

**Alaska Department of Fish and Game
Division of Wildlife Conservation
2007**

Evaluation and testing of techniques for ungulate management

Thomas Lohuis

**Research Annual Performance Report
1-July 2006-30 June 2007
Federal Aid in Wildlife Restoration
W-33-5
Project 1.63**

This is a progress report on continuing research. Information may be refined at a later date

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**FEDERAL AID
ANNUAL RESEARCH PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF WILDLIFE CONSERVATION
PO Box 115526
Juneau, AK 99811-5526

PROJECT TITLE:Evaluation and testing of techniques for ungulate management

PRINCIPAL INVESTIGATOR: Tom Lohuis

COOPERATORS:Dr. Kimberlee Beckmen, ADF&G; Kenai National Wildlife Refuge, USFWS

FEDERAL AID GRANT PROGRAM:Wildlife Restoration

GRANT AND SEGMENT NR.: W-33-5

PROJECT NR.:1.63

WORK LOCATION: Moose Research Center (MRC), Soldotna

STATE: Alaska

PERIOD:July 1, 2006 – June 30, 2007

I. PROGRESS ON PROJECT OBJECTIVES SINCE PROJECT INCEPTION

OBJECTIVE 1. MRC Maintenance and Operations.

The MRC housed 25 moose and 4-9 caribou during the FY06. In FY07, the MRC housed 22-25 moose and 0-4 caribou, which were fed and cared for daily during the past reporting period. Four adult moose died and two calves were born. Various maintenance projects, including erecting 0.5 mile of new fence, upgrading the station electrical system, and assisting a Kenai National Wildlife Refuge work crew with the construction of a new 20' x 60' shop building were completed during this time. Brush and undergrowth were removed from approximately 2000 feet of fence.

OBJECTIVE 2. Drug Testing.

Medetomidine/ Ketamine, a combination of immobilizing drugs not previously tested in Alaskan moose, was tested in one male moose in FY06. In FY07 we evaluated the efficacy of an untested combination of Butorphenol, Azaperone, and Medetomidine for immobilizing moose.

OBJECTIVE 3. Moose nutrition, physiology, and reproductive studies.

We are evaluating moose physiology and their response to a TASER device as a nonlethal deterrent along with standard immobilization drugs.

OBJECTIVE 4. Caribou nutrition, physiology, and reproductive studies.

Two male and two female caribou were euthanized and processed for body composition measurements during FY07.

OBJECTIVE 5. Preparation of reports and technical publications.

Annual progress reports were completed for this project during the current reporting period. In addition, IACUC documents were prepared and submitted for the work described under 'drug testing', Job 2; and 'Moose nutrition, physiology, and reproductive studies', Job 3.

II. SUMMARY OF WORK COMPLETED ON JOBS IDENTIFIED IN ANNUAL PLAN THIS PERIOD

JOB/ACTIVITY 1. MRC Maintenance and Operations.

The MRC housed 22-25 moose and 0-4 caribou, which were fed and cared for daily during the past reporting period. Four adult moose died during FY07; one bull on approximately 10/15/2006, as a result of injuries sustained during rut; one cow on approximately 4/8/07, as a result of old age; one cow on approximately 5/1/07, as a result of being immobilized with a experimental combination of immobilizing drugs; and one cow on approximately 11/15/2006 as a result of feed overload. Two calves born on May 25 and June 1, 2007 have survived to date, and we anticipate that these animals will become part of the captive herd.

JOB/ACTIVITY 2. Drug Testing.

In collaboration with Dr. Kimberlee Beckmen, the ADF&G wildlife veterinarian, we evaluated the efficacy of a combination of Butorphenol, Azaperone, and Medetomidine for immobilizing moose. This combination of drugs has not been previously tested in Alaskan moose. Two adult male and one adult female moose were immobilized with this combination on February 1, 2007; one adult bull was immobilized on February 8, 2007; and two adult female and two adult male moose were immobilized between April 22 and April 24, 2007. During immobilizations, we recorded time and depth of immobilization, respiratory and heart rates, blood oxygen saturation, and collected blood samples for blood chemistry assessment. Data is currently being analyzed for this project.

JOB/ACTIVITY 3. Moose nutrition, physiology, and reproductive studies.

Between April 22 and 24, 2007, we evaluated the effect of the TASER device as a nonlethal deterrent in two adult male and two adult female moose. Animals were first immobilized with a standard dose of carfentanil/xylazine, and control values for time and depth of immobilization, respiratory and heart rates, blood oxygen saturation, and collected blood samples for blood chemistry assessment were recorded and collected. Next, the TASER device was applied, and the animals immobilized again. The same data was collected after application to determine if the TASER device had any additional deleterious physiological effect over and above that of a standard chemical immobilization. This data is currently being analyzed.

JOB/ACTIVITY 4. Caribou nutrition, physiology, and reproductive studies.

Two male and two female caribou were euthanized and processed for body composition measurements during FY07. Animals were processed on September 6, 2006; September

28, 2006; and on June 22, 2007. There are no longer caribou housed at the MRC, so this objective will be inactive in future reporting periods.

JOB/ACTIVITY 5. Preparation of reports and technical publications.

Annual progress reports were completed for this project during the current reporting period. In addition, IACUC documents were prepared and submitted for the work described under 'drug testing', Job 2; and 'Moose nutrition, physiology, and reproductive studies', Job 3.

III. ADDITIONAL FEDERAL AID-FUNDED WORK NOT DESCRIBED ABOVE THAT WAS ACCOMPLISHED ON THIS PROJECT DURING THIS SEGMENT PERIOD

None.

IV. PUBLICATIONS

None.

V. RECOMMENDATIONS FOR THIS PROJECT

None.

VI. APPENDIX

None.

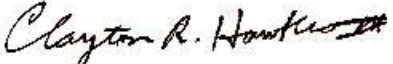
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APPROVAL DATE: _____