LONGEVITY OF WOODHOUSE'S TOAD IN COLORADO

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Little is known about the longevity of amphibians in nature. Records from captive specimens have demonstrated life spans of 10 to 20 yr for a number of anuran species, including 36 yr for *Bufo bufo* (Duellman WE, Trueb L. 1986. Biology of Amphibians. New York: McGraw-Hill. 670 p). Here, we report on a male Woodhouse's toad (*Bufo woodhousii*) which appeared in 1978, and has apparently remained since, in a basement window well of a brick home in an unincorporated western suburb of Denver, Colorado (T3S, R69W, S30). In the intervening years no other toads have been observed in any of the other window wells around the house and no distinctive differences in size and appearance of this toad have occurred, which makes it unlikely that multiple animals over time could have been assumed to be a single individual. This individual has now been observed continuously during the warmer months for 19 yr. Although we cannot know its age when it first dropped into the window well, it is likely that this individual exceeds 20 yr of age. The site in which this toad trapped itself is well protected or removed from most potential predator species and offers reliable food sources (insects, spiders, earthworms), factors which undoubtedly provide optimal circumstances for maximal longevity. The window well structure is in a small garden along the east face of the home. A 1.5 m wooden fence to the south protects it from the sun, while a nearby faucet provides moisture from early spring through mid-fall.

Because the activities of this specimen have been readily observable, we began maintaining records of the date of first emergence from hibernation each spring since 1988 (Table 1). In 5 of the 9 yr, this toad emerged in March, which is slightly before the April to early May emergence described by Hammerson (Hammerson GA. 1982. Amphibians and Reptiles in Colorado. Denver: Colorado Division of Wildlife. 131 p) for Colorado populations in completely natural settings. Correlation coefficients were calculated to explore potential relationships between date of emergence and weather patterns, as represented by January, February and March average temperatures, numbers of days with maximum temperature below freezing, and numbers of days with minimum temperature below freezing. These analyses did not demonstrate any strong relationships (maximum $R^2 = 0.17$) that might help explain the timing of emergence.

TABLE 1. Dates of emergence from hibernation for a specimen of Woodhouse's toad, 1988 to 1996.

Year	Date of emergence
1988	18 April
1989	18 April
1990	20 March
1991	18 March
1992	20 March
1993	20 March
1994	8 May
1995	27 March
1996	22 May

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