University of Nebraska - Lincoln
DigitalCommons@University of Nebraska - Lincoln

Mammalogy Papers: University of Nebraska State Museum

Museum, University of Nebraska State

9-1-1996

A Recent Record of Mountain Lion in Nebraska

Hugh H. Genoways
University of Nebraska - Lincoln, h.h.genoways@gmail.com

Patricia W. Freeman
University of Nebraska-Lincoln, pfreeman1@unl.edu

Follow this and additional works at: http://digitalcommons.unl.edu/museummammalogy

Part of the Zoology Commons

Genoways, Hugh H. and Freeman, Patricia W., "A Recent Record of Mountain Lion in Nebraska" (1996). *Mammalogy Papers: University of Nebraska State Museum.* Paper 2.
http://digitalcommons.unl.edu/museummammalogy/2

This Article is brought to you for free and open access by the Museum, University of Nebraska State at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Mammalogy Papers: University of Nebraska State Museum by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

From:
The Prairie Naturalist 28(3), September 1996, pp. 143–145.
Published by the Great Plains Natural Science Society; used by permission.
http://www.fhsu.edu/biology/pn/prairienat.htm

A RECENT RECORD OF MOUNTAIN LION IN NEBRASKA — On the morning of November 10, 1991, a deer hunter in the Pine Ridge area of extreme northwestern Nebraska shot a young female mountain lion (Gertzen, 1991, Omaha World-Herald, November 15, Sunrise ed. p. 17sf; Henion, 1991, Omaha World-Herald, November 15, Metro ed. p. 17). Although mountain lions *(Felis concolor)* were part of the original mammalian fauna of Nebraska (Jones, 1949, J. Mammal. 30: 313; 1962, Bull Univ. Nebraska State Mus. 4: 87-100; 1964, Univ. Kansas Publ., Mus. Nat. Hist. 16: 1-356), the species has been considered to be extirpated from the state. The most recent record that Jones could confirm was an individual seen in 1903 along Deadmans Creek, 11.3 km S and 5.6 km W of Crawford in Dawes Co., also in the Pine Ridge region of the state. The recent specimen comes from northwest of Crawford with the exact site that it was shot being 8 km N and 22.5 km E of Harrison in Sioux Co. (T32N, R14E, Sec 13).

The Pine Ridge is a low, west-to-east escarpment that rises no more than 200 m above the surrounding short-grass prairie. The Pine Ridge separates the High Plains in eastern Wyoming and western Nebraska, which lies to the south of the ridge, from the Missouri Plateau and the Nebraska badlands, which lie to the north of the ridge in Nebraska and into South Dakota. The ridge is rugged with many breaks and valleys. The sides and top of the ridge are covered with open stands of ponderosa pine *(Pinus ponderosa)*. Permanent sources of water are scattered along the escarpment. Ranching is the primary mode of land use throughout the region. The hunter reported that he shot the mountain lion as it emerged from a stand of pine into an open meadow along the ridge (Gertzen, op. cit.). This young female was reported by the local representative of the Nebraska Game and Parks Commission to weigh 35.4 kg and to measure 167.64 cm from the tip of the nose to the tip of the tail (Gertzen, op. cit.).

There have been reports for several years of sightings of mountain lions along the Pine Ridge in the vicinity of Harrison, Crawford, and Chadron (Gertzen, op. cit.; Henion, op. cit; Cook, 1991, Chadron Record, November 15 p. 1). About three weeks before this mountain lion was killed, the District Representative of the USDA Animal Damage Control Office confirmed a deer kill by a mountain lion in the area. Reportedly, mountain lion tracks were seen in the area as well as where the deer had been dragged across a road. The remains of the deer had been partially buried as is typical of mountain lions (Gertzen, op. cit.; Cook, op. cit.). There have been no reported livestock losses from mountain lions in the area. Mountain lions are now protected in Nebraska as a game species with no open season.

The skull and skeleton of this specimen are catalogued as part of the research collections of the Division of Zoology of the University of Nebraska

State Museum (UNSM 18,674). We consider this specimen (Fig. 1) to be a subadult female. All of the permanent dentition was fully erupted, but showed no wear, and most of the bones of the cranium were not fully co-ossified (Goldman, 1946, The Puma, Mysterious American Cat, Part II, Stackpole Co., Harrisburg, PA). Only in a few bones of the skeleton were the epiphyses attached to the shaft or body of the bone and even in these cases the epiphyseal line was clearly discernible. During preparation, in most bones the epiphyses had separated from the remainder of the bone. Clearly, this animal would have grown to a larger size and should not be considered an adult.

Measurements (in mm) of our specimen after Goldman (1946:192) were as follows: greatest length of skull, 181.1; condylobasal length, 163.6; zygomatic breadth, 126.8; height of cranium, 63.7; interorbital breadth, 35.1; breadth across postorbital processes, 60.1; length of maxillary toothrow, 52.8; crown length of upper camassial, 20.5; crown width of upper carnassial, 10.8; crown length of lower carnassial, 15.1; diameter (anterior-posterior) of upper canine, 12.1.

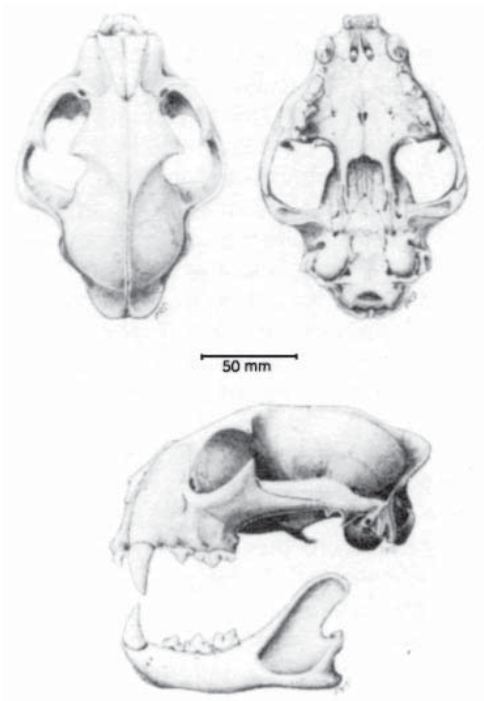

Figure 1. Dorsal, ventral, and lateral views of cranium and lateral view of the lower jaw of a subadult female mountain lion from 8 km N. 22.5 km E Harrison, Sioux Co.. Nebraska (UNSM 18,674).

When a record of this nature is reported, there is always the question as to whether this is natural dispersal or whether the animal has escaped from a roadside zoo or traveling menagerie. We believe that this record is the result of natural dispersal into Nebraska from the Rocky Mountains of Wyoming to the west (distance to the Laramie Mountains is approximately 175 to 200 km) or from the Black Hills of South Dakota to the north (approximately 100 km) where a small population exists (Jones, J. K., Jr., D. M. Armstrong, R. S. Hoffmann, and C. Jones, 1983, Mammals of the Northern Great Plains, Univ. Nebraska Press, Lincoln). Examination of the skeleton suggests that the individual was in good condition when it was shot. It lacks any of the bone deformation and unusual dental wear that are common in captive animals, nor was it declawed. Mountain lion populations have been increasing in the Rocky Mountains in recent years because of the protection that the species has received. It is not unreasonable to believe that as these populations increase, the species will reinvade parts of its former geographic range. In Nebraska, additional mountain lions may be expected in the Pine Ridge, the Wildcat Hills just south of the North Platte River where we have a reliable report of a sighting in early June 1988 at Bull Canyon (about 6.5 km east of the Wyoming border) in Banner Co. (T18N, R58W, Sec. 10), and along the wooded parts of the North Platte and South Platte rivers, which extend into Wyoming and Colorado, respectively.

We assign this specimen to the subspecies *F. c. hippolestes,* which occurs in the central Rocky Mountains and Great Plains (Hall, 1981, The Mammals of North America, John Wiley and Son, New York; Jones et al., op. cit). It is difficult to compare the cranial measurements of our specimen with those of a series of adult female *F.* c. *hippolestes* given by Goldman (op. cit.) from Meeker, Colorado, because our specimen is not an adult; however, measurements of the individual teeth should not change significantly with growth. Comparing the dental measurements of our specimen with those given by Goldman reveals that the measurements of our specimen fall within the range of those from Meeker (given in parentheses) for length of upper carnassial (20.2–22.4), width of upper carnassial (10.6-11.8), length of lower carnassial (15.0-16.8), and diameter of upper canine (10.8-12.3). The Pine Ridge specimen also agrees with specimens of *F. c. hippolestes* because the first upper premolar is minute (Fig. 1) and does not fill the space between the canine and second premolar. The frontal pits are relatively shallow and the nasals just enter the pits and are not deeply sunken in the pits. The size of the dentition of the Nebraska specimen and its other characters, we believe, confirm our opinion that this specimen represents *F.* c. *hippolestes* and that it is the result of natural dispersal into the state. – *Hugh H. Genoways and Patricia W. Freeman, University of Nebraska State Museum, W436 Nebraska Hall, University of Nebraska-Lincoln, Lincoln, NE 68588-0514.*

Received: 1/23/96 Accepted: 5/27/97