Uinta Chipmunk

Tamias umbrinus

REGULATORY STATUS

USFWS: No special status
USFS R2: No special status
USFS R4: No special status
Wyoming BLM: No special status
State of Wyoming: Nongame Wildlife

CONSERVATION RANKS

USFWS: No special status
WGFD: NSS4 (Bc), Tier III
WYNDD: G5, S2S5
Wyoming Contribution: HIGH
IUCN: Least Concern

STATUS AND RANK COMMENTS

The Wyoming Natural Diversity Database has assigned Uinta Chipmunk (*Tamias umbrinus*) a state conservation rank ranging from S2 (Imperiled) to S5 (Secure) because of uncertainty about the abundance, proportion of range occupied, and population trends for this species in Wyoming.

NATURAL HISTORY

Taxonomy:

Chipmunk taxonomy remains disputed, with some arguing for three separate genera (i.e., *Neotamias*, *Tamias*, and *Eutamias*) [1-3], while others support the recognition of a single genus (i.e., *Tamias*) [4]. Uinta Chipmunk (briefly *N. umbrinus*) [5] has since been returned to the currently recognized genus *Tamias*, along with all other North American chipmunk species [6]. Of the seven recognized subspecies of Uinta Chipmunk, three are found in Wyoming: *T. u. fremonti*, *T. u. montanus*, and *T. u. umbrinus* [7-10]. These subspecies are geographically isolated on different mountain ranges and are not believed to interbreed [10].

Description:

Identification of Uinta Chipmunk is possible in the field. Uinta Chipmunk is a medium-sized, brownish chipmunk with dark facial stripes, three dark and four light longitudinal dorsal stripes, white underbelly, long bushy tail, and a large head that is longer than 34 mm [8, 10]. Males and females are similar in size and appearance [10]. Adults weigh between 55–80 g and can reach total lengths of 200–243 mm [10]. Tail, hind foot, and ear length ranges from 90–115 mm, 30–35 mm, and 16–19 mm, respectively [10]. Within its Wyoming distribution, Uinta Chipmunk can be distinguished from Cliff Chipmunk (*T. dorsalis*) by its defined dorsal stripes, and from Yellow-pine Chipmunk (*T. amoenus*) and Least Chipmunk (*T. minimus*) by its larger size and outermost dorsal stripes that are white instead of dark [8, 10].

Distribution & Range:
The continental distribution of Uinta Chipmunk consists of six or seven disjunct populations spread across the western United States in parts of California, Nevada, Arizona, Utah, Idaho, Montana, Colorado, and Wyoming [8, 9, 11]. The three subspecies found in Wyoming have non-overlapping distributions. Specifically, *T. u. fremonti* is widely distributed in the northwestern mountains; *T. u. montanus* is found in south-central and southeastern Wyoming in the Sierra Madre, Medicine Bow, and possibly Laramie mountain ranges; *T. u. umbrinus* is found primarily in the Uinta Mountains of far southwestern Wyoming [8, 10]. Confirmed or suspected breeding has been documented in 7 of 28 latitude/longitude degree blocks in the state [12].

Habitat:
Uinta Chipmunk is a highly arboreal, montane and subalpine species that is typically found between elevations of 1,417–3,660 m in coniferous forests [8]. Habitat varies slightly for the three subspecies of Uinta Chipmunk in Wyoming. *T. u. fremonti* inhabits the edges of clearings and meadows within spruce-fir forests typical of montane forests of northwestern Wyoming, but can also be found in rocky habitat above timberline; *T. u. montanus* is found in closed-canopy Lodgepole Pine (*Pinus contorta*) and Douglas Fir (*Pseudotsuga menziesii*) forests with open understories as well as rocky Ponderosa Pine (*Pinus ponderosa*) and Subalpine Fir (*Abies lasiocarpa*) ecosystems; *T. u. umbrinus* lives in spruce-fir forests [8, 10]. Uinta Chipmunk nests in logs, rock crevices, underground burrows, and occasionally in trees [8].

Phenology:
Uinta Chipmunk likely hibernates in a state of intermittent torpor from October to May, and probably breeds immediately after emergence [8, 10]. Females give birth to a single litter of 3–5 young after a gestation period of approximately 30 days [8, 10].

Diet:
Uinta Chipmunk forages primarily on seeds and fruits from numerous species of trees and shrubs, but will also consume buds, pollen, tender green shoots, fungi, insects, and carrion [8-10].

CONSERVATION CONCERNS

Abundance:
Continental: REGIONAL ENDEMIC
Wyoming: UNCOMMON
There are no robust estimates of abundance available for Uinta Chipmunk in Wyoming. The species has an estimated statewide abundance rank of UNCOMMON and also appears to be uncommon within suitable environments in the occupied area [12].

Population Trends:
Historic: UNKNOWN
Recent: UNKNOWN
Historic and recent population trends for Uinta Chipmunk in Wyoming are unknown.

Intrinsic Vulnerability:
LOW VULNERABILITY
Uinta Chipmunk has low intrinsic vulnerability in Wyoming because it is found across a range of coniferous forest habitats, elevations, and montane systems. Likewise, the species does not appear to have any life history characteristics that make it inherently vulnerable to changing environmental conditions.

Extrinsic Stressors:
SLIGHLTY STRESSED
Montane forests in Wyoming are vulnerable to altered fire regimes, loss or fragmentation from harvest and management practices, disease and insects, and drought and climate change [13]. As a species associated with Lodgepole Pine forests in parts of its range, Uinta Chipmunk has likely been exposed to tree mortality from the ongoing outbreak of Mountain Pine Beetle (*Dendroctonus ponderosae*) in the state; however, a study in northern Utah found that Uinta Chipmunk and Least Chipmunk were actually more abundant in stands with moderate tree mortality [14]. In another study of montane mammals, Uinta Chipmunk was one of only two species predicted to persist across their entire Great Basin ranges despite potential effects of global warming [15]. The species experienced only minor upslope elevational range contractions over an 80-yr period of increasing maximum summer temperatures and precipitation in the Ruby Mountains of northeastern Nevada, which may suggest that the species is less likely to be impacted by the effects of global warming than some other small mammal species [16]. It is not known how potential extrinsic stressors might impact Uinta Chipmunk in Wyoming.

KEY ACTIVITIES IN WYOMING

Uinta Chipmunk is classified as a Species of Greatest Conservation Need by the Wyoming Game and Fish Department. Little work has been done on Uinta Chipmunks in Wyoming, and most records are from incidental sightings or trapping records from survey efforts for other species. There are currently no research projects designed specifically for Uinta Chipmunk in Wyoming.

ECOLOGICAL INFORMATION NEEDS

Uinta Chipmunk is not well studied, and little is known about the natural history and reproductive habits of this species in Wyoming [10]. This species would benefit from research to determine the status, distribution, and abundance of the three subspecies across their respective ranges in the state. Although Uinta Chipmunk appears able to withstand some forms of disturbance, it is not known how potential natural or anthropogenic stressors may impact the species in Wyoming.

MANAGEMENT IN WYOMING

This section authored solely by WGFD; Nichole L. Bjornlie. Little is known about Uinta Chipmunk in Wyoming. Consequently, management priorities for the species in the short-term will focus on addressing these data deficiencies. Of particular importance are data on presence, distribution, population status and trends, and the impact of potential threats, including the current condition of montane forest habitat, which will ultimately be used to develop management and conservation recommendations. Because of the differences in habitat use and lack of connectivity among subspecies, state-wide recommendations may not be appropriate for Uinta Chipmunk, and it will be important to tailor recommendations to address localized data needs and habitat threats.

CONTRIBUTORS

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Figure 1: A Uinta Chipmunk in Zion National Park, Utah. (Photo courtesy of Nichole L. Bjornlie)

Figure 2: North American range of *Tamias umbrinus*. (Map from: Patterson, B. D., et al. (2007) Digital Distribution Maps of the Mammals of the Western Hemisphere, version 3.0, NatureServe, Arlington, Virginia.)

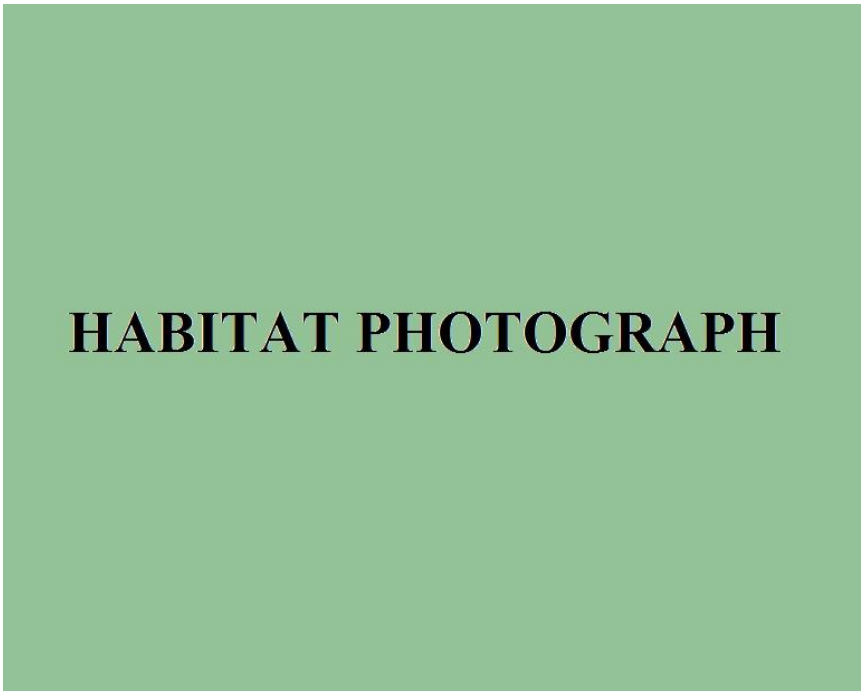

Figure 3: Photo not available.

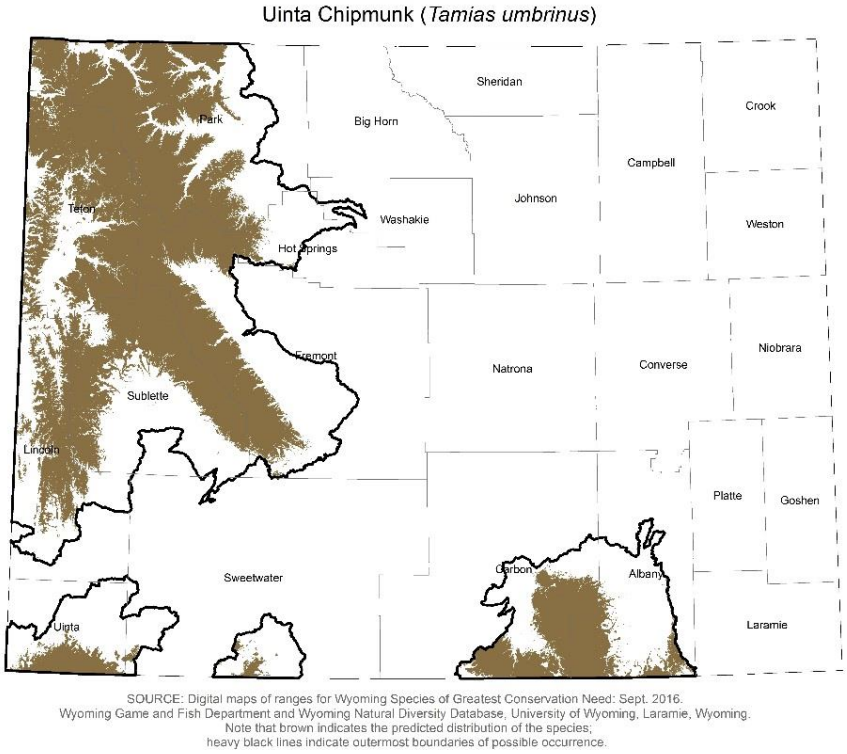

Figure 4: Range and predicted distribution of *Tamias umbrinus* in Wyoming.