

PREDATOR AVOIDANCE THROUGH BURROW USE BY CASSIN'S AND BLACK-THROATED SPARROWS

RICHARD K. BOWERS, JR., 2925 N. Cascada Circle, Tucson, Arizona 85715

JOHN B. DUNNING, JR., Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, Arizona 85721

Arid grassland birds are difficult to observe and follow in the field. Often it appears that a bird "must have disappeared down a hole somewhere." Here we report observations showing that this behavior actually occurs. Grassland birds in southeastern Arizona occasionally enter rodent burrows to escape predation.

In 1982 and 1983 we banded and color-marked a population of Cassin's Sparrows (*Amphiphila cassinii*) southeast of Tucson, Pima Co., Arizona, as part of a study to determine this species' seasonal movements. On 18 February 1983 we recaptured an adult male originally banded on 29 October 1982 in the same location. During handling the bird was injured and momentarily escaped. The sparrow ran across bare ground to the nearest shrub, a Creosotebush (*Larrea tridentata*), and disappeared into a rodent burrow under the bush. The burrow ran along the surface approximately 3 cm beneath the ground, so we dug along the length and found the bird approximately 45 cm into the burrow. The bird escaped again and reentered the excavated burrow and was recaptured at the same spot. The bird was collected due to its injury: the specimen is now in the University of Arizona collection (UA 14422).

Bowers had previously observed Cassin's Sparrows entering burrows during this study on 3 November and 4 December 1982. In both instances the birds were being chased by Bowers in an attempt to drive them into mist nets. On 3 February 1983 at the Santa Rita Experimental Range, 48 km south of Tucson, Pima Co., Arizona, an adult Black-throated Sparrow (*Amphispiza bilineata*) escaped while being removed from a mist net. The bird ran to the nearest bush and immediately entered a White-throated Woodrat (*Neotoma albigula*) midden. The bird did not reappear in spite of attempts to scare it out of hiding.

Occasional use of burrows has been reported for Brown Towhees (*Pipilo fuscus*) and Black-throated Sparrows (Austin and Smith, *Auk* 91:167, 1974) as a mechanism for escaping summer heat. Our observations were taken during relatively mild conditions. Normally grassland birds react to a capture attempt by running to cover or by flying. The birds we observed had either just escaped from the hand, or were being pursued closely by one or more people. Thus these species may use rodent burrows as a "last-ditch" effort to escape predation.

We thank Stephen Russell for reviewing this note.

Accepted 27 September 1984



Black-throated Sparrow

Sketch by Tim Manolis