyamaca Mountains, Grinnell and Miller 1944, MVZ 3942) to 24 April (1909, Witch Creek, FMNH 148483).

Vermivora c. sordida (Townsend, 1890) breeds on the islands off southern California and Baja California, locally on the nearby mainland. It is darker than *lutescens*, with heavier streaking below, especially on the undertail coverts. It has bred at least at Torrey Pines (N7), Point Loma (eggs collected, WFVZ), Coronado (S9; A. M. Ingersoll in Willett 1912), and canyons in San Diego (WFVZ; nest in a "decorative hanging fern basket inside a small lath house" in Golden Hill, S9, Abbott 1926). In one of California's more unusual bird migrations, *sordida* disperses to the mainland during its nonbreeding season. Grinnell and Miller (1944) reported such migrants from mid July through March, and all 18 San Diego County specimens fit within this window, except for one from Poway Grade 29 April 1918, at that time possibly a local breeder. *Vermivora c. sordida* ranges as far inland as the San Luis Rey River 0.5 mile west of Henshaw Dam (G16; 10 September 1996, SDNHM 49614), Julian (K20; 5 August 1908, MVZ 3819), the Cuyamaca Mountains (1 September 1908, MVZ 3944), and 1.3 miles northwest of Morena Conservation Camp (S21; 14 November 1983, SDNHM 42815). With the spread of *lutescens*, however, the gap between the breeding ranges of *lutescens* and *sordida* mapped by Grinnell and Miller (1944) has closed, and it is possible that *lutescens* is swamping out *sordida* on the mainland. Specimens in known breeding condition are needed to test this hypothesis.

Vermivora c. celata (Say, 1823), breeding in the transcontinental taiga zone, is even less yellow than *orestera*; the head is always gray, and in some females the yellowish on the underparts is reduced to irregular blotches. It reaches southern California as a rare migrant and winter visitor (Grinnell and Miller 1944). One specimen from San Diego County has been reported, collected at Witch Creek (J18) 24 April 1909 (Willett 1912), but on examining this specimen I found is actually *orestera* (FMNH 148483). Nevertheless, nominate *celata* is reconfirmed elsewhere in southern California by recent specimens from the Channel Islands and Imperial Valley (SDNHM, Patten et al. 2003).