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
Wildlife Restoration Grant

Grant Number: AKW-10 Wildlife Restoration FY2016

Project Number: 14.29

Project Title: Using genomics to identify population structure and inform models of Southeast Alaskan wolves

Project Duration: 1 July 2015–30 September 2018

Report Due Date: 1 September 2016

PRINCIPAL INVESTIGATOR: Gretchen Roffler

COOPERATORS: Dr. Michael Schwartz, Katherine Zarn, and Kristine Pilgrim at the National Genomics Center for Wildlife and Fish Conservation, Rocky Mountain Research Station, USFS, Missoula, MT.

WORK LOCATION: Game Management Units 1-5, Region I, Southeast Alaska

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I. PROGRESS ON PROJECT OBJECTIVES DURING LAST SEGMENT

OBJECTIVE 1: Collect samples for DNA analysis

OBJECTIVE 2: Genotype wolf samples

OBJECTIVE 3: Data analysis

OBJECTIVE 4: Data synthesis and preparation of publications

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

JOB/ACTIVITY 1A: We will collect hair and muscle tissue samples from harvested wolves from throughout Southeast Alaska and neighboring portions of British Columbia and the Yukon**.**

Accomplishments: We coordinated with area biologists, trappers, sealers, and other ADF&G staff to obtain wolf muscle and skin tissue samples from across Region I for wolf genomics analyses. In September 2015 we sent 96 samples to the National Genomics Center for Wildlife and Fish Conservation. We also coordinated with biologists from the Yukon Department of the Environment to obtain samples from harvested wolves. We continued to collect and prepare wolf samples from the 2015 – 2016 harvest season resulting in additional 283 samples from all GMUs in Region I where wolves are present (1A-1D, 2, 3, 5).

JOB/ACTIVITY 2A: We will collaborate with the National Genomics Center for Wildlife and Fish Conservation in Missoula, Montana to obtain genotypes of wolves region-wide.

Accomplishments: No work was completed on this job during the reporting period.

JOB/ACTIVITY 3A: We will use spatially-explicit, individual-based models to assess patterns of gene flow at the regional scale**.**

Accomplishments: No work was completed on this job during the reporting period.

JOB/ACTIVITY 3B: We will test the relative influence of landscape features, habitat types, and geographic distance on patterns of genetic relatedness**.**

Accomplishments: No work was completed on this job during the reporting period.

JOB/ACTIVITY 3C: We will use population assignment tests to identify recent immigrants from different regions**.**

Accomplishments: No work was completed on this job during the reporting period.

JOB/ACTIVITY 3D: We will characterize fine-scale genetic structure of wolves within GMUs (presence of multiple populations).

Accomplishments: No work was completed on this job during the reporting period.

JOB/ACTIVITY 3E: We will use parentage approaches to identify wolf packs and disperser vs. resident wolves.

Accomplishments: No work was completed on this job during the reporting period.

JOB/ACTIVITY 4: We will synthesize and compare data sets from wolves throughout the region and beyond. We will prepare annual progress reports and a final report. We will strive to produce several peer-reviewed publications from this project. We will share our findings with the public as needed.

Accomplishments: This progress report was prepared. No other work was completed on this job during the reporting period.

Submitted by: Anthony Crupi, Acting Research Coordinator

Date: 9/1/2016