



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

Animal Abstract

Element Code: AMAFF07013

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Sigmodon hispidus eremicus*

COMMON NAME: Yuma Hispid Cotton Rat, Yuma Cotton Rat

SYNONYMS:

FAMILY: Muridae

AUTHOR, PLACE OF PUBLICATION: Mearns. Proc. U.S. Nat. Mus. 20:304. 1897.

TYPE LOCALITY: Cienega Well, 30 mi. S. Monument No. 204, Mexican boundary line on east bank Colorado River, Sonora.

TYPE SPECIMEN: March 24, 1804. E.A. Mearns and F.X. Holzmer.

TAXONOMIC UNIQUENESS: 1 of 7 North American species in genus; 1 of 4 Arizona species in genus. 1 of 25 North American subspecies. 1 of 2 Arizona subspecies.

"Populations in southern Yuma County (*eremicus*) are slightly larger than populations to the east, and this difference seems most pronounced in length of the hind foot. Morphological characters, however, do not provide a basis to consider these two, widely separated non-interbreeding groups of populations as other than one species consisting of two, not markedly differentiated subspecies" (Hoffmeister 1986). According to NatureServe, in examining mitochondrial DNA sequence data, Peppers and Bailey (2000) found that *Sigmodon hispidus* is probably paraphyletic, and recommended the recognition of three different species: one from the United States and central Mexico, a second from Southern Mexico, and a third from Central and South America.

DESCRIPTION: "A subspecies of *Sigmodon hispidus* of large size, long tail and hind feet, large skull, dorsum, including head, pale; sides pale ochraceous" (Hoffmeister 1986). Head and body 5"-8" (127-203mm). Tail 3.5"-6" (81-152mm). Weight 4-7oz. Skull has 16 teeth. 8-10 mammae.

AIDS TO IDENTIFICATION: "Our specimens from the vicinity of Yuma are especially pale and are in marked contrast to all specimens of *S. h. confinis*....the difference in color between these two subspecies is as great or greater than in nearly any other two subspecies" (Hoffmeister 1986). Yellow nose cotton rat is yellowish around nose. Rice rat has scaly tail

as long as head and body. *S. h. confinis* has longer hind feet, longer skull, broader skull, less depth of skull, paler coloration of dorsum, sides, and head (Hoffmeister 1986).

ILLUSTRATIONS: B&W diagrams of skull (Hoffmeister 1986: Fig. 5.210)

TOTAL RANGE: Arizona, California; Sonora, Mexico.

RANGE WITHIN ARIZONA: Known only from Colorado River in southwestern Yuma County, from Yuma south to the Arizona-Mexico Border. (AGFD 1987).

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: They are known to make surface runways along which may be found small piles of cut grass stems. For the full species the home range is 100-200 feet across. Also this species is one of the most prolific of mammals, breeding as early as six weeks of age. Its enormous reproductive potential is kept in check by its many predators, including other mammals, birds, and reptiles. Rarely lives more than 1 year in the wild.

REPRODUCTION: Breeds throughout year. Nests are built underground and under logs and rocks. Gestation lasts 27 days. 5-7 offspring. Can have several litters a year. Rats are sexually mature at 2-3 months (AGFD1987).

FOOD HABITS: Eats insects, stems, leaves, nuts, and seeds.

HABITAT: Dense grassy areas such as fields and along roadside edges, brushy or weedy areas among weeds and cattails along the Colorado River and streams or ponds, in irrigated fields, and desert scrub (AGFD 1988).

ELEVATION: According to AGFD HDMS records accessed 10-01-04 the range is 120-160 feet (37-49 m).

PLANT COMMUNITY: Found with *Pluchea*, *Typha*, and *Phragmites*.

POPULATION TRENDS: According to NatureServe, no recent records from the California side of the Colorado River; relative to the early 1900's, apparently has increased in distribution, if not in abundance, with the development of more emergent vegetation along the mainstream Colorado River and in backwaters and canals.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)

[C2 USDI, FWS 1994]

[C2 USDI, FWS 1991]

[C2 USDI, FWS 1989]

[C2 USDI, FWS 1985]

STATE STATUS:

OTHER STATUS:

MANAGEMENT FACTORS: Natural habitat has been altered.

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS: Not much work has been done on this species lately. It may be prudent to census population numbers, and evaluate their habitat (AGFD 1996).

LAND MANAGEMENT/OWNERSHIP: BLM-Yuma field office; AGFD Mittry Lake; Private.

SOURCES OF FURTHER INFORMATION

REFERENCES:

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MAJOR KNOWLEDGEABLE INDIVIDUALS:**ADDITIONAL INFORMATION:**

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