

**Alaska Department of Fish and Game  
State Wildlife Grant**

**Grant Number:** W-33 **Segment Number:** 11

**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 Date:** September 1, 2013

**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.

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, captured 22 preparturient adult and yearling female deer during April-May 2011, and another 21 preparturient adult and yearling female deer during April-May 2012. We radiotracked 45 fawns during May and June 2010, 54 neonate fawns during May–June 2011, and another 50 neonate fawns during May–June 2012.

**Objective 2:** Evaluate habitat selection

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. We captured 21 adult female deer and fitted with GPS collars in 2012.

**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.

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.

We will begin the data analysis next 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.

This project concluded field data collection in 2012-2013, and met or exceeded all data collection goals.

Capture of live animals was successful, resulting in 21 adult female deer captured and fitted with GPS collars and no capture mortality. Of these adult females, 18 were fitted with vaginal implant transmitters (VITs), allowing us to capture fawns at birth. Fifty fawns were captured from VITs and opportunistic captures combined, resulting in no capture-related mortality.

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

We tracked 21 adult females and 50 fawns.

Adult female mortality was low. We observed one mortality resulting from legal human harvest during the annual doe season. Female survival was estimated at 0.96.

Fawn mortality was lower than during the previous year, due largely to a very mild winter with low snow levels. Most fawn mortality occurred during the first 2 months of life, when bear predation is at its peak. Of the total of 21 mortalities, 19 mortalities resulted from bear predation, 1 from drowning, 1 from human predation, and 1 from unknown causes. Based on a Kaplan-Meier estimate of survival, annual survival was 0.52.

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

The project continued its successful monitoring of snow levels during winter months using automated temperature sensors deployed throughout the study area. We downloaded temperature data from all (>40) snow stakes fitted with temperature sensors.

**Job/activity 4a:** Data analyses.

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

**IV. SIGNIFICANT DEVIATIONS AND/OR ADDITIONAL FEDERAL AID-FUNDED WORK NOT DESCRIBED ABOVE THAT WAS ACCOMPLISHED ON THIS PROJECT DURING THIS SEGMENT PERIOD**

None.

**V. PUBLICATIONS**

None.

**VI. RECOMMENDATIONS FOR THIS PROJECT**

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 and Sophie Gilbert

**Date:** 9/01/2013