29

Owl Pellets Reveal Cryptotis parva, a New Record for Caddo County, Oklahoma

Kent S. Smith

Department of Zoology and Oklahoma Museum of Natural History, University of Oklahoma, Norman, OK 73019-0235 Received: 1993 Apr 08; Revised: 1993 Jun 29

In the spring of 1991 several great horned owl (*Bubo virginianus*) pellets found near Apache, Caddo County, OK, were examined (1). These owl pellets contained the remains of several taxa: prairie vole, *Microtus ochrogaster*; deer mouse, *Peromyscus leucopus*; hispid pocket mouse, *Chaetodipus hispidus*; hispid cotton rat, *Sigmodon hispidus*; and harvest mouse, *Reithrodontomys montanus*. All taxa found within the owl pellets were previously known to exist in Caddo County, except *M. ochrogaster*. The first *M. ochrogaster* specimens were collected by trapping and collecting in the area (1). It was then confirmed that the vole specimens found in association with the owl pellets also were *M. ochrogaster*.

Until recently, periodic inspection of the owl pellet site near Apache did not produce any species other than those listed by Smith (1). A single partial skull of a shrew was discovered in association with regurgitated great horned owl pellets at the site in 1993. At the Recent Mammal Collection of the Oklahoma Museum of Natural History (OMNH), comparisons were made of the partial skull with various species of shrews including *Blarina hylophaga* and *Cryptotis parva*. The partial skull possesses 4 multicuspid teeth (1 premolar and 3 molars) on the right side. On the left maxillary 3 multicuspid teeth are present with the M3 missing. The 4 unicuspid teeth on both left and right maxillaries are missing, but the alveoli are preserved. The identification of shrews is partly determined by the number and size of teeth. The presence of 4 unicuspid teeth revealed the partial skull to be that of a least shrew (*Cryptotis parva*).

In the most recent study (2) of southwestern Oklahoma, there was no record of least shrews in Caddo County. Therefore, the partial skull of a least shrew provides a voucher specimen for a new county record of Oklahoma (3). The specimen was deposited at OMNH.

According to Hall (4), the least shrew occurs in the eastern United States, westward across Oklahoma and Texas, and into eastern New Mexico. Although the specimen found near Apache, Oklahoma, in the spring of 1993 is not a range extension, it does fill a gap between recorded occurrences. The paucity of shrew records may be due, in part, to the diminutive size of this insectivore; it is difficult to trap by standard methods. Even when pit-fall traps are utilized, the mammalogist may be hard-pressed to collect shrews (pit-fall traps have been used by the author near the owl pellet site, but no shrews have been collected). However, it is well known that owl pellets are an excellent source of animal remains; owl pellets provide another method of sampling local small animal populations. The hunting ranges of great horned owls were recorded not to exceed one-quarter mile from the nesting site (5,6). Tyler and Jensen (7) found *Cryptotis parva* in owl pellets from Jackson County, Oklahoma. McMurry (8), while studying the stomach contents of feral cats in Comanche County, Oklahoma, found only 3 least shrews in some 223 cats examined. McMurry stated that these were the first least shrew specimens discovered during the 1945 study.

ACKNOWLEDGMENTS

I thank Mr. and Mrs. James M. Patterson for allowing me access to their property, and N.J. Czaplewski for critically reviewing this manuscript and confirming the identification of the shrew.

REFERENCES

- 1. Smith, K., The Prairie Vole, *Microtus ochrogaster*, in Caddo County, Oklahoma. *Texas J. Sci.* 44, 116-117 (1992).
- 2. Stangl, F.B., Jr., Dalquest, W.W., and Baker, R.J., Mammals of Southwestern

Oklahoma. Occas. Papers Mus., Texas Tech Univ., 151, 1-47 (1992).

- 3. Caire, W., Tyler, J.D., Glass, B.P., and Mares, M.A., *Mammals of Oklahoma*. University of Oklahoma Press, Norman (1989) p. 567.
- 4. Hall, E.R., *The Mammals of North America*. John Wiley and Sons, New York (1981) p. 181.
- 5. Baumgartner, F.M., Territory and Population in the Great Horned Owl. Auk 56, 274-282 (1939).
- 6. Craighead, J.J., and Craighead, F.C., Jr., *Hawks, Owls, and Wildlife*. Wildlife Management Institute, Washington, DC (1956) pp. 83-85.
- 7. Tyler, J.D., and Jensen, J.F., Notes on Foods of Great Horned Owls (*Bubo virginianus*) in Jackson County, Oklahoma. *Proc. Okla. Acad. Sci.* **61**, 28-30 (1981).
- 8. McMurry, F.B., Three shrews, *Cryptotis parva*, Eaten by a Feral House Cat. J. Mamm. 26,94 (1945).