

MOUNTAIN LION IDENTIFICATION AND METHODS OF DETERMINING SEX AND AGE



Introduction

South Dakota Game, Fish and Parks (SDGFP) is responsible for managing wildlife and its habitat as well as providing outdoor-related recreation. Our public outreach programs promote appreciation, understanding, and stewardship of South Dakota's wildlife. SDGFP is funded through hunting and fishing license sales. The purpose of this document is to provide information to anyone who wants to hunt mountain lions and for anyone interested in mountain lion ecology. This document presents information about mountain lion biology, physiology, and behavior; explains how to determine the gender of a mountain lion; and details some of South Dakota's laws and regulations pertaining to mountain lion hunting.

Mountain Lions in South Dakota

Mountain lions are native to the Black Hills of South Dakota. Dispersals outside of the Black Hills have been documented; however, there has been no evidence of an established prairie population. Mountain lions are efficient predators that primarily prey on deer and other small mammals. In South Dakota their natural predators include other mountain lions, disease, vehicles and humans. South Dakota State University and SDGFP have studied in the past, and continue to study a wide range of topics related to mountain lions in the Black Hills including home range size, survival, dispersal, population size, prey selection, survey methods, hunting impacts, genetics and disease. Results of these studies continue to guide management activities for mountain lions in South Dakota and can be found in the South Dakota Mountain Lion Management Plan at <https://gfp.sd.gov/management-plans/>.

South Dakota Mountain Lion Hunting Regulations

- 1) No person may harvest or attempt to harvest a mountain lion with a spotted coat (kitten) or any mountain lion accompanying another mountain lion

2) No person may release dogs (where allowed) on tracks indicating multiple mountain lions traveling together.

The information below is intended to assist hunters in making decisions by understanding and recognizing certain key observations while in the field. Additional information on mountain lion hunting in South Dakota can be found at <https://gfp.sd.gov/mountain-lion/>.

Physical Appearance

The mountain lion's scientific name is *Puma concolor*, which means "cat of one color." Adult mountain lions are tan to light cinnamon in color with a white underbelly and have black on the back of their ears and the tip of their tail. Adult males can grow to an excess of 8 feet in length, including the tail, and weigh an average of 140-150 pounds. Adult females can grow up to 7 feet long and weigh an average of 80-90 pounds. Mountain lions have very long tails which can be more than a third of the total length of the animal.

Mountain Lion Gender Identification (Sexing) in the Field

The only reliable way to determine the gender of a mountain lion is to look closely at the genital area. Adult and sub-adult male mountain lions have a conspicuous black spot of hair, about one inch in diameter, surrounding the opening to the penis sheath behind the hind legs, and about four to five inches below the anus. Between the black spot and the anus is the scrotum and it is usually covered with light brown and white hair. The anus is hidden below the base of the tail. Female adult and sub-adult mountain lions have a black vulva spot about 1" below the anus. Because the anus and vulva are up under the base of the tail, the vulva spot may not be evident, especially from a distance. The left picture below shows a female with a black spot and the right picture shows a male with a black spot.



Female mountain lion. © Ken Logan.

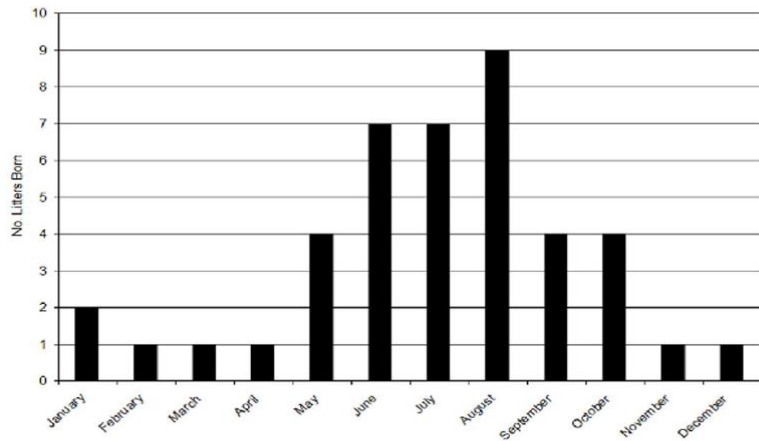


Male mountain lion. © Ken Logan.

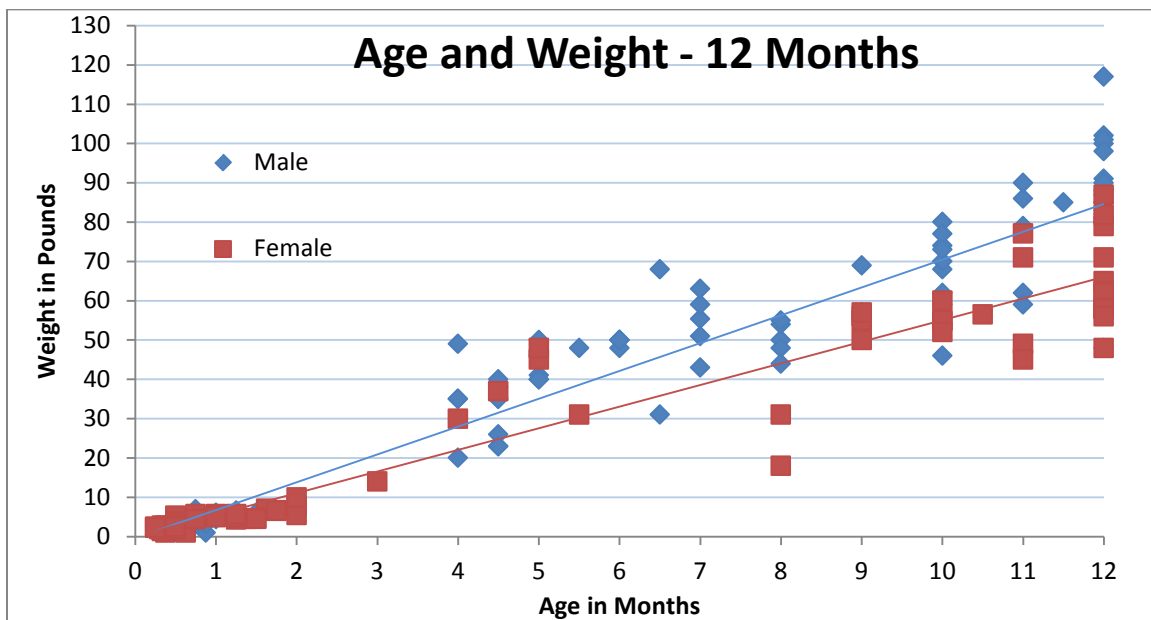
Mating, Breeding, & Raising Young Mountain Lions

Females begin reproducing when they are approximately 2½ years old, and typically breed every other year. Courtship begins when a roaming female in heat makes frequent calls and leaves scent that attracts males. After locating the female, the male accompanies her for just a few days, during which time mating occurs. Breeding can take place throughout the year. Most females give birth between May and October, following a three-month gestation period. Average litter-size is three kittens. Each year about 50% of adult female mountain lions produce kittens, while another 25% have dependent kittens from the previous year. Thus, about 75% of adult females might have dependent young at any given time.

Number of litters born during each month from 2005 to 2009 for mountain lions (*Puma concolor*) in the Black Hills, South Dakota.



Newborn kittens are heavily spotted for the first three months of life, and then the spots begin to fade. Typically by six months of age the spots have almost completely faded. However this can vary. Kittens may still have faded spots when they are a year old. At two to three months, kittens typically have been weaned and begin traveling with the mother. Kittens three months old weigh approximately 15 to 20 pounds. At six months of age kittens will weigh approximately 35 to 45 pounds (see graph and pictures on next page for examples). Kittens stay with their mother until they become independent sometime between 10 to 18 months old. Seeing a female mountain lion alone does not mean that she does not have dependent kittens.





Six-month-old mountain lion kitten weighing 48 pounds.



Two-month-old mountain lion kitten weighing ten pounds.

Tracks

Tracks of mountain lions, especially in snow or mud, can be used as another indicator of the sex of a mountain lion or whether a female might have young with her. More than one set of tracks often indicates a female with young or a group of sub-adult mountain lions. Immature males may leave tracks as large as their mother's. The track of large adult males may be up to 5" wide and the average male will have tracks approximately 4" wide. Adult females leave tracks 3.5" in width or less. Another way to determine gender from tracks is to measure the plantar (heel) pad. Since a mountain lion in a walking gait usually places its hind foot on the track left by the same-side front foot, the hind track will usually be the most distinct and easiest to measure. The hind foot plantar pad width for a female adult mountain lion will usually be less than two inches wide; a male's plantar pad will usually be greater than two inches wide. The front foot plantar pad width for a female adult mountain lion will measure between 2 - 2.5"; a male's will usually be 2.5 - 3" wide.



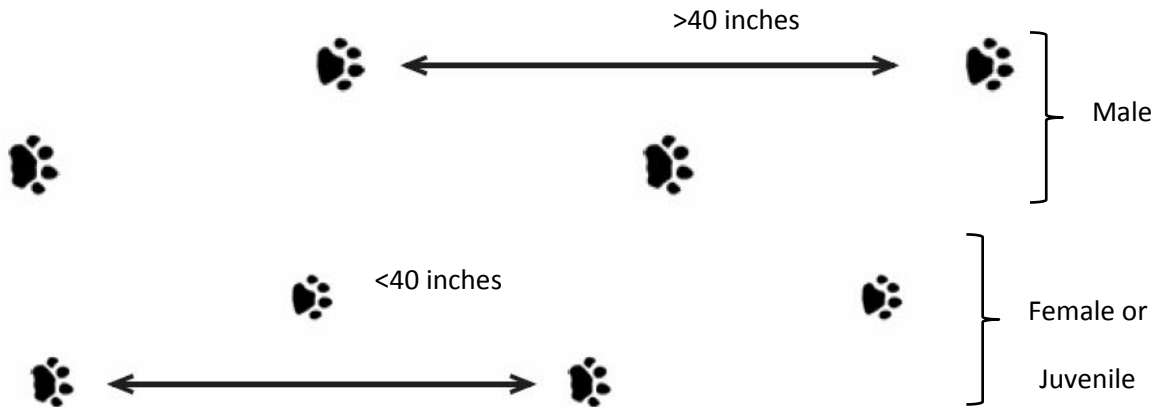
Adult female



Adult male

Stride Length

When walking in snow on level ground, mature males will have an average stride greater than 40". Females and young mountain lions will have a shorter stride, measuring less than 40". The illustration of tracks below shows a male's stride (top) and a female's stride (bottom).



Various factors may lead to incorrect conclusions when 'reading' tracks and stride:

- Nature of the surface the tracks are on—hard, soft, wet, etc.
- Snow depth
- Pace of the mountain lion's travel
- Tracks may have been left by a sub-adult

For more information about mountain lions in South Dakota, please visit <https://gfp.sd.gov/mountain-lion/> or contact your local SDGFP Office (<http://gfp.sd.gov/agency/contacts/contact-wildlife-offices.aspx>).

