

**BEHAVIORAL PATTERNS OF BARREN-GROUND
CARIBOU OF THE CENTRAL ARCTIC HERD
ADJACENT TO THE TRANS-ALASKA OIL PIPELINE**

by
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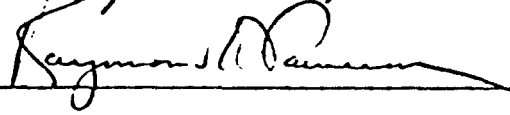
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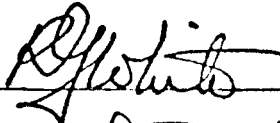
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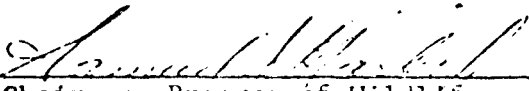









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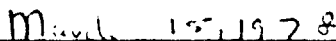


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Date

BEHAVIORAL PATTERNS OF BARREN-GROUND CARIBOU
OF THE CENTRAL ARCTIC HERD ADJACENT TO
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A
THESIS

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the University of Alaska in Partial Fulfillment
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by

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Fairbanks, Alaska

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ABSTRACT

Concern over impact of the pipeline and haul road on normal caribou behavioral patterns prompted study of environmental factors affecting herd activity. Seasonal and sexual differences were found in activity budgets and cycles. In winter, the period of the rest and activity cycle is approximately twice that for summer. In summer, the cycle period for cow groups is longer than for bull groups; the winter cycle is not sex dependent. Circadian activity patterns are synchronized with dawn and dusk. Northward spring movements of parturient cows and their avoidance of riparian habitats are attributed to wolf predation pressure. Caribou harassment by parasitic insects results in distinct behavioral and movement responses. Winter snow characteristics are primarily responsible for caribou distribution and movements. Pipeline construction resulted in little apparent disruption of behavioral patterns of bulls; however, its influence was most evident on distribution and activity of cow-calf groups between calving and rut.

ACKNOWLEDGEMENTS

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The ideas of many others exchanged through conversation have, as always, shaped the interpretation of the results of this study. Among those most influential were Ken Whitten, Ray Cameron, Jim Curatolo, Jack Shea, Marilyn Sigman, Jim Davis, Dave Klein, and Bob White. I am indebted to Gary Milke and Rudy Berus for their assistance to me in the field. Rob Ingham, Larry Hunt, Ivan Frohne, and Karl Haflinger were all very helpful in solving the problems of data analysis. Laura McManus patiently and skillfully typed the many drafts. I am grateful to the members of my committee Dave Klein, Ray Cameron, Bob White and Phil Gipson for much editing and input to the final draft. I would especially like to thank Ray Cameron for encouragement, assistance and support during all phases of the study.

TABLE OF CONTENTS

Abstract.	iii
Acknowledgements.	iv
Table of Contents	v
List of Figures	vi
List of Tables.	viii
INTRODUCTION.	1
Background	1
Objectives	10
STUDY AREA.	11
Description of study area.	11
History of caribou movements in the study area	16
METHODS	20
RESULTS AND DISCUSSION.	29
The annual cycle	29
Circadian rhythms.	46
Forage, snow, and habitat selection.	59
Weather.	77
Predation.	94
Insects.	103
Group structure and social environment	117
The pipeline and haul road	134
SYNOPSIS AND CONCLUSIONS.	154
LITERATURE CITED.	161
Appendix A (seasonal activity budget)	171
Appendix B (sexual differences in seasonal activity budgets).	172
Appendix C (description of vegetation types).	173
Appendix D (forage species list).	176
Appendix E (description of winter feeding areas).	189
Appendix F (wolf kills near the haul road).	193
Appendix G (elevated pipe crossings/deflections).	196

LIST OF FIGURES

Figure 1.	Map of the study area showing the route of the Trans-Alaska Pipeline, haul road, and physiographic regions.	12
Figure 2.	Annual cycles of the Central Arctic herd and Newfoundland caribou	34
Figure 3.	Seasonal allocation of time to various activities for CAH caribou.	36
Figure 4.	Seasonal allocation of time to various activities by bull-dominated and cow-dominated caribou groups (May-September).	39
Figure 5.	Seasonal allocation of time to various activities by bull-dominated and cow-dominated caribou groups (October-April).	40
Figure 6.	Seasonal variation in mean group size and average individual distance of caribou in the Central Arctic herd.	42
Figure 7.	Seasonal variation in the mean rate of group movement for the Central Arctic caribou herd	43
Figure 8.	Comparison of the circadian incidence of lying in groups of caribou between summer and winter seasons.	47
Figure 9.	Comparison of the diel pattern of lying during winter between bull and cow groups of caribou (November 9 - May 5)	49
Figure 10.	Comparison of the diel pattern of feeding during winter between bull and cow groups of caribou (November 9 - May 5)	50
Figure 11.	Comparison of the diel pattern of lying during summer between caribou groups with calves and groups without calves (May 14 - September 28).	51
Figure 12.	Comparison of the diel pattern of feeding during summer between caribou groups with calves and groups without calves (May 14 - September 28).	52

List of Figures, Continued.

- Figure 13. Incidence of feeding, lying, and walking activities in relation to sunrise during winter (November 11 - April 28) in the Central Arctic caribou herd 56
- Figure 14. Incidence of feeding, lying, and walking in relation to sunset during winter (November 11 - April 28) in the Central Arctic caribou herd 58
- Figure 15. Seasonal occupancy of habitats by the Central Arctic caribou herd. 67
- Figure 16. Locations of snow sampling stations along the arctic slope section of the Trans-Alaska Pipeline haul road. 72
- Figure 17. Incidence of feeding and lying in caribou groups as a function of temperature in winter 80
- Figure 18. Incidence of feeding and lying in caribou groups as a function of windchill during winter 83
- Figure 19. Mean rate of caribou group movement and average individual distance at different windchill values during winter. 84
- Figure 20. Seasonal direction of caribou group movements. 89
- Figure 21. Seasonal direction of caribou group movements. 90
- Figure 22. Comparison of the summer diel pattern of lying between caribou groups less than 400 m and groups greater than 400 m from the pipeline haul road141
- Figure 23. Mean level of alarm reaction in groups of caribou as a function of distance from the pipeline haul road143
- Figure 24. Mean individual distance in caribou groups at different distances from the pipeline haul road. . . .146

LIST OF TABLES

Table 1.	Seasonal distribution of caribou activity counts observed from February 1975 to August 1976 on the range of the Central Arctic herd	30
Table 2.	Seasonal description of caribou group composition and environmental conditions during the collection of activity data from the Central Arctic herd	31
Table 3.	Seasonal and sexual differences in caribou habitat selection.	68
Table 4.	Snow depth (D) and resistance (R) at snow stations along haul road during winter 1975-76.	71
Table 5.	Caribou activity at different snow cover values.	76
Table 6.	Correlations between weather variables and caribou behavioral variables	78
Table 7.	Direction of caribou group movement in relation to wind direction (no insects)	86
Table 8.	Direction of caribou group movement in relation to wind direction (insect season).	87
Table 9.	Weather conditions during various levels of mosquito and oestrid fly activity.	106
Table 10.	Correlations between insect harassment/snow cover conditions and caribou behavioral variables.	107
Table 11.	Caribou activities at various levels of mosquito and oestrid fly harassment	109
Table 12.	Correlations between group composition variables and caribou behavioral variables	118
Table 13.	Caribou activity in groups of different sizes during winter.	120
Table 14.	Caribou activity in groups of different sizes during summer.	122
Table 15.	Relationship of group composition to caribou behavior (means)	128

List of Tables, Continued

Table 16.	Correlations between caribou activity and behavioral variables130
Table 17.	Correlations between pipeline haul road disturbance variables and caribou behavioral variables.135
Table 18.	Seasonal mean caribou activity percentages in relation to distances from the pipeline haul road. . .	.138
Table 19.	t test comparison of mean caribou activity percentage between groups greater than 300 m from the haul road and groups at closer distances139
Table 20.	Caribou behavior and activity following different levels of avoidance reaction to the pipeline haul road144

"'Well,' I added, as the duck paddled along slowly, displaying its intricately patterned feathers, 'that's just the way I feel right now, as though the universe were too frighteningly queer to be understood by minds like ours. It's not a popular view. One is supposed to flourish Ockham's razor and reduce hypotheses about a complex world to human proportions. Certainly I try. Mostly I come out feeling that whatever else the universe may be, it's so-called simplicity is a trick, perhaps like that bird out there. I know we have learned a lot, but the scope is too vast for us. Every now and then if we look behind us, everything has changed. It isn't precisely that nature tricks us. We trick ourselves with our own ingenuity. I don't believe in simplicity.'"

- Loren Eiseley, All the Strange Hours