

A REVIEW OF THE MOUNTAIN GOAT MANAGEMENT PLAN IN ALBERTA



KIRBY SMITH
AREA WILDLIFE BIOLOGIST
EDSON

OBJECTIVES

- **Examine information that was used to develop the Mountain Goat Mgmt. plan in Alberta.**
- **Discuss the advantages of preparing a management plan for goats in B.C.**

**Factors leading up to the
closure of the hunting
season in Alberta and the
subsequent development of
the Goat Mgmt. Plan**

POPULATION ESTIMATES BASED ON AERIAL SURVEYS

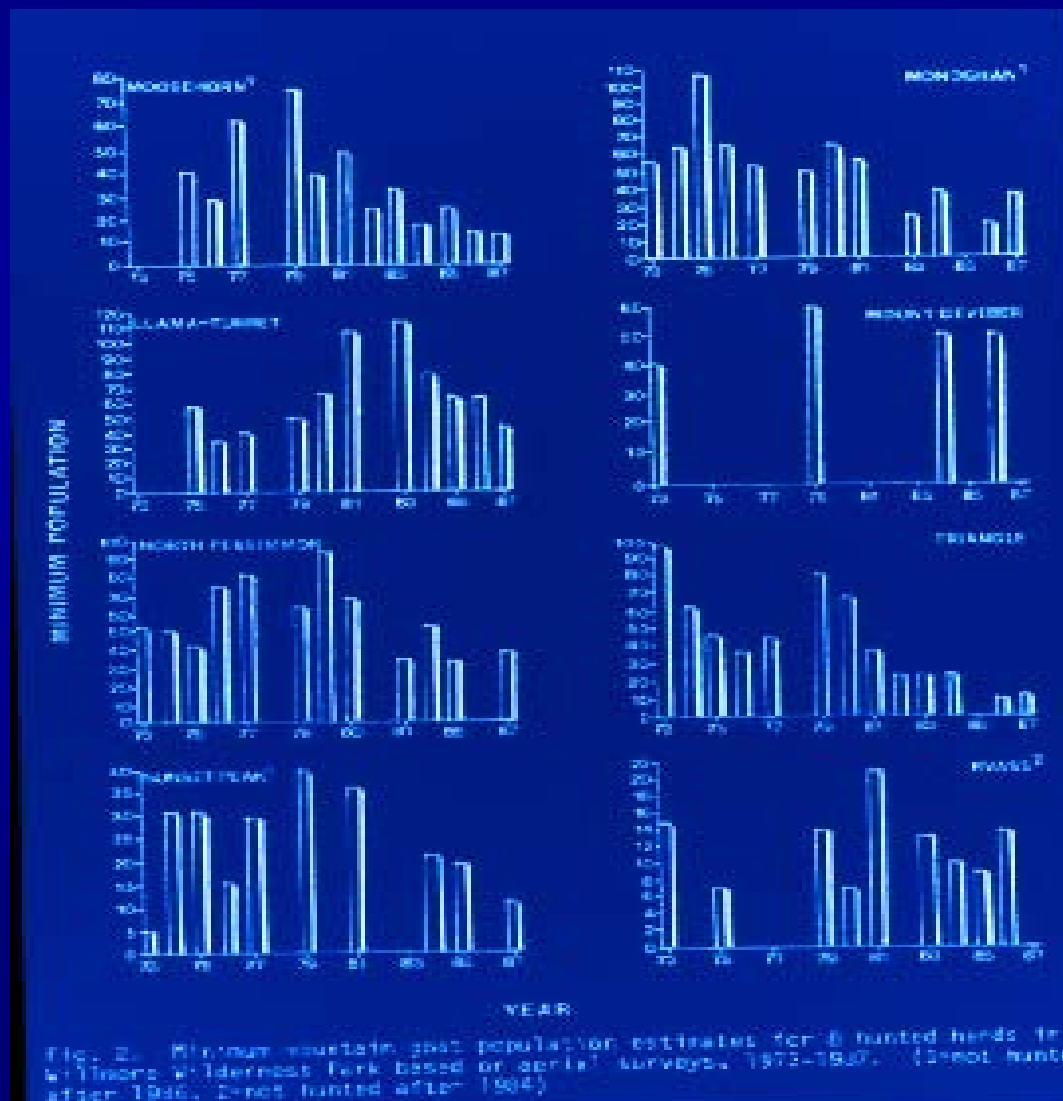


STUDY AREA



Fig. 1. Distribution of mountain goat survey complexes in the Willmore Wilderness Park study area of west-central Alberta.

DECLINES IN 8 HUNTED HERDS FROM 1973 - 1987



(Smith 1988)

HUNTER HARVEST CONSISTED OF
43% FEMALES WITH A MEAN AGE
WHICH VARIED FROM 4.6 - 8.5 YEARS



Hunting Season Closed in 1988 with 4 Main Objectives.

- Allow time for herds to recover.
- Develop a provincial management plan.
- Initiate a kid mortality study.
- Initiate a transplant program in an attempt at restoring goat herds on historic range in southern Alberta.

CAW RIDGE INTENSIVE STUDY AREA



KID MORTALITY STUDY



TIMING OF KID MORTALITY

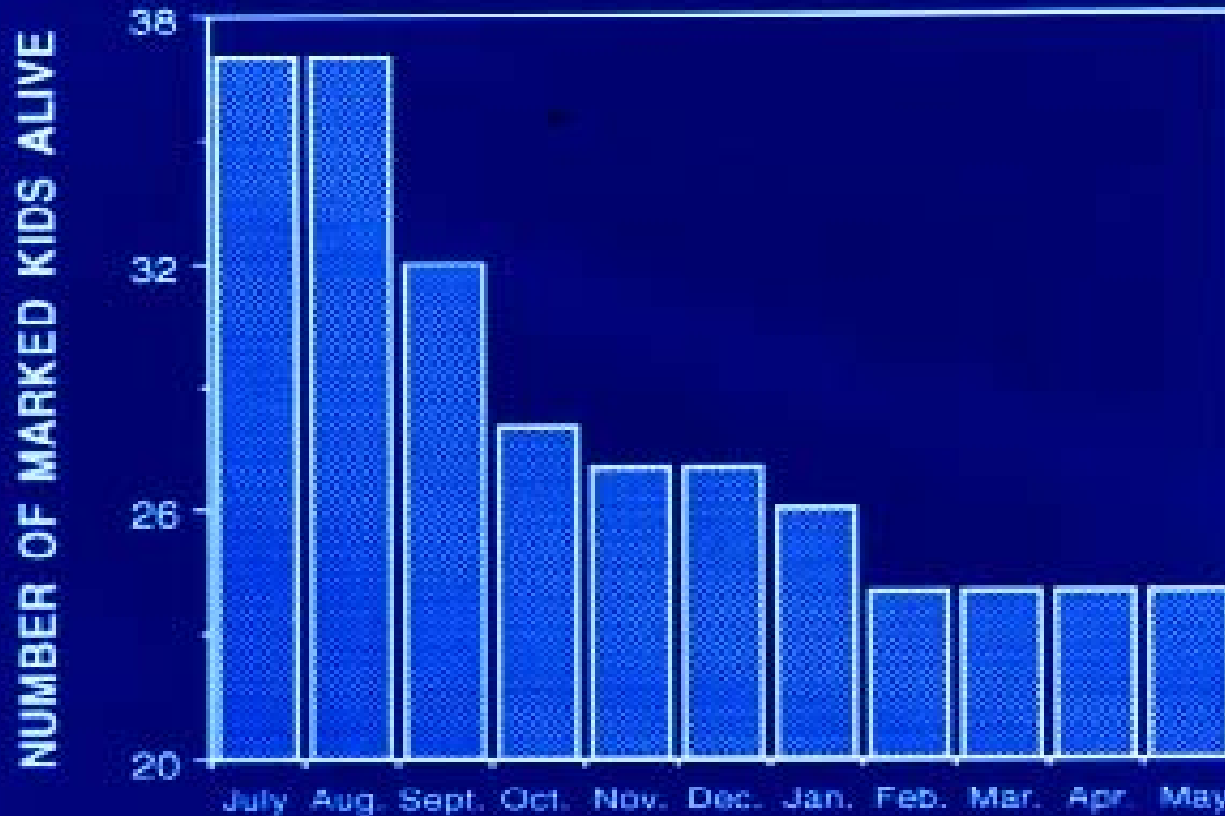


FIG. 1. Survival of marked mountain goat kids from July to the following June, 1988–1993, at Caw Ridge, Alberta.

LOCATION OF MORTALITY SIGHTS \pm 100 m TREELINE



WOLVES



MOUNTAIN LION



GRIZZLY BEAR



**NANNIES DIDN'T PRODUCE KIDS
UNTIL 4-5 YEARS.
ONLY 50% OF YEARLING
FEMALES LIVE TO 4 YEARS.**



RESULTS from Gonzalez et al. 2003 (Wildlife Biology 9:3)

- Hunted herds generally recovered following hunting closure in 1988, however there was variation amongst herds.
- Control (unhunted) herds also showed variability in numbers during the monitoring period (1973 - 2001).

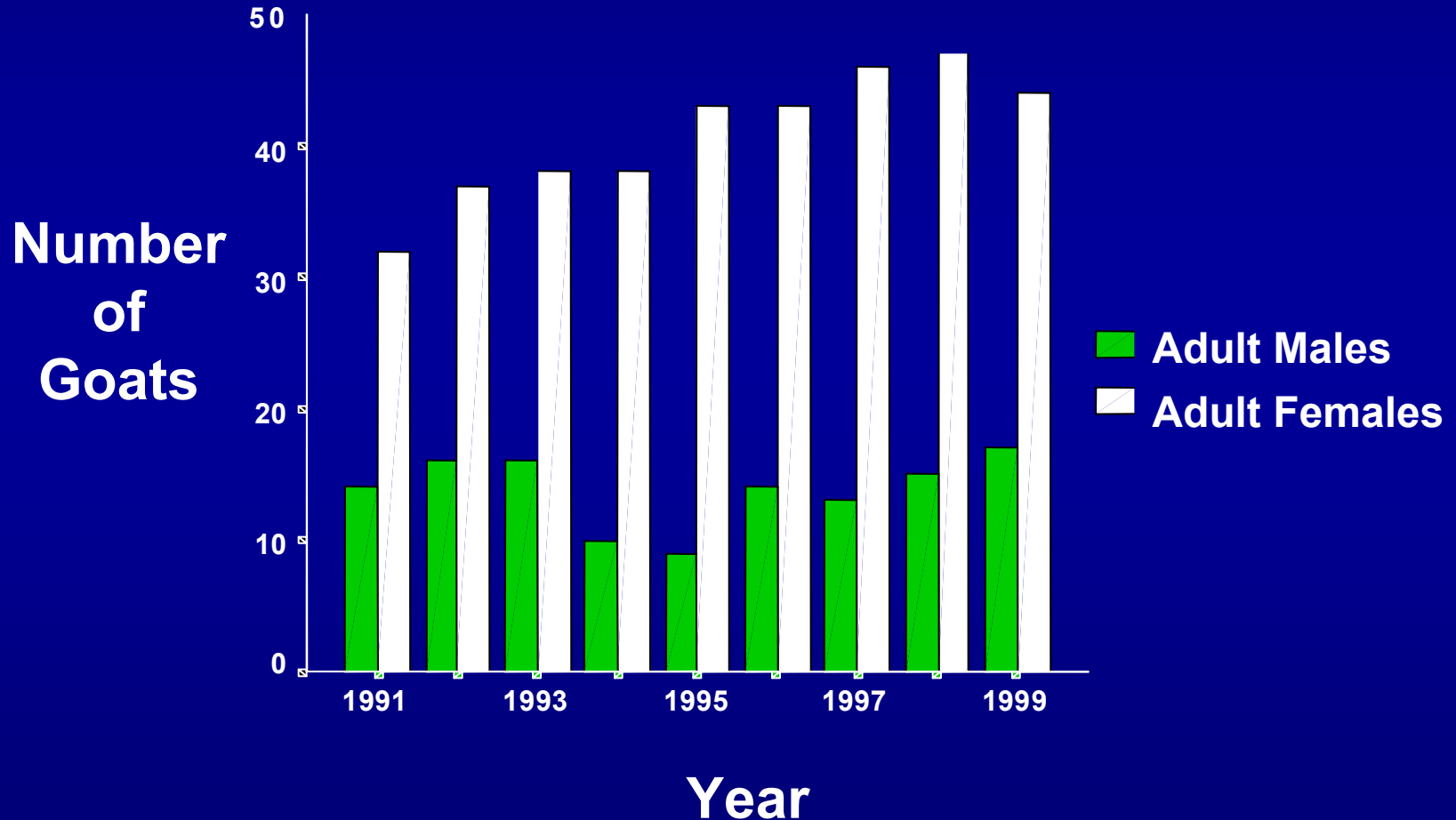
DISCUSSION

- It is unlikely that hunting was the only cause of the population decline in the 1980's, because not all of the herds increased after hunting was stopped.
- The wide variation in population trends among adjacent herds suggests that factors other than weather were responsible for changes in population size. (No synchronized dynamics).

PREDATION?



NUMBER OF ADULT MALES AND FEMALES (≥ 3 YEAR-OLD) IN SEPTEMBER AT CAW RIDGE



SUMMARY

- HUNTER HARVEST PROBABLY ADDITIVE MORTALITY
- FEMALE HARVEST TARGETS PRIME AGE PRODUCERS
- ADULT MALE COHORTS POORLY REPRESENTED IN INTENSIVELY STUDIED (UNHUNTED) HERD

MGMT. IMPLICATIONS

- Hunting had a negative effect on mountain goat herds; however, other factors were also involved.
- Management should be on a herd specific basis based on between herd variability.
- Harvests should be restricted to males as much as possible.
- Harvest rates should be very low.

Requirements before hunting resumes.

- The herd must have a population goal of at least 50 animals.
- There must be at least 10 years of survey data collected during years with no hunting.
- The herd must be at or above the population goal.
- The herd should have a male to female ratio above 1:3.
- Aerial survey required the year of the hunt.

Interest by Sportsmen

- **Hunting re-opened in 2002 in southern Alberta and 3921 hunters applied for 3 tags.**
- **In 2003, 3222 hunters applied for 7 tags.**

Transplants

- **Have been successful in increasing numbers of goats in southern Alberta, but average movements from release sites to centre of new home range (27.6 km) compromised the goal of re-establishing populations in desired target areas (Jorgenson and Quinlan 1996).**

Advantages for Developing a Mountain Goat Mgmt. Plan

- Provides a permanent record of all information.
- Provides direction to new staff including consistent survey methodology (allows provincial status to be easily updated).
- Depending on the level of sign-off within government, it can provide improved policy for conservation.



[Hhttp://www3.gov.ab.ca/srd/fw/hunting/pdf/managementPlans/MgmtPlanMountainGoat.pdf](http://www3.gov.ab.ca/srd/fw/hunting/pdf/managementPlans/MgmtPlanMountainGoat.pdf)