

HABITAT CONSERVATION PLANNING FOR ALASKA COASTAL SPECIES:
SHORT-TAILED ALBATROSS DETERRENT MEASURES, SEABIRD
INCIDENCE OBSERVATIONS, AND OBSERVER PROGRAM
ENHANCEMENTS

By

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1. INTRODUCTION

The short-tailed albatross (*Diomedea albatrus*) has been listed as endangered since 1970. Although the species range includes the North Pacific and Bering Sea coasts of Alaska, its seasonal abundance in nearshore waters has not been well known. Because short-tailed albatross may number less than 1,000, concerns have been raised about potential entanglement and bycatch in coastal and offshore fisheries. There are at least 40 records of the species within Alaskan coastal waters (0-3 nm), but incidental take has not been documented from fisheries in state waters (U.S. Fish and Wildlife Service 2002). This project sought to enhance our understanding of nearshore albatross distributions and reduce the potential for accidental injury. Project components included an investigation of short-tailed albatross and other seabird occurrence in nearshore waters, using vessels simulating the commercial longline fleet, training for commercial fishermen in seabird avoidance techniques, and enhancements to the state of Alaska's observer program. The general scope of the objectives for these studies is to provide background information on areas of concern that involve fisheries and that might eventually be needed to develop Habitat Conservation Plans. Most of the work for short-tailed albatross and seabird deterrent components of this project was performed under contract to by the Washington Sea Grant Program (WSGP).

2. SEABIRD INCIDENCE ABOARD SURVEY RESEARCH VESSELS

The extent to which short-tailed albatross interact with fisheries, particularly longline fisheries, has been poorly known, in part, because much of the fishing is conducted by small vessels that cannot easily accommodate onboard observers. The smaller longline vessels tend to frequent inshore areas so that the observer information from larger offshore vessels which can carry observers is not readily applicable. One component of this project was to apply seabird bycatch and observation records from chartered longline research vessels, for which seabird incidence observations are available, as a proxy for seabird incidence aboard small commercial longliners.

Longline vessels are routinely chartered by the International Pacific Halibut Commission (IPHC), the National Marine Fisheries Service (NMFS), and the Alaska Department of Fish and Game (ADF&G) for fish stock assessment surveys. These chartered vessels provide platforms of opportunity for observing the relative distribution of seabirds on the Alaskan longline fishing grounds. The chartered vessels are required to carry trained fishery samplers to record catch information. With additional training, the fishery samplers can also record seabird incidence information. Because the chartered survey vessels fish in both inshore and offshore areas using methods similar to commercial longline vessels, the survey observations can provide a proxy for the unobserved small longline fleet, which tends to fish mostly in inshore waters.

Seabird observations were collected during four longline stock assessment surveys in 2002:

1. IPHC coastwide halibut survey,
2. ADFG Northern Southeast Inside (NSEI) sablefish survey,
3. ADFG Southern Southeast Inside (SSEI) sablefish survey, and
4. NMFS sablefish survey.

WSGP staff trained the fishery samplers to identify and quantify North Pacific seabirds. Immediately after hauling operations, samplers recorded the number of seabirds by species or species group on the water and in the air within a 50-meter radius of the vessel's stern. All albatross species, northern fulmars, and red-legged (*Rissa brevirostris*) and black-legged kittiwakes (*R. tridactyla*) were identified to the species level. Gulls, terns, shearwaters, storm petrels, jaegers, alcids, and cormorants were identified to the species group level. This "snap shot" methodology yields information on the presence and absence of species and their relative abundance. All hauls were monitored for incidental seabird mortality as well. IPHC received and managed data from all the surveys. The information was entered into a database by IPHC staff, and was made available to the WSGP at the University of Washington for analysis.

In the project segment described in this report, the seabird information from 2002 research surveys were analyzed and a publication (Melvin et al. 2004) was produced. Seabird data were collected from 80 ADF&G survey sets, 1,228 IPHC survey sets and 142 NMFS survey sets for a total of 1,450 observed sets of longline gear. A total of 79,131 birds were observed in the course of these surveys for an average of 54.6 seabirds per observed longline set. Most seabirds were northern fulmars (75%). Albatrosses (11%) and gulls (8%) were also common. Seabirds were absent in 223 (15.4%) longline sets, 43% of which were in inside waters.

Seabird observations were plotted as a function of location and density using ArcGIS (ESRI, Redlands, CA). Mean number of seabirds per haul-observation were calculated for each species or species group by NMFS Management Area and IPHC Regulatory Area and were contrasted for inside and outside waters. Because only one survey station occurred in the state waters of Cook Inlet, Cook Inlet was not included in the analysis of inside waters.

Short-tailed albatross were rarely observed within the 50m observation zone (11 sightings), with one observation in the Central Gulf of Alaska and the remainder in the Western Gulf of Alaska, the Aleutian Islands and the Bering Sea (Figure 1). No short-tailed albatross were observed in inside waters. Sightings were consistent with those reported to the USFWS since 1994 during similar seasons.

Details of the findings are described in Melvin et al. (2004, Appendix), which includes GIS maps of survey effort and seabird distributions and discusses the significance of these findings relative to managing seabird bycatch in the fleets of small longline vessels. Onboard fish samplers were also trained to collect these data in 2003 during this project. The 2002 data report (Melvin et al. 2004) produced for this project segment is available online (<http://www.wsg.washington.edu/outreach/mas/fisheries/datareport.pdf>) and is included as an appendix to this report.

3. SEABIRD DETERRENT TRAINING

In December, 2004, the State of Alaska adopted regulations requiring seabird avoidance measures in longline fisheries into the Alaska Administrative Code under [5 AAC 28.055](#) These regulations mirror federal fishing regulations under [50 C.F.R. 679.24](#) that include the use of rapidly sinking hooks, controlling offal discharge, and deploying buoy bag lines and streamer lines.

However, proper deployment of seabird deterrents is critical to their success. A previous joint effort by Washington and Alaska Sea Grant resulted in edited video footage demonstrating proper use of seabird deterrent measures for longline fishing gear. The second component in the current project completed production of the video footage and provided funding to duplicate and distribute the video program to commercial fishermen longlining in Alaska.

The resulting video “[Off the Hook: an informational video for longline fishermen in Alaska](#)” is available as a VHS or PAL video recording, or can be viewed online at the Washington Sea Grant website: <http://www.wsg.washington.edu/research/living/seabirdvideo.html> (see Appendix 1) in the proprietary RealPlayer and Windows Media Video formats.

The video describes the conservation issues involving incidental mortality of seabirds in Alaskan longline fisheries and provides instruction on the use of “streamer lines”, one of the seabird bycatch mitigation technologies. A press release announcing the release of the video was distributed to 417 entities (49 fishing industry, 194 government, 47 NGO, 64 academic, 10 media, and 58 unclassified entities) in 43 countries. A mailing distribution list was synthesized from ADF&G and CFEC permit holder records to cover distribution of the video to the core of the Alaska longline fleet. Copies of the VHS videotape, notification of the new regulations, and a brochure on streamer lines (produced by WSGP), were distributed to 1,800 Alaska hook and line permit holders on the mailing list. Copies of the video were also distributed to fishermen over the counter from eight ADF&G offices. An additional 292 NTSC copies of the video were distributed to 86 individuals (20 industry, 46 government, 10 NGO, 7 academic, 1 media, 3 unknown affiliation) in 10 countries, and PAL copies were mailed to 33 individuals (13 industry, 14 government, 4 NGO, 2 academic) in 14 countries.

4. OBSERVER PROGRAM ENHANCEMENT FOR SEABIRD MONITORING

The seabird identification capabilities of ADF&G onboard observers ([Schwenzfeier et al. 2002](#)) were enhanced as part of this project. Seventy copies of “[Beached Birds](#)” (2nd edition), from the University of Washington “[Coastal Observation and Seabird Survey Team](#)” (COASST) program, were purchased to help observers identify incidentally caught seabirds in the hand. In addition, 70 copies of the “National Geographic Field Guide to the Birds of North America” were purchased for general seabird identification by the observers.

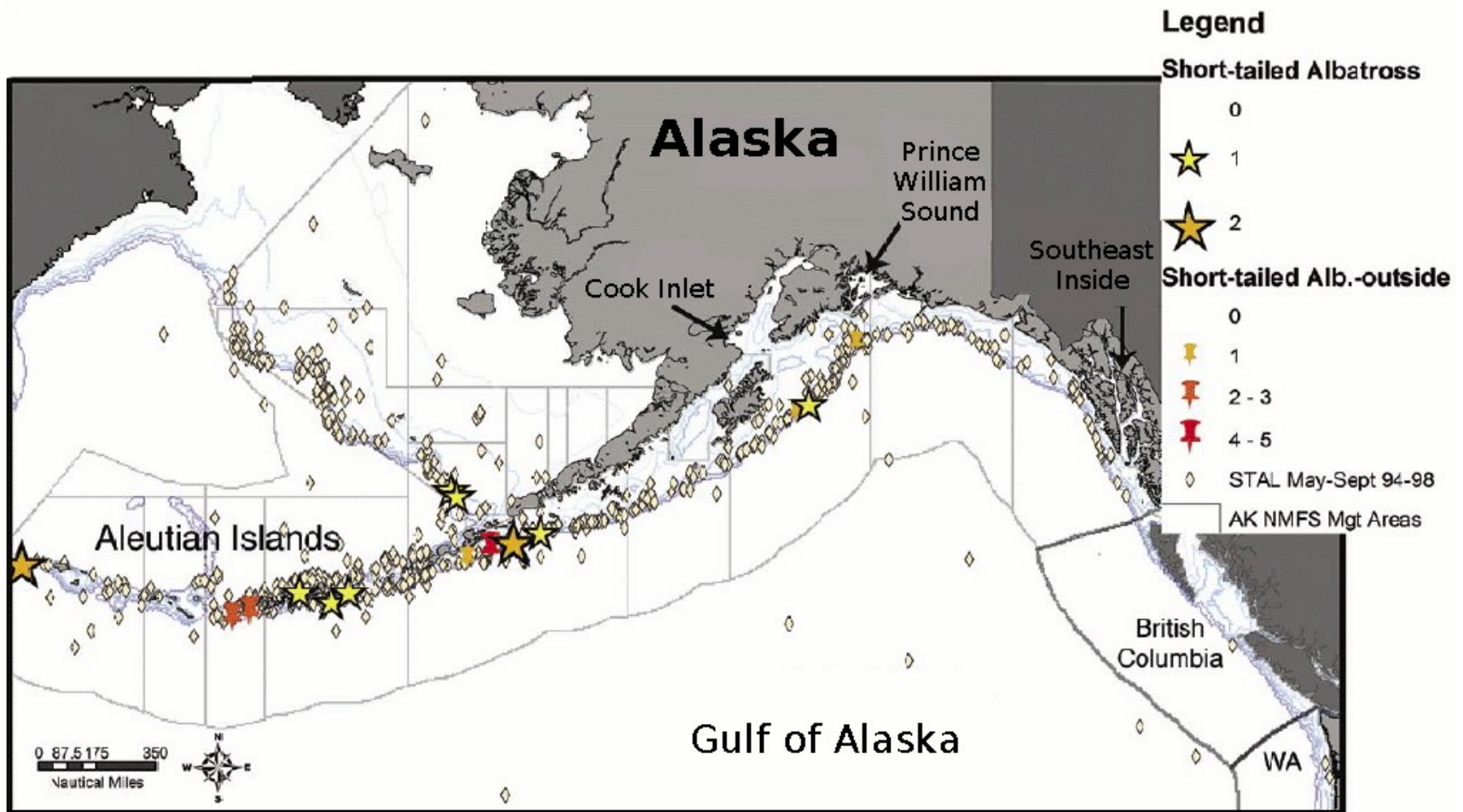


Figure 1. Location of endangered short-tailed albatross (STAL) sightings during 2002 IPHC, ADF&G, and NMFS assessment surveys (stars indicate sightings within 50 m observation zone; pins indicate sightings outside observation zone). Also shown (small diamonds) are short-tailed albatross sightings reported to the USFWS between May-September, 1994-1998. (Based on Melvin et al. 2004, Figure 7).

5. LITERATURE CITED

- Melvin, E., Dietrich, K., Van Wormer, K., and T. Geernaert. 2004. The distribution of seabirds on Alaskan longline fishing grounds: 2002 data report. [Washington Sea Grant publication WSG-TA 04-02](#).
- Schwenzfeier, M., S. Coleman and R. Reif. 2002. State of Alaska mandatory shellfish onboard observer program: Report to the Alaska Board of Fisheries, Spring 2002. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K02-9, Kodiak.
- U.S. Fish and Wildlife Service. 2002. Habitat conservation plan for coastal Alaska: has the time come? Unpubl. Report. U. S. Fish and Wildlife Service, Ecological Services, Anchorage. 9pp.

APPENDIX 1: Off the Hook






<http://www.wsg.washington.edu/research/living/seabirdvideo.html>



LIVING MARINE RESOURCES: Fish/Fisheries Management: Off the Hook

Off the Hook: an informational video for longline fishermen in Alaska.

Downloadable Video : Provided in two formats - RealPlayer and Windows Media Player. The links are not set up to play automatically within your web browser but may do so when you select the links below. You can download each file to your harddrive individually or if you want access to all files click [here](#). To download to a PC: Right click mouse > Select 'save target as' > open once downloaded. To download to a MAC: Control > Mouse click > Select 'download link to disc'.

 <p>- Free version can be downloaded for Windows (Free version link in upper right corner) and Mac OS X.</p> <ul style="list-style-type: none">• Clip 1 (8:49 minutes; 49.1 MB)• Clip 2 (8:42 minutes; 48.3 MB)• Clip 3 (5:25 minutes; 30.1 MB)	 <p>- Free version for both Windows & MAC platforms.</p> <p>Two sizes of files are available as well:</p> <ul style="list-style-type: none">• Clip 1 - (29.7 MB) - (15.0 MB)• Clip 2 - (28.5 MB) - (14.5 MB)• Clip 3 - (18.4 MB) - (9.3 MB)	
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The video was produced jointly by the Washington Sea Grant Program and the University of Alaska, Fairbanks, Marine Advisory Services with funding from the US Fish and Wildlife Service. It is being duplicated and distributed (in VHS and PAL format) with funding from the Alaska Department of Fish Game to all Alaska Federal Fisheries Permit (hook-and-line endorsement) or IFQ Permit holders affected by new and forthcoming seabird bycatch regulations.

This video provides information to help Alaska longline fishermen avoid catching seabirds and protect their fisheries. It portrays a variety of seabird species, in flight and interacting with longline gear. It also demonstrates how to rig and deploy streamer lines - a seabird bycatch deterrent required on most Alaska longliners by new regulations in 2003.

APPENDIX 2: The Distribution of Seabirds on Alaskan Longline Fishing Grounds



International Pacific
Halibut Commission

The Distribution of Seabirds on Alaskan Longline Fishing Grounds: 2002 Data Report

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Washington Sea Grant publication WSG-TA 04-02.
(<http://wsg.washington.edu/mas/pdfs/datareport.pdf>)