

THE ROCKY MOUNTAIN GOAT IN THE BLACK HILLS

Introduction

Mountain goats are a unique species found only in northwestern North America. A small, isolated population of Rocky Mountain Goats exists within the Black Hills of South Dakota. However, they are not indigenous to the state. In 1924, Custer State Park (CSP) obtained six animals from Alberta, Canada and placed them in an enclosure at CSP. The first night, two of the goats, an adult female and a yearling male, escaped. By 1929, all remaining goats had escaped. These goats moved approximately 10 miles northwest onto the Harney Peak range.

By the late 1940's an estimated 300 to 400 mountain goats were occupying the granite outcroppings around Harney Peak and remained stable through the 1950s and 60s. From 1954 to 1968, forty three mountain goats were transplanted to Spearfish Canyon in the Black Hills and to the states of Wyoming and Colorado. The population declined through the 1970's likely due to overharvest and transplants. Surveys conducted in 1981-82 indicated a substantial decrease in the goat population and by 1983 the goat population was reported to be approximately 80 animals. By the 1990s the mountain goat population increased to an estimated 150 to 170 animals. In the early 2000s the mountain goat population started to decline again. There are a number of hypotheses as to why the population declined including habitat degradation due to pine encroachment, increased human disturbance in primary range, increased predation and lack of genetic diversity due to the population originating from six mountain goats. To address the potential lack of genetic diversity the South Dakota Game, Fish and Parks (SDGFP) transplanted 19 mountain goats from Colorado in

2006 and 21 mountain goats from Utah in 2013 to South Dakota. Currently the mountain goat population is believed to be increasing based on aerial survey data and population modeling.



SDGFP staff carrying a live mountain goat out for transplant

Range

The primary range where mountain goats are found is from Highway 385 at Crazy Horse east to Mount Rushmore and from Highway 244 near Harney Peak south to the Needles area in the Black Hills. Mountain goats have also expanded into the Grizzly Creek drainage near Keystone, SD. The primary range extends over 32,000 acres. Mountain goats occupy habitat ranging in elevation from about 4,000 ft. to 7,242 ft. Mountain goats utilize the granite outcroppings found in this area. During the morning hours they feed at the base of these outcroppings, usually within 100 meters, and then move to the top during the day to sun themselves. The goats use the outcroppings as escape cover and climb them to escape danger. Mountain goats are excellent climbers!



Growth and Reproduction

The breeding season for mountain goats occurs between mid-November and early December. Billies (males) may travel considerable distances in search of receptive nannies (females). Billies will breed with multiple females but not vice versa. Typically, prime-aged males (5-10 years old) do most of the breeding, with some battling among males causing occasional horn-inflicted puncture wounds. Adult males usually separate themselves from larger nanny-kid nursery groups except during the rut. They may form small bachelor groups, especially in summer. Females, on the other hand, tend to stay in groups along with kids and immature goats. This behavior is particularly evident during mid-summer when large nursery bands form.

Nannies reach sexual maturity at 2.5 years of age. However they commonly do not breed until 3.5 to 4.5 years of age. Further, female mountain goats may have a lower probability of reproducing in a given year if they reproduced the previous year and they are in poor condition. Usually a single kid is born in mid-late May after a gestation period of approximately 180 days. Twinning occurs rarely. Nannies seek out rugged, isolated sites prior to giving birth but soon join other nannies with newborn kids to form nursery groups. Kids remain with their mothers until the next breeding season and often for some years beyond. Mountain goats may live up to 15 years, but most live less than 12.

Feeding Ecology

Mountain goats are both grazing and browsing animals depending on the particular habitat and season of the year. Their diet includes grasses, herbs, sedges, ferns, moss, lichen, and shrubs. As winter advances, feeding habits generally shift to browsing.



Hunter with goat harvested in first season.

Hunter Harvest

The first season on mountain goats was held in 1967 and offered 25 licenses. There were no seasons were held in 1972, 1974 and 1975 for unknown reasons. The mountain goat season was closed from 1982 to 1984 due to a declining population. The season opened again in 1985 with a limited harvest compared to prior seasons. The season was closed from 2007 to 2014 due to a decline in the population. The following table shows the harvest of mountain goats from 1967 to present.

MOUNTAIN GOAT HARVEST 1967 - 2014

| Year | Licenses Issued | Total Harvest | Male | Female | Unknown |
|-------------|-----------------|---------------|------|--------|---------|
| 1967 | 25 | 24 | 13 | 11 | |
| 1968 | 25 | 21 | 13 | 8 | |
| 1969 | 25 | 24 | 19 | 5 | |
| 1970 | 25 | 24 | 14 | 10 | |
| 1971 | 15 | 12 | 5 | 7 | |
| 1972 | | NO SEASON | | | |
| 1973 | 15 | 12 | 3 | 9 | |
| 1974 - 1975 | | NO SEASON | | | |
| 1976 | 15 | 12 | 4 | 8 | |
| 1977 | 10 | 9 | 1 | 1 | 7 |
| 1978 | 10 | 9 | 4 | 5 | |
| 1979 | 10 | 10 | 6 | 4 | |
| 1980 | 10 | 10 | 6 | 4 | |
| 1981 | 10 | 10 | 8 | 2 | |
| 1982 - 1984 | | NO SEASON | | | |
| 1985 | 4 | 4 | 3 | 1 | |
| 1986 | 3 | 3 | 2 | 1 | |
| 1987 | 5 | 5 | 5 | 0 | |
| 1988 | 5 | 5 | 4 | 1 | |
| 1989 | 5 | 5 | 1 | 4 | |
| 1990 | 4 | 4 | 3 | 1 | |
| 1991 | 4 | 4 | 4 | 0 | |
| 1992 | 4 | 4 | 2 | 2 | |
| 1993 | 4 | 4 | 3 | 1 | |
| 1994 | 4 | 4 | 3 | 1 | |
| 1995 | 4 | 4 | 3 | 1 | |
| 1996 | 5 | 5 | 1 | 4 | |
| 1997 | 4 | 4 | 3 | 1 | |
| 1998 | 4 | 4 | 4 | 0 | |
| 1999 | 4 | 4 | 4 | 0 | |
| 2000 | 4 | 3 | 3 | 0 | |
| 2001 | 4 | 4 | 2 | 2 | |
| 2002 | 3 | 3 | 2 | 1 | |
| 2003 | 3 | 3 | 1 | 2 | |
| 2004 | 3 | 3 | 1 | 2 | |
| 2005 | 2 | 2 | 0 | 2 | |
| 2006 | 2 | 1 | 0 | 1 | |
| 2007 - 2014 | | NO SEASON | | | |