# Breeding Records of Black-capped Vireo (*Vireo atricapilla*) in Northeastern Mexico

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# Breeding Records of Black-capped Vireo (*Vireo atricapilla*) in Northeastern Mexico

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ABSTRACT.—We conducted field work during May–July 2005 in the Mexican states of Nuevo León, Tamaulipas and San Luis Potosí. We observed breeding activity of Black-capped Vireos and found active nests in northwestern Nuevo León and southwestern Tamaulipas. These findings represent the first documented nests for those states, and for the latter state, the first records of Black-capped Vireos nesting below the Tropic of Cancer. Our findings suggest that the breeding range of Black-capped Vireos should be extended approximately 520 km to the southeast of the previous known nesting area near Ocampo, Coahuila. *Received 25 June 2013. Accepted 6 September 2013.*

Key words: Black-capped Vireo, breeding, Mexico, nests.

The Black-capped Vireo (*Vireo atricapilla*) is classified as a vulnerable species internationally (BirdLife International 2013), and as Endangered by the U.S. Fish and Wildlife Service (Ratzlaff 1987), Texas Parks and Wildlife (TPWD 1988), and Secretaría Medio Ambiente y Recursos Naturales (SEMARNAT 2010). Threats considered to be of greatest conservation concern are brood parasitism by Brown-headed Cowbirds (*Molothrus ater*), and habitat conversion and destruction (USFWS 1991, Wilkins et al. 2006). The historical breeding range for this species extended from Kansas to northwestern Mexico (Coahuila, Nuevo León, and Tamaulipas; USFWS 1991, Howell and Webb 1995). Currently, the breeding range includes portions of southwestern Oklahoma, central Texas, and northern Coahuila (Grzybowski 1995). Although authors such as Graber (1961), Marshall et al. (1985) and Benson and Benson (1990) mentioned potential reproductive

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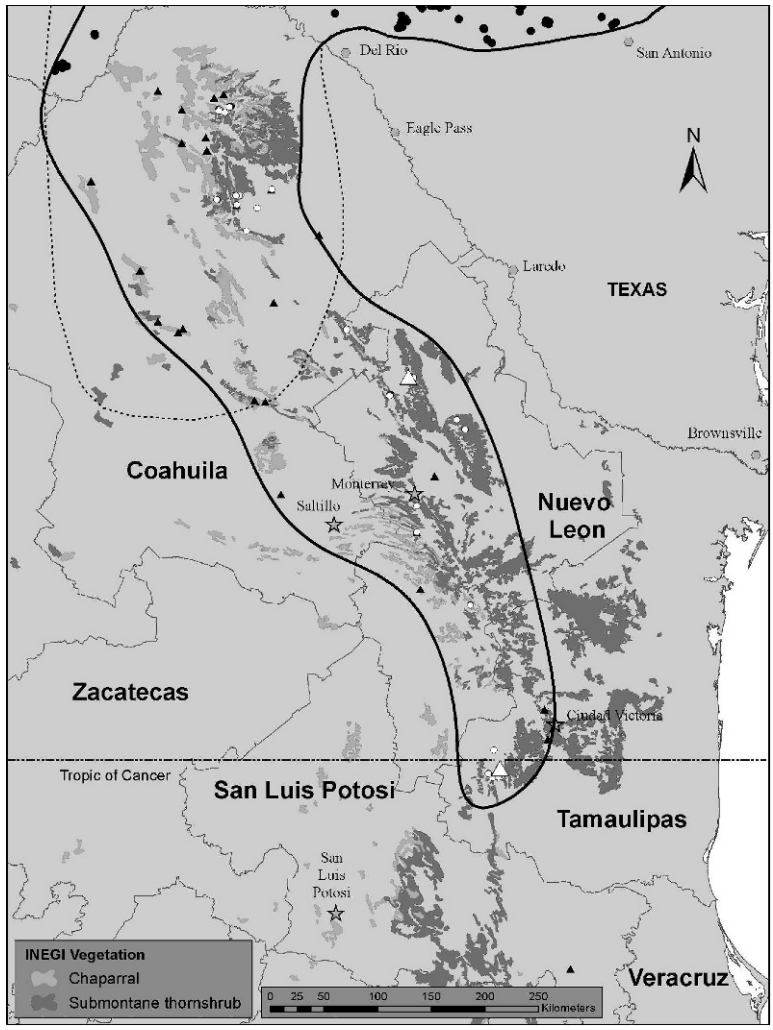


FIG. 1. Proposed (dark line) and historic (dotted line) boundaries for breeding range of Black-capped Vireos in Mexico. Black dots indicate where Black-capped Vireos were observed in Texas (Texas Natural Diversity Database 2008), previous studies in Mexico (black triangles; Graber 1961, Marshall et al. 1985; white circles, Farquhar and Gonzalez 2005) and for nests (white triangles) documented in present study.

habitat in Mexico for Black-capped Vireos, only a few nests have been described. The few nests documented were located in two small mountain chains in central Coahuila ($n = 5$, Sierra Padilla and Sierra Masera; Graber 1961), and in northern Coahuila ($n = 4$, Rancho La Escondida; Farquhar et al. 2003). We document here the first records of Black-capped Vireos nesting in Nuevo León and Tamaulipas, which effectively extend their known breeding range southward over 500 km, and into the Tropic of Cancer (Fig. 1). In addition, we present the first published record of brood parasitism by Brown-headed Cowbird (*Molothrus ater*) for this species in Tamaulipas.

In May–July 2005, we visited potential breeding habitat known to have documented sightings of Black-capped Vireos (CCF, unpubl. data) located within chaparral and submontane thornshrub (INEGI 1996) in Nuevo León and Tamaulipas. Our primary objective was to determine presence of Black-capped Vireos and, if located, attempt to determine breeding status, locate nests, and characterize vegetation. As access to suitable habitat is often difficult for various reasons (e.g.,

locating and obtaining permission from landowners, navigability, security), we focused primarily on areas in which access could be regularly obtained in areas with good habitat in north central Nuevo León (a private ranch, Rancho Real de Minas Viejas, near municipality of Bustamante) and southwestern Tamaulipas, on Hwy 101 connecting Palmillas and Bustamante, and along an unnamed road that heads northwestward to Miquihuana from that highway. We visited these areas approximately once per month during the survey period in an effort to visually or aurally document the occurrence of Black-capped Vireos. During those visits, we searched for adult females, noted behavioral cues such as singing males, alarm calling (e.g., ''shredding;'' Graber 1961), nest material transport by either sex suggestive of nesting activity and presence of fledglings.

In May, we located three nests at Rancho Real de Minas Viejas, Bustamante, Nuevo León. Two nests were found on 16 May, and a third on 17 May. The first of the nests found on 16 May (26° 39′ 05″ N, 100° 22′ 05″ W; 930 m asl) was located 1.1 m above the ground in a 1.7-m evergreen sumac (*Rhus virens*). This nest contained three 5- to 6-day-old Black-capped Vireo nestlings that were tended to by both parents. The second nest we found on 16 May (26° 38′ 59″ N, 100° 22′ 03″ W; 920 m asl) was located 1.4 m from the ground on a 1.8-m tall evergreen sumac. This nest contained two eggs from Black-capped Vireos with the nest guarded by the male parent. The third nest, located 17 May (26° 39′ 05″ N, 100° 22′ 07″ W; 938 m asl), was found 0.8 m above the ground in a 1.4-m tall thickleaf milkberry (*Chiococca pachyphylla*). We observed one egg from a Black-capped Vireo in this nest.

Later in the same season (2005), we found two nests at a site in Tamaulipas. The first nest (23° 21′ 51″ N, 99° 36′ 20″ W; 1,492 m asl) was discovered 12 June, 0.8 m above the ground in a 1.4-m tall lantrisco (*Rhus pachyrrachis*). In this nest we found four 2-day-old Black-capped Vireo nestlings along with one egg from a Brown-headed Cowbird. The second nest (23° 21′ 59″ N, 99° 36′ 12″ W; 1,569 m asl), found 1 July in the same general area, was located 0.8 m above the ground in a 1.5-m tall orchid tree (*Bauhinia ramossisima*). This nest contained an unhatched egg from a Black-capped Vireo, and two recently fledged Black-capped Vireo chicks were seen nearby. Upon return visits between 29 June and 2 July we recorded observations on 20 adults and four fledglings (Farquhar and Gonzalez 2005) to verify that the area supported at least a small breeding population of Black-capped Vireos during that time. It is possible these were not initial, but subsequent nesting attempts. Further work here should uncover those details.

The nests we found were cup-shaped and pensile, built in the forks of branches toward the outer foliage, closely matching the description of other nests built by Black-capped Vireos found throughout Texas, Oklahoma (Grzybowski 1995, Wilkins 2006), and Coahuila (Graber 1961). Our nests were located in typical Mexican submontane thornshrub vegetation, including lantrisco, orchid tree, and thickleaf milkberry, which are new additions to the extensive list of nest substrates previously recorded for Black-capped Vireos (e.g., Grzybowski et al. 1994). For this species, nest substrate varies regionally across the breeding range of Black-capped Vireos (Grzybowski 1995, Wilkins 2006). In Oklahoma, Graber (1961) found many nests located in blackjack oak (*Quercus marilandica*) and post oak (*Q. stellata*); in Texas, they are commonly in Spanish oak (*Q. texana*), Texas persimmon (*Diospyros texana*), evergreen sumac (*R. virens*), and Ashe's juniper (*Juniperus ashei*) (Smith et al. 2012, Pope et al. 2013). In submontane thornshrub habitat in Coahuila, nests previously have been found in low-growing species of oak (*Quercus* spp.) and in madrone (*Arbutus xalapensis*) (Graber 1961).

The shrubs at our nest sites were 1.4–1.8 m tall, within the 2–3 m range reported in the U.S. (Grzybowski et al. 1994, Bailey and Thompson 2007). Nests were located mainly between 0.8–1.4 m above the ground, within the ranges previously reported for the species; no other data are published for this species in Mexico. Many factors are at play in determining nest placement, including herbivory (e.g., by goats and deer), size of trees and shrubs, and predators (Grzybowski 1995, Bailey and Thomspon 2007, Smith et al. 2012). Research on conservation and community-level factors (e.g., brood parasitism and nest success in general) limiting local populations of Black-capped Vireos in Mexico is warranted.

The potential breeding habitat for Black-capped Vireos in Mexico is likely quite extensive (Guerrero 2004, Núñez 2007), and the breeding range there has not been fully defined. However,

observation of the five nests presented here confirms that Black-capped Vireos are known to breed in the states of Nuevo Leon and Tamaulipas. We suggest that the breeding range for Black-capped Vireos in Mexico should be extended southward from the previously known nest sites near Ocampo, Coahuila, to at least 23° 21′ N and 99° 36′ E to include the nesting area we documented in southwestern Tamaulipas, constituting a breeding range extension of approximately 520 km. Such an extension places breeding Black-capped Vireos within the Tropic of Cancer, meaning they now must be considered both a Neotropical and a temperate zone breeder, and because of the extension of latitudinal range across distinct ecozones, local adaptive differences in breeding ecology and productivity may warrant investigating (Stutchbury and Morton 2008). We further believe surveys southward in the state of San Luis Potosi, in suitable chaparral and submontane thornshrub habitat on the western foothills of the Sierra Madre Oriental, could eventually yield positive results. This study also provides previously undocumented record of brood parasitism of Black-capped Vireos by Brown-headed Cowbirds for the state of Tamaulipas, a conservation threat that certainly warrants further investigation. Compounding this threat is the year-round presence of Bronzed Cowbirds (*M. aeneus*) also capable of parasitizing broods of Black-capped Vireos (although as yet undocumented). Finally, we feel our data demonstrate the strong need for expanded research efforts on the ecology of Black-capped Vireos and conservation in México without which evaluation of its U.S. Department of Interior listing status would be inconclusive.

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# Observations of Glaucous-winged Gulls Preying on Passerines at a Pacific Northwest Colony

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ABSTRACT.—Breeding within a seabird colony can have positive and negative effects for smaller passerine species. For example, they may profit from the anti-predator behavior of the seabirds as well as from the influx of food and nutrients brought into the community. However, these possible benefits might be offset by seabird predation. For instance, gulls are not only fierce defenders of their colony, but also opportunistic feeders. Here, we report predation of Glaucous-winged Gulls (*Larus glaucescens*) on Sooty Fox Sparrows (*Passerella iliaca fuliginosa*), Song Sparrows (*Melospiza melodia*), and a European Starling (*Sturnus vulgaris*), observed on Mandarte Island, British Columbia, Canada. These observations provide new evidence for dietary supplements of Glaucous-winged Gulls and for a disadvantage of passerine life in a Glaucous-winged Gull colony. *Received 11 May 2013. Accepted 24 September 2013.*

Key words: Mandarte Island, passerines, predation, seabird colony, species association.

Within a community, different bird species share the same biotope and therefore have the potential to interact, particularly during the breeding season when movements are constrained by the location of nests. Depending on their natural history, such breeding associations may provide benefits and costs to each species (Quinn and Kokorev 2002). Benefits include profiting from heterospecific vigilance signals, as well as from physical displacement of predators by members of another species (Quinn and Ueta 2008). For example, because of their aggressive nest defense behavior (Burger and Gochfeld 1996), colonial gulls reduce predation rates on associated species (Young and Titman 1986, Väänänen 2000). Food provided by nesting seabirds can provide additional benefits. For instance, mockingbirds of the Galápagos eat seabird eggs (Harris 1968). Darwin's finches consume eggshells of gulls (Grant and Grant 1980) and feces of other seabirds (Schluter and Grant 1984). Additionally, nutrients brought in by colonial seabirds may sometimes increase the productivity of plants, in turn providing increased food sources (reviewed in Ellis 2005).

Conversely, smaller species breeding within seabird colonies can suffer increased rates of predation and aggression from larger species (Wheelwright et al. 1997). For example, most gulls are known to be opportunistic feeders

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