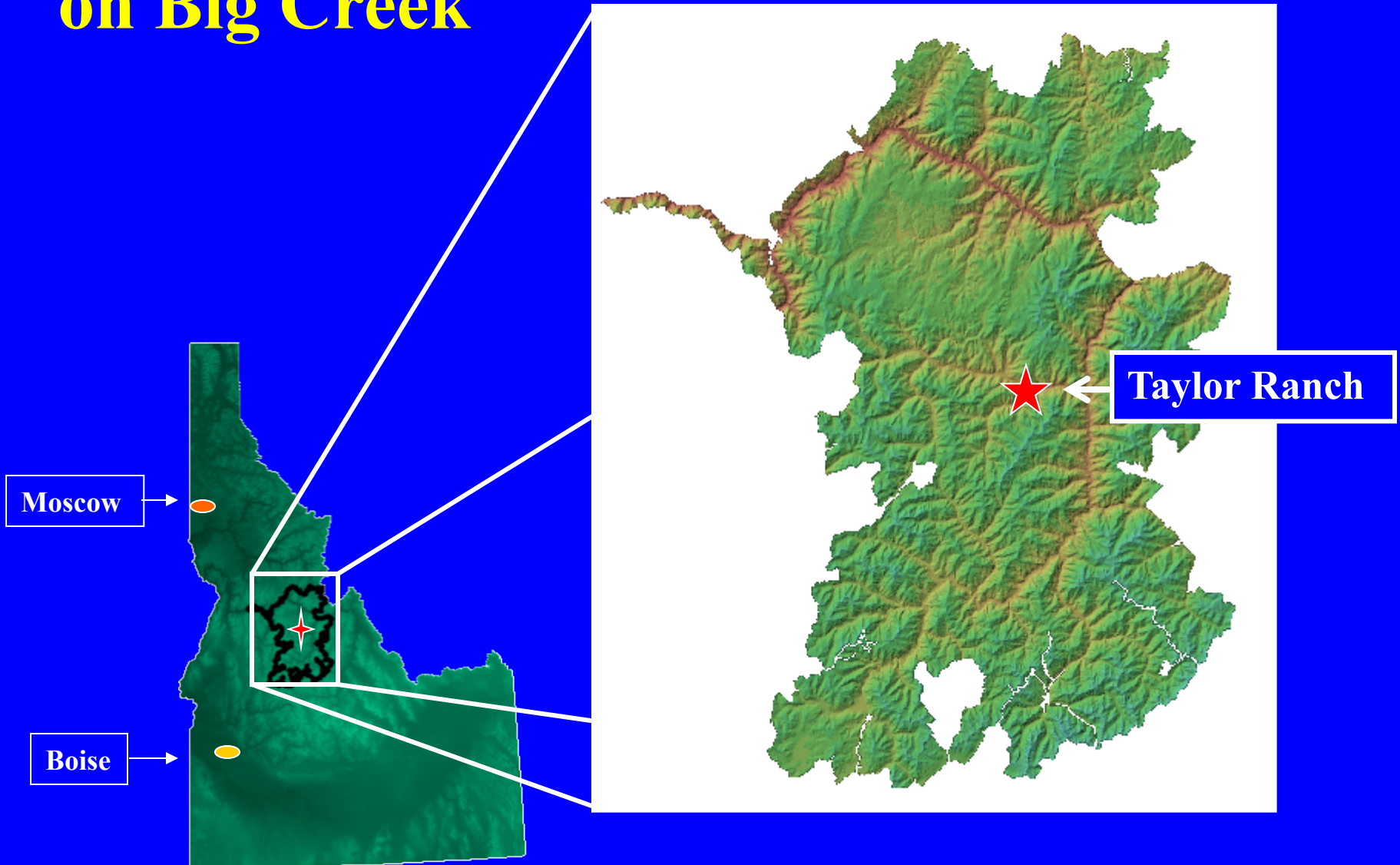


Big Creek Bighorn Sheep Status Report 2004



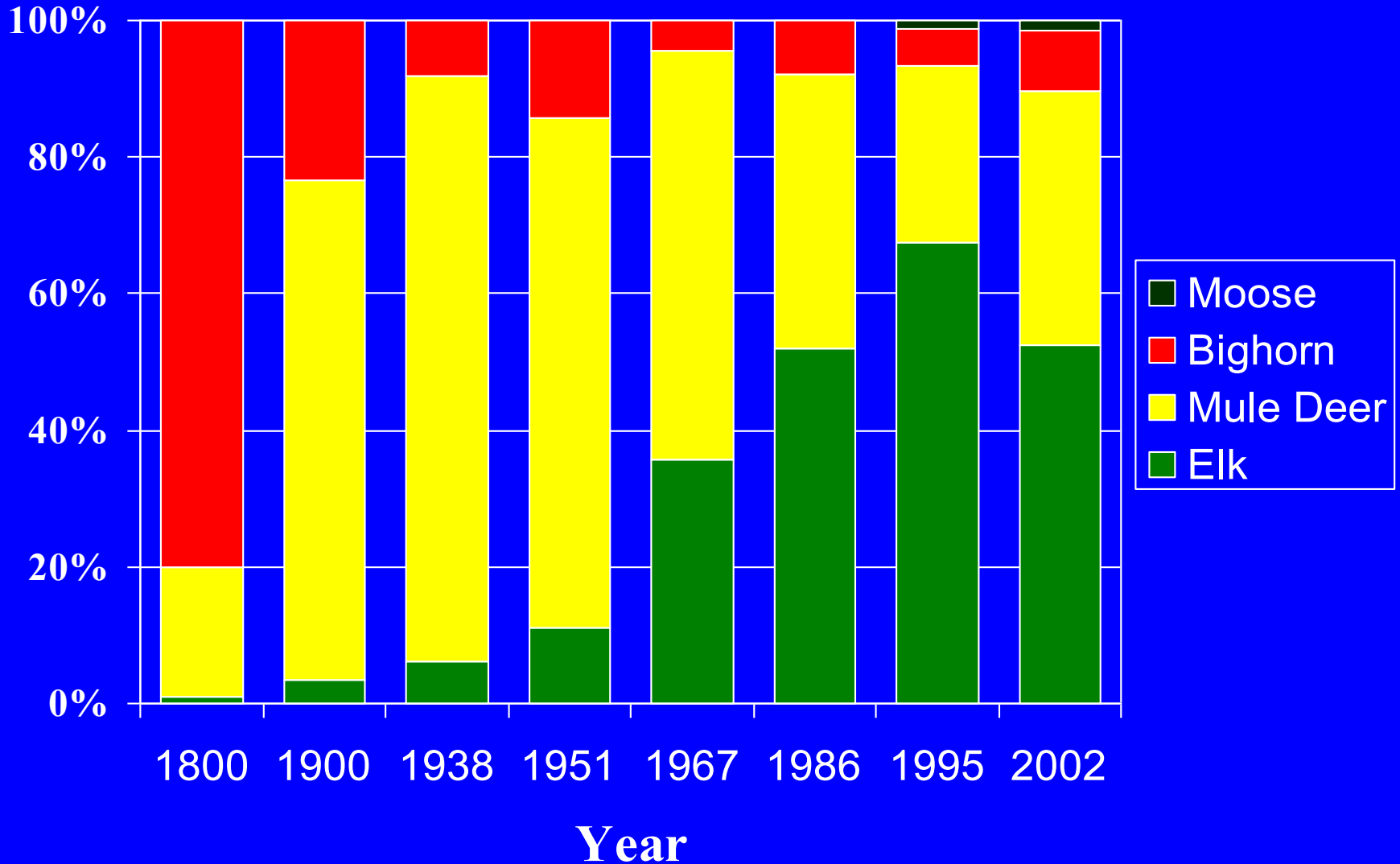
Taylor Ranch Field Station on Big Creek





Taylor Ranch Field Station

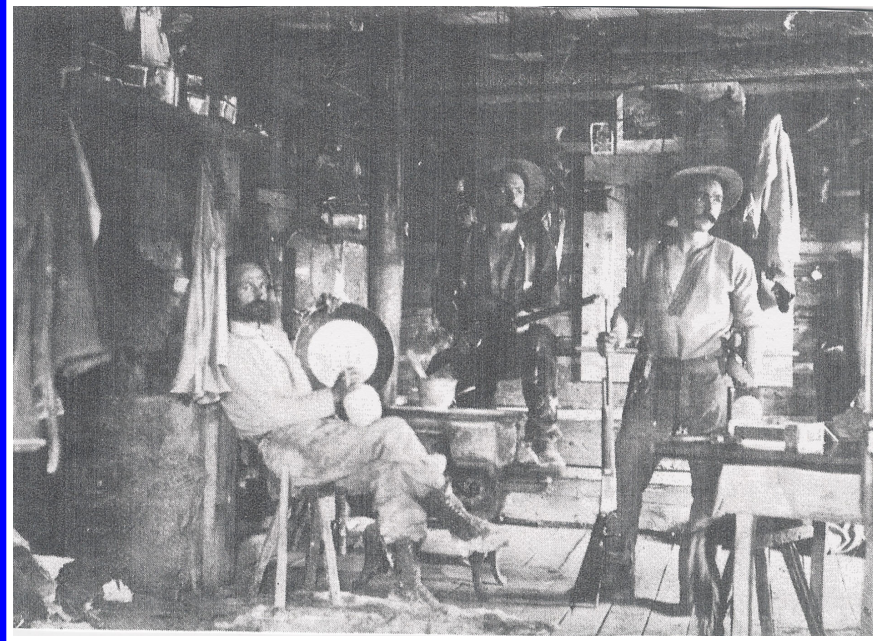
Historical Ungulate Abundance On Big Creek





Lou Caswell

Caswell Diary March 24, 1898



“Wes killed 2 sheep, dressed them and grained the hides and commenced him a pair of stirrups out of sheep horns.”

(The 3 brothers recorded killing 25 cougars, 5 bears, 2 coyotes, 1 bobcat, 1 wolf, and 175 ungulates in 5 years, including over 40 bighorns)

Bighorn Sheep on Big Creek

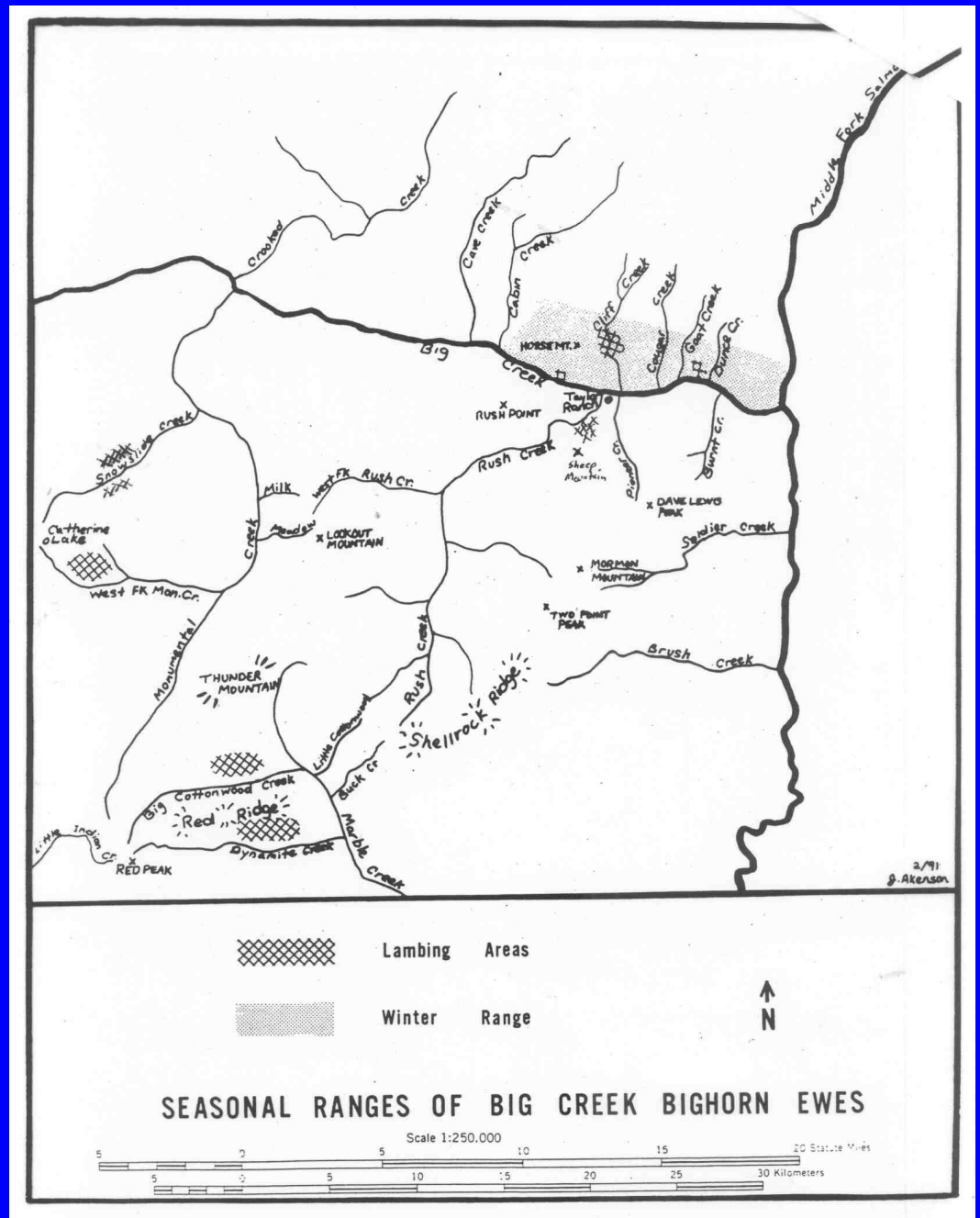
- **Research History**

- Smith (1954)
- Bennett (1976)
- Akenson (1986)
- Akensons (1990)
- Van der Grift (1993)
- Wagner (1996)
- Frey (2000)
- McDaniel (2001)



Big Creek Seasonal Ranges

Longest
Lambing
Migration in
Lower 48





Bighorn Production and Summer Lamb Survival

	Lamb Production	August 1 survival
Akensons (1990)	76:100	7:100
McDaniel (2001)	95:100	84:100

Effect of Cougar Predation on Ungulate Populations

Hornocker: Elk >> Deer > Bighorn = Mtn Goat

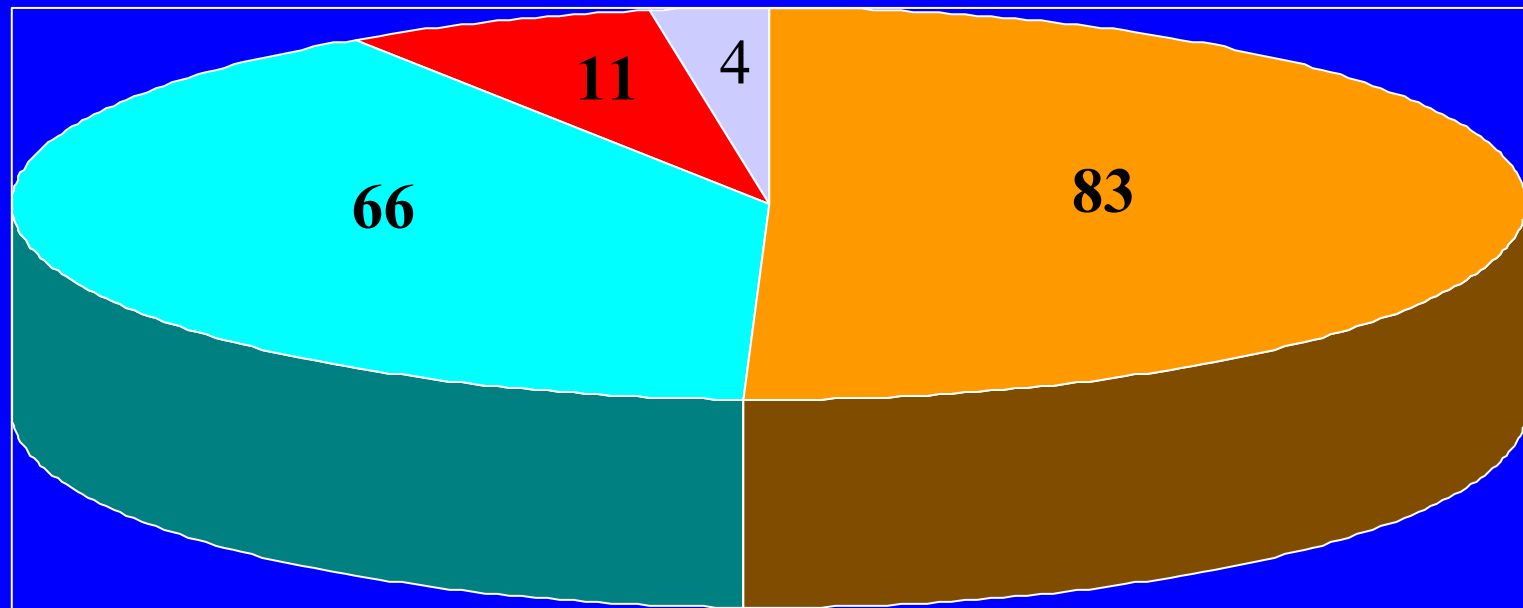
Seidensticker: Elk >> Deer

Quigley & Koehler: Elk = Deer

Akensons: Moose >> Elk = Deer > Bighorn

Species Composition of Ungulate Carcasses

7% of Mortalities were Bighorn Sheep



Elk Deer Bighorn Moose

Bighorn Sheep Winter Mortalities

Cause of Death

- Disease 5
- Cougar kill 4
- Unknown 4





Wolf Reintroduction, 1995



Big Creek Bighorns After The Diamond Point Fire of 2000



Why Conduct Ground Counts During the Bighorn Rut?

- Annual data set
- Timing: minimal sex bias during rut counts
- Low cost
- Collaboration among U of I, FNAWS, IDF&G
- Early warning for population problems
- Assess changes over winter by comparing to helicopter count









FNAWS Bighorn Sheep Counts

2001 crew: T. Heinrickson, D. Nachbar, J&H Akenson

2002 crew: C. Middleton, E. VanGrouw, Neil Paynter, J&H Akenson

2003 crew: T. Schommer, B. Burrows, D. Toweill, C. McDaniel, J&H Akenson

Year	Total	Ewes	Lambs	L:E Ratio	I Ram	II Ram	III Ram	IV Ram	Total Rams	R:E Ratio
2001	110	58	34	58:100	7	5	5	1	18	31:100
2002	98	41	23	56:100	9	15	9	1	34	83:100
2003	94	47	17	36:100	3	9	16	2	30	64:100

Comparison of Ground and Air Bighorn Composition Counts

	December Ground Counts		March Helicopter Counts	
Winter	Total Sheep	Lambs: 100 ewes	Total Sheep	Lambs: 100 Ewes
2001-2002	110	59:100	81	32:100
2003-2004	94	36:100	101	19:100



Comparison of Ground and Air Bighorn Ram Composition Counts

	December Ground Counts			March Helicopter Counts		
Winter	Total Rams	I-II	III-IV	Total Rams	I-II	III-IV
2001-2002	31 rams:100 ewes 18	12	6	30 rams:100 ewes 15	9	6
2003-2004	64 rams:100 ewes 30	12	18	44 rams:100 ewes 27	18	9



Comparison of December Ground Counts and March Helicopter Counts

- Similar numbers of bighorns were observed
- Composition ratios differed; lamb ratios were lower in spring
- December and March counts must be separate data sets, as they are not interchangeable





New Bighorn Mortality Factors ?







Sheep?...might be a nice change
from deer and elk.





Conclusions

POPULATION MONITORING:

- *Valuable to continue*

RESEARCH QUESTIONS:

- *Fire and Habitat*
- *Predation*
- *Disease*

