

FEDERAL AID ANNUAL RESEARCH PERFORMANCE REPORT

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

Alaska Department of Fish and Game State Wildlife Grant

Grant Number: W-33 **Segment Number:** 10

Project Number: 2.14

Project Title: Survivorship of Sitka black-tailed deer fawns in Southeast Alaska

Project Duration: July 1, 2008–June 30, 2014

Report Period: July 1, 2011–June 30, 2012

Report Due to HQ: September 1, 2012

PRINCIPAL INVESTIGATOR: Dave Person

COOPERATORS: Kris Hundertmark and Sophie Gilbert (University of Alaska Fairbanks)

WORK LOCATION: Ketchikan, Alaska.

I. PROGRESS ON PROJECT OBJECTIVES DURING LAST SEGMENT

Objective 1: Evaluate fawn mortality as a result of malnutrition.

Accomplishments: Graduate student, Sophie Gilbert, completed her Ph D dissertation proposal and passed her Ph D comprehensive examinations. We captured 21 preparturient adult and yearling female deer during April-May 2010 and captured 22 preparturient adult and yearling female deer during April-May 2011. We radiotracked 45 fawns during May and June 2010. We followed 54 neonate fawns during May 27–June 30, 2011.

Objective 2: Evaluate habitat selection

Accomplishments: We recovered 12 GPS radiocollars during April–May 2011 that released from adult female deer captured during April–May 2010. We obtained >40,000 GPS locations for those deer.

Objective 3: Evaluate black bear predation on fawns is positively related to levels of bear activity or is spatially correlated with habitat composition and distribution.

Accomplishments: We measured habitat and landscape variables associated with birth sites of 21 fawns located using VITs were evaluated, and locations of death for 26 fawns killed by bears. We did transects using a trained dog to locate scats and tracks of wolves and bears at each site to determine relative predator activity.

Objective 4: Evaluate whether bear predation is partly compensatory and additive.

Accomplishments: We will begin the data analysis in future years.

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

Job/activity 1a: Capturing and radiocollaring adult does and neonate fawns and training and purchasing equipment

Accomplishments: Graduate student, Sophie Gilbert, passed her Ph D comprehensive examinations during November 2011. We purchased 20 new GPS radiocollars for adult deer and 30 GPS collars (ATS, Isanti, MN) for fawns. We also purchased 20 new vaginal implant transmitters (ATS, Isanti, MN) for adult does.

We captured 22 preparturient adult and yearling female deer during April-May 2012. One of those was a recapture of a deer collared in May 2011. All deer were captured by free-range darting using telemetered darts filled with a combination of ketamine and medetomidine. Nineteen does were fitted with vaginal implant transmitters (VIT) and we placed GPS radio collars on all does. No does died during capture and handling. We assessed body condition of all does using ultrasound measurements of rump fat and loin muscle. body condition of does will be compared with survival of their fawns. Seventeen VIT-fitted does gave birth before June 30 and 2 did not. We radiocollared fawns from 14 of those does using VITs to locate birth sites. We also captured neonate fawns opportunistically along roads. Using both methods, we radiocollared 54 neonate fawns during May 27–June 30. All fawns were weighed and measured for growth indicating body size and condition.

Job/activity 2a: Monitor and tracking does and fawns.

Accomplishments: We recovered 10 GPS radiocollars during April 2012 that released from adult female deer captured during April–May 2011. We obtained a total >40,000 GPS locations for those deer. Nine other does captured in 2011 will drop their collars during July 2012. Adult and yearling does captured and radiocollared during April–May 2011 were monitored through the end of the reporting period. We will continue tracking them during the next reporting period and their GPS collars are programmed to release in July, 2012. During July 2011–June 2012, 3 radiocollared adults died. One was killed by a hunter during the hunting season, a second doe was shot out of season, and a third died from causes related to malnutrition during late winter. Data from the adult does will be analyzed during winter 2012–2013.

Of 55 fawns radiocollared during the previous reporting period (May and June 2011) only 6 fawns (11%) survived until May 2012. Unlike the previous year, almost 30% of fawns died from malnutrition during the snowy winter of 2011-2012. Most mortalities (44%) were from predation by bears. Wolves and eagles also killed several fawns during the reporting period and one fawn was killed by an automobile.

Job/activity 3a: Vegetation sampling and estimating deer and bear activity.

Accomplishments: We downloaded temperature data from all (>40) snow stakes fitted with temperature sensors, replaced batteries and repaired any damage to the data loggers or stakes.

Job/activity 4a: Data analyses.

Accomplishments: No progress on this activity to report, except submitting this annual performance report.

IV. PUBLICATIONS

We are preparing a publication describing the use of VITs in Sitka black-tailed deer in temperate rainforest.

V. RECOMMENDATIONS FOR THIS PROJECT

With the exception of monitoring collared deer until summer 2013 and recovering all GPS collars that release during spring 2013, the field portion of this study is completed. There will be no new captures in 2013 and project personnel will focus on data analyses, and report and manuscript preparation.

Prepared by: David K. Person Ph. D.

Date: 9/01/2012