

## Status of Tricolored Blackbirds in Nevada

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### INTRODUCTION

A close relative of the Red-winged Blackbird (*Agelaius phoeniceus*), the Tricolored Blackbird (*A. tricolor*) shares the Red-winged's habit of nesting in marshy areas and foraging in nearby pastures, feedlots, meadows, and agricultural fields (Beedy and Hamilton 1999). Unlike its relative, though, the Tricolored Blackbird has a restricted distribution that is centered around the Central Valley of California, with small satellite populations scattered through the Pacific Northwest and the western parts of the Intermountain West. Throughout most of its California range, the Tricolored Blackbird is a year-round resident, but the more northern populations and the only known Nevada population are migratory. The species nests colonially, often in close proximity to other blackbirds, including the Red-winged, the Yellow-headed (*Xanthocephalus xanthocephalus*), and the Brewer's Blackbird (*Euphagus cyanocephalus*).

Tricolored Blackbird populations have been in rangewide decline, with over half of the global population estimated to have been lost between the 1930s and 1970s (DeHaven et al. 1975); other estimates of population losses during the 20<sup>th</sup> century are even higher (Beedy et al. 1991, Shuford and Gardali 2008). The population declines did not involve a significant range reduction, but mostly a decline in numbers within the historic range. As a result, the species has been recognized by the U.S. Fish and Wildlife Service as a species of conservation concern, by the California Department of Fish and Game as a species of special concern (Tricolored Blackbird Working Group 2007), and by Nevada Partners in Flight as a conservation priority species (Nevada Partners in Flight, *in prep.*).

The purpose of this article is to summarize our current knowledge about the species' status in Nevada based on recent surveys of the only colony known to breed in the state and explorations of other potential habitat for the species. We thank Bill and Beth Clark, the Nevada Natural Heritage Program, and the Nevada Department of Wildlife for their help in preparation of this manuscript. The study was funded by the U.S. Fish and Wildlife Service, Nevada Fish and Wildlife Office, and the field work was conducted by Jim Woods.

## METHODS

In the spring and summer of 2006, we conducted regular surveys of the only breeding colony known to occur in Nevada, in Carson Valley, Douglas County. The site is located at 1442 m elevation and consists of an approximately 4 ha permanent agricultural return flow pond with cattail (*Typha* spp.) and bulrush (*Scirpus* spp.) dominated emergent vegetation and an approximately 0.5 ha patch of shrub willow (predominantly *Salix exigua*) adjacent to the pond. The surrounding landscape consists of agricultural areas that include pastures, hayfields, and return flow marshes, a dairy feedlot, state and county roads, and rural residences. The site is in the historic floodplain of the Carson River, and it floods occasionally every several years in late spring. During such events, the pond and surrounding pastures become a large wetland complex for several weeks.

During each visit, the number of birds was recorded by sex, and during the nesting period, the number of active breeding territories was estimated from a distance. The colony nests on private land, and all observations were made at the fenceline, approximately 30 m from the breeding pond.

## RESULTS AND DISCUSSION

The estimated total number of active breeding territories in the Douglas County colony of Tricolored Blackbirds was 18 for the 2006 breeding season (Table 1). Because nest sites were not visited, this estimate is based on the generally-held assumption that all adult females present during breeding were mated and attempted to nest at least once. Three of the 21 males (14%) present during breeding were assumed to be unmated. One of these unmated males occupied a marshy area located about 4 km away from the breeding colony throughout the breeding season. Based on the 2006 observations, the presumed peak of incubation in Nevada is at the end of May, and the peak nestling period through the first half of June.

Prior to the time when nesting evidence was observed, the total number of birds present peaked at 68 on 20 May (Table 1). This suggests that the site is used as a stopover by many birds that continue their migration on to other breeding sites. Their most likely destinations could include known breeding sites in the nearby Honey Lake Basin in Lassen County, California, and scattered locations throughout northern California, Oregon, and Washington. It is likely that these migratory populations are on a breeding schedule similar to the Nevada colony.

Perhaps the most striking observation from our surveys is the lack of Tricolored Blackbirds throughout the rest of Carson Valley, which features many other marshy areas that are visually very similar to the single Tricolored Blackbird colony site. We surveyed most of these apparently suitable sites in Carson Valley during the 2006 breeding season specifically to discover any previously unknown populations, but did not locate any additional populations. The three other, more widespread species of blackbirds, in contrast, were nesting throughout the valley. Aggressive displays between Red-winged and Tricolored Blackbirds were observed at the colony site during the peak of nesting. All three

Table 1: Breeding chronology and number of birds present at the Tricolored Blackbird colony in Douglas County, Nevada, 2006.

Date	# Males	# Females	Total	Comments
24 April	0	0	0	
27 April	0	0	0	
29 April	1	0	0	
2 May	28	12	40	
16 May	33	23	56	
18 May	37	28	65	
20 May	38	30	68	
24 May	20	15	35	Carrying nest material
31 May	25	15	40	Territorial displays
3 June	20	18	38	
8 June	20 + 1*	18	39	Carrying food
13 June	20 + 1*	18	39	Carrying food
17 June	20 + 1*	18	39	Carrying food
20 June	20 + 1*	18	39	Carrying food
28 June	20 + 1*	18	39	Carrying food

\* + 1 = single unmated male observed outside of breeding colony.

other blackbird species, however, also nested in the immediate vicinity of the colony, so it is difficult to conceive that interspecific aggression alone prevents Tricolored Blackbirds from using other nearby, apparently suitable sites for nesting.

The colony in Douglas County was discovered in June, 1996, by local birders Bill and Beth Clark. Anecdotal reports from the years after the discovery indicated high counts of as many as 150 individuals, but the size of the breeding colony has been relatively consistent at approximately 20 pairs in recent years (Floyd et al. 2007). Prior to the discovery of this small colony, the species was considered a rare transient in Nevada (Alcorn 1988). Historically, the species was also reported in places outside of Douglas County, including specimens collected in the Truckee Meadows near Reno in April in the 1960s and 70s (Alcorn 1988), and an unconfirmed report of a colony in Carson City County near the U.S. Forest Service headquarters in June 1980 (references in Beedy et al. 1991). Interestingly, no reports of the species have occurred outside of the area of the known colony in Douglas County since the time of these records. Several authors describe the species as nomadic (Beedy and Hamilton 1999), even as “sheerly and illogically erratic in its seasonal movements and activities” (Neff 1942, p. 45). However, aside from occasional sightings within 15 km of the colony, the only other evidence of such movements for the small Douglas County colony that we know about are two reports of the colony having moved about 4 km when the area was flooded in 1999 and 2007 (Bill and Beth Clark, pers. comm.; Jim Woods, pers. obs.). In subsequent years, including 2008, the traditional colony site was again used for nesting by approximately the same number of breeding pairs as were observed in 2006.

Conservation of Nevada’s Tricolored Blackbird colony will likely depend on the future of the known colony site and adjacent wetland areas, and land use practices in the greater landscape around the site. The absence of the species throughout the rest of Carson Valley’s wetlands is currently unexplained, and protective and other conservation measures in the area of the colony site may be warranted to retain the species in the state.

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