FEDERAL AID ANNUAL RESEARCH PERFORMANCE REPORT

Alaska Department of Fish and Game
State Wildlife Grant

Grant Number: W-33   **Segment Number:** 12

Project Number: 2.15

Project Title: Movement patterns, home range, and habitat use by Sitka black-tailed deer in Southeast Alaska

Project Duration: 1 July 2008–30 June 2015

Report Due Date: 1 September 2014

Reporting Period: 1 July 2013–30 June 2014

Principal Investigators: Karin McCoy, Phillip Mooney

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: <u>Order collars, purchase animal capture equipment, program collars, review literature, develop a work plan, organize and mobilize personnel.</u>

All the collars have been deployed and retrieved. Four radio collars remain from this project with intact battery life for field deployment. These have been stored in "off" status. Collars were not reprogrammed for revised deployment dates, because no captures or collaring were planned for the period of 1 July 2013–30 June 2014.

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

One final radio collar, for which the CR2A release mechanism failed in 2012, is still on a deer. A signal was still being heard from this collar in November of 2013. A telemetry flight was flown summer 2014 to determine whether this collar was still functioning, but a signal was not detected. This collar may eventually come back to us through hunter kill, but recovery efforts have now been abandoned. Incidentally, the survey crew also scanned for the other 3 collars that had not emitted a signal after deployment in 2010, and these collars were also still not detected.

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

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

In addition, three snow stakes were deployed in the Pavlof watershed a low (0-500 feet), medium (500-1000 feet), and high (over 1000 feet) elevations for comparison to snow depths recorded at the Hoonah and other weather stations. The resolution of these stakes is less than that from NOAA weather stations, in that they only record whether snow was present or absent at 3 depths (10, 25, and 50 cm).

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

Collars were recovered in August and September 2013. The data was downloaded and their data was joined with the previous collar data. Analyses of these data has begun, but has not been completed.

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

Collars were recovered in August and September 2013. The data was downloaded and their data was joined with the previous collar data. Analyses of these data has begun, but has not been completed.

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

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

Objective 2: Provide information for public education and outreach.

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

An annual performance report was prepared.

Job/activity 2b: <u>Write final report.</u>

Not active.

Job/activity 2c: <u>Prepare manuscript for submission.</u>

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: <u>Conduct ground and aerial based activities instrumental in the collaring of Sitka black-tailed deer and retrieve collars.</u>

We monitored the remaining radio collars until they fell off in August of 2013. We conducted a telemetry flight to identify the location of the collars in August of 2013. Four collars were recovered. A fifth collar, which had malfunctioned in 2012 such that it did not fall off the deer, was still emitting a signal through November of 2014. This final collar was not heard on a survey flight in July 2014.

Table 1 gives an overview of all deer captured for which there is data available. Two of the deer in this table deer may be used for limited movement analysis, but will not be used for habitat selection analysis due to migration out of the study area (HD10) and limited number of days with data (HD39).

JOB/ACTIVITY 1c: <u>Monitor snow conditions</u>

Snowfall data was compiled from nearby weather stations, and 3 snow stakes were deployed at low, medium, and high elevations in the Pavlof watersheds. We hope these snow stakes will provide data to help fine-tune the relationship between snow depth at NOAA weather stations versus locations within the Pavlof watershed.

JOB/ACTIVITY 1e: <u>Deer movement and habitat use</u>

Data from all collars were combined into one file. Analyses of these data has begun, but has not been completed.

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

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 This project should be continued as described in the study plan and the final report will be completed in the next reporting year.

Prepared by: Karin McCoy

Date: 9/01/2014

Table 1: Final summary of deer to be used for habitat or movement analysis.

ID	Collar	Capture method	Capture	Sex	Age	On animal	Off animal	Days	No. locations
HD04	618563	Ground	08/07/09	F	A	08/08/09	1/25/11	535	5294
HD06	618564	Ground	08/10/09	F	Y	08/10/09	6/30/11	689	6878
HD09	622909	Ground	07/14/10	F	Y	07/15/10	7/31/11	381	9399
HD10	616625	Ground	07/15/10	M	Y	07/16/10	7/31/11	380	9315
HD14	618567	Ground	07/19/10	F	A	07/20/10	3/18/11	241	2060
HD15	618570	Netgun	08/27/10	F	A	08/28/10	3/10/11	194	1814
HD16	616648	Netgun	08/27/10	F	A	08/28/10	7/31/11	337	8898
HD17	618562	Netgun	08/27/10	M	A	08/28/10	11/12/10	76	1078
HD18	616780	Netgun	08/27/10	M	A	08/28/10	10/17/10	50	2261
HD20	616644	Netgun	08/27/10	F	A	08/28/10	7/31/11	337	9007
HD21	616789	Netgun	08/27/10	F	A	08/28/10	7/31/11	337	8802
HD23	616647	Netgun	08/28/10	F	A	08/29/10	7/31/11	336	9009
HD24	616781	Netgun	08/28/10	M	Y	08/29/10	7/31/11	336	9050
HD27	616661	Netgun	08/28/10	F	A	08/29/10	7/31/11	336	9085
HD29	616649	Netgun	08/28/10	M	A	08/29/10	6/6/11	281	7652
HD30	616624	Netgun	08/28/10	F	A	08/29/10	7/31/11	336	8948
HD31	616642	Netgun	08/28/10	F	A	08/29/10	7/31/11	336	8677
HD22	618597	Netgun	08/28/10	M	A	08/29/10	8/1/12	703	7135
HD25	618569	Netgun	08/28/10	M	A	08/29/10	8/1/12	703	6857
HD26	618572	Netgun	08/28/10	F	A	08/29/10	8/1/12	703	7158
HD28	618571	Netgun	08/28/10	F	A	08/29/10	4/25/11	239	2254
HD32	618568	Ground	09/29/10	F	Y	09/30/10	8/1/12	671	7110
HD35	615980	Ground	8/9/2011	F	A	08/10/11	8/1/12	357	8276
HD39	655431	Ground	06/19/12	F	Y	06/20/12	7/3/12	13	621
HD42	616659	Ground	08/02/12	M	Y	08/03/12	4/26/13	266	5638
HD40	655437	Ground	07/12/12	F	Y	07/13/12	8/1/13	384	11454
HD41	618562	Ground	07/11/12	F	Y	07/12/12	8/1/13	385	10948
HD43	618562	Ground	08/05/12	F	A	08/06/12	9/28/12	53	1247