

STATUS REPORT ON MOUNTAIN LIONS IN NEBRASKA

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Abstract: From 1991 to 2000, 8 confirmed observations of mountain lions were made in the state of Nebraska. Several hundred additional, unconfirmed reports were submitted throughout the state. This status report evaluates confirmed and unconfirmed observations with respect to distribution, type of observation, and response.

Available records suggest that the mountain lion (*Puma concolor*) once occurred throughout Nebraska, but was probably never abundant (Jones 1962, 1964). The species was likely associated with the rough country in the Pine Ridge in northwest Nebraska, and occasionally ranged south and eastward along the larger streams (Jones 1949). Mountain lions were extirpated in Nebraska by the end of the 19th century. Regardless of this, reports of mountain lion sightings occurred almost annually throughout the second half of the 20th century. In 1991 the first confirmed mountain lion for nearly 100 years was observed in Sioux County and subsequently shot by a hunter. To this point, mountain lions were not protected by state law, mainly because of the low chances of an encounter in the state. The controversial shooting in 1991 and the possibility that more mountain lions might be found in the state made the consideration of a status change necessary. In 1995 the mountain lion was designated as a game species by the Nebraska legislature. Since no hunting season has been established, the species is protected year-round.

The objective of this report is to provide a compilation and evaluation of recent mountain lion reports in Nebraska. It also attempts to correlate sighting locations and tolerance for mountain lions with other factors such as human population density.

OBSERVATIONS

From 1990 to 2000 hundreds of mountain lion reports have been submitted to the Nebraska Game and Parks Commission (NGPC). Reports have been submitted in various formats from personal phone and email communications to formal data sheets, and thus vary greatly in accuracy and detail. Eighty-eight of these reports provided sufficiently accurate spatial and temporal information and were entered into an ACCESS database and subsequently mapped using ArcView GIS software. The reports submitted include visual observations, observations of signs (such as tracks, foraging remains), as well as mortalities (i.e. dead mountain lions).

Reports were often incomplete, so most parameters (e.g. gender, age, behavior) are only available for a small subset of the entire report collection. The geographic location information varies greatly in its accuracy as well. While some observers recorded legal land description up to section quarter, others only indicated the approximate distance and direction to certain landmarks such as towns, etc.

Of the 88 reports entered into the database, 72 were visual observations, 11 were observations of signs, 4 were mortalities, and 1 was an acoustic observation. In 9 cases, reports were submitted of observations of more than 1 mountain lion (2-3).

MORTALITIES

Five mountain lion mortalities were reported between 1991 and 2000 (See Figure 1). All specimens were examined by veterinarians. Four were males and 1 was a female. All animals were adults and in fair to excellent body condition. Three animals died as a result of wounds caused by firearms, and 1 may have been killed by a train. None of the animals that were shot could be associated with depredation complaints, however 1 animal was shot within the Harrison city limits and another was treed near a farm house and shot by the farm owner. The most recent specimen was shot by law enforcement officials within the city limits of St. Paul, Nebraska on November 20, 2000.

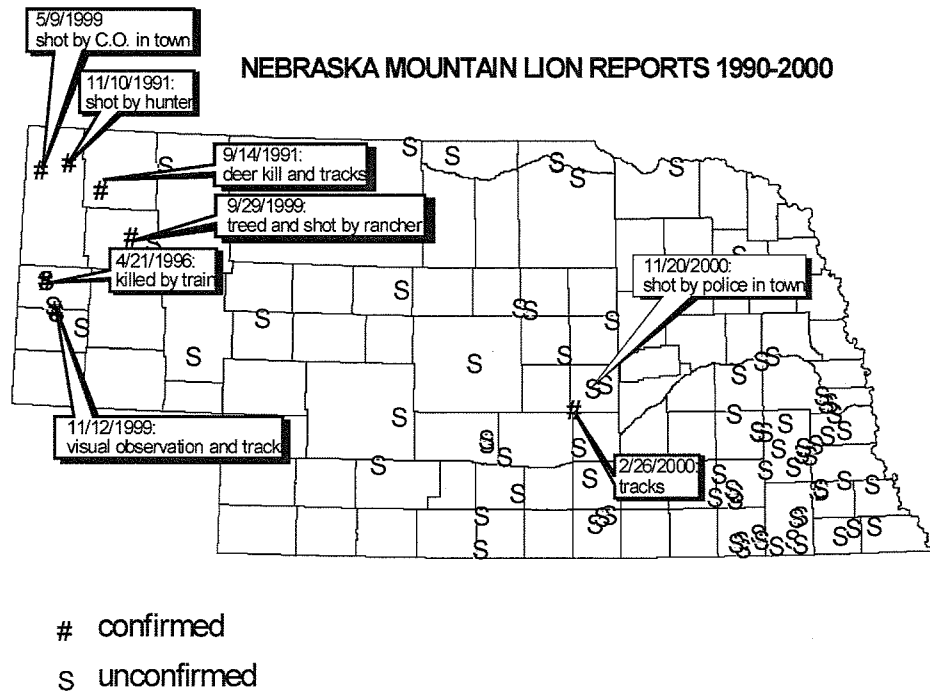


Figure 1: Distribution of Nebraska mountain lion observation reports that were included in the analysis.

SOURCES

Based on the geographic pattern of the confirmed mountain lion reports and the mountain lion population status in neighboring states, it is reasonable to believe that least some of the animals encountered in Nebraska originated either in Colorado, Wyoming and/or the Black Hills of South Dakota (Benedict et al. 2000). Another source may be animals that escaped or have been released from captivity.

DEPREDATION

Of all reports entered into the database, 14 were associated with depredation complaints. Cattle, hog, goat, horse, dog, and cat were the domestic species suspected of being injured or killed by mountain lions. Cattle (mostly calves) were most commonly reported as being preyed upon by mountain lion. Article 37-557 (Laws of the State of Nebraska pertaining to the Game and Parks

Commission) provides legal opportunity to destroy mountain lions causing agricultural depredation. None of the confirmed sightings was linked with depredation occurrences.

RESPONSES

The responses of NGPC staff to reports ranged from shooting a mountain lion to site investigations to no response at all. In 1997 a Mountain Lion Action Plan was composed by the NGPC in an effort to standardize report investigation, evaluation, and response.

In 55 of 88 cases the reporter spoke directly with an NGPC employee or was contacted by an NGPC employee after submitting a report. In >20 of 88 cases NGPC employees inspected the observation site.

CONCLUSION

The majority of confirmed mountain lion observation reports come from the panhandle area in close proximity to Colorado, Wyoming or South Dakota, all states with extant mountain lion populations. On the other hand, the majority of reports that could not be confirmed coincide with areas of high human population density. Two factors may be responsible for this clustering of unconfirmed reports in areas with denser human population. First, the more people live in an area the greater the number of possible observations and thus reports. Second, an initial report that becomes public (regardless of whether it is confirmed or not) can cause biases in future observers, thus potentially causing a chain reaction of additional "observations." This illustrates the importance of appropriate responses to the public, even if reports are unconfirmed.

Considering the recent confirmed sightings of mountain lions and the large number of deer in the state, it is likely that additional mountain lions will be encountered in Nebraska. It is doubtful that a population will establish itself in areas where human population density and associated habitat disturbance is high. Encounters, however, in those areas are not impossible considering the large distances that individual animals, especially young males, can travel. In addition, it is possible that some animals were released or escaped from captivity. A frequently updated management plan will continue to provide protocols for handling a variety of situations from a biological, emergency, and public relations point of view.

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