

GOLDEN-CHEEKED WARBLER FATALITY IN A COWBIRD TRAP

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Abstract. Management for the federally endangered Black-capped Vireo (*Vireo atricapillus*) and Golden-cheeked Warbler (*Dendroica chrysoparia*) in Travis County, Texas, has included Brown-headed Cowbird (*Molothrus ater*) trapping since the mid-1980s. In June of 1997, remains of a Golden-cheeked Warbler were found inside a cowbird trap two days after a Golden-cheeked Warbler was observed bringing food to a juvenile Brown-headed Cowbird inside the trap. The trapping protocol for Travis County has been modified to require immediate removal of any juvenile cowbirds from traps to minimize the possibility of any further such incidents.

Key Words: Brown-headed Cowbird, cowbird trapping, *Dendroica chrysoparia*, Golden-cheeked Warbler, host species, *Molothrus ater*, non-target species, parasitism.

Trapping of Brown-headed Cowbirds (*Molothrus ater*) has been used as a management tool for the conservation of endangered songbird species for more than a decade (Kepler et al. 1996, Griffith and Griffith in press, Hayden et al. in press; W. Armstrong, pers. comm.). As information has been assimilated, modifications to trap size, design, and placement have been made to maximize capture success and minimize non-target captures. Decreasing trap entrance slot size has resulted in a decrease of the total number of non-target species captured on Fort Hood, Texas (J. Cornelius, pers. comm.). Other modifications have included replacing poultry wire with half-inch hardware cloth to minimize predator impacts and cowbird escapes.

Cowbird trapping has been used in central Texas for management of the federally endangered Black-capped Vireo (*Vireo atricapillus*) and Golden-cheeked Warbler (*Dendroica chrysoparia*). Trapping locations include Fort Hood Military Reservation, probably the best-known trapping program in the central United States; Kerr Wildlife Management Area; Balcones Canyonlands National Wildlife Refuge; and Balcones Canyonlands Preserve (BCP). Managed by five different conservation entities, the BCP is a network of preserve units established by the Balcones Canyonlands Conservation Plan (BCCP) to protect habitat for the Black-capped Vireo and Golden-cheeked Warbler, six federally endangered karst invertebrates, and 27 Species of Concern. Due to the increasing destruction of songbird habitat in this rapidly urbanizing area, coupled with an increase in habitat edge, cowbird trapping is considered an essential management technique for the Black-capped Vireo (USFWS 1991, Grzybowski 1995) and, to a lesser extent, the Golden-cheeked Warbler (USFWS 1992).

Cowbird trapping has been conducted in Travis County since the mid-1980s. A private consulting company conducted the first trapping for

the BCCP in 1989. Texas Animal Damage Control operated the traps from 1990 to 1996. In 1997, Travis County Transportation and Natural Resources Department operated the trapping program.

In 1997, efforts were made to minimize non-target fatalities by limiting the trap entrance size to a 3.2 cm wide slot, and by checking traps at least three times a week in the early part of the trapping season, and daily in the latter part of the season. Traps were situated in the immediate vicinity of Black-capped Vireo habitat and, in some cases, also in the vicinity of Golden-cheeked Warbler habitat (these vegetation types may be contiguous). Vireos breed in shrubby forest-grassland ecotones of mostly deciduous species of irregular height and distribution with vegetative cover from 0 to 3 m tall (Graber 1961, Grzybowski 1995). Given the opportunity to mature, many sites with vireo habitat may eventually produce warbler habitat. Both these songbirds nest in association with Ashe juniper (*Juniperus ashei*). While many of the same plant species are present in each bird's breeding habitat, the structure of the vegetation is quite different. Unlike the vireo, the warbler requires mature junipers at least 4.5 m tall with shedding bark from which the warbler constructs its nest (Pulich 1976, USFWS 1992, Campbell 1995).

In 1997 a new trap location (CC1) was established in a small open area surrounded by mature live oaks (*Quercus virginiana*) and second growth Ashe juniper. This trap location was the closest available access point to the largest existing Black-capped Vireo population in the county. Although not considered habitat for either songbird, the location was 2.75 km from the vireo colony and within 600m of warbler habitat, well within the 6.7 km commuting distance for Brown-headed Cowbirds reported by Rothstein et al. (1984).

On June 2, 1997, during a routine check of traps, I observed a female Golden-cheeked War-

bler feeding a juvenile Brown-headed Cowbird through the trap wire of CC1. The same feeding behavior was observed the following day. No Golden-cheeked Warbler was observed attempting to enter the trap. However, on June 5, the remains of a Golden-cheeked Warbler were found on the trap floor along with a dead juvenile cowbird and three dead adult male cowbirds. Presumably the host bird entered the trap to feed the juvenile cowbird, was unable to find an exit, and died. The cause of death for the birds was not determinable. By the time of discovery, red imported fire ants (*Solenopsis invicta*) had consumed most of the warbler and some of the remains of the cowbirds.

Golden-cheeked Warblers have been observed feeding Brown-headed Cowbird fledglings through cowbird traps at Fort Hood (T. Cook, pers. comm.) and in Travis County (D. Lyter, pers. comm.). A male Kirtland's Warbler (*Dendroica kirtlandii*) was observed entering and exiting a trap to feed a young Brown-headed Cowbird in Michigan (M. DeCapita, pers. comm.). I know of no other instance of a host bird entering a trap to feed cowbirds (W. Armstrong, pers. comm.; A. Averill, pers. comm.; J. C. Griffith, pers. comm.; S. Rothstein, pers. comm.).

In the effort to protect rare species through

management techniques such as cowbird trapping, the possibility always exists that control methods could negatively impact the very species these efforts are designed to protect. Admittedly, the capture of host species in cowbird traps appears to be extremely rare. However, measures taken to lessen the likelihood of repeat incidents may be worthwhile for the survival of all non-target species. Modifications to the Travis County cowbird trapping program to minimize non-target captures and fatalities, especially of host species, include daily trap monitoring throughout the trapping season and prompt removal of juvenile cowbirds. In addition, efforts will be made to relocate traps from host breeding sites to cowbird foraging areas. Such foraging sites may include open shortgrass areas with grazing cattle or horses, large lawn areas such as golf courses, and residential areas with numerous bird feeders, all within commuting distance for cowbirds (Verner and Ritter 1983, Rothstein et al. 1984, Airola 1986, Coker and Capen 1995).

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