

ALASKA REGION COASTAL MARINE RESOURCES GRANT REPORT FOR 2010

In 2010, Ocean Alaska Science and Learning Center in collaboration with the National Park Foundation awarded 10 grants totaling \$75,059.00 to support coastal and marine projects within Alaska. Three projects totaling \$15,695.00 were funded through the National Park Foundation and seven projects totaling \$59,364.00 through Ocean Alaska Science and Learning Center. Funded projects, listed below, do not appear in any priority order.

Mr. Howard Ferren
Alaska SeaLife Center
P.O. Box 1329
Seward, AK 99664

Seabirds and Rats: Interpretive Exhibit

The exhibit will focus on rat invasions, seabird colony devastations, human behavior, policy and action. The exhibit will deliver content about the invasive Norwegian rat (*Rattus norvegicus*) and its impacts to sea bird colonies, and the Rat Island rat eradication project. The exhibit will educate people of rat invasions, the impacts to sea birds and coastal ecosystems, and how action can be taken to prevent and mitigate infestations. Content will be offered through exhibits and interpretation to more than 150,000 annual visitors and will be presented to Elderhostel programs. The exhibit will also be used as a backdrop for the SeaLife Center's distance education. Project leaders are collaborating with the Alaska Maritime National Wildlife Refuge and The Nature Conservancy to collect and summarize content for the exhibit.

Fieldwork location: NA

Award date: 3/2/2010

Grant Amount: \$9,988.00 (Funded by OASLC)

Fieldwork Dates: NA

Category: Public Education

Grant Number: 10AKCMRG004

Scott Gende, Senior Science Advisor
Glacier Bay Field Station
3100 National Park Road
Juneau, Alaska 99801

Host a cruise ship science meeting for determining criteria and impacts to marine resources in Glacier Bay

In 2003, Glacier Bay signed the Record of Decision for the Vessel Quota and Operating Requirements Final Environmental Impact Statement (FEIS). The FEIS defined the long-term daily and seasonal quota of all marine vessels that utilize park waters. However, quotas were not designated for cruise ships, owing to the great uncertainty into the existence or extent of their impacts. Consequently, Glacier Bay appointed an independent Science Advisory Board (SAB) consisting of federal, state, and tribal participants to advise the park on information gaps, prioritize research efforts, and evaluate targeted studies that would help determine the extent of these impacts before cruise ship entry quotas were set. The SAB worked throughout 2004 and 2005 recommending a number of research and monitoring projects focusing on quantifying the impacts to biological and socio-cultural resources in the park. Many of these studies were implemented by scientists at a number of universities, as well as several federal and state agencies, and are slated for completion by 2009. Simultaneously, National Park Service managers have recommended no changes in quotas of cruise ship entries into the park until these studies have been completed and presented to park management and Science Advisory Board members.

To facilitate full and open communication of these directed research studies between scientists and park management, and to generate a sustainable, science-based management plan for cruise ship entry quotas, funding will be used to support meetings between scientists that have spearheaded research efforts, NPS management, and Science Advisory Board members.

Fieldwork location: NA

Award date: 3/2/2010

Grant Amount: \$10,000.00 (Funded by OASLC)

Fieldwork Dates: NA

Category: Public Education

Grant Number: 10AKCMRG0010

Matt Gray
Watershed Program Director
Resurrection Bay Conservation Alliance
P.O. Box 1092
Seward, AK 99664

Seward Storm Drain Stenciling Project

Many people are unaware that storm drains carry storm water to the nearest waterway without receiving any kind of treatment. Individuals who would never consider polluting our waterways may unknowingly pour antifreeze, paint, used motor oil, pet waste, etc., down storm drains. The debris and chemicals flowing through storm drains can threaten marine life living within the water bodies that ultimately receive the water, in this case, Resurrection Bay. This project's goal is having only rainwater enter Seward's storm drains. The purpose of painting a fish on the storm drain is to remind residents and visitors that whatever goes into that storm drain does not disappear, but will continue into the environment affecting all life, human and otherwise, in that area. Visitors to Seward may notice the stencils on the storm drains and become aware of the impacts of storm water runoff, and how the community cares for the environment. There is a potential for visitors to take this knowledge back to their home community and help sponsor stenciling programs there.

Fieldwork location: Seward, Alaska

Award date: 3/2/2010

Grant Amount: \$3,845.00 (Funded through NPF)

Fieldwork Dates: 6/1/2010 - 7/30/2010

Fund: Education

Grant Number: 10AKCMRG001

Anne Hoover-Miller
Alaska SeaLife Center
P.O. Box 1329
Seward, AK 99664

Marine Observational Surveys in the Kenai

Harbor seal populations in Alaska experienced a more than 80% population decline during the 1980s. Populations have been monitored in the Kenai Fjords National Park (KFNP) since 1979 (Hoover 1983), and since 2002 remotely operated video cameras have been used to observe seals, environmental conditions associated with tidewater glaciers, and human activities near Aialik and Pedersen Glaciers in Aialik Bay (Hoover 1994, Maniscalco et al. 2008, Hoover-Miller and Prewitt 2009). During the 1980s-1990s, Northwestern Glacier, a tidewater glacier west of Aialik Bay rapidly receded and is near terrestrial termination (Molnia 2008). Concurrently, numbers of visitors visiting Aialik Bay and Northwestern Fjords and fishing in waters adjacent to the KFNP have increased, resulting in marked increases in interactions between visitors and wildlife (Jeziarski et al. 2008, Hoover-Miller and Prewitt 2009). This research

includes the continuation and enhancement of a pilot project aboard Kenai Fjords Tours (KFT) vessels that was successfully initiated in 2009 to enable repetitive surveys of harbor seals in Northwestern Fjord and opportunistic observations of other marine species (Hoover-Miller and Prewitt 2009). Vessel surveys aboard KFT vessels allow researchers to collect marine mammal observations during regularly scheduled tours. Observers will record the distribution of marine mammals in the study area and take photographs to assist individual identification of animals being studied by other organizations. Data collected in 2010 will also include vessels and marine mammals interactions.

Fieldwork location: Kenai Fjords Alaska

Award date: 3/2/2010

Grant Amount: \$9,998.00 (Funded by OASLC)

Fieldwork Dates: 5/1/2010 - 8/31/2010

Fund: Research and Monitoring

Grant Number: 10AKCMRG007

Fritz Klasner:

Kenai Fjords National Park

P.O. Box 1727

Seward, AK 99664-1727

Time Lapse Photography of Coastal Resources

The purpose of the project is to document and monitor phenology in Lake Clark NP&P and Kenai Fjords NP using time lapse photography. Phenology, the study of periodic plant and animal life cycle events and how these are influenced by seasonal and interannual variations in climate, has been shown to be a robust integrator of the effects of year-to-year climate variability and longer-term climate change on natural systems (e.g., recent warming trends). Experimental studies have shown how other global change factors (e.g., elevated CO₂ and N deposition) can also influence phenology. This project will help better document biological responses to a changing world. The investigators are participating in the PhenoCam and USA-National Phenology Network, a continental-scale phenological monitoring program which engages federal agencies, environmental networks, educational institutions, and mass participation by citizen scientists.

Fieldwork location: Kenai Fjords National Park/Lake Clark National Park and Preserve

Award date: 3/2/2010

Grant Amount: \$5,278.00 (Funded by OASLC)

Fieldwork Dates: 4/15/2010 - 9/30/2010

Fund: Research and Monitoring

Grant Number: 10AKCMRG009

Mr. John M. Maniscalco:

Alaska SeaLife Center

P.O. Box 1329

Seward, AK 99664-1329

Prey availability and seabird productivity: missing links in the Kenai Fjords ecosystem

This project is intended to fill knowledge gaps in key components of the Kenai Fjords ecosystem where public/agency understanding is currently lacking. The University of Alaska Fairbanks (UAF) is conducting studies of the physical, chemical, and lower biological parameters of this local ecosystem (e.g. Weingartner et al. 2002). Concurrently, Alaska SeaLife Center staff is conducting studies of upper trophic-level pinnipeds and killer whales (e.g. Maniscalco et al. 2007). Both sets of studies have extensive long-term data contributions. However, information from the middle trophic levels are notoriously lacking in this region. In order to have a better understanding of how this ecosystem functions, proposers will assess productivity of black-legged kittiwakes and the relative presence of forage fish species based on the diet of

predatory fish caught in the area. Kittiwakes will be observed at a colony near Cape Resurrection using a remote-control video system already installed at that location. Productivity will be determined via surveys of randomly selected nests 3-4 times per week recording incubation postures, hatching rates, and fledging success. Predatory fish stomachs will be obtained from the charter fishing fleet in Seward which has a range of more than 100 nautical miles across the northern Gulf of Alaska.

Fieldwork location: The Kenai Fjords and Adjacent Gulf of Alaska

Award date: 3/2/2010

Grant Amount: \$9,996.00 (Funded by OASLC)

Fieldwork Dates: 5/15/2010 - 8/15/2010

Fund: Research and Monitoring

Grant Number: 10AKCMRG008

Craig Matkin
North Gulf Oceanic Society
3430 Main St. Suite B-1
Homer, AK 99603

Identifying Local Whales: Public Education and Enhancement of the Viewing Experience

The goal of this project is to engage wildlife tour vessel passengers, through amateur photography and contribution to a web based cetacean data base, in the stewardship of regional orca and humpback whales and their habitat. Through participation in this project, visitors will develop an enhanced appreciation of whale habits and social relationships. As the passengers have the opportunity to learn about individual animals, their interest in long-term marine stewardship is expected to increase. Additionally, the submission of photographs will help further monitor regional use by these animals. Project website address is: <http://www.alaskawhalesightings.com/index.html>

Fieldwork location: Gulf of Alaska and Adjacent Fjords

Award date: 3/2/2010

Grant Amount: \$1,850.00 (Funded through NPF)

Fieldwork Dates: 3/15/2010 - 6/15/2010

Fund: Research and Education

Grant Number: 10AKCMRG002

Laura Phillips
Kenai Fjords National Park
PO Box 1727
Seward, Alaska 99664

Identifying indicators of visitor experience and resource conditions to protect sensitive coastal resources in Kenai Fjords National Park

Managing impacts from visitor use in coastal areas of National Parks in Alaska is an increasing challenge for management personnel. KEFJ includes approximately 400 miles of remote coastline accessible only by boat or floatplane. The availability of suitable landing beaches and camping areas is limited by the steep fjord topography, thus concentrating visitor use in more accessible areas. This higher density of users in specific areas yields the potential for more rapid and severe impacts to both biological and social values. Protecting natural resources and maintaining high quality visitor experience are integral to the mission and purpose of KEFJ, but park managers need clearly defined management objectives and threshold levels to determine when management action should be taken to protect resources.

KEFJ recently completed a study to revise the methodology used to assess resource conditions at coastal backcountry campsites with the goal of creating a revised protocol and sampling design for continued monitoring and analysis of trends in campsite condition. To ensure this data is utilized by managers to protect visitor experience and park resources, indicators and standards of resource conditions in these coastal areas need to be developed. Funding will support Utah State University (USU) researchers in the development of management objectives for coastal resources and for the quality of the backcountry visitor experience.

Fieldwork location: Kenai Fjords National Park

Award date: 3/2/2010

Grant Amount: \$9,804.00 (Funded by OASLC)

Fieldwork Dates: 5/15/2010 - 9/15/2010

Fund: Research and Monitoring

Grant Number: 10AKCMRG006

Laura Phillips

Kenai Fjords National Park

PO Box 1727

Seward, Alaska 99664

Updating the Resource Guide for Coastal Backcountry Users in Kenai Fjords National Park

In 2007, KEFJ staff created a Resources Guide to assist backcountry users, primarily kayakers, in locating food storage lockers in the park and to provide them with information about bear safety and wildlife viewing ethics. This guide was distributed to backcountry users through tour operators, water taxi providers, and other partners, and by park staff at the KEFJ visitor centers.

Currently, the park has almost run out of copies of the handout to provide to users. Funding will be used to update and reprint the guide. The revised guide will be printed on waterproof paper in a format that is convenient to use and carry in a kayak and will also be made available on the park website. Kenai Fjords will continue to work with local businesses to distribute the guide to backcountry users. Park staff will also continue to distribute the guide through the visitor centers. Kenai Fjords will make the guide available to other coastal parks to ensure ideas for managing and protecting coastal resources are shared.

Because KEFJ cannot require backcountry users to obtain permits, this guide is one of the primary tools used to distribute these important messages to visitors. Encouraging the proper behavior of visitors in the backcountry is a tangible and practical way to reduce impacts to coastal resources.

Fieldwork location: Kenai Fjords National Park

Award date: 3/2/2010

Grant Amount: \$4,300.00 (Funded by OASLC)

Fieldwork Dates: NA

Fund: Education

Grant Number: 10AKCMRG005

Scott A. Wolfe

The Wildlifers

20390 East Birch Hill Drive

Palmer AK 99645

Winter and Nest Distribution of Black Oystercatchers Along Coastal Waters Near the Yakutat Ranger District, AK

The Wildlifers, in collaboration with the Yakutat Ranger District, Tongass National Forest will conduct standardized aerial and watercraft surveys of black oystercatchers between November 2010 and March

2011 to identify important winter concentrations in coastal habitats; and watercraft surveys, nest searches, and nest success estimates of black oystercatchers will take place between 5 May and 15 June 2011, along coastal habitats of southeast Alaska. Black oystercatchers are listed as a sensitive species in Alaska by federal and state agencies. Major threats include human disturbance of nests and behavioral activities, predation especially from exotic species, coastal development, shoreline erosion from vessel wakes, contaminants (especially shoreline catastrophic events such as oil spills), and climate change. This project specifically addresses priority research needs including providing managers with tools to make better informed resource decisions on the Tongass National Forest. Most research on black oystercatchers in Alaska has occurred near Kodiak Island and in Prince William Sound, Alaska, where ~10% of the population occurs during winter. Thus, oystercatcher concentrations and nesting characteristics need to be identified in southeast Alaska, especially near Yakutat and areas east and west from there, where little information exists. Direct outcomes of this proposed project will be estimates of winter concentrations and numbers of birds in those areas along with locations and characteristics of nesting habitat of black oystercatchers in southeast Alaska, all identified as priority actions in shorebird conservation plans. Data will be integrated into the Online International Black Oystercatcher Conservation Database.

Fieldwork location: Southeast Alaska

Award date: 3/2/20210

Grant Amount: \$10,000.00 (Funded through NPF)

Fieldwork Dates: 11/2010 - 6/2011

Fund: Research and Monitoring

Grant Number: 10AKCMRG003
