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Characteristics of the Natal Den of the Badger

Abstract

Natal dens of three badgers (*Taxidea taxus*) in northwestern Utah and southeastern Idaho were characterized by a single main tunnel which branched into two secondary tunnels that later rejoined. Two of the dens had two chambers and one had a single chamber. An average of eight tunnels less than 15 cm in length (pockets) and eight dead-end tunnels ($\bar{x} = 1.1$ m) were found in the walls of the main and secondary tunnels and chambers. Pockets were filled with scats and dead-end tunnels with loosely packed soil and scats.

Introduction

Activities of badgers center around the use of underground dens. Primarily nocturnal, they rest in dens during daylight hours and through a majority of the year rarely spend more than one day without emergence in a given den. Extended use (two to six days) of a single den becomes more frequent as activity is restricted during the winter months (Sargeant and Warner, 1972). However, the greatest long-term demand placed on a den is during a four to eight week period in the spring when the female gives birth to and raises young (Lindzey, in preparation). Because badgers characteristically dig their own dens, the construction of the natal den should reflect the functional needs of the female and young.

Methods

During 1969-1970 five natal dens were located in Curlew Valley of southeastern Idaho and northwestern Utah. Sagebrush (*Artemisia tridentata*), the dominant natural vegetation in the valley, was interspersed with cereal-grain plantings and crested-wheat grass (*Agropyron cristatum*) seedings.

External characteristics of natal dens used in differentiating them from day-use dens were: (1) a soil mound at the entrance generally over twice the size of those of day-use dens (principally freshly deposited soil); (2) more numerous tracks on the mound indicating frequent trips to and from the den (adult and later young); and (3) abundant badger hair mixed with soil comprising the mound. The presence of hair throughout the soil mound was the most reliable criterion for identifying natal dens.

Three of the dens were subsequently excavated. Sketches were made as the excavations progressed and locations identified where scats were found. Measurements were taken of the lengths and depths of the tunnels and pockets of two of the three dens.

Results and Discussion

Only one of the three dens had more than a single entrance. Apparently this second entrance, which showed little sign of use, had been an entrance to a day-use den

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Two of the dens contained young at the time of excavation. The third den was excavated after the departure of the female and two young.

Results and Discussion

Only one of the three dens had more than a single entrance. Apparently this second entrance, which shows little sign of use, had been an entrance to a day-use den contacted during construction of the natal den. Characteristics of construction common to the three dens were: (1) a main tunnel that branched into two secondary tunnels which later rejoined; (2) dead-end side tunnels projecting from the chambers and main and secondary tunnels; (3) pockets (15 cm or less in length) in the sides of the chambers and main and secondary tunnels; (4) shallow depressions in the tunnel floors; and (5) chamber(s) (Fig. 1). The deepest of the dens was 2.3 m at its maximum depth; the other was 1.3 m.

The secondary tunnels of two of the dens remained in generally the same horizontal plane following their formation whereas one secondary tunnel of the third den dropped to a level approximately 30 cm below the other before they rejoined. As suggested by Thomas (1974), branching of the main tunnels may allow animals to pass one another in the system. Each den had one or two chambers, 46-54 cm in diameter. One chamber in each den was located at the point where the two secondary tunnels rejoined. An average of eight dead-end tunnels ranging in length from 0.6 to 1.5 m ($x = 1.1$ m) and eight pockets (tunnels less than 15 cm) were found in the walls of the main and secondary tunnels and chambers. Pockets appeared similar in function to the "fecal chambers" described by Martin (1971) in the burrow system of mountain beavers

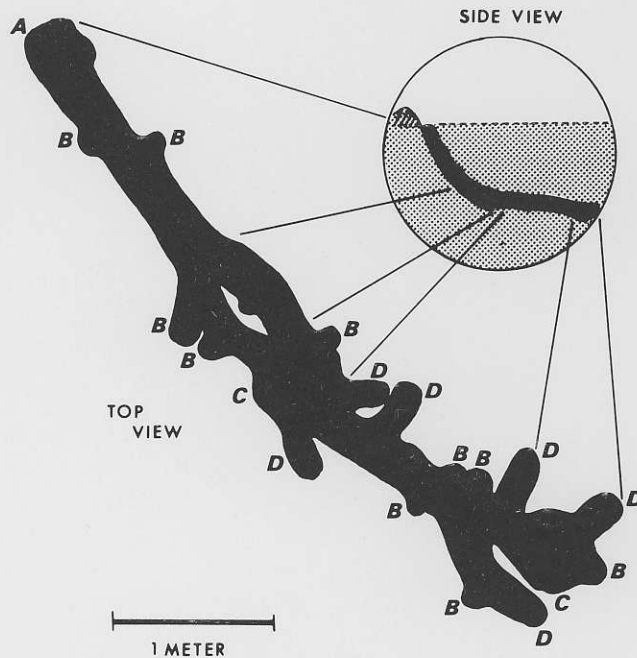


Figure 1. Composite diagram showing characteristics of natal den construction of the badger. Letters represent: A, entrance; B, pockets; C, chambers; D, dead-end tunnels.

(*Aplodontia rufa*). Each pocket contained one or more scats which had been covered with soil. Dead-end tunnels were filled with both scats and loosely packed soil. Some loose soil from digging in the den was apparently moved into the dead-end tunnels rather than out of the den. Scats were occasionally found in shallow (approximately 5 cm) depressions in the tunnel floors. No nest material was found in the dens.

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