

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

**Grant Number:** W-33

**Segment Number:** 9

**Project Number:** 12.01

**Project Title:** Mountain goat population dynamics in southeastern Alaska

**Project Duration:** July 1, 2010-June 30, 2014

**Report Due Date:** September 1, 2011

**Principal Investigators:** Kevin S. White, Neil Barten, Ryan Scott, Anthony Crupi, Phil Mooney, Boyd Porter

**Cooperators:** BLM, City of Sitka, USFS

**Work Location:** Lynn Canal (GMU 1C/1D), Haines (GMU 1D), Baranof Island (GMU 4), Cleveland Peninsula (GMU 1A/1B), Alaska

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

**JOB/ACTIVITY 1:** Capture and radio-mark mountain goats.

**Accomplishments:** We captured and deployed GPS/VHF radio-collars on mountain goats in Lynn Canal (n = 8), Haines (n = 23), Baranof Island (n = 12) and the Cleveland Peninsula (n = 5). All mountain goats were captured using helicopter darting methods.

**JOB/ACTIVITY 2:** Estimate mountain goat population size and composition.

**Accomplishments:** We conducted aerial surveys during September-October 2010 in order to estimate mountain goat population size and composition (Lynn Canal, n = 4; Haines, n = 3, Baranof, n = 1, Cleveland Peninsula, n = 0). During these surveys mountain goat sighting probabilities were estimated based on data collected from radio-marked adult female moose.

**JOB/ACTIVITY 3:** Estimate reproductive performance and survival of radio-marked mountain goats

**Accomplishments:** We conducted aerial surveys (Lynn Canal, n = 3; Haines, n = 3; Baranof, n = 1; Cleveland Peninsula, n = 0) to determine kid status of radio-marked adult female mountain goats (Lynn Canal, n = 23; Haines, n = 7; Baranof, n = 4; Cleveland Peninsula, n = 6).

We monitored survival of radio-marked mountain goats (Lynn Canal, n = 49; Haines, n = 23, Baranof, n = 12; Cleveland Peninsula, n = 12) via air-based radio-telemetry surveys and/or from examining GPS-telemetry data. During 2010/2011, we investigated 15 mortality events involving radio-marked mountain goats (Lynn Canal, n = 5; Haines, n = 7; Baranof, n = 1; Cleveland Peninsula, n = 2).

**JOB/ACTIVITY 5: Data analysis and reporting.**

**Accomplishments:** We prepared annual progress reports detailing activities conducted in Lynn Canal and Baranof Island, as required by funding agreements with AKDOT/PF, Coeur Alaska and the City of Sitka. We also prepared a report describing aerial survey technique development activities to satisfy funding requirements for the USFS.

We had two papers accepted for publication in peer-reviewed journals. One paper detailed patterns of mountain goat survival in coastal Alaska. Another paper characterized population genetics of mountain goats on Baranof Island.

**III. PUBLICATIONS**

White, K. S. and N. L. Barten. 2010. Mountain goat monitoring and assessment along the Juneau Access road corridor, southeastern Alaska. Research Progress Report. 16pp.

White, K. S., P. Mooney and K. Bovee. 2010. Mountain goat movement patterns and population monitoring on Baranof Island. Research progress report. 5pp.

K. S. White and G. W. Pendleton. 2010. Mountain goat population monitoring and survey technique development. Research progress report. 4pp.

White, K. S., G. W. Pendleton, D. Crowley, H. Griese, K. Hundertmark, T. McDonough, L. Nichols, C. Smith, and J. Schoen. 2011. Mountain goat survival in coastal Alaska: effects of age, sex, and climate. *Journal of Wildlife Management* (In press).

Shafer, A. B. A., K. S. White, S. D. Cote, D. W. Coltman. 2011. Deciphering translocations from relicts in Baranof Island mountain goats: Is an endemic genetic lineage at risk? *Conservation Genetics* (In press).

**VI. RECOMMENDATIONS FOR THIS PROJECT**

This project should be continued as described in the study plan.

**Prepared by:** Kevin White

**Date:** 9/01/11