

[A race of the] Botta's pocket gopher (*Thomomys bottae nesophilus*)

## **Species Status Statement.**

### Distribution

This subspecies is endemic to Utah, occurring only on Antelope Island in the Great Salt Lake. It has been found only in a very small area in the southeastern part of the island, despite surveys elsewhere on the island (Durrant 1952, p. 188). The State of Utah owns Antelope Island, and the Utah Division of Parks and Recreation administers it as a state park.

Table 1. Utah counties currently occupied by this species.

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| <b>[a Race of] Botta's Pocket Gopher - nesophilus</b> |
| DAVIS   |

### Abundance and Trends

Population trends of this subspecies are unknown. Seemingly, only five specimens have been collected, all at the single locality of its occurrence (Durrant 1952, p. 188).

## **Statement of Habitat Needs and Threats to the Species.**

### Habitat Needs

Because this subspecies occurs on Antelope Island only at the historical Fielding Garr Ranch, Durrant (1952, p. 188) thought that historical farming “may have developed a more favorable environment for pocket gophers”. However, Garr Springs is one of the strongest and most consistent springs on Antelope Island. This hydrology has probably had more to do with the occurrence, and the prehistoric isolation and divergence, of this narrowly endemic subspecies than has farming.

### Threats to the Species

Anything that might cause the dewatering of Garr Springs would almost certainly represent a very serious threat to this endemic subspecies. This would include various direct human activities such as aggressive management of the spring, indirect activities such as excessive groundwater withdrawal, as well as temperature extremes and drought. Also, Antelope Island, to which *Thomomys bottae nesophilus* is restricted, is very heavily invaded by the introduced annual grass *Bromus tectorum* (cheatgrass), and this cheatgrass invasion and subsequent displacement of naturally-occurring native plants on the island could be a threat to the subspecies.

Table 2. Summary of a Utah threat assessment and prioritization completed in 2014. This assessment applies to the species' entire distribution within Utah. For species that also occur elsewhere, this assessment applies only to the portion of their distribution within Utah. The full threat assessment provides more information including lower-ranked threats, crucial data gaps, methods, and definitions (UDWR 2015; Salafsky et al. 2008).

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| <b>[a Race of] Botta's Pocket Gopher - nesophilus</b> |
| <b>High</b>   |
| Agricultural / Municipal / Industrial Water Usage     |
| Droughts  |
| Groundwater Pumping                                   |
| Spring Development / Capping                          |
| Water Allocation Policies                             |
| <b>Medium</b>   |
| Invasive Plant Species – Non-native                   |

### **Rationale for Designation.**

This subspecies is restricted to a very small part of a single island in the Great Salt Lake. Because of its highly restricted distribution and its small population size, the subspecies is vulnerable to extinction. The Utah Division of Wildlife Resources (UDWR) considers it a high priority for conservation (Oliver 2018).

### **Economic Impacts of Sensitive Species Designation.**

Sensitive species designation is intended to facilitate management of this species, which is required to prevent Endangered Species Act listing and lessen related economic impacts. An ESA listing of this subspecies could lead to restrictions on water development and use in the Great Salt Lake watershed. A listing could also affect management of Garr Ranch at Antelope Island State Park.

### **Literature Cited.**

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Oliver, G.V. 2018. Mammal subspecies endemic to Utah; an overview and conservational prioritization. Utah Division of Wildlife Resources. Salt Lake City, Utah, USA. 51 pp.

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biodiversity conservation: unified classifications of threats and actions. *Conservation Biology* 22: 897–911.

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