

### Yellow Warbler *Dendroica petechia*

The Yellow Warbler symbolizes mature riparian woodland, that is, streamside cottonwood, willow, alder, and ash trees that have reached their full height. It is a fairly common breeding summer resident in this habitat, though the habitat itself is scarce and patchy. Though the Yellow Warbler is recognized by the California Department of Fish and Game as a species of special concern, since the late 1980s San Diego County's population has increased, evidently in response to the widespread trapping of the Brown-headed Cowbird, which parasitizes the warbler heavily. The Yellow Warbler is also common as a migrant passing through the county. It is rare as a winter visitor, in riparian woodland near the coast almost exclusively.

**Breeding distribution:** The Yellow Warbler's distribution is one of the more difficult to interpret, because migrants headed north may be seen through much of the season when the local population is nesting, and in the same habitat. Males sing freely in migration, negating that clue to territoriality. The interpretation of just what sightings to designate as in "suitable habitat" thus required judgment and review in the context of the entire



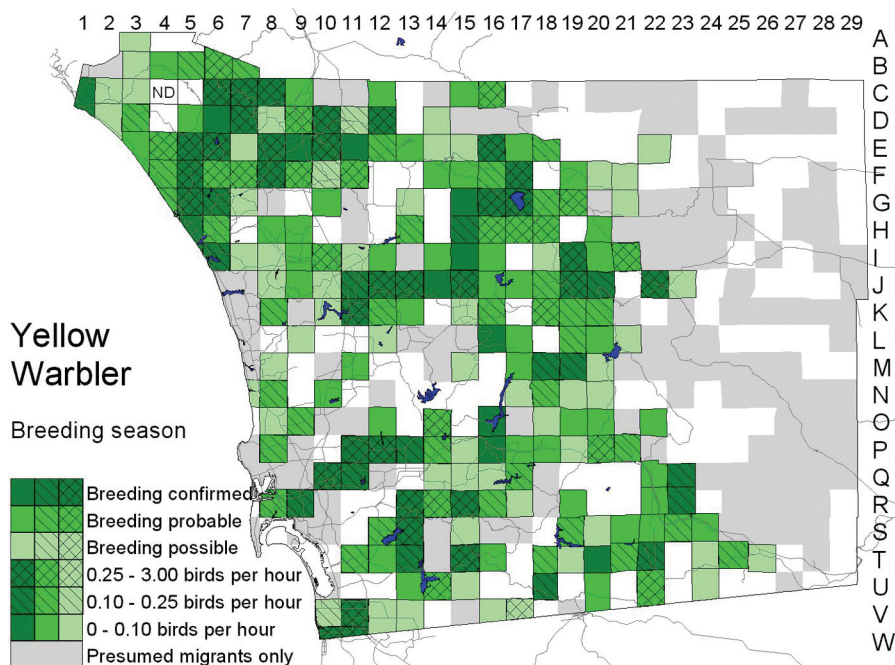
Photo by Anthony Mercieca

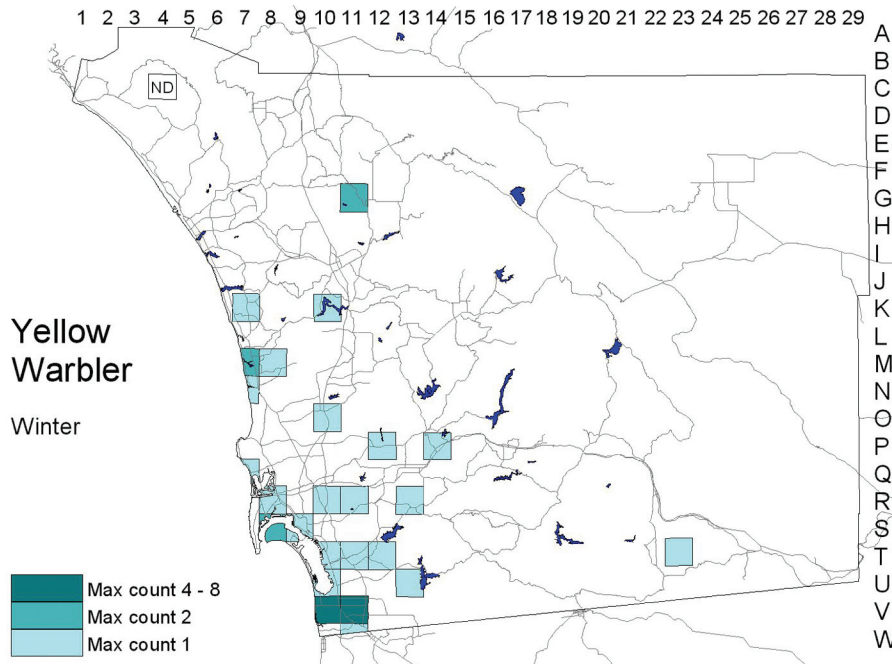
data set. With the population expanding, some birds were pioneering into marginal habitat. Three late June records for the Anza-Borrego Desert mock any attempt to define a "safe date" after which no spring migrants are seen. The designations of breeding as "probable" and "possible" must be taken more literally for this species than for many others.

Despite these caveats, the Yellow Warbler's breeding distribution is clear: riparian corridors on the coastal slope. There is one area of known breeding on the desert slope, San Felipe Valley (J22;

50—probably including some migrants—on 21 May 1999, E. C. Hall; feeding young 13 July 2001, P. Unitt). A singing male in a cottonwood grove at San Ignacio at the headwaters of Borrego Palm Canyon 16 June 1999 (E22; P. Unitt) suggests breeding at that site.

In the coastal lowland, breeding Yellow Warblers are most widespread from Carlsbad north, more localized farther south. At low elevations the species is more confined to larger streams; in the foothills and mountains it takes advantage of narrow strips and patches of riparian trees. Surface water favors Yellow Warblers strongly but is probably not essential, as long as groundwater



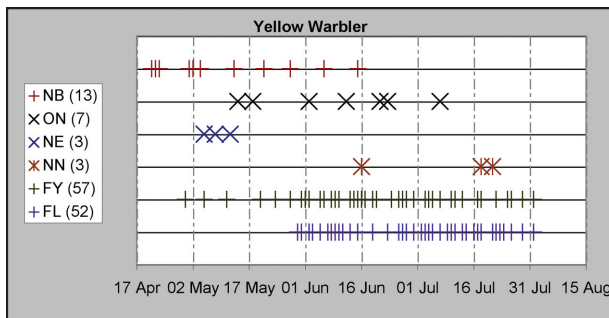


Though many Yellow Warblers arrive in March, apparently they do not begin nesting until well into April. Our dates of breeding activity are consistent with dates of 20 egg sets collected 1903–1931: 3 May–10 June; Sharp (1907) reported 20 June. The nesting schedule implied by our observations allows ample time for the birds to raise two broods. Previous studies (Goossen and Sealy 1982, Lowther et al. 1999) found the Yellow Warbler only rarely attempting two broods, but these studies were made at latitudes far to the north of San Diego. Indeed, virtually all of what has been published on the Yellow Warbler’s biology comes from regions remote from southern California.

suffices to support tall trees. The Yellow Warbler’s attachment to mature riparian woodland in southern California contrasts with its habitat in the more humid parts of its transcontinental range, where it inhabits lower thickets and disturbed and early successional habitats (Lowther et al. 1999).

Some sites where breeding Yellow Warblers are exceptionally numerous are the Santa Margarita River north of Fallbrook (C8; 64, including 60 singing males, 24 May 2001, K. L. Weaver), the east end of Lake Hodges (K11; 50, including 40 singing males, 18 April 1997, E. C. Hall), and the Tijuana River valley (W11; 40, including 30 singing males, 27 June 1998, P. Unitt). Away from the main rivers numbers are much smaller. Still, San Diego County appears to be one of the main population centers for the Yellow Warbler in California, along with the Santa Ynez River in Santa Barbara County and the east base of the Sierra Nevada in Mono County (S. Heath pers. comm.).

**Nesting:** Yellow Warblers build a cup nest, placing it typically in upright forks of twigs. One nest in Peutz Canyon (P16) was along the trunk of an alder tree, supported by a slab of loose bark (M. B. Stowe, P. Unitt). The two nests whose height our observers estimated were about 23 and 35 feet above ground—well above the average height reported by studies elsewhere (Lowther et al. 1999).



**Migration:** Spring arrival of the local population of the Yellow Warbler is in March, typically in the last week, sometimes in the third week. One along the Sweetwater River near Jamacha (R14) 8 March 1998 (M. and D. Hastings) was exceptionally early. Migrants headed farther north become frequent in mid April, peak in May, and occur regularly through the first week of June. Numbers of spring migrants seen in a day at nonbreeding localities may run as high as 40, as in Vallecito Valley (M24) 24 May 1999 (P. D. Jorgensen). Two at Tamarisk Grove (I24) 16 June 1998 (P. D. Jorgensen), one in Borrego Springs (F24) 20 June 1998 (M. L. Gabel), and another nearby in Borrego Springs (G24) 21 June 1998 (P. D. Jorgensen) were very late stragglers, later than any spring Yellow Warbler recorded in the Salton Sink (Patten et al. 2003).

Fall migration takes place mainly from mid August to mid October, but at least some of the local population remains on its breeding territories, the males still singing, through early September.

**Winter:** In winter the Yellow Warbler is a rare but annual visitor, mainly in riparian willows, also in ornamental plantings. Usually only a single individual is seen at a time, but multiple birds are regular in the Tijuana River valley, up to eight around the Dairy Mart pond (V11) 19 December 1998 (G. McCaskie). The birds can survive the winter successfully and even return to the same spot in successive years, as one has done to *Myoporum* trees at Famosa Slough (R8). Almost all records are from low elevations near the coast, inland to Valley Center (G11) and Lindo Lake (P14), with one notable exception: one near the navy’s La Posta Microwave Station (T23), elevation about 3000 feet, 21 February 1998 (C. R. Mahrtd).

**Conservation:** The Yellow Warbler is well known throughout its range as a frequent host of the Brown-headed Cowbird—and famous for its response of flooring over parasitized nests to build a new nest atop the old.

Nevertheless, many parasitized Yellow Warblers end by raising cowbirds anyway. Like that of many other riparian songbirds, the population of the Yellow Warbler in southern California collapsed during the mid 20<sup>th</sup> century under the double onslaught of the cowbird invasion and the elimination of riparian woodland. Then, once the Least Bell's Vireo was formally listed as endangered in 1986, cowbird trapping began at many sites throughout the county, and the Yellow Warbler was among the species whose numbers resurged. Unfortunately, rigorous numerical data with which these changes in Yellow Warbler abundance could be assessed are lacking, and habitat changes, like the regrowth of riparian woodland in the Tijuana River valley, have played a role too. In 1984, I called the species only "uncommon" as a summer resident, and counts of dozens in a day along a two- or three-mile strip of river, as found at the most favorable localities now, were unknown. The species has refilled apparently all of the San Diego County range from which it retracted before 1980. From 1997 through 2002, we recorded only a single instance of cowbird parasitism on the Yellow Warbler—a female feeding a fledgling cowbird in Kit Carson Park (J11) 24 June 1998 (W. Pray).

Regulations restricting the removal of riparian woodland and channelizing of streams have been critical in slowing the loss of the Yellow Warbler's habitat. Also, the damming of rivers has largely eliminated the flooding that once knocked over large trees, allowing more woodland to mature to the point where it attracts Yellow

Warblers. Continuing negative factors, though, are the proliferation of the exotic giant reed, which replaces native riparian trees, and the pumping of groundwater, which lowers the water table to the point where these trees can no longer survive.

**Taxonomy:** The Yellow Warblers nesting in San Diego County, and most migrants as well, are *D. p. morcomi* Coale, 1887. The few Rocky Mountain specimens I have seen do not differ consistently from California specimens, dissuading me from following Browning (1994) in resurrecting *brewsteri* Grinnell, 1903, for the California population (Patten et al. 2003). Spring males have a yellow forehead contrasting with the greenish remainder of the upperparts. Each age and sex class considered separately, *morcomi* is brighter yellow than *rubiginosa* Pallas, 1811, the darker subspecies breeding along the Pacific coasts of Alaska and British Columbia. Spring males of *rubiginosa* have the entire crown green down to the base of the bill. *D. p. rubiginosa* migrates through San Diego County in both spring and fall. Its spring migration is concentrated in the second half of May (7 of 9 SDNHM specimens for this interval), though records extend from 7 April to 1 June (Unitt 1984). Four fall specimens are from 8 to 15 October, a late one from 21 November, part of the pattern suggesting that *rubiginosa* is a late migrant in fall (Patten et al. 2003). Though no winter specimens have been collected, most or all of the Yellow Warblers occurring in winter are bright yellow, implying *morcomi*.