

THE EASTERN CHIPMUNK IN CENTRAL OKLAHOMA, WITH VALIDATION OF HOWELL'S 1929 RED FORK RECORD

Jeffrey Howard Black and Ruth Hunsicker

Department of Biology, Oklahoma Baptist University, Shawnee, Oklahoma

Albert P. Blair

Natural Sciences Faculty, University of Tulsa, Tulsa, Oklahoma

Tim Hunkapiller

Three Forks Nature Center, Sequoyah State Park, Hulbert, Oklahoma

The eastern chipmunk, *Tamias striatus*, is a characteristic mammal of the Ozark region in Oklahoma, where it lives on rocky slopes and in mesic ravines. Blair (1) listed specimens of the subspecies *venustus* Bangs from Adair, Cherokee, Mayes, Tulsa, LeFlore and McCurtain Counties, Oklahoma. Specimens housed in the Oklahoma State University Museum are from the following Oklahoma counties: Delaware, Latimer, Muskogee, Sequoyah, and Wagoner. Two specimens reported by Howell (2) from Red Fork, now a southwestern suburb of Tulsa, Tulsa Co., constitute the westernmost record in Oklahoma. In the 1930's, Blair (1) failed to find the chipmunk in this area and states "it seems likely that it is extremely rare west of the Ozark District". He mentioned having heard of one individual seen, presumably because A. P. Blair had told him of observing a chipmunk in the Lost City area south of the Arkansas River between Tulsa and Sand Springs.

The purpose of this paper is to report the continued existence of the chipmunk in the Tulsa area and extension of the range of chipmunk populations into the Osage Savanna District of central Oklahoma.

At approximately 1100 hr on 4 October 1975, one of us (Blair) heard and observed a chipmunk in the underbrush along the highway about two miles east of the south end of the Sand Springs bridge. This verifies the continued existence of what appears to be a small chipmunk population in Tulsa Co.

During 1975, Black, Hunsicker, and Hunkapiller found and trapped from populations of the eastern chipmunk 9 and 16 miles southeast of Shawnee in Pottawatomie and Seminole Counties, Oklahoma, respectively. This extends the known range some 65 miles southwest from Red Fork, Tulsa Co., and well into the Osage Savanna Biotic District of Blair and Hubbell (3) or the Oak-Woodland Faunal Region of Webb (4) in central Oklahoma.

Chipmunks in central Oklahoma have been collected and observed in isolated stands of blackjack-post oak surrounded by grassland, rocky ravines of sandstone in oak-woodland, and in and around buildings. Burrows have been found under sandstone boulders, buildings, and oak trees. Local residents report that these chipmunks remain active throughout the year.

An adult male captured and released at the Pottawatomie Co. study area on 22 October 1975 weighed 113.5 g. Two adult females from the same study area on the same date weighed 90.5 and 106.5 g. Another female captured and released also on this date, weighed 127 g. This female was twice recaptured; on 16 November 1975 she weighed 123 g, and on 13 March 1976 weighed 143.6 g. Acorns and beetle elytra were found in food cache areas in October.

Vegetation where these central Oklahoma populations occur consists primarily of post oak (*Quercus stellata*), blackjack oak (*Q. marilandica*), American elm (*Ulmus americana*), cedar (*Juniperus virginiana*), sumac (*Rhus glabra*), willow (*Salix nigra*), green-

briar (*Smilax* sp.) and a variety of grasses. These plants are typical of the Osage Savanna Biotic District (3) and the Oak-Woodland Faunal Region (4).

Blair (1) reported that certain eastern forest mammal species follow the oak-elm floodplain forest westward along major streams into the Osage Savanna District and there occupy the blackjack association on the sandstone ridges and the oak-elm association of the stream systems. This may explain the occurrence of the eastern chipmunk in central Oklahoma.

The occurrence of an eastern forest species in central Oklahoma is not unexpected. We find similar examples in plants (*Acer saccharum* (5)), cave invertebrates (*Trigenotyla* sp. (6)), amphibians (*Gastrophryne carolinensis* (7)), reptiles (*Carphophis amoenus* (4)), and various mammals (1).

Study skin specimens from central Oklahoma are deposited in Webster Natural History Museum, Oklahoma Baptist University.

ACKNOWLEDGMENTS

We owe special thanks to Dr. Bryan P. Glass for his comments on this paper and use of records from the Oklahoma State University Museum.

REFERENCES

1. W. F. BLAIR, *Am. Midl. Nat.* 22: 85-133 (1939).
2. A. H. HOWELL, *North Am. Fauna* 52: 1-157 (1929).
3. W. F. BLAIR and T. H. HUBBELL, *Am. Midl. Nat.* 20: 425-454 (1938).
4. R. G. WEBB, *Reptiles of Oklahoma*, Univ. Okla. Press, Norman, 1970.
5. E. L. LITTLE, *Ecology* 20: 1-10 (1939).
6. J. H. BLACK, *Okla. Underground* 4: 2-53 (1971).
7. A. P. BLAIR and H. E. LAUGHLIN, *Copeia*: 311 (1955).