

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Animal Abstract

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CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Thomomys umbrinus* *
COMMON NAME: Southern Pocket Gopher
SYNONYMS: *Geomys umbrinus*
FAMILY: Geomyidae

AUTHOR, PLACE OF PUBLICATION: Richardson. 1829. Fauna Boreali-Americana, 1:202.

TYPE LOCALITY: Southern Mexico; probably vicinity of Boca del Monte, Veracruz.

TYPE SPECIMEN:

TAXONOMIC UNIQUENESS: Hall and Kelson (1959) and subsequently Hall (1981) combined several previously recognized species (including *T. bottae*) and assigned them to *T. umbrinus*. Hall (1981) considers *T. umbrinus* to be 1 of 5 species of *Thomomys* found in North America. He recognizes 230 subspecies of *T. umbrinus*, of which 45 are found in Arizona. Hoffmeister (1986), however, considers *T. umbrinus* to be distinct from *T. bottae*; and after reviewing measurements and cranial features of the 3 subspecies concluded that although there were some differences in size, color, and cranial characters, they were either as variable within populations as between populations or not sufficient to warrant subspecific designation. All 3 subspecies, were reduced to synonymy with *T. u. intermedius*, the oldest name.

DESCRIPTION: A small, cinnamon-colored gopher, with a pronounced dark stripe extending from the nose nearly to the base of the tail; color on sides below dark stripe is somewhat iridescent or purplish. Black post-auricular spot usually large and confluent with black of back in some specimens. 6 mammae, 1 pair pectoral; 2 pair inguinal. The skull is slender, with brain case smoothly rounded. Nasal distinctly wedge shaped, narrowing posteriorly, the end usually emarginate. Upper incisors relatively broad and heavy, decurved in vertical plane at anterior ends of nasal in Arizona forms, strongly procumbent in numerous Mexican races. Head and body 4 3/5 - 5 in. (11.7 - 12.7 cm); tail 2 - 2 2/5 in. (5.1 - 6.1 cm).

AIDS TO IDENTIFICATION: Pocket gophers are distinguished from other rodents by their fossorial way of life; very small eyes; small, barely visible ears; fur-lined external cheek pouches (pockets) that open externally; enlarged incisors with lips that close behind them; short but well-muscled forelegs with long well-developed claws, short, nearly naked tail; and

the skull without postorbital processes. *Thomomys* is the only genus of pocket gopher in Arizona. It is separated from other genera by the lack of vertical grooves on the incisors. Hoffmeister (1986) considers *T. umbrinus* to be distinguishable from *T. bottae* by the presence in *T. umbrinus* of a dark wide band of color on the back (as opposed to none); iridescent or purplish color of the sides below the band (as opposed to uniform color of back and sides); 1 pair of pectoral mammae (as opposed to usually 2); hind foot usually less than 29.4 mm (as opposed to more); and differences in chromosome numbers, baculum characters, and cranial characters. See Hoffmeister (1986:240) and Hall (1981:469) for discussion of hybrids between the two species.

ILLUSTRATIONS: Black and white photos (Hoffmeister 1986:239, 240; of species only)

TOTAL RANGE: Extreme southeastern Arizona and southwestern New Mexico, south into Mexico. Since Hall (1981) considers *T. bottae* to be a synonym of *T. umbrinus*, he considers the range of *T. umbrinus* to include California and parts of southern Nevada, Utah, Colorado, and western New Mexico, and west Texas.

RANGE WITHIN ARIZONA: Southern most Arizona, mostly in the oak belt of the Santa Rita, Patagonia, Atascosa, Pajarito, and Huachuca Mountains.

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: This species makes relatively small tunnels probably due to its small size and the shallowness and rockiness of much of its habitat. It may often be found with *Sigmodon ochrognathus* and *Reithrodontomys fulvescens*. *S. ochrognathus* are small enough to use the abandoned tunnels while *S. hispidus* is probably too big to use them. Other pocket gophers are territorial and live alone in separate tunnel systems coming together only to breed. Tunneling by gophers in general can be beneficial and detrimental to their surrounding habitat. The digging of tunnels allows for soil mixing and aeration, both of which make the soil more porous and thus reduces runoff. These effects plus seed dispersal can affect composition and growth of vegetation. The tunnels can also allow heavy erosion when built upon steep slopes.

REPRODUCTION: Based on finding pregnant females from February through April and a gestation period of about 30 days, the species in Arizona is thought to have 1 litter of 4-5 young per year and are probably born from March to May.

FOOD HABITS: In Arizona (Patagonia Mountains) one report of feeding on the core of an agave stalk by Hoffmeister (1986). Otherwise probably similar to other pocket gophers and feeds on the roots and tubers of a wide variety of grasses and forbs. Like other pocket gophers they probably sometimes forage on plants above ground or cut plant stems below ground and pull them down into their burrows. Pocket gophers meet their water need with the vegetation they eat and thus do not need to drink free water

HABITAT: At Pena Blanca Spring, Goldman (1947) found them "in gravelly soil along a broad wash." Elsewhere in Arizona, the species is generally found on rocky slopes in open oak woodland. In one instance it was found among agave and in another in a clearing among pines and Douglas-fir. Where found in Sycamore canyon in association with *T. bottae* the latter occupied the deeper, less rocky, easier digging soil lower down in the canyon. The species in Arizona is found primarily in the lower parts of the mountain ranges.

ELEVATION: 4,500 - 9,000 feet (1,373 - 2,745 m).

PLANT COMMUNITY: Oak belts in the Upper Sonoran Zone. Near Pena Blanca Spring they were found on slopes with oak, *Mimosa*, and thistle. Elsewhere in Arizona the species has been found in association with combination of oak, juniper, agave, mountain mahogany, sumac and grasses including *Andropogon*; on a high, rocky slope with agave; and in a clearing with pines Douglas-fir.

POPULATION TRENDS: Unknown.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS:

STATE STATUS:

OTHER STATUS:

T. umbrinus quercinus: Forest Service Sensitive (USDA, FS Region 3 1999)

MANAGEMENT FACTORS:

Unresolved taxonomy.

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

surveys.

Taxonomic clarification; distribution and population

LAND MANAGEMENT/OWNERSHIP:

USFS, US Army, Private.

SOURCES OF FURTHER INFORMATION

LITERATURE CITATIONS:

Arizona Game and Fish Department, Heritage Data Management System. 1996 Mammal Diversity Review notes.

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MAJOR KNOWLEDGEABLE INDIVIDUALS:

D.F. Hoffmeister - University of Illinois, Urbana.

ADDITIONAL INFORMATION:

* It was decided by the biologists at the 1996 Mammal Diversity Review, in which Dr. Hoffmeister was a participant, that the following changes were to be followed when considering subspecies of *T. umbrinus*:

- T. umbrinus quercinus* is a synonym of *T. u. intermedius*.
T. umbrinus grahamensis is a synonym of *T. bottae mearnsi*.
T. umbrinus hualpaiensis is a synonym of *T. bottae desertorum*.
T. umbrinus muralis is a synonym of *T. bottae desertorum*.
T. umbrinus suboles is a synonym of *T. bottae desertorum*.
T. umbrinus subsimilis is a synonym of *T. bottae subsimilis*.

Revised: 1992-02-24 (JSP)
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