

Avian Mortality During Spring Migration at a
North Mississippi Television Tower

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During nocturnal migration birds have been killed by hitting tall towers or buildings in several areas of the eastern United States, ranging from Minnesota in the northwest (Raveling and Warner 1978) to Florida in the southeast (Crawford 1978, 1981). I have found no records of such mortality from Mississippi, and only one from immediately surrounding areas of adjacent states, e.g. Memphis, Tennessee (Coffey 1964). Therefore, it seems in order to describe one such incident and to call attention to possible occurrences of this sort in other parts of Mississippi. A noteworthy aspect of this "bird kill" was its occurrence during spring migration, whereas most published reports on such incidents are from fall migration. One exception giving considerable attention to spring migration kills is the early report of Stoddard (1962).

The transmitter tower and building of WMAV-TV, a regional outlet of the Mississippi Educational Television Network, are located 18.3 km west-southwest of the center of Oxford. On the morning of 21 April 1984, a local resident, Robert E. Briscoe, noticed brightly-colored birds lying dead on a dirt road west of the tower. These were approximately beneath one of the four large anchoring cables extending outward to a distance of ca. 300 m from the base of the tower. Stopping to investigate, Mr. Briscoe walked along the area cleared of brush beneath the cable until he reached the fence around the installation. In a distance of ca. 80 m along this cleared strip, he saw approximately 200 dead birds plus 2 or 3 injured beyond ability to fly. A number of the bodies were being attacked by ants or other insects, and there were several collections of feathers indicative of birds that had already been devoured by scavengers. Mr. Briscoe picked up 26 dead birds that were free of insects and undamaged, brought them to Oxford and gave them to Hugh L. Quarles, who later conveyed them to me. This sample of ca. 10% of the birds noted by Briscoe consisted of the following:

THE MISSISSIPPI KITE

Wood Thrush (<u>Hylocichla mustelina</u>)	5
Gray Catbird (<u>Dumetella carolinensis</u>)	1
Yellow-throated Vireo (<u>Vireo flavifrons</u>)	2
Red-eyed Vireo (<u>V. olivaceus</u>)	3
Golden-winged Warbler (<u>Vermivora chrysoptera</u>)	1 male
Tennessee Warbler (<u>V. peregrina</u>)	3
Bay-breasted Warbler (<u>Dendroica castanea</u>)	1 male
Cerulean Warbler (<u>D. cerulea</u>)	1 each sex
Kentucky Warbler (<u>Oporornis formosus</u>)	4
Yellow-breasted Chat (<u>Icteria virens</u>)	3
Northern Oriole (<u>Icterus galbula</u>)	1 male

The birds have been deposited as mummy specimens in the Vaiden Collection of the Department of Biology, University of Mississippi. It seems likely that many additional birds not seen by Mr. Briscoe may have fallen into the uncleared, brushy areas near the cleared strip that he viewed. Considering that a systematic search was not made, it is possible that the number of dead birds seen by Briscoe (estimated at 200) might have constituted only 10-15% of the actual toll. A "bird kill" of considerable magnitude is apparently represented by these observations.

The WMAV-TV tower rises 397.5 m above ground to an elevation of 538.6 m above sea level. On the evening of 20 April surface weather observations recorded at the University-Oxford Airport (ca. 16 km to the northeast) showed a ceiling of about 365 m with broken clouds, visibility of 8 km with fog and wind from the east at 10 knots. Thus, the top of the WMAV-TV tower may have been in clouds on the night of the tower-mortality of the migrants. The apparent clustering of dead birds on the ground mainly to the west of the tower, as best can be known from Briscoe's report, is consistent with a significant wind from the east. These conditions are in accord with those described by Tordoff and Mengel (1956) as promoting TV tower kills, namely, "cloud ceiling down to as low as 800-1000 feet" that "presumably force the migrating birds to fly below the cloud ceiling and thus brings them within the altitudinal range of the television towers."

Transmitter towers in the range of heights between 365 and 730 m occur in several other areas of Mississippi, three southwest of Jackson alone. Birders in such areas should be alerted to the possible occurrence of similar bird kills. Such incidents have served as a source of valuable specimens of species rarely noted otherwise.

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