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ISSN

EAST KOOTENAY BIGHORN SHEEP ENHANCEMENT PROJECT

- COMPLETION REPORT -

A Habitat Conservation Fund project

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ABSTRACT

The Rocky Mountain Bighorn Sheep Enhancement Project was initiated in January 1982 to conduct prescribed burns on key winter ranges of bighorn sheep in the East Kootenay Sub-region of southeastern British Columbia. The population of Rocky Mountain bighorn sheep had declined from about 4000 in the 1920's to 2100 in 1981. Epizootic dieoffs at 18- to 24-year intervals had reduced the bighorn sheep population by 25 to 50% and full recovery of numbers had not occurred between epidemics. The 1981-1983 epizootic reduced the population of bighorns from 2100 to 1550 in 17 months. The scope of the project was broadened as a result of disease research done in 1982 and 1983 that indicated that the pneumonia epidemic may have occurred due to a compromised immune system response caused by high stress levels experienced in herds wintering adjacent to the southern Rocky Mountain Trench. Antiparasite and trace mineral treatments were initiated to prevent disease outbreaks from occurring in overpopulated herds on poor winter ranges and to promote recruitment of bighorn sheep in herds reduced through past epidemics. Harassment of bighorn sheep on winter ranges has been controlled through access management. Integrity of range has been maintained through the

referral system with the Ministry of Crown Lands, Lands Branch on private land, and the Ministry of Forests on Crown range. Translocations were used to reduce population densities on land in poor condition and increase population densities on herds reduced through epizootic dieoffs.

This report will include details of all herd and habitat enhancement activities but will not include details of habitat protection and habitat mapping activities. Types of habitat enhancement techniques are described and include prescribed fire, selective logging, slashing and spacing, seeding of forage, and fertilization of range. Habitat and herd monitoring activities are described. Condition and trend of key low elevation winter ranges were determined through paired macroplots. Effects of various enhancement techniques on floristic characteristics and productivity of vegetation are described. Health and herd monitoring research included fecal lungworm larval output, fecal and blood cortisol levels, blood and tissue trace mineral levels, population structure and herd recruitment levels. Transplant monitoring included radio-telemetry follow-up of radio-collared animals after visual observation of ear-tagged animals.

ACKNOWLEDGEMENTS

This project resulted from the efforts of many people. Although I cannot mention all those who contributed, I would like to mention some individuals and groups who deserve special credit.

First, I would like to thank R. Silver, and R. Demarchi who recognized the need for habitat enhancement work on bighorn sheep and pursued that dream through establishment of the Habitat Conservation Fund (HCF). The Habitat Conservation Fund Board has faithfully supported the Rocky Mountain Bighorn Sheep Recovery Project for 8 years under the guidance of R. Silver, R. Hunter and M. Wayne. I give special mention to L. Gansner, the local HCF representative who tirelessly defended this project and became a personal mentor.

This project was supported by several hundred people who donated time, energy, equipment and money to disease research, treatment, live capture and translocation of bighorn sheep. Several clubs deserve special mention because of continuous support: the East Kootenay Hunter's Association, the Canal Flats Wilderness Club, the Invermere Wilderness Club, and the Fernie Rod and Gun Club. Several individuals deserve special recognition for the tremendous effort expended in making the treatment, translocation, and radio-telemetry projects a success. First, D. and J. White and family have always made extensive personal sacrifices in time and energy. Guide outfitters including H. Fercho, F. Maurer, D. Anderson, K. Schmieder, Sr., K. Schmieder, Jr., and A. Cooper

never missed an opportunity to trap and treat bighorn sheep. H. Kugler, M. Winger, A. and M. O'Grady spent many weeks each year baiting bighorn sheep using their own vehicles.

The Lakit Mountain Bighorn Sheep Project was initiated between the East Kootenay Hunter's Association and the Ministry of Environment to translocate, treat and follow-up radio-collared sheep moved to the Lower Wildhorse area. Radio-telemetry follow-up of collared animals was done by S. Davis, G. Johnson, D. and J. White and family, G. Ward, and A. and B. Burlingham.

Countless hours of unpaid overtime were endured by summer students hired as assistants to this project. Special mention must be made to L. Ingham who persisted through four summer seasons, and many undesirable job requests such as carcass collection, slashing of several mountain sides in 34 C heat, and range condition and trend research under searing conditions. Summer Coop students including P. Food, K. Mackenzie, and Z. Murdoch spent many hours following radio-collared bighorn sheep and assisting in range research.

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