

# Twelfth Biennial Symposium Northern Wild Sheep and Goat Council

## Table of Contents

### Habitat

- Page 1 Identification of Bighorn Sheep Migration Corridors Using GPS Telemetry Systems  
S.L. Lemke and D.N. Jury
- Page 11 Effects of Prescribed Grassland Burns on Forage Availability, Quality and Bighorn Sheep Use  
K.E. Ruckstuhl, M. Festa-Bianchet and J.T. Jorgenson
- Page 26 The Use of Video for Mountain Goat Winter Range Habitat Inventory and Assessment of Overt Helicopter Disturbance  
S.M. Gordon and D.M. Reynolds
- Page 38 An Evaluation of a GIS-Based Habitat Model for Bighorn Sheep Winter Range in Glacier National Park, Montana (*abstract*)  
G.H. Dicus
- Page 39 GPS Wildlife Collars: Bias from Topographical and Coastal Forest Canopy Constraints (*abstract*)  
S. Taylor

### Health

- Page 40 Pneumonia as a Cause of Mortality in Two Dall's Sheep in the Mackenzie Mountains, Northwest Territories, Canada  
E. Jenkins, S. Kutz, A. Veitch, B. Elkin, M. Chirino-Trejo and L. Polley
- Page 54 Blood Chemistry and Trace Mineral Reference Values for California Bighorn Sheep in Oregon  
D.G. Whittaker, J.C. Lemos and T.R. Clark
- Page 68 Rocky Mountain Bighorn Sheep Transplants in Hells Canyon  
V.L. Coggins, E.F. Cassirer, P. Matthews and M. Hansen
- Page 75 An Unusual Contagious Ecthyma Outbreak in Rocky Mountain Bighorn Sheep  
D.S. Merwin and G.C. Brundige
- Page 83 New Host and Geographic Records for *Protostongylus stilesi* and *Parelaphostrongylus odocoilei* in Dall's Sheep from the Mackenzie Mountains, Northwest Territories, Canada (*abstract*)  
S. Kutz, A. Veitch, E. Hoberg, B. Elkin, E. Jenkins and L. Polley

- Page 84 Preliminary Evaluation of Trace Element Levels and Pathogen Exposure in Hells Canyon Bighorn Sheep (*abstract*)  
E.F. Cassirer, M. Drew, V.L. Coggins and P. Fowler
- Page 85 What Microsatellites Can Tell Us About Disease Resistance in Free-Living Sheep Populations: The Genetics of Resistance to Nematodes in Naturally Parasitised Soay Sheep From St. Kilda, Scotland (*abstract*)  
D. Coltman
- Page 86 Designing a protocol: What should you do if you are faced with a bighorn sheep die-off?  
G. Erickson

### **Climate Change**

- Page 88 Cohort Variation in Horn Growth of Dall Sheep Rams in the Southwest Yukon, 1969-1999  
D.S. Hik and J. Carey
- Page 101 Parasite Biodiversity, Development, and Transmission: An Integrative Model for Monitoring Climate Change at Northern Latitudes (*abstract*)  
S. Kutz, E. Hoberg, L. Polley

### **Biology and Management**

- Page 102 Hunter Satisfaction with Trophy Dall Sheep Management in the Tok Management Area, Alaska  
R. Sutherland, C. Gardner and L. Zaczkowski
- Page 114 Mountain Goat Inventory in the Robson Valley, British Columbia  
K.G. Poole, D.C. Heard and G.S. Watts
- Page 125 Population Dynamics of Bighorn Sheep in Hells Canyon (*abstract*)  
E.F. Cassirer, V.L. Coggins and P. Fowler
- Page 126 Dynamics of Hunted and Unhunted Mountain Goat Populations (*abstract*)  
A. Gonzalez-Voyer, K.G. Smith and M. Festa-Bianchet
- Page 127 Dall's Sheep (*Ovis dalli dalli*) Sexual Segregation: Environmental Factors and Spatial Implications (*abstract*)  
P. Corti
- Page 128 The Foundation for North American Wild Sheep – A Sheep Biologist's View from the Inside  
W.E. Heimer

## **Disturbance**

- Page 138     **Working Session**  
                  Dealing with Unprecedented Levels of Aircraft Supported Commercial  
                  Activities  
                  J. Denton
- Page 153     Fleeing Decisions by Dall’s Sheep Exposed to Helicopter Overflights  
                  A. Frid
- Page 170     Behavioral Responses by Dall’s Sheep to Overflights by Fixed-Wing Aircraft  
                  A. Frid
- Page 186     **List of Attendees**