

LONG-DISTANCE MOVEMENTS BY LOGGERHEAD SHRIKES

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Abstract.—Band recoveries indicate that populations of Loggerhead Shrikes east of the Rockies migrate partly or wholly to the southeastern states for the winter. Recoveries of western populations are inconclusive.

MOVIMIENTOS DISTANTES DE *LANIUS LUDOVICIANUS*

Sinopsis.—La recaptura de especímenes anillados de *L. ludovicianus* indica que la población al este de las Rocalosas migra en grupos o en su totalidad, hacia los estados del sureste durante el invierno. No hay información de recaptura de las poblaciones del oeste.

Migration in Loggerhead Shrikes (*Lanius ludovicianus*) has been documented primarily by the seasonal presence or absence of individuals in portions of the range (Bent 1950, Graber et al. 1973, Miller 1931). Miller (1931) hypothesized that snow cover and other adverse weather conditions force shrikes to move south in severe winters. Populations in the southern United States do not appear to migrate, while northern

TABLE 1. Long-distance movements of Loggerhead Shrikes (HY = Hatching Year, AHY = After Hatching Year, U = Unknown Age).

	Banded		Recovered		Distance (km)	Age code
	State or province	Date (mo/yr)	State	Date (mo/yr)		
1*	Florida	5/65	Florida	11/65	238	HY
2	Illinois	4/60	Tennessee	11/60	708	U
3	Iowa	5/63	Arkansas	1/64	690	HY
4	Michigan	6/29	Alabama	9/29	1344	HY
5	Missouri	3/81	Louisiana	1/82	860	AHY
6	Ohio	5/33	Ohio	12/33	276	HY
7	Colorado	6/71	Texas	4/72	860	HY
8	North Dakota	4/32	Texas	11/32	1774	U
9	North Dakota	6/32	Arkansas	2/36	1460	HY
10	South Dakota	8/31	Texas	2/34	1317	U
11	South Dakota	5/33	Kansas	2/34	932	U
12	Texas	9/66	Texas	10/66	387	HY
13	Alberta	6/33	Texas	12/33	2401	HY
14	Alberta	7/33	Texas	10/34	2509	HY
15	Quebec	8/45	Virginia	2/46	1013	HY
16	Saskatchewan	7/31	Missouri	9/31	1953	HY
17	Saskatchewan	6/38	Texas	4/42	2222	U
18	Saskatchewan	8/38	Oklahoma	12/38	2133	AHY
19	Saskatchewan	7/72	Texas	11/72	2554	HY

* The numbers correspond with numbers in Figures 1 and 2.

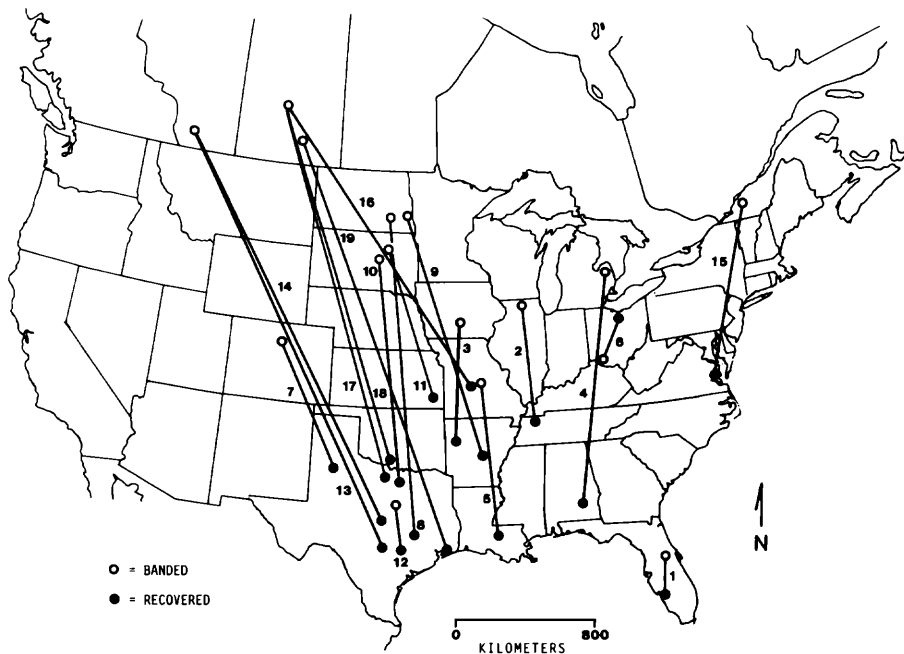


FIGURE 1. Banding and recovery sites of Loggerhead Shrikes. Numbers correspond to those in Table 1.

populations disappear from breeding areas during winter (Miller 1931, Morrison 1981).

Bent (1950) lists band recovery records for four Loggerhead Shrikes that moved from breeding areas in the northern U.S. and southern Canada to wintering grounds in southern states. This was the first evidence that shrikes migrate long distances. This paper further documents long-distance movements by this species.

Banding and recovery records for Loggerhead Shrikes were obtained from the U.S. Fish and Wildlife Service Bird Banding Laboratory, Laurel, Maryland. Banding records for the years 1955–1983 and recovery records for 1923–1983 were analyzed. Records indicating shrike movements of 100 km or more were plotted on a map of the United States and southern Canada.

Of 151 banded shrikes recovered in the United States and Canada during the period 1923–1983, 135 were intrastate records and 16 were interstate. One-hundred-four shrikes were recovered within 20 km of the banding site, 28 moved 21–99 km, and 19 moved 100 km or more from the banding site (Table 1). The average distance traveled by birds moving at least 100 km was 1349 km (range 238–2554 km) and the period between their banding and recovery averaged 11.8 months (range 1–46

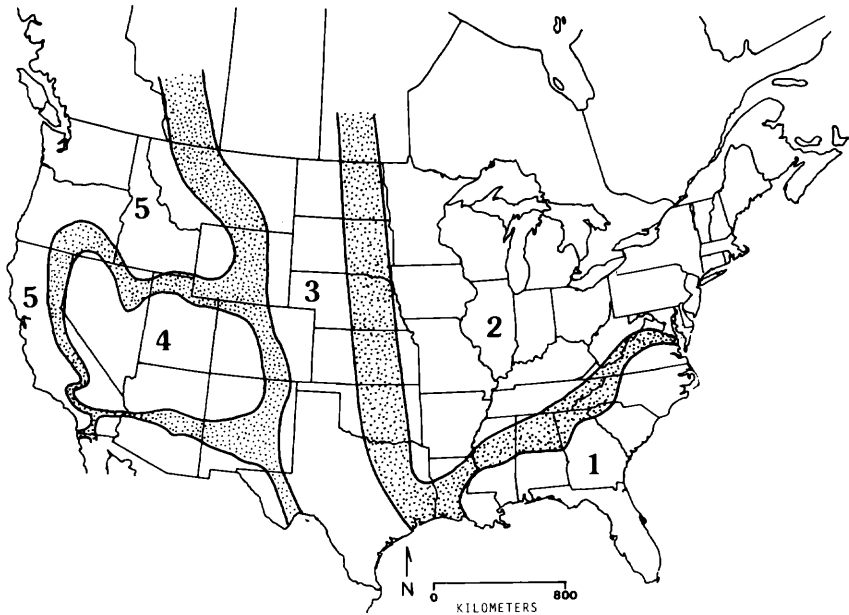


FIGURE 2. The breeding ranges and zones of overlap (stippled areas) of populations of Loggerhead Shrikes as defined by Miller (1931): 1 = *L. l. ludovicianus*, 2 = *L. l. migrans*, 3 = *L. l. excubitorides*, 4 = *L. l. nevadensis*, 5 = *L. l. gambeli*.

months). Fifteen of the 19 long-distance records were of shrikes recovered within a year of the banding date.

Banding and recovery sites for Loggerhead Shrikes are shown in Figure 1. All but one shrike were banded north of recovery sites. Records indicate that 12 of 19 long-distance migrants were banded at northern latitudes during temperate months (March–September, Table 1) and recovered during winter months (October–February) in southern states. An exception to this is an HY shrike that was banded in May 1933 in southwestern Ohio and recovered in December of the same year 276 km north of the banding site (Fig. 1).

All dispersal routes were located east of the Rocky Mountains: 14 routes west and 5 east of the Mississippi River. A total of 50 Loggerhead Shrikes were banded, and subsequently recovered, west of the Rocky Mountains and none of these represented long-distance movements. Ninety-nine shrikes were recovered east of the Rockies and 19 represented long-distance movements.

Miller (1931) stated that populations of Loggerhead Shrikes that are partly or entirely migratory are *Lanius ludovicianus ludovicianus*, *L. l. migrans*, *L. l. excubitorides*, *L. l. gambeli*, and *L. l. nevadensis*. General locations of each population can be seen in Figure 2. This study provides further evidence that populations east of the Rocky Mountains migrate

(*ludovicianus*, *migrans*, and *excubitorides*), but, it provides no evidence to support Miller's statement regarding migration in western shrikes (*gambeli* and *nevadensis*; Fig. 1).

The fact that a disproportionate number of shrikes (18 of the 19 records) moved from north to south can be partially explained by the following. (1) Human population density is greater in southern states than the northern Great Plains states, thus the probability of recovering a banded shrike is greater in the south. (2) HY shrikes lack experience in southern habitats and thus, may have a higher mortality rate there compared to the more familiar habitat in breeding areas. This would increase the chance that shrikes will be recovered in the south. (3) Shrikes that were banded in southern latitudes during winter probably were captured using traps or nets. In my experience these birds will be trap shy and thus, difficult to recapture at northern latitudes. Conversely, HY birds are often banded while on the nest in the north and will not be trap shy after migrating southward.

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LITERATURE CITED

- BENT, A. C. 1950. Life histories of North American wagtails, shrikes, vireos, and their allies. U.S. Natl. Mus. Bull. 197:114-182.
- GRABER, R. R., J. W. GRABER, AND E. L. KIRK. 1973. Illinois birds: Laniidae. Ill. Nat. Hist. Surv., Biol. Notes No. 83.
- MILLER, A. H. 1931. Systematic revision and natural history of the American shrikes (*Lanius*). Univ. Calif. Publ. Zool. 38:11-242.
- MORRISON, M. L. 1981. Population trends of the Loggerhead Shrike in the United States. Am. Birds 35:754-757.

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