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## FIRST RECORD OF AN ADULT MALE EVENING BAT FROM KANSAS

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**FIRST RECORD OF AN ADULT MALE EVENING BAT FROM KANSAS --**

The evening bat (*Nycticeius humeralis*) occurs throughout the eastern and southeastern United States and into extreme northeastern Mexico, approximately 42° to 18° N latitude (Watkins and Shump 1981). Although records of females are common, records of adult male evening bats are rare in the northern portion of the species range (Watkins 1969, Watkins 1972). Jones et al. (1967) suggested that adult males might not accompany females to at least some parts of the parturient range.

As part of a larger study (Davis 2003) we surveyed bats on Fort Leavenworth Military Reservation (FLMR), Leavenworth County, Kansas in July 2002 and June and July 2003. Bats were captured by using mist netting, for a total effort of 48 net nights over two summers. Universal Transverse Mercator (UTM) coordinates were recorded for all collecting locations and are available from authors.

We captured 11 evening bats, including three specimens now deposited in the Collection of Recent Mammals, Midwestern State University (MWSU). Ten of the evening bats captured in our study included three adult females and seven juveniles. All of these individuals were captured in openings of the cottonwood-sycamore (*Populus deltoides*-*Platanus occidentalis*) and pecan-sugarberry (*Carya illinoensis*-*Celtis laevigata*) floodplain forests along the Missouri River. The other individual (MWSU 22086) represents the first record of an adult male evening bat for Kansas (Jones et al. 1967, Sparks and Choate 2000). The adult male was captured in oak-hickory (*Quercus alba*-*Carya ovata*) upland forest; northing 0334200, easting 4358631.

This record documents the occurrence of an adult male evening bat approximately 480 km north and west of the previously known range in extreme south-central Missouri (Boyles et al. 2003). In south-central Missouri where evening bats of both sexes are residents, adult males roost alone unlike communally roosting females and young (L. Robbins and J. Boyles, Southwest Missouri State University, unpublished data). Sparks and Choate (1995) hypothesized that the evening bat is expanding its range westward by taking advantage of the spread of trees across the prairie. Our limited finding has one adult male exclusively occupying a habitat distinct from those of females and young at the northwest extreme of the species range. If adult males occupy a different or more limited habitat, it might be that range expansion of the two sexes takes place at differential rates.

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#### LITERATURE CITED

- Boyles, J. G., J. C. Timpone, and L. W. Robbins. 2003. Late-winter observations of red bats, *Lasiurus borealis*, and evening bats, *Nycticeius humeralis*, in Missouri. *Bat Research News* 44:59-61.
- Davis, C. R. 2003. Mammals of Fort Leavenworth, Kansas: a 60-year follow-up. M.S. Thesis, Midwestern State University, Wichita Falls, Texas.
- Jones, J. K., Jr., E. D. Fleharty, and P. B. Dunnigan. 1967. The distributional status of bats in Kansas. *Miscellaneous Publications, Museum of Natural History, University of Kansas* 46:1-33.
- Sparks, D. W., and J. R. Choate. 1995. New distributional records for mammals in Kansas. *Prairie Naturalist* 27:185-192.
- Sparks, D. W., and J. R. Choate. 2000. Distribution, natural history, conservation status, and biogeography of bats in Kansas. Pp. 173-228 in *Reflections of a naturalist: papers honoring Professor Eugene D. Fleharty* (J. R. Choate, editor). Fort Hays Studies, Special Issue 1, Hays, Kansas.
- Watkins, L. C. 1969. Observations on the distribution and natural history of the evening bat (*Nycticeius humeralis*) in northwestern Missouri and adjacent Iowa. *Transactions of the Kansas Academy of Science* 72:330-336.
- Watkins, L. C. 1972. *Nycticeius humeralis*. *Mammalian Species* 23:1-4.
- Watkins, L. C., and K. A. Shump, Jr. 1981. Behavior of the evening bat *Nycticeius humeralis* at a nursery roost. *American Midland Naturalist* 105:258-268.

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