

# Winter Status of White-eyed Vireos in Northeastern Louisiana

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## ABSTRACT

In December 2004, February 2005, and June 2005, we recaptured a White-eyed Vireo (*Vireo griseus*) that was banded on 19 May 2004 at the same location on the Tensas River National Wildlife Refuge, Madison Parish, LA. This is the first documented permanent resident White-eyed Vireo outside of resident populations known from Florida and southern Texas. This individual appears to be resident near the northern limit of the winter range for the species. Although White-eyed Vireos are uncommon in northeastern Louisiana during winter, we detected other White-eyed Vireos during line transect surveys and banding during winters 2003 - 2004 and 2004 - 2005. The lack of research and observation of winter birds in northern Louisiana and the secretive and inconspicuous behavior of White-eyed Vireos in winter may have led to an underestimation of abundance at the northern limits of their winter range.

## INTRODUCTION

The White-eyed Vireo (*Vireo griseus*) is a widespread Neotropical migrant songbird found primarily in dense deciduous scrub, wood margins, and overgrown pastures in the southeastern United States (Hopp et al. 1995). Northern populations are fully migratory. The species overwinters in the Caribbean, Mexico, and along the Gulf and south Atlantic coasts of the United States, ranging as far north as coastal North Carolina (Hopp et al. 1995, <http://www.mbr-pwrc.usgs.gov/bbs/htm96/cbc622/ra6310.html>). Although White-eyed Vireos are found year-round

in the southern portion of their range, within the United States only two subspecies are known to be resident: *V. g. maynardi* in Florida and *V. g. micrus* in southern Texas (Lowery 1974, Hopp et al. 1995, Remsen et al. 1996, R. Poole, C. Brown, P. Homann, unpubl. data). Kale et al. (1992) noted that resident individuals in Florida shift southward during winter, but did not provide details describing which portion of the population shifts southward versus remains on territory year-round, nor did they identify how far birds move.

We report here the first permanent resident White-eyed Vireo within a previously undocumented resident population. In addition, this individual was found resident near the northern limit of the winter range for the species.

## METHODS

White-eyed Vireos are abundant migratory and breeding birds at the Tensas River National Wildlife Refuge (NWR), Madison Parish, LA (Twedt et al. 1999, Wilson and Twedt 2003), but are uncommon during winter (D.J. Twedt and S.G. Somershoe, unpubl. data; Louisiana Bird Records File, Museum of Natural Science, Louisiana State University). Tensas River NWR encompasses >26,000 ha of bottomland hardwood forest consisting of a matrix of reforestation and mature second growth forest, which provide habitat for migratory songbirds including White-eyed Vireo.

During summers 2003 - 2005, we banded birds on nine dates within eight forest stands at Tensas River NWR following Monitoring Avian Productivity and Survival (MAPS) protocol. During winters of 2003 - 2004 and 2004 - 2005, we banded birds on six dates (twice per month) within six of these eight stands. Weather permitting, we operated from 10 to 15 nets within a stand for circa six hours per day. Also during winter, we conducted two to six line transect surveys (250 m in length) in each of 22 forest stands.

## RESULTS

On 30 Dec 2004 and 11 Feb 2005, we recaptured a White-eyed Vireo that was originally banded within the same Tensas River NWR forest stand during MAPS operations on 19 May 2004. We also recaptured the same individual on 17 Jun 2005 at the same location. Upon initial capture and recapture in summer 2005, we aged this vireo as an after-second-year bird: the bird did not have fat stores nor any evidence of breeding condition (i.e., no cloacal protuberance or brood patch; Pyle 1997). During summer banding operations we regularly capture and recapture breeding pairs of White-eyed Vireos together (i.e., one male and one female) while infrequently capturing two males or two females together. Although we did not capture the bird in breeding condition, we suspect the bird is a male as we recaptured the White-eyed Vireo with a presumed female White-eyed Vireo (well developed brood patch present) in summer 2005. Since spring migration for White-eyed Vireos is complete by 10 May at our study site (D.J. Twedt and S.G. Somershoe unpubl. data) and all recaptures were within 100 m of initial capture, we suggest this White-eyed Vireo was a permanent resident at Tensas River NWR.

## DISCUSSION

This encounter represents the first documented permanent resident White-eyed Vireo outside Florida and southern Texas. The location is approximately 400 km north of the nearest known permanent resident population and is near the northern limit of their winter range as identified by Christmas Bird Counts (<http://www.mbr-pwrc.usgs.gov/bbs/htm96/cbc622/ra6310.html>) and sight records (Louisiana Bird Records File, Museum of Natural Science, Louisiana State University). Permanent resident vireos may occur in southern Louisiana and along the Gulf Coast, but as banding is not generally conducted on the same sites during summer and winter, resident birds are not documented.

While banding at Tensas River NWR, we captured two other White-eyed Vireos during winter 2003 - 2004 and one additional vireo during winter 2004 - 2005. We did not recapture other winter-banded vireos during summer 2004 or 2005. In addition to

banded birds, we detected at least three different White-eyed Vireos during winter 2003 - 2004 and at least five others during winter 2004 - 2005 on line transect surveys or during travel between study sites. One of these White-eyed Vireos was a silent, unbanded bird, observed on 27 Jan 2005, approximately 150 m from where the resident individual was encountered. Thus, at least two White-eyed Vireos overwintered within this 23 ha forest stand. We detected additional White-eyed Vireos during winter surveys but their close proximity to previous sightings (<150 m) precluded our confirming different individuals.

Three additional White-eyed Vireos were found during the Tensas River Christmas Bird Count on 3 Jan 2005 (D. King, pers. obs.) >3 km from the nearest banding or survey locations. White-eyed Vireos have been recorded, on average, once every four years on the Tensas River Christmas Bird Count (<http://www.audubon.org/bird/cbc/>): the three detected in January 2005 was a high count for the Tensas River Christmas Bird Count. From our banding and survey efforts, White-eyed Vireos are uncommon, but regular winter birds at Tensas River NWR.

We found only one White-eyed Vireo detection on Christmas Bird Counts in north and central Mississippi and in northern Louisiana between 1955 and 1969. Although the numbers of White-eyed Vireo have increased on Christmas Bird Counts in the northern region of their winter range from 1970 - 2004 (mean 4.9 birds/yr, range 1 - 24 birds/yr), we found the trend is not significant after controlling for party hours.

The majority of White-eyed Vireos detected on surveys (6/8) were found audibly with only two individuals detected exclusively through visual observation. Although we captured five White-eyed Vireos on three forest stands in two winters, we detected no singing vireos at banding stations. We detected less than half of all wintering White-eyed Vireos audibly, thus we suggest the majority of White-eyed Vireos may be overlooked because of their often secretive and inconspicuous behavior in winter. Thus, White-eyed Vireo relative abundance during winter in northeastern Louisiana is underestimated (Hopp et al. 1995, Remsen et al. 1996).

We have no data before winter 2003 - 2004 to draw conclusions on the role of weather on wintering populations of White-eyed Vireo, but relatively mild weather during the two winters of our study may have provided ample food resources and allowed White-eyed Vireos to winter at this northern latitude. Mild weather conditions and high insect and/or fruit resource abundance provide opportunity for individuals to survive the winter on their breeding grounds. We did observe an unbanded White-eyed Vireo foraging on the fruit of poison ivy (*Toxicodendron radicans*), suggesting that White-eyed Vireos may rely on fruit resources during winter (Hopp et al. 1995). Staying on the breeding ground provides the advantage of maintaining a high quality territory year-round and obtaining a high quality mate at the onset of the breeding season (Terrill and Ohmart 1984).

Although most White-eyed Vireos leave the breeding grounds in northeastern Louisiana during autumn, at least one White-eyed Vireo is likely a permanent resident. Further efforts are needed to document the extent of resident White-eyed Vireos at the northern limits of their winter range. Additional research questions include: what factors drive migratory or resident status of White-eyed Vireos, and is this status related to age, sex, food resources, or weather conditions. We encourage more research on winter bird populations through use of standardized surveys and winter banding through the Monitoring Avian Winter Survival (MAWS) program. The MAWS program, sponsored by the Institute for Bird Populations (<http://www.birdpop.org>), was established to monitor winter populations of songbirds in the southeastern U.S. using protocols developed to monitor winter survivorship of migratory landbirds.

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