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## HOLOCENE PREDATION OF THE UINTA GROUND SQUIRREL BY A BADGER

Michael E. Nelson<sup>1</sup>

In 1985 J. H. Madsen, Jr., then the state paleontologist of Utah, collected several fossil bones at an elevation of 1524 m in Morgan County, Utah (Utah Antiquities locality 42Mo029v). The specimens were recovered from a large burrow intruded into shoreline sands deposited by Pleistocene Lake Bonneville. All fossils were found in a single pocket that probably represents the distal end of a burrow of the North American badger, *Taxidea taxus*. The specimens consist of (1) numerous post-cranial elements of a juvenile badger and (2) several bones, including a right dentary, of the Uinta ground squirrel, *Spermophilus armatus*. Many of the ground squirrel bones are crushed or broken, a condition also noted by Long and Killingley (1983) in their study of badger prey.

*Taxidea taxus* is virtually an exclusive carnivore and does not eat significant amounts of plant material (Ewer 1973). Rodents are the most common prey, but the animals are not adverse to eating a variety of other vertebrates and arthropods (Long and Killingley 1983). Messick and Hornocker (1981) noted that Townsend ground squirrels, *Spermophilus townsendi*, are the most important prey species of badgers in southwestern Idaho. The animals either burrow after the active squirrels, catch them hibernating in their burrows, or opportunistically wait at a burrow entrance (Balph 1961). Badgers also will eat carrion and sometimes make food caches (Snead and Hendrickson 1942).

Postdeath disturbance of the bones probably accounts for missing elements of both *Taxidea* and *Spermophilus*. All preserved bones show extensive gnawing by small rodents; mice and other rodents commonly

occupy badger burrows after the structures are deserted (Choate 1989, personal communication).

Part of the badger pelvis was sacrificed for a radiocarbon date completed by Tandem Accelerator Mass Spectrometry at the Laboratory of Isotope Geochemistry, University of Arizona. The date of  $2790 \pm 74$  yr. B.P. (AA-2514) suggests that Holocene diets of Utah badgers were similar to their extant counterparts. The remains of the ground squirrel may represent the last meal of the badger.

All specimens are accessioned into the Sternberg Memorial Museum at Fort Hays State University (FHSM VP-10648 [ground squirrel] and FHSM VP-10649 [badger]). I thank Dr. Dave Gillette (Utah Antiquities), James H. Madsen (DINOLAB), and John Lund (FHSU).

### LITERATURE CITED

- BALPH, D. F. 1961. Underground concealment as a method of predation. *Journal of Mammalogy* 42: 423-424.
- EWER, R. F. 1973. The carnivores. Cornell University Press, Ithaca, New York. 494 pp.
- LONG, C. A., AND C. A. KILLINGLEY. 1983. The badgers of the world. Charles C. Thomas, Publisher, Springfield, Illinois. 404 pp.
- MESSICK, J. P., AND M. G. HORNOCKER. 1981. Ecology of the badger in southwestern Idaho. *Wildlife Monographs* No. 3. 53 pp.
- SNEAD E., AND G. O. HENDERSON. 1942. Food habits of the badger in Iowa. *Journal of Mammalogy* 45: 380-391.

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