

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

**Animal Abstract**

**Element Code:** AMABA01240

**Data Sensitivity:** No

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Sorex arizonae*  
**COMMON NAME:** Arizona Shrew  
**SYNONYMS:** *Sorex vagrans* (in part)  
**FAMILY:** Soricidae

**AUTHOR, PLACE OF PUBLICATION:** Diersing, V.E. and D.F. Hoffmeister. 1977. Jour. Mammal. 58:321-333.

**TYPE LOCALITY:** Upper end of Miller Canyon, Huachuca Mts., Cochise County, Arizona.

**TYPE SPECIMEN:** Holotype - Female, skin and skull, no. 3809, Museum of Natural History, University of Illinois, upper end of Miller Canyon, 15 mi S (= 10 mi S, 4 3/4 mi E) Fort Huachuca (near spring at lower edge of Douglas fir zone, Huachuca Mts.), Cochise County, Arizona; obtained by Woodrow Goodpaster, 15 August 1950, original no. 4743.

**TAXONOMIC UNIQUENESS:** Monotypic species. Possibly closely related to *S. oreopolus emarginatus* or *S. merriami*.

**DESCRIPTION:** Small: body length 50-73 mm; total length 93-114 mm. Weights reported at 1.9 and 2.9 gm. Five toes on each foot; hind foot 11-13 mm. Color unusually brownish-gray above and slightly lighter below. Snout long and pointed; ears (.5 mm) and eyes small. **Tail relatively long**, 37-46 mm, greater than half (65-95 percent) the body length; indistinctly bicolored. **Five upper unicuspid, without pigmented ridge; tines always present on medial sides of first upper incisors.**

**AIDS TO IDENTIFICATION:** Five species of *Sorex* occur in Arizona. Identification usually requires analysis of cranial and dentition characteristics. *S. arizonae* can be especially difficult to distinguish from *S. monticolus* and *S. merriami*. The only *Sorex* which overlaps distribution with *arizonae* is *S. monticolus*. In addition to several other cranial features, *S. arizonae* has a broader rostrum than *monticolus*. See Diersing and Hoffmeister (1977) and Hoffmeister (1986) for detailed discussion of identification techniques.

*S. arizonae* is sympatric with *Notiosorex*. All *Sorex* can be distinguished from *Notiosorex* by the presence of a longer tail (33 mm or more; *Notiosorex* is less than 30 mm); five upper unicuspids (*Notiosorex* has three); reddish cusps rather than pale orangeish or white cusps on

unworn teeth; ears small rather than conspicuous; and pelage color more brownish than grayish.

**ILLUSTRATIONS:** Black and white illustration of unicuspid (Diersing and Hoffmeister 1977: 322-323)

**TOTAL RANGE:** Mountains of southeastern Arizona (Huachuca, Santa Rita and Chiricahua); the Animas Mountains, Hidalgo County, New Mexico; and in Chihuahua, Mexico, 60 km by road west of Tomochic.

**RANGE WITHIN ARIZONA:** Huachuca, Santa Rita and Chiricahua mountains of southeastern Arizona.

### **SPECIES BIOLOGY AND POPULATION TRENDS**

**BIOLOGY:** Because of small size often mistaken for mice which are rodents. They are insectivores. Teeth do not grow continuously. Pointed incisors are used like forceps to pick up prey. Pointed cheek-teeth pierce and mince food rather than grind it. They feed mainly on insects, but anything they can catch is fair game. They use echolocation to help detect prey. High clicks are also used to confuse prey allowing for easier capture. Larger prey such as mice may be subdued by the mildly venomous saliva. Except for owls, most predators find shrews undesirable as prey because their musk glands produce an offensive odor.

The shrew has a high metabolic rate, to avoid starvation, daily food intake must be one-to-two times its own body weight. This is the reason shrews are active year round. The fast and nonstop pace causes shrews to seldom live for more than a year (Van Pelt 1996).

**REPRODUCTION:** Females can breed within three months of birth. Gestation lasts for 20-25 days. 5-7 young are born naked and helpless. Young weaned at 22-25 days of birth and taught to hunt (Van Pelt 1996).

**FOOD HABITS:** Arthropods, earthworms, slugs etc.

**HABITAT:** Not clearly known. Usually occurs within mountain canyons in riparian zones with heavy ground cover such as logs, rocks or dense vegetation. Usually in close proximity to surface water. Hoffmeister (1986) reports an animal taken in the Huachuca Mountains in a dense stand of *Equisetum* with thick duff accumulation. Simons et al. (1990), working in the Huachuca Mountains, captured four animals, all in riparian habitat within 10 meters of water.

**ELEVATION:** 5,168 - 9,187 feet (1,575 - 2,800 m).

**PLANT COMMUNITY:** Interior Riparian Forest. Includes oak, walnut, maple, sycamore, Douglas fir, quaking aspen and various pines.

**POPULATION TRENDS:**

### **SPECIES PROTECTION AND CONSERVATION**

**ENDANGERED SPECIES ACT STATUS:** SC (USDI, FWS 1996)  
[C2 USDI, FWS 1991]

**STATE STATUS:** 1B (AGFD SWAP 2012)  
[WC, AGFD, WSCA in prep]  
[State Candidate AGFD, TNW 1988]

**OTHER STATUS:** Forest Service Sensitive (USDA, FS Region 3 1999, 2013)  
[Forest Service Sensitive USDA, FS Region 3 1988]  
P, Determined Endangered in Mexico  
(NORMA Oficial Mexicana NOM-059-SEMARNAT-2010)

**MANAGEMENT FACTORS:** Maintain mature vegetation in the canyons of mountains of southeast Arizona. Restore lost and degraded habitat. Educate public on importance of the Arizona shrew in the evergreen oak-pine forest ecosystem (Van Pelt 1996).

**PROTECTIVE MEASURES TAKEN:**

**SUGGESTED PROJECTS:** Studies on distribution, habitat, population and life history.

**LAND MANAGEMENT/OWNERSHIP:** DOD Fort Huachuca Military Reservation; USFS Coronado NF.

### **SOURCES OF FURTHER INFORMATION**

#### **LITERATURE CITATIONS:**

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**ADDITIONAL INFORMATION:**

**Revised:** 1991-12-31 (DBI)  
 1991-05-05 (BKP)  
 1997-03-04 (SMS)  
 1999-06-21(DAS)

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