ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF WILDLIFE CONSERVATION
PO Box 115526
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Alaska Department of Fish and Game
State Wildlife Grant
ANNUAL INTERIM PERFORMANCE REPORT

Grant Number: **T-1** **Segment Number: 3**

Project Number: **3.10**

Project Title: An integrated regional ecological assessment of the Black oystercatcher (*Haematopus bachmani*)

Project Duration: July 1, 2006 – June 30, 2008

Report Period: 1 July 2006 – 30 June 2007

Report Due Date: September 30, 2007

Partner: Alaska Department of Fish and Game

Project Objectives

OBJECTIVE 1: Determine the size and nesting density of several important local breeding populations throughout the range.

OBJECTIVE 2: Assess the overall population status and demographic parameters important in regulating population size (i.e., overwintering and adult survival, fledging success, recruitment age, breeding site fidelity, and natal philopatry).

OBJECTIVE 3: Assess regional differences in nesting effort, breeding success and productivity.

OBJECTIVE 4: Identify local threats or limitations to productivity.

OBJECTIVE 5: Elucidate levels of population structuring and the degree of connectivity between regional breeding populations.

OBJECTIVE 6: Identify locations of important wintering areas and the numbers of birds in those areas.

OBJECTIVE 7: Identify movement patterns between various breeding and wintering areas.

OBJECTIVE 8: Follow the movements of oystercatchers from their breeding areas to their wintering areas.

JOB/ACTIVITY A: Capture at least five adult oystercatchers at each of two important breeding areas in Alaska, and attach backpack mounted satellite transmitters to them.

OBJECTIVE 9: Analyze data, write reports, attend conferences, present papers and results.

Summary of Project Accomplishments

OBJECTIVE 1: For the most part, this objective was completed in summer 2006. We have surveyed breeding activity on Kodiak Island, Middleton Island, Kenai Fjords National Park,

Harriman Fjord in Prince William Sound, the Beardslee Islands in Glacier Bay National Park, Sitka Sound, Baranof Island, the Necker Islands, the Myriad Islands, the Tebenkof Islands, and the Forester and Lowrie island complex. Collaborators have independently surveyed much of the Queen Charlotte Islands, as well as Barkley and Clayoquot Sounds in British Columbia, the San Juan Islands in Washington, and most of the Oregon Coast.

OBJECTIVE 2: In the summers of 2006 and 2007 we continued to monitor the fate of populations of oystercatcher we have banded on Middleton Island, Kenai Fjords National Park, Prince William Sound, and Glacier Bay National Park. 2005 was the final year of banding in Kenai Fjords and Middleton Island; 2006 was the last banding year in Prince William Sound and Glacier Bay. 2007 was the final year for active observation of banded populations because, A) the four years of data we have should be sufficient for determining adult survival, and B) band loss rates will make identification of a large proportion of individuals unlikely after 2007, C) it was the planned conclusion of the study, and we have expended our funds for this objective.

OBJECTIVE 3: The summer of 2006 was the third and final season for assessing productivity in Glacier Bay and Prince William Sound. Summer 2005 was the last of three years studying productivity at Kenai Fjords National Park, and the last of two years on Middleton Island. In 2007, independent colleagues began to assess productivity in Pacific Rim National Park and Gulf Islands national Park in British Columbia, and along the Oregon Coast.

OBJECTIVE 4: See Objective 3.

OBJECTIVE 5: In summer 2006 and 2007 we conducted genetics investigations in the Molecular Biology Laboratory at the USGS Alaska Science Center. We extracted DNA from all samples collected at our various study sites (Kodiak Island, Kenai Fjords, Prince William Sound, Middleton Island, Glacier Bay, Stephens Passage, and Laskeek Bay in BC. We acquired or developed all necessary primers to compare individuals and populations from these sites using both DNA microsatellite techniques and mitochondrial DNA. The majority of the microsatellite and mitochondrial DNA comparisons have been run, and we will be completing the population genetics analyses between September 2007 and January 2008. We also developed a new technique for accurately sexing oystercatchers in the field; a technique we validated through molecular genetic work.

OBJECTIVE 6: We surveyed Middleton Island on foot in February 2006, we used boats to survey Kodiak Island in February 2007, and Barkley and Clayoquot Sounds (BC) October 2006, and Prince William Sound in March 2007. For the third year running, inclement weather made planned aerial surveys impossible

OBJECTIVE 7: Resighting of oystercatchers banded on their breeding grounds provided some exciting and novel information about interseasonal movements. One chick banded in Glacier Bay and one adult banded on Middleton Island were sighted on Vancouver Island, BC in the winter of 2006-7. Another adult banded on Middleton was observed in Prince William Sound winter of 2006-7. Band resightings also began to provide information on natal philopatry. A chick banded in Kenai Fjords was found in a breeding are in BC in 2007, while three other chicks were found returning to breeding areas only 10 to 40km from their natal grounds.

OBJECTIVE 8:

JOB/ACTIVITY A: In May and June of 2007, we implanted satellite transmitters in 18 adult oystercatchers: six on Middleton Island, six in Prince William Sound, and six in Stephen's Passage near Juneau. We also attached VHF radio transmitters to 20 adult oystercatchers; 10 on Kodiak Island and 10 in Pacific Rim National Park, BC. Satellite and VHF transmitters were split evenly between genders at each location. We are already getting exciting information from this effort, but it falls outside this reporting period, so you'll have to stay tuned for the next one!

OBJECTIVE 9: Analyses of data is ongoing, and is estimated to be complete March 2008. Data from this work helped inform the recently completed Black Oystercatcher Conservation Action Plan (Tessler et al. 2007). Portions of this work have been presented as oral papers at the Shorebird Science in the Western Hemisphere conference in Boulder, CO February 2007, and at The Wildlife Society meetings in Juneau, AK April 2007.

Prepared By: David F. Tessler

Additional Information:

Tessler, D.F., J.A. Johnson, B.A. Andres, S. Thomas, and R.B. Lanctot. 2007. Black Oystercatcher (*Haematopus bachmani*) Conservation Action Plan. International Black Oystercatcher Working Group, Alaska Department of Fish and Game, Anchorage, Alaska, U.S. Fish and Wildlife Service, Anchorage, Alaska, and Manomet Center for Conservation Sciences, Manomet, Massachusetts. 115 pp. (http://www.whsrn.org/shorebirds/conservation_plans.html)