

Western Bat Working Group

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Species Accounts

Developed For the 1998 Reno Biennial Meeting

Updated at the 2005 Portland Biennial Meeting

Myotis velifer

CAVE MYOTIS

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I. DISTRIBUTION: *Myotis velifer*, a member of the Family Vespertilionidae, occurs from Kansas, Oklahoma and western Texas, to southern Nevada, and southeastern California (along the Colorado River only), south through Mexico to Honduras. At least some populations are migratory. Hibernacula have been discovered in Mexico, Arizona, and Kansas. Within the U.S. it is most widely distributed in Arizona. This species is found primarily at lower elevations (the Sonoran and Transition life zones) of the arid southwest, in areas dominated by creosote bush, palo verde, brittlebush, and cactus.

II. STATUS: Global Rank - G5. State Ranks: AZ - S3S4; CA - S1S2; CO - S?; NM - S4; NV - S?; TX - S4. Hayward (1961) claimed that *M. velifer* was very common in southern Arizona, with at least 500,000 individuals during the summer months. Current status is not well known. The BRD Bat Population Database has about 50 observation records of colonies from 13 literature citations from peer-reviewed journals, but current status of these colonies is unknown. Very severe declines have been documented along the Colorado River in California.

III. IDENTIFYING CHARACTERISTICS AND LIFE HISTORY: *M. velifer* is a large *Myotis*, with a forearm of 37-47 mm. It can be distinguished from other large *Myotis* by the presence of a conspicuous bare patch on the back between the scapulae, and the absence of either a keel on the calcar or fringe on the interfemoral membrane. As implied by the vernacular name, caves are the main roosts for this southwestern species, although it also uses mines, and occasionally buildings and bridges. It is primarily a "crevice dweller," preferring "crevices, pockets, and holes in the ceilings of its underground retreats" (Stager 1939). This species is also known to roost in barn swallow nests. Colonies of 2,000 to more than 10,000 individuals have been reported. This bat is reported to fly less erratically and more strongly than other species of *Myotis*. It has been reported foraging over dense riparian vegetation and in drier desert washes. Dietary studies in Arizona, Kansas, and Mexico indicate that lepidopterans and coleopterans are typical prey. Known predators include rat snakes, hawks, barn owls, and raccoons. In southern Arizona this species has been found in the winter occupying wet mine tunnels above 6,000 feet, where roost temperatures are 8° to 11° C.

IV. THREATS: Potential threats include recreational caving, mine closures and subsequent roost destruction, and loss of foraging habitat in riparian zones.

V. GAPS IN KNOWLEDGE: We need information regarding status of historically identified colonies, trends in population numbers, more information on roosting and foraging requirements, basic life history information.

VI. SELECTED LITERATURE:

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