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## General Notes

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### STATUS OF THE BAT *Myotis keenii* IN THE ARKANSAS OZARKS

Keen's bat, *Myotis keenii*, occurs in two disjunct ranges in North America. The western subspecies, *M. k. keenii*, is found from Alaska south to Puget Sound in Washington. The eastern race, *M. k. septentrionalis*, ranges from Saskatchewan to Newfoundland and south to northern Florida (Fitch and Shump, 1979).

It has been suggested by van Zyll de Jong (1979), based on a study of Canadian specimens, that *M. k. keenii* and *M. k. septentrionalis* are distinct species. In that case, the Arkansas form would take the name *M. septentrionalis*. At this time it is not clear whether or not this separation will be accepted. Therefore, we utilize the name *M. k. septentrionalis* for the Arkansas form.

*Myotis keenii* is a medium-sized *Myotis* with long ears (17-19 mm) and a narrow pointed tragus. The forearm measures 32-39 mm and the wingspan is 228-258 mm; the calcar is not keeled (Barbour and Davis, 1969). Color varies somewhat but the body is usually brownish to reddish-brown above and gray below. The fur is not glossy.

*Myotis keenii* hibernates in caves or mines during the winter where they usually select relatively cool sites, often near cave entrances. They often hang singly and seem to prefer tight crevices and holes. They are never abundant; concentrations of 100 or more in a single cave or mine are unusual (Barbour and Davis, 1969). During summer they roost in a variety of shelters including under the bark of trees, behind shutters, and in buildings. They appear to be relatively solitary in their habits, except for small maternity colonies formed during summer.

In Arkansas, *M. keenii* is widely distributed throughout the Interior Highlands. Sealander (1979) considered it to be "relatively uncommon" in Arkansas and reported it from Benton, Washington, Newton, Baxter, Stone, and Independence counties in the Ozarks and from Pike and Garland counties in the Ouachitas. During a recent study in eastern Missouri, Caire et al. (1979) reported that 141 trips to 77 caves between October 1975 and April 1976 resulted in locating only 39 *M. keenii*. However, as many as 460 individuals were captured at a single Missouri cave entrance during one night in June.

Since 1968, we have recorded *M. keenii* from 15 caves in seven Arkansas Ozark counties, the same six counties reported by Sealander (1979), and also from Marion County. Usually 1-3 and not more than 6 *M. keenii* were seen in any one cave. They were found in relatively large numbers in only one cave, Cave Mountain Cave in Newton County. During the winter of 1973-74 we estimated 200 to be present there and during the winter of 1977-78 we found ca. 100 (we did not visit the cave during the intervening years). Since the winter of 1977-78, Cave Mountain Cave has been checked yearly and less than 10 *M. keenii* have been observed there each winter. However, it is important to point out that because of their preference for cracks and holes in the cave ceiling, they could easily be overlooked.

Netting at cave entrances during the summer-autumn swarming period indicates that this species is more abundant in the Arkansas Ozarks than indicated by observations of hibernating bats in caves and mines. As many as 40 *M. keenii* have been netted at the entrance of Cave Mountain Cave. However, that number is greater than at most caves netted, where the number captured during any one night is usually less than 10.

Cave Mountain Cave, located on Buffalo National River lands, from which the largest numbers of *M. keenii* have been reported in Arkansas, was recently (1982) fenced by the National Park Service to protect the endangered Indiana bats (*M. sodalis*) and gray bats (*M. grisescens*) that hibernate there from human disturbance. Hopefully, the protection of this cave from disturbance during the hibernation period will result in an increase in the numbers of *M. sodalis*, *M. grisescens*, and *M. keenii* that hibernate there.

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