

LOGGERHEAD SHRIKE KILLS AND TRANSPORTS A NORTHERN CARDINAL

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Abstract.—A Northern Cardinal killed by a Loggerhead Shrike is the largest bird known to have been carried into the air by a Loggerhead Shrike.

LANIUS LUDOVICIANUS MATA Y TRANSPORTA UN ESPECIMEN DE CARDINALIS CARDINALIS

Sinopsis.—Un alcaudón (*Lanius ludovicianus*) mató y transportó por el aire un espécimen de cardenal (*Cardinalis cardinalis*). Se considera éste, el ave de mayor tamaño que haya podido transportar un *L. ludovicianus*.

About 16:15 CST on 7 January 1986, the senior author observed a Loggerhead Shrike (*Lanius ludovicianus*) killing a male Northern Cardinal (*Cardinalis cardinalis*). When first seen, the apparently healthy cardinal was foraging at the base of a leafless tree in the center of an asphalt parking lot adjacent to White Oak Lake, Hopkins Co., Texas. The shrike struck the cardinal from behind and held on during a noisy struggle lasting less than a minute, by which time the cardinal was dead. As the senior author approached the birds, the shrike flew off carrying the cardinal, never rising more than about 0.6 m above the ground, although it often dipped lower, dragging the cardinal along the ground for short distances. The shrike transported the cardinal for about 40 m before dropping it in a grassy area close to the parking lot. A necropsy revealed that the cardinal's neck was broken at the base of the skull. Considerable tissue trauma and coagulated blood were found under the skin at the site of the break. The cardinal weighed 45.8 g, about the same as the predator ($47.4 \text{ g} \pm 3.26$).

Most records of shrike predation on birds indicate that smaller species are generally taken (Table 1). Slack (1975) demonstrated that under captive conditions shrikes preferentially take prey smaller than themselves. He found that when presented with a choice of mice of varying sizes, 83.5% of mice selected by captive shrikes weighed less than 8.6 g (\bar{x} for 200 tests = 7.15 g) and only 4 mice chosen were in excess of 13 g. Although birds are seldom major prey items for shrikes, Bent (1950) reported that sparrows and warblers appear to make up the bulk of the small bird prey and that House Sparrows are fairly often taken in cities and towns.

Attacks by shrikes on larger birds may require special circumstances of vulnerability. Grasslands and thickets along White Oak Lake shore and adjacent to the parking lot harbored numerous species of small birds,

TABLE 1. Mean weights for the Loggerhead Shrike and some of its reported avian prey.

Species	Mean weight (g) ¹	Source
Loggerhead Shrike	47.4 ± 3.26	
Blue-gray Gnatcatcher (<i>Poliioptila caerulea</i>)	6.0 ± 0.13	Wm. Lloyd in Bent (1950)
Bell's Vireo (<i>Vireo bellii</i>)	8.5 ± 0.55	Wm. Lloyd in Bent (1950)
Chipping Sparrow (<i>Spizella passerina</i>)	12.3 ± 0.84	Wm. Lloyd, H. L. Stoddard, & Pearson et al., in Bent (1950)
Yellow-rumped Warbler (<i>Dendroica coronata</i>)	12.9 ± 0.76 (males)	Wm. Lloyd, H. L. Stoddard, & Pearson et al., in Bent (1950)
Bank Swallow (<i>Riparia riparia</i>)	14.6	Wm. Brewster in Bent (1950)
Grasshopper Sparrow (<i>Ammodramus savannarum</i>)	17.0 ± 2.75	Judd (1898)
House Sparrow (<i>Passer domesticus</i>)	28.0 ± 1.55 (males)	Judd (1898); Bent (1950); S. A. Grimes in Bent (1950)
Horned Lark (<i>Eremophila alpestris</i>)	31.9 (males)	Wiggins (1962)
Eastern Bluebird (<i>Sialia sialis</i>)	31.6 ± 0.92	Wm. Brewster and Wright & Harper in Bent (1950)
White-crowned Sparrow (<i>Zonotrichia leucophrys</i>)	32.0 ± 2.18	Esterly (1917)
Rufous-sided Towhee (<i>Pipilo erythrophthalmus</i>)	41.7 ± 1.95 (males)	Cumming (1951)
Northern Cardinal	45.4 ± 4.29 (males)	present report
Northern Mockingbird (<i>Mimus polyglottos</i>)	48.5	Holt (1913)
Mourning Dove (<i>Zenaidra macroura</i>)	123.0 ± 1.85 (males)	Balda (1965)

¹ Dunning (1984); White-crowned Sparrow wt. *Z. l. nuttalli*.

including sparrows, warblers, and Dark-eyed Juncos (*Junco hyemalis*). The cardinal was in a vulnerable position in an open area, enhancing the chances of success while, perhaps, minimizing the chances of injury to the shrike. Similarly, Balda (1965) reported that a shrike attacked and killed a much larger Mourning Dove (*Zenaidra macroura*). The dove was feigning injury as a result of human disturbance and therefore was particularly vulnerable. In this case it was not transported by the shrike.

Predation appears to be most common on species less than about two-thirds the mean body weight of the shrike (30–35 g) and rare on larger individuals. It is likely that larger prey may be subject to shrike predation only under circumstances of special vulnerability.

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LITERATURE CITED

- BALDA, R. P. 1965. Loggerhead Shrike kills Mourning Dove. *Condor* 67:359.
- BENT, A. C. 1950. Life histories of North American wagtails, shrikes, vireos, and their allies. *U.S. Natl. Mus. Bull.* 197. 411 pp.
- CUMMING, F. 1951. Towhee is shrike's prey. *Migrant* 22:44.
- DUNNING, J. B., JR. 1984. Body weights of 686 species of North American birds. *West. Bird. Band. Assoc. Monogr. No.* 1:38 pp.
- ESTERLY, C. O. 1917. How does the shrike carry its prey? *Condor* 19:25.
- HOLT, E. G. 1913. Notes on the Loggerhead Shrike at Barachias, Montgomery Co., Ala. *Auk* 30:276-277.
- JUDD, S. D. 1898. The food of shrikes. *U.S. Dep. Agric. Biol. Surv. Bull. No.* 9:15-17.
- SLACK, R. S. 1975. Effects of prey size on Loggerhead Shrike predation. *Auk* 92:812-814.
- WIGGINS, I. L. 1962. Horned Lark captured in flight by Loggerhead Shrike. *Condor* 64: 78-79.

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NOTES AND NEWS

"WETLANDS '87", a symposium to discuss advances in wetland ecology in Canada and elsewhere, will be held **26-28 Aug. 1987** at the Univ. of Alberta, Edmonton. For information, contact the *Wetlands '87 Coordinator, CCELC Secretariat, Lands Directorate, Environment Canada, Ottawa, Ontario K1A 0E7*.

3rd SOUTHEASTERN NONGAME AND ENDANGERED WILDLIFE SYMPOSIUM, 8-10 Sept. 1987, [NOTE REVISED DATES] Athens, GA. Invited papers on research and management in the SE, and film and poster sessions. Those wishing to submit films or poster papers should send brief abstracts by **1 Apr.** Registration details to be announced later. For information write to RON ODOM, *Georgia DNR, Game and Fish Division, Rt. 2, Box 119A, Social Circle, GA 30179 (404-557-2523)*.

WESTERN BIRD BANDING ASSN., 9-11 Oct. 1987, Tucson.

COOPER ORNITHOLOGICAL SOCIETY, 58th Annual Meeting, Asilomar, CA 18-21 Mar. 1988.

7th PAN-AFRICAN ORNITHOLOGICAL CONGRESS, Nairobi, Kenya, **28 Aug.-5 Sept. 1988**. GEOFFREY MALORY of the University of Nairobi is the Congress Chairman. For further information write DON TURNER, *P.O. Box 48019, Nairobi, Kenya, East Africa*, or Dr. LESTER L. SHORT, *American Museum of Natural History, Central Park West at 79th St., New York, NY 10024*. For those wishing to contribute papers or propose symposia, the Scientific Program Chairman is DAVID PEARSON, *Dept. of Biochemistry, University of Nairobi, P.O. Box 30197, Nairobi, Kenya*.