

STATUS AND DISTRIBUTION OF *LASIURUS CINEREUS* (CHIROPTERA: VESPERTILIONIDAE) IN OKLAHOMA

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INTRODUCTION

The hoary bat (*Lasiurus cinereus*) is a wide-ranging, often migratory bat that probably occurs in all 50 of the United States (1). Blair (2) provided the first published record of the hoary bat in Oklahoma and believed that the species rarely occurred in the state. According to Glass and Halloran (3) *L. cinereus* is found throughout Oklahoma in summer. In Kansas, the species is widely distributed but more numerous in the eastern part of the state (4). Findley and Jones (5) found that hoary bats exhibit a distinct seasonal, sexual, and geographic distribution in North and South America.

Museum and reliable sight records were compiled to determine the status of *L. cinereus* in Oklahoma. Figure 1 shows the distribution based on these records, the majority of which are from central and extreme western Oklahoma. Of particular interest is the distribution of the sexes. Females have been taken primarily in the central and eastern portions of the state and constitute 63 percent of the specimens for which the sex is known, whereas the less common males were found most often in the Panhandle. This sexual segregation in Oklahoma agrees with the findings of Findley and Jones (5) which indicated that females occupied an eastern summering ground but that males were more prevalent in the montane West. They theorized that the more eastern areas of parturition were unoccupied by adult males and that most males recorded in these localities would be young-of-the-year. This theory is supported by the fact that one of only two males from central Oklahoma is a newly fledged juvenile (see Table 1).

Records of occurrence by season for the hoary bat in Oklahoma are presented in Table 1. Thirty-five percent of the specimens were taken in June or July, with scattered records from earlier in spring and in autumn. Findley and Jones (5) also found *L. cinereus* to be most abundant in New Mexico in June and July. The late summer and autumn (August, September, and October) and spring (April and May) records probably represent migrating individuals. Except for one, all records from the Panhandle occurred between August and October. This could suggest that *L. cinereus* does not reside there during summer, or merely that little collecting takes place then.

The hoary bat in Oklahoma is seemingly a migrant statewide. Summer residents are dominated by females in central and eastern Oklahoma. Females, pregnant prior to beginning their northward spring migration, probably bear young in Oklahoma in May and June. Our present understanding of the distribution of *Lasiurus cinereus* in the state may be biased by times and locations of sampling and by lack of adequate collection.

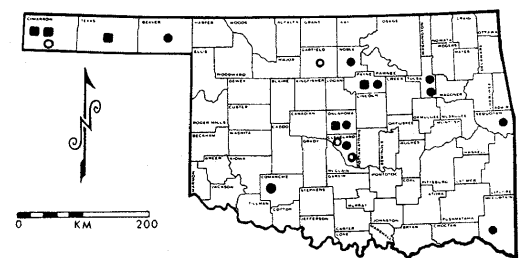


FIGURE 1. Known distribution of *Lasiurus cinereus* in Oklahoma. Solid circles represent females, squares designate males, and open circles are specimens of unknown sex.

REFERENCES

1. R. W. BARBOUR and W. H. DAVIS, *Bats of America*, Univ. Kentucky Press, Lexington, 1969, pp. 143-149.
2. W. F. BLAIR, *Am. Midl. Nat.* 22: 101-102 (1939).
3. B. P. GLASS and A. F. HALLORAN, *J. Mammal.* 42: 236 (1961).

4. J. K. JONES, E. D. FLEHARTY, and P. B. DUNNIGAN, Misc. Publ. Mus. Nat. Hist., Univ. Kansas 46: 20-21 (1967).
5. J. S. FINDLEY and C. JONES, J. Mammal. 45: 461-470 (1964).
6. S. BASS, letter of 7 December 1976 to C. M. Scott, on file in CUMZ.
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TABLE 1. *Locations, dates, and sexes of Lasiurus cinereus records from Oklahoma.*

Repository or Reference ^a	Location	Date	Sex
(5)	"Eastern Oklahoma", probably Sequoyah Co.	"April"	♀
CSUCV 1305	Cleveland Co., Moore	22 April 1972	♀
UOMZ 11015	Cleveland Co., 4 mi. S. Norman	30 April 1926	—
OSU 6554	Tulsa Co., Tulsa	May 1967	♀ (2 emb.)
J. D. Tyler sight record	Cimarron Co., 4 mi. S. Kenton (in pinyon pine)	9 May 1982	—
CM 14187	Noble Co., Ceres	2 June 1937	♀
OSU 282	Payne Co., Stillwater	17 June 1936	♂ (newly fledged juv.)
S. Bass sight record (6)	Tulsa Co., Tulsa	1 June 1976	♀
MSU	^b Texas, Wichita Co., Wichita Falls	19 July 1960	♂
OSU 3069	McCurtain Co., 3 mi. E. Wright City	29 July 1956	♀
(7)	Garfield Co., Enid	July 1957	—
CSUCV	Oklahoma Co., Edmond	July 1972	♀
OSU 3070	Beaver Co., 3 mi. S., 2 W. Elmwood	4 August 1956	♀
OSU 1000	Cimarron Co., 6 mi. N. Kenton (Carrizzo Creek)	12 August 1949	♂
OSU 3234	Texas Co., Guymon	17 September 1956	♂
UOMZ 11085	Cleveland Co., Norman	23 September 1975	—
OSU 3994	Payne Co., Stillwater	28 September 1955	♀ (yng.-of-year)
USNM-BS	Comanche Co., Wichita Mtns.	"September"	
CUMZ 36	Cimarron Co., 4 mi. S. Kenton (rocky crevice)	9 October 1970	♂
CSUCV 1241	Oklahoma Co., Oklahoma City	17 October 1975	♂

a. CM = Carnegie Mus., Pittsburgh, PA; CSUCV = Central State Univ. Coll. Vertebrates; CUMZ = Cameron Univ. Mus. Zool.; MSU = Midwestern State Univ.; OSU = Oklahoma State Univ.; UOMZ = Univ. Oklahoma Mus. Zool.; USNM-BS = U. S. Natl. Mus., Biol. Surv.)

b. Wichita Falls is 15 miles south of the Oklahoma border.