

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

Animal Abstract

Element Code: AMAEB04010

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Brachylagus idahoensis* (Merriam, 1891)

COMMON NAME: Pygmy rabbit, Pigmy rabbit

SYNONYMS: *Lepus idahoensis* Merriam, 1891; *Sylvilagus idahoensis*

FAMILY: Leporidae

AUTHOR, PLACE OF PUBLICATION: *Brachylagus idahoensis* M.W. Lyon Jr., 1904. Smith. Misc. Coll., 45:411. (First usage of current name combination). *Lepus idahoensis* C. H. Merriam, 1891. N. Amer. Fauna, 5:76.

TYPE LOCALITY: Pahsimeroi Valley, Idaho (near Goldberg, Custer County, Davis, 1939).

TYPE SPECIMEN:

TAXONOMIC UNIQUENESS: The species *idahoensis* is placed in the monotypic genus *Brachylagus*. According to Wilson and Reeder (2005), "Formerly included in *Sylvilagus*; but Corbet (1983). Placed in the monotypic genus *Brachylagus* by Dawson (1967) and, together with *bachmani*, in the genus *Microlagus* by Gureev (1964:170-173); but also see Hall (1981:294), who recognized *Brachylagus* as a subgenus. This species is widely sympatric with *Sylvilagus nuttallii*, and perhaps overlaps narrowly with *S. audubonii*. It has been interpreted as either a primitive rabbit (Hibbard, 1963), or as derived from *Sylvilagus* (Corbet, 1983). Reviewed by Green and Flinders (1980, Mammalian Species, 125)."

DESCRIPTION: The smallest rabbit in North America, females measure slightly larger than males. Total length of males is 25.2-28.5 cm (9.92-11.22 in) while females measure 23.0-30.5 cm (9.1-12.0 in); length of tail is 1.5-2.0 cm in males and 1.5-2.5 cm in females; and weights for males 373-435 g (13.16-15.34 oz) and females 415-458 g (14.64-16.16 oz). Pygmy rabbits molt once per year. In autumn, the new fur is very long, silky, gray above, and white, often tinged with buff on the abdomen. By mid-winter, the pelage is worn, but still silvery-gray. By spring and summer darker gray dominates. The tail is gray above and below, while the nape of the neck and the front legs are cinnamon in color. Hind legs are very short, and the hind feet are comparatively broad and heavily haired. It has whitish spots on the side of its nostrils that distinguish it from all other rabbits. Their antorbital process is nearly as long as the postorbital and they are both free from the cranium. (Green and Flinders, 1980; Wilson and Ruff, 1999). The auditory bullae are inflated. They have relatively small molariform teeth, with the first upper one possessing but a single reentrant angle. There are 28 teeth in the skull (I 2/1, C0/0, P3/2, M3/3).

AIDS TO IDENTIFICATION: *Brachylagus idahoensis* is the smallest of all North American leporids. It can be distinguished but other cottontails sharing its range by its small inconspicuous tail and buff, rather than white, underside. In addition, they have very short rounded ears, densely haired inside and out; short hind legs resulting in scurrying, rather than a leaping gait; a one-seven syllable alarm call; its unique simple to extensive burrow system in soil and snow; and its obligate association with sagebrush. (Wilson and Ruff, 1999).

ILLUSTRATIONS:

Color photo (B. Moose Peterson/WRP, in Wilson and Ruff, 1999: 682; also in North American Mammals, <http://www.mnh.si.edu/mna/>).

Color photos of rabbits and habitat by multiple photographers (in Montana Field Guide, accessed 2/25/2011, http://fieldguide.mt.gov/detail_amaeb04010.aspx).

TOTAL RANGE: Known range includes SW Oregon to east-central California, SW and eastern Utah, N to SW Montana, and an isolated population in west-central Washington.

RANGE WITHIN ARIZONA: None. Potentially may exist in the State, but there is no documentation to prove or disprove its existence.

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: In southwestern Wyoming, their winter home range was 548-18,464 sq meters. Most of their activity is within a 30m radius of their burrow. They are active throughout the year. They may be active at any time of day or night, but they are generally crepuscular. They dig burrows with entrance diameters measuring 10-12 cm. Tunnels widen below surface and may extend a maximum depth of 1 meter. The burrow may have up to 10 entrances (typically 4-5) and are located in slopes oriented in a north-to-east direction, and at the base of sagebrush plants. Use of burrows is variable, but is greatest for juveniles. They have a distinct alarm call of one to seven syllables. The fact that pygmy rabbits readily give alarm calls signifies socialization to a degree not known for other North American leporids; this social system has not been fully described. (Wilson and Ruff, 1999).

According to Wilson and Ruff (1999), “the pygmy rabbit is sympatric with several other leporids, including the brush rabbit (*Sylvilagus bachmani*), the mountain cottontail (*S. nuttallii*), the desert cottontail (*S. audubonii*), the snowshoe rabbit (*Lepus americanus*), the white-tailed jackrabbit (*L. townsendii*), and the black-tailed jackrabbit (*L. californicus*). Pygmy rabbits have many of the same diseases and internal parasites as these cottontails and hares, but are not known to exhibit the population cycles documented for the other species.”

Weasels readily enter burrows, and are the principal predator of Pygmy rabbits, followed by coyotes, foxes, owls and hawks. Bobcats and badgers, among other predators likely take Pygmy rabbits as well.

REPRODUCTION: Breeding period extends from spring to early summer. The gestation period lasts probably about 27-30 days and they average 6 young per litter. In California, mating occurs from late February to early May. In December, the testes of the male begin to enlarge and they shrink again in June following mating season. The young are born from March to early August. Three litters per year have been reported in Idaho. The young are altricial and mortality is highest in late winter and early spring.

FOOD HABITS: They are herbivores with big sagebrush being their primary food source but grasses and forbs are consumed in mid- to late summer. Big sagebrush provides up to 99% of the diet in the winter and grasses provide up to 40% of their diet in mid-summer to fall. Bitterbush is rarely taken, even though it may be dense in the pygmy rabbit's habitat. They forage on the ground and in shrubs, and they may store food in their burrow.

HABITAT: Pygmy rabbits inhabit tall, dense stands of big sagebrush (*Artemisia tridentata*) growing in deep loose soils on plains, alluvial fans, riparian gullies, and in fenced right-of-ways along roads. In southwestern Wyoming, pygmy rabbits selectively used dense and structurally diverse strands of sagebrush that accumulated a relatively large amount of snow. The subnivean environment provided access to a relatively constant supply of food and provided protection from predators and thermal extremes.

ELEVATION: No occurrences reported for Arizona

PLANT COMMUNITY: Sagebrush shrubland communities preferred, but have been found utilizing desert and chaparral communities as well.

POPULATION TRENDS: Declining throughout its range. Their range apparently decreased in Washington during the last 3,000 years as the extent of sagebrush-dominated steppe diminished. The Washington population was estimated at less than 250 animals in 1995 and is now estimated at zero.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[C2 USDI, FWS 1991]

STATE STATUS: None

OTHER STATUS: None

MANAGEMENT FACTORS: Loss of habitat is a direct threat to this species, which depends mainly on big stands of big sagebrush. In its range, Pygmy rabbits are an important food source for both birds and mammals. Their habitat has become increasingly fragmented by development,

agriculture, rangeland “improvements” (e.g., projects that replace big sagebrush with bunchgrasses), and by fire. (Museum of Nat. Hist., accessed 2011).

PROTECTIVE MEASURES TAKEN: A captive breeding program was initiated in Washington.

SUGGESTED PROJECTS: An assessment of all current populations needs to be performed to determine their status rangewide.

LAND MANAGEMENT/OWNERSHIP:

SOURCES OF FURTHER INFORMATION

REFERENCES:

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MAJOR KNOWLEDGEABLE INDIVIDUALS:

ADDITIONAL INFORMATION:

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