

Tricolored Blackbird *Agelaius tricolor*

The Tricolored Blackbird is one of California's amazing natural treasures: a songbird whose biology follows the model of a colonial seabird. Tricolored Blackbirds nest in large, dense colonies, usually in freshwater marshes, and forage in nearby grassland, pastures, or agricultural fields. Colonies once ranged up to 200,000 nests, but elimination of marshes and development of surrounding uplands has reduced the population greatly, especially in southern California. The Tricolored Blackbird is recognized as a highest-priority species of special concern by the California Department of Fish and Game. The San Diego County population is probably 5000–8000 birds, concentrated in 20–30 colonies. In spite of the Tricolored Blackbird's demanding requirements for breeding, in the nonbreeding season it forages readily in artificial habitats like dairies, lawns, garbage dumps, and parking lots.



Photo by Anthony Mercieca

Breeding distribution: Tricolored Blackbird colonies in San Diego County are now so few that they can be listed individually (Table 9). They are concentrated in two areas: north-central San Diego County from Dameron Valley and Oak Grove south to Ramona and Santa Ysabel,

and the Campo Plateau from Potrero to Jacumba. The roster is not exhaustive; a few colonies undoubtedly passed undetected on private ranches or water-district lands we were unable to reach; such properties are the sites of most of the known colonies. Unconfirmed colonies are likely especially in La Jolla Valley (L10; 20 on 7 May 2000, K. J. Winter), at Miramar Lake (N10; 50 on 23 June 1999, K. J. Winter), Merigan Ranch, Descanso (P20; 15 on 18 April 1997, P. Unitt), Lake Murray (Q11; up to 30 on 9 June 2000, N. Osborn), La Posta Valley (S23; up to 20, males displaying, 11 April 1999, L. J. Hargrove), and McCain Valley (R26; 12 on 11 May 1999, L. J. Hargrove). Some colonies may remain active for years; that at

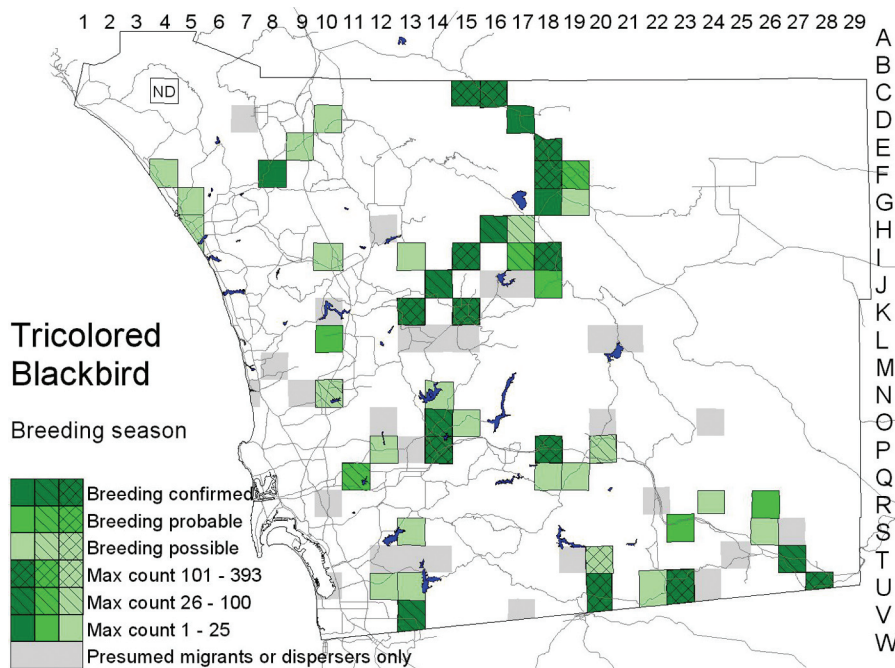


TABLE 9 Known Tricolored Blackbird Colonies in San Diego County, 1997–2001

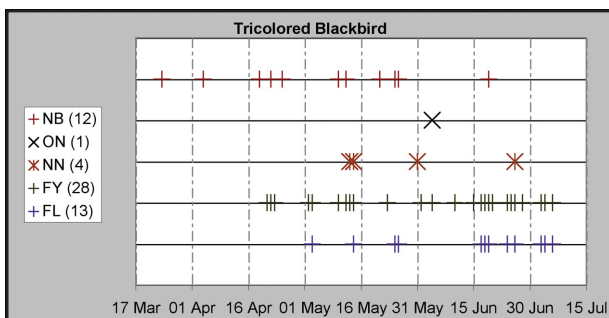
Colony	Square	Years Known Active	Maximum Count	Observers
Dameron Valley	C15	1997, 1998	200	K. L. Weaver
Oak Grove	C16	1998, 1999	840	K. L. Weaver
Sunshine Summit	D17	1999, 2000	25	P. Unitt
Puerta La Cruz	E18/F18	2000, 2001	250	P. K. Nelson, P. Unitt, M. G. Mathos
Swan Lake	F18	2000, 2001	1000	P. Unitt, M. G. Mathos, P. K. Nelson
Warner Ranch	G18	1999, 2000	18	P. K. Nelson, J. K. Wilson
Bonsall	F8	2000	20	J. Evans
Mesa Grande NW	H16	1999	12	E. C. Hall, J. O. Zimmer
Pamo Valley	I15	2000	1280	W. E. Haas
Mesa Grande SE	I17	2000	160	W. E. Haas
Santa Ysabel Ranch	I18	2000	260	S. E. Smith
Boden Canyon	J14	1999, 2000, 2001	40	C. R. Mahrtdt, R. L. Barber, O. Carter, L. Comrack
Ramona W. D. Pond	K13	1998, 2000	1000	P. von Hendy, W. E. Haas, P. Unitt
East Ramona Pond	K15	1998, 1999	400	M. and B. McIntosh
Lindo Lake	P14/O14	1997, 1998, 2000	220	M. B. Stowe
Viejas Casino	P18	1999, 2000	600	K. J. Winter
Tule Lake	T27	2000	30	J. K. Wilson, F. L. Unmack
Twin Lakes	U20	1999, 2000, 2001	150	R. and S. L. Breisch
Campo	U23	1997, 1998, 1999, 2000, 2001	1000	D. S. and A. W. Hester, P. Unitt
Jacumba	U28	1997, 1998, 1999, 2000	300	F. L. Unmack
La Media Rd.	V13	1998, 1999, 2000, 2001	100	P. Unitt

Jacumba has been used continuously since at least the 1970s. But others shift from year to year (a predator-avoidance strategy in many colonial birds), and others become unusable if the nesting marsh is trimmed or cut completely (as at the pond at Magnolia Ave. and Highway 78 in Ramona, K15) or the surrounding uplands are developed. The paucity of colonies in the coastal lowland where marshes are more numerous suggests that foraging habitat sufficient to support a large colony, not availability of nesting sites, has become the most important factor limiting the population.

Nesting: Most colonies are in cattail marshes, but Tricolored Blackbirds also nest in blackberry thickets (as in Santa Ysabel Valley, I18) or stands of black mustard (as on Otay Mesa, V13). Like the Red-winged Blackbird, the Tricolored attaches its nest to several usually vertical stems or leaves. But the male Tricolored defends a territory of as little as 1.8 square meters, and as many as six

females build nests within one square meter (Beedy and Hamilton 1999). Nesting within a colony is often synchronized, so that all young may hatch and fledge within a few days of each other. Large colonies may include one or more successive waves of peripheral settlement. But different colonies are often unsynchronized, some establishing themselves up to nine weeks after others. The birds may shift to a second site and re-nest in the same season (Hamilton 1998). The schedule of Tricolored Blackbird nesting we observed in San Diego County 1997–2001 fits within that reported from the Central Valley by Beedy and Hamilton (1999), though with nest building at Twin Lakes, Potrero (U20), 19 June 1999 (R. and S. L. Breisch) it runs later than known from egg sets collected in the county 1890–1962 (latest 26 May).

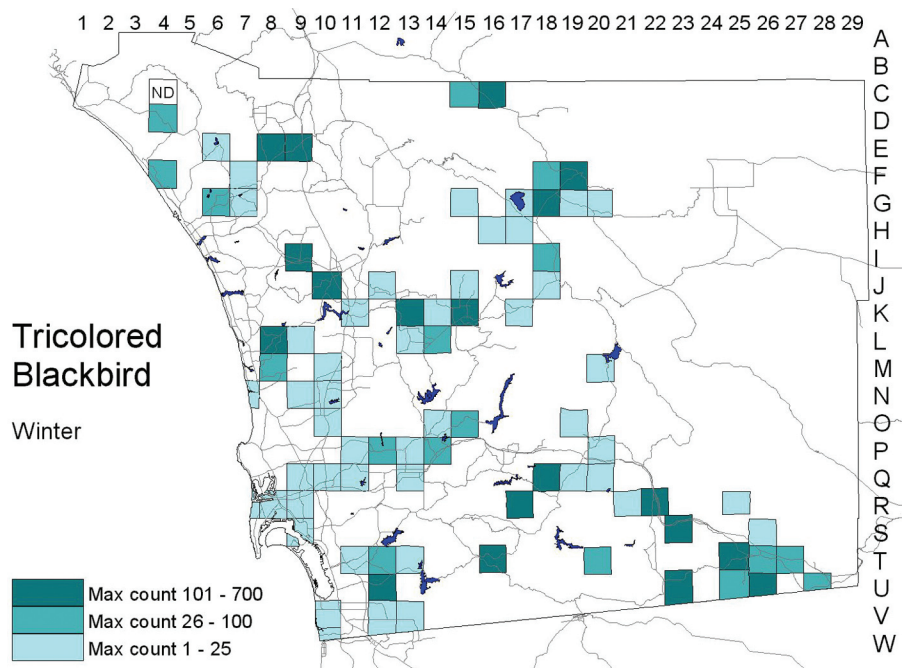
Migration: Tricolored Blackbirds wander nomadically when not breeding, and some are seen sporadically away from nesting habitat through the breeding season. Some of these, such as 85 at a dairy 1.9 miles south of Ramona (L15) 22 April 2000 (P. Unitt), were within a few miles of known colonies. But others, such as eight at the east end of the basin of Lake Cuyamaca (L21) 13 April 1999 (J. K. Wilson), six along the Kelly Ditch Trail in the Cuyamaca Mountains (L20) 14 July 2000 (E. C. Hall), and two in Marron Valley (V17) 16 May 2000 (P. Beck), were far from any suspected colony. Particularly unusual were seven flying over a chaparral-covered ridge 1 mile east of Mount Laguna (O24) 16 June 2001 (P. Unitt) and the only recent records for the Anza–Borrego Desert, of 13 caught and released from a cowbird trap at



Whitaker Horse Camp (D24) 24 April 2002 (N. Collin) and one feeding in horse corrals at Borrego Springs (G24) 11 May 2002 (K. and P. D. Jorgensen). Old records from the desert slope are of specimens collected by Frank Stephens at “Palmetto Spring” (i.e., Palm Spring, N27) 1 April 1895 (SDNHM 792) and in San Felipe Valley near Scissors Crossing (J22) 4 April 1895 (SDNHM 793).

Winter: Though Tricolored Blackbirds may leave their breeding colonies in the winter, they still prefer to roost in marshes. In San Diego County it appears that most of the population does not shift a great distance. Sometimes large flocks are seen in winter at nesting colonies: up to 700 at Swan Lake 10 December 2000 (M. G. Mathos, J. R. Barth) and 500 at Oak Grove 26 February 2000 (K. L. Weaver). Some large winter flocks elsewhere could represent undiscovered nesting colonies: 300 in Lawson Valley (R17) 1 December 2001 (M. B. Stowe), 250 near Dulzura (T16) 31 January 2001 (D. W. Povey), 400 in Japatul Valley (Q18) 17 January 2001, and 525 in Hill Valley (T25) 4 February 2001 (P. Unitt). In north-coastal San Diego County wintering Tricolored Blackbirds are generally inconsistent (most regular around Bonsall and in the San Dieguito Valley), but the numbers may be much larger than are known to breed in this area (up to 200 in Rancho Santa Fe, L8, 28 December 1997; 190 at the Hollandia Dairy, San Marcos, I9, 27 February 1999, W. E. Haas). In south-coastal San Diego County a few still winter around Mission Bay and the San Diego River mouth, where they forage on lawns (maximum 20 at Robb Field, R7, 1 March 1999, V. P. Johnson). Considerable numbers wintered at the Otay dump (U12) until 1998 (135 on 19 December 1998, W. E. Haas), and Santee Lakes (P12) remains a regular wintering site, possibly for birds originating from the Lindo Lake colony (up to 70 on 19 December 1997, E. Post—fewer since). But over most of metropolitan San Diego the Tricolored Blackbird is now rare even as a winter visitor.

Conservation: The history of the Tricolored Blackbird in San Diego County has been one of continuous decline. In the early 1860s, J. G. Cooper (in Baird 1870) considered the Tricolored Blackbird “the most abundant species near San Diego.” Neff (1937) listed five colonies in San Diego County’s coastal lowland in 1935 and 1936, of up to 1000 nests. None of these persists today. The Dairy Mart pond in the Tijuana River valley (V11; Unitt 1984) is no longer a colony. San Diego Christmas bird count results show a sharp decline from the mid 1980s through 2001, with only a single Tricolored Blackbird reported in the latter



year. The pattern on the Oceanside count is similar: the Tricolored Blackbird was formerly abundant in the lower San Luis Rey River valley, but a 95% drop from 1990 to 1991 was never reversed; the species was missed on the count for the first time in 2001.

Elimination of marshes undoubtedly contributed to the Tricolored Blackbird’s population collapse, but loss of foraging habitat to development probably played an even greater role. For the species to nest successfully, it may need large colonies for proper social stimulation (Orians 1980). And a large colony requires a considerable habitat with abundant prey like grasshoppers. The critical mass for the population to be self sustaining is doubtless larger for the Tricolored Blackbird than for species that live as dispersed pairs.

Can the decline be arrested or reversed? Critical questions that still need to be answered include the extent of foraging habitat needed to support a viable colony and the number of alternative colony sites needed to support a viable population. Only one of the colonies, in Boden Canyon, lies on land devoted primarily to conservation, but the water in the pond was taken to fight a fire in August 2001; the pond did not refill in the following year of drought, and the blackbirds abandoned the colony in 2002 (L. Comrack). The only colony on public parkland, that at Lindo Lake, is already surrounded by development. Sustaining the Tricolored Blackbird will require the cooperation of water districts and private landowners. Can new colonies be attracted to restored or artificial marshes put near foraging habitat? Even though it lasted only two years, a colony formed in 1990 in a revegetation project in Mission Valley (R9) the first year after artificial islands were installed in the San Diego River. But the Tricolored Blackbird likely poses one of the most difficult conservation problems among North American birds.