

did not find the difference to be sufficient to justify the extra model terms. This determination was based on residual errors of competing models. Because components of the Poisson model corresponding to surface winds made a strong contribution toward explaining deviance, there also could be a relationship between advection patterns and mockingbird calling.

Northern Mockingbird singing appears to be sensitive to a number of weather-related parameters. With the Northern Mockingbird being one of the more common species in Oklahoma, it makes a good model for further quantitative study into avian weather-sensing abilities.

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Literature Cited

- Elkins 1983. Weather and bird behaviour. T&AD Poyser, Staffordshire, England.
- Kramer, G. 1961. Long distance orientation. *Biology and Comparative Physiology of Birds* 2:341–371.
- Meier, H., and A. C. Russo. 1985. Circadian organization. *Current Ornithology* 2:303–343.
- Nottebohm, F. 1975. Vocal behavior in birds. *Avian Biology* 5:287–332.
- Oklahoma Birds Records Committee. 2000. Date guide to the occurrences of birds in Oklahoma, third edition. Oklahoma Ornithological Society, Tulsa.
- Schwartzkopff, J. 1973. Mechanoreception. *Avian Biology* 3:417–477.
- Tamhane, A. C., and D. D. Dunlop. 2000. Statistics and data analysis: from elementary to intermediate. Prentice Hall, Upper Saddle River, New Jersey.
- Terres, J. K. 1980. The Audubon Society encyclopedia of North American birds. Alfred A. Knopf, Inc., New York.
- Wiltschko, W., and R. Wiltschko. 1988. Magnetic orientation in birds. *Current Ornithology* 5:67–121.
- Wingfield, J. C., and D. S. Farner. 1993. Endocrinology of reproduction in wild species. *Avian Biology* 9:163–327.

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First record for the Bronzed Cowbird in Oklahoma.—We observed a Bronzed Cowbird (*Molothrus aeneus*) on a bird feeder at the house of Esther Israel in Keyes, Cimarron County, Oklahoma, on 18 May 2003. Using binoculars (8.5 x 42 Swarovski and 10 x 40 Zeiss) and a spotting scope (27 x 82 Kowa), we were able to observe its glossy black plumage, heavy bill, short tail, stocky shape, red eye, and neck ruff, which it flared several times during the 15 min. we observed it from 1830h.

We first observed the bird briefly with binoculars from about 10 m on a window feeder at the house, but it flew to a dead tree about 30 m away where its diagnostic features were easily observed using the spotting scope. McMahon took video as the bird flared its ruff, but no other diagnostic features were visible due to poor light conditions. This sighting was accepted 26 July 2003 by the Oklahoma Bird Records Committee, which added the species to the Oklahoma Ornithological Society Check-list of Oklahoma Birds as hypothetical (no acceptable photograph or other tangible evidence).

Israel (2003 pers. comm.) was surprised when advised of the significance of this bird, because she said that over the past 20 years she has seen Bronzed Cowbirds at her feeder every 4–5 years, usually with Brown-headed Cowbirds (*Molothrus ater*). In all instances, the Bronzed Cowbirds stayed for only a day or two. In the eastern United States, there have been few Bronzed Cowbird records north of Texas and the Gulf Coast states. These records include 1 from Missouri in 1979 (Table 1; Robbins, M. B. and D. A. Easterla. 1981. Range expansion of the Bronzed Cowbird with the first Missouri record, *Condor* 83:270–272) and 1 from Colorado in 1990 (L. Semo. Secretary, Colorado Bird Records Committee. 2003 pers. comm.). Currently, there are no records for Kansas (M. Thompson, Chair, Kansas Bird Records

Table 1. Records of Bronzed Cowbirds in Oklahoma and surrounding states.

State	Counties	Reference	Notes
OK	Cimarron	Heck & McMahon, OK Birds Records Committee 2003	1 Record 18 May 2003
AR	—	Parker, M., Chair AR Bird Records Committee 2003	No record
KS	—	Thompson, M., Chair KS Bird Records Committee 2003	No Record
MO	Holt	Robbins & Easterla 1981	1 Record 5 January 1979
CO	Jefferson	Semo, L., Secretary CO Bird Records Committee 2003	1 Record 18 May to 5 June 1990
NM	Numerous	Williams, S. 2003	Through summer of 2002, breeding in 12 counties. Breeding uncertain in 5 more counties in E and NE nearest OK. Range is expanding to north.
TX	Numerous	Kostecke, Ellison & Summers 2003, Seyffert 2003	Breeding in Eastland and Lamesa counties, the 2 nearest to OK. Range is expanding to north.

Committee 2003, pers. comm.) or Arkansas (H. Parker, Chair, Arkansas Bird Records Committee 2003 pers. comm.). The Bronzed Cowbird has extended its range northward in New Mexico since first recorded in 1947, and it has been recorded in 3 northeastern counties (Union, San Miguel, and Quay), with 2 pairs observed near Clayton in Union County (S. Williams. 2003. Notes on Bronzed Cowbird range expansion in New Mexico. Southwest Natural History Institute, Albuquerque, New Mexico. unpublished document). Union County, New Mexico abuts Cimarron County, Oklahoma, and Clayton is about 90 km southwest of Keyes, a likely route of expansion into Oklahoma.

Since 1956, the Bronzed Cowbird has steadily extended its range northward from its historic range in south Texas (Kostecke, R. M., K. Ellison, and S. G. Summers. *In press*. Continued range expansion of bronzed cowbirds in the southwestern United States. *Southwestern Naturalist*). Bronzed Cowbirds have now been documented breeding as far north in Texas as the Fort Hood area and Lubbock (K. Seyffert, 2003, pers. comm.). However, individual Bronzed Cowbirds have been observed further north in Texas in Amarillo, Randall and Armstrong counties (Kostecke et al.).

If the current northward range expansion of the Bronzed Cowbird continues, future sightings in Oklahoma will likely occur in 3 areas based on distances from current populations in Texas and New Mexico: the Panhandle and the southwestern and south-central areas.

BERLIN A. HECK, 109 Kaye Drive, Broken Bow, Oklahoma 74728; e-mail: baheck@pine-net.com

JERI A. MCMAHON, 311 Bayou Road, Ft. Gibson, Oklahoma 74434; okiebirder@mynewroads.com

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