

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:** 11
Project Number: 2.15
Project Title: Movement patterns, home range, and habitat use by Sitka black-tailed deer in Southeast Alaska
Project Duration: July 1, 2008–June 30, 2014
Report Due Date: September 1, 2013
Principal Investigators: Karin McCoy, Phillip Mooney, David Person
Work Location: Chichagof Island, Southeast Alaska.

I. PROGRESS ON PROJECT OBJECTIVES DURING LAST SEGMENT

Objective 1: Use GPS collars to collect fine-scale deer movement data.

Job/activity 1a: Order collars, purchase animal capture equipment, program collars, review literature, develop a work plan, organize and mobilize personnel.

In 2008: 30 GPS collars were ordered, received, and programmed. Capture equipment was purchased. The literature was reviewed and a work plan developed. A capture permit was received. Personnel began ground captures for the first time in August 2008.

In June 2011, 7 new collars were received from the manufacturer: 4 had failed and were replaced by the company at no cost, 3 were refurbished after hunter or winter kills. Existing collars were maintained and programmed for summer 2012 deployment. A minimal amount of capture drugs and field paraphernalia was purchased for capture operations. Capture and collar recovery operations were planned.

Job/activity 1b: Conduct ground and aerial based activities instrumental in the collaring of Sitka black-tailed deer and the retrieval of released collars.

Thirty-five deer were radiocollared by multiple ground-capture sessions (16 deer) and aerial net gunning (24 deer) from July 2008-August 2012 (Table 1). The length of each capture session varied depending on personnel availability. During fall 2010, we tried aerial net gunning due to the lower than expected success with ground captures.

Thirty radiocollars have been retrieved, one collar is still on the ground, and 4 radiocollars have failed (Table 1). Of the retrieved radiocollars, 3 deer were killed by

hunters, 3 deer died from natural causes, 14 radiocollars were retrieved during August 2011, 7 radiocollars were retrieved during August 2012, and 3 collars were retrieved in 2013. One radiocollar is still on the ground in the field and one radiocollar is still on a deer (one CR2 failure from 2012).

Job/activity 1c: Monitor snow depths through nearby weather stations and by ground checks of snow conditions.

Monthly snowfall was recorded for each month of each winter from nearby existing NOAA weather stations.

Job/activity 1d: Identify deer home range characteristics and investigate differences in home range size.

Collars were recovered in August of 2012 and their data was joined with the 2011 collar data. Analyses of these data has begun, but has not been completed. The data from collars currently in the field will be joined with these data after recovery in August 2013.

Job/activity 1e: Identify differences in deer movement and activity patterns relative to seasonal use of habitat types and level of POG forest fragmentation.

Collars were recovered in August of 2012 and their data was joined with the 2011 collar data. Analyses of these data has begun, but has not been completed. The data from collars currently in the field will be joined with these data after recovery in August 2013.

Job/activity 1f: Identify diel and seasonal patterns of deer habitat use.

Analyses of these data has begun, but has not been completed.

Objective 2: Provide information for public education and outreach.

Job/activity 2a: Write annual reports detailing activities and accomplishments to date, including results of animal captures and collar status.

An annual performance reports was prepared.

Job/activity 2b: Write final report.

Not active.

Job/activity 2c: Prepare manuscript for submission.

Not active.

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

OBJECTIVE 1: Use GPS collars to collect fine-scale deer movement data.

JOB/ACTIVITY 1b: Conduct ground and aerial based activities instrumental in the collaring of Sitka black-tailed deer and retrieve collars.

Although no ground captures had initially been planned for this period, the manufacture replaced 4 collars that had malfunctioned, and we refurbished an additional three that we retrieved from hunters and winter mortalities. Those 7 collars, in addition to the 2 that were never originally deployed, gave us 9 collars that we attempted to deploy.

During 9-15 July 2012, 2 yearling does were captured and radiocollared from the ground (Table 1). During 1-8 August 2012, 1 one adult doe and one yearling doe were captured and radiocollared from the ground. No winter captures were attempted.

On 1 August 2012, telemetry survey was conducted using fix-winged aircraft. The survey attempted to find the signals of 10 collars, 3 of which had not been heard since deployment and were believed to be malfunctions. The 3 malfunctioning collars were still not heard. Six radiocollars were heard and detected to be on mortality; one collar was still active and had not fallen off the deer.

During August 2012, 6 collars were recovered by the use of a helicopter.

We will monitor the remaining 4 radiocollars until they fall off in August of 2013. No collars should remain on deer after August of 2013.

JOB/ACTIVITY 1c: Monitor snow conditions

Snowfall data was compiled from nearby weather stations.

JOB/ACTIVITY 1e: Deer movement and habitat use

Some exploratory analyses were conducted on the collars that were recovered from the field in 2011-2012. Analyses of these data has begun, but has not been completed.

JOB/ACTIVITY 2a: Summary report of the capture activities and project status

We prepared and submitted the 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

Prepared by: Karin McCoy

Date: 8/21/2013

2.15 Movement patterns, home range, and habitat use by Sitka black-tailed deer in Southeast Alaska
 FY13 Annual Research Performance Report

Table 1. Deer captures and radiocollar recovery for project duration.

Reporting period (July 1-June 30)	Deer capture d this period*	Deer collared this period	Collar duration	Collars in field (Sept)	Collars recovered this period	Failure **	Capture mortality	Hunter or winter mortality
2008-2009	3	2	2 years	0	2			2
2009-2010	3	3	2 years	3	0			
2010-2011	27	24	1 & 2 years	27	4	3	1	4
2011-2012	7	2	1 year	7	14	1	3	
2012-2013	4	4	1 year	4	7			
2013-2014	0	0		1	3			
Total (all periods)	44	35		1	30	4	4	6

* Each period more deer were captured than collared. Some deer were wrong age/sex group, unhealthy, or died.

** Collars failed when either they did not release off deer (1) or they ceased to function (3). These collars may be recovered eventually if the deer are shot by hunters.