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**The distribution of seabirds on the Alaskan longline
fishing grounds: Implications for seabird avoidance
regulations**

Author:

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The Distribution of Seabirds on the Alaskan Longline Fishing Grounds: Implications for Seabird Avoidance Regulations

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NOAA Fisheries Service



Seabird mortality in longline fisheries is a worldwide marine conservation problem. In the Alaska groundfish longline fisheries, incidental seabird mortality averaged 13,144 birds per year from 1993 to 2004, peaking at 26,269 seabirds in 1998. Procellariiform (or “tubenose”) seabirds, which include albatross species, were the most frequently caught.

The short-tailed albatross, an endangered species under the U.S. Endangered Species Act, is the focus of regulatory and conservation attention in the Alaska longline fisheries. The U.S. Fish and Wildlife Service’s (USFWS) Biological Opinion specifies that short-tailed albatross takes exceeding six within a two-year period (four in the groundfish fishery and two in the Pacific halibut fishery) would trigger re-initiation of a Section 7 consultation in these respective fisheries and consequently, could interrupt or close Alaska’s \$320 million (ex-vessel value) groundfish and halibut longline fisheries.

In December 2001, the North Pacific Fishery Management Council took final action on seabird avoidance measures required in the Alaska longline fisheries for groundfish and Pacific halibut. These revised seabird avoidance requirements were based on the results of a study done in collaboration with industry on vessels fishing exclusively in open waters of the Bering Sea and Gulf of Alaska (GOA). During Council deliberations, the need for seabird avoidance devices for vessels fishing Alaskan inside waters — defined as Prince William Sound (PWS), Southeast Alaska (SEAK), and state waters of Cook Inlet (CI) for the purposes of seabird avoidance regulations — was strongly questioned. The Council acknowledged that albatrosses and other pelagic seabirds are unlikely to occur within these areas but that data on the distribution of these seabirds were insufficient to rule out the need for seabird mitigation in these inside waters. Ultimately, a less stringent set of regulations was adopted for vessels fishing inside waters as compared to vessels fishing all other waters of Alaska.

Given the paucity of data on seabird distribution in Alaskan waters and the need to manage Alaska’s longline fisheries based on the best available science, Washington Sea Grant Program (WSGP) developed a three-year collaborative program with the International Pacific Halibut Commission (IPHC), the National Marine Fisheries Service (NMFS) Alaska Fisheries Science Center Auke Bay Laboratory, and the Alaska Department of Fish and Game (ADFG) to collect seabird distribution data in the course of Pacific halibut and sablefish stock assessment surveys on longline vessels. In this report, we provide the most current and comprehensive data on the distribution patterns of seabirds on the Alaskan longline fishing grounds and recommend regulatory changes based on analyses of this unique data set.

Seabird data were collected from 2002-2004 during four summer longline stock assessment surveys: IPHC halibut surveys, NMFS sablefish surveys, ADFG Southeast Inside sablefish surveys, and

ADFG Prince William Sound sablefish surveys. The number of seabirds by species or species group was recorded within a 50-m radius of each survey vessel’s stern immediately after each set was retrieved, providing a snapshot of presence and absence of species and their relative abundance. Seabird sightings at each survey station across all three years were compared among eight geographic regions, comprised of two inside waters areas (PWS and SEAK) and six outside waters areas (all other Alaskan waters). Because only one survey station was located within the inside waters of CI, this area was not included in quantitative analyses of inside waters.

An average of 1,456 stations were surveyed each year, and a total of 230,452 birds were observed over three years. Most birds seen were tubenose seabirds (85% of all birds sighted), and of these, most were northern fulmars (71% of all birds sighted) or albatrosses (13% of all birds sighted). Albatrosses occurred throughout the fishing grounds in outside waters. Short-tailed albatrosses were extremely rare (0.03% of all sightings) and had a similar distribution to Laysan albatrosses — rare or absent east and south of the Western GOA and most abundant in the Aleutian Islands. Black-footed albatrosses were more ubiquitous, occurring in all outside waters.

Albatrosses and other tubenose species (fulmars and shearwaters) were absent in our observations of PWS, and extremely rare in SEAK. When sighted in SEAK, tubenose birds were geographically limited to the mouth of Chatham Strait and Dixon Entrance, making area management very tractable. Our survey data were insufficient to evaluate seabird distributions in CI.

Seabird data from the North Pacific Pelagic Seabird Database (NPPSD) and US Fish and Wildlife Service (USFWS) provided an expanded temporal and spatial assessment of seabird distribution in inside waters, spanning up to 26 years and including Cook Inlet. These data corroborated our findings, demonstrating that albatrosses were exceedingly rare or absent, and shearwaters and fulmars uncommon to absent, in all inside waters.

Collectively, data from our surveys and all other available sources strongly suggest that longline fishing poses little to no risk to albatrosses and other tubenose seabirds in Alaskan inside waters. Although longline fishing may pose some small degree of risk to seabird species that were sighted in inside waters (northern fulmars and shearwaters in highly localized areas of PWS and CI, black-legged kittiwakes in PWS, and gulls in all inside waters), none of these species are USFWS-identified birds of conservation concern. In addition, less than 5% of the longline takes of these species occurs in the GOA, strongly suggesting that the relative risk to these species is low in this region. Finally, the characteristics of most vessels fishing inside waters (considerably fewer hooks set, hooks set at slower speeds so they sink quickly, and little or no offal production) make them generally unattractive to seabirds, reducing the risk of incidental mortality even further.

Inside Waters

- We recommend that seabird avoidance requirements be eliminated for longline vessels fishing in the inside waters of Prince William Sound (NMFS Area 649), Southeast Alaska (NMFS Area 659), and state waters of Cook Inlet. Currently, in inside waters, these regulations require vessels 26-32 ft and 32-55 ft (without masts, poles, or rigging) to tow one buoy bag line, and vessels 32-55 ft (with masts, poles, or rigging) and > 55 ft to tow a single streamer line. If implemented, this action would affect 42% of the Alaska longline fleet, which lands 10% of the Alaska longline catch. Of this affected segment of the fleet, 85% are small vessels (≤ 55 ft) and over half fish with snap-on gear.
- The presence of black-footed albatrosses, northern fulmars, and shearwaters in southern Chatham Strait and Dixon Entrance of the Southeast Alaska region suggests increased risk to seabirds from longline fishing in these small areas. If this risk is deemed significant, the definition of inside waters (for the purpose of seabird avoidance regulations) could be amended to exclude these areas. Specifically, ADFG statistical areas 345603 and 345534 in Chatham Strait, and 325431 and 325401 in Dixon Entrance could be reclassified as “outside waters”, where seabird avoidance regulations would continue to be required.

Outside Waters

- Based on these data, we recommend that existing seabird avoidance requirements be maintained in all outside waters. For recommendations on small vessels fishing fixed gear in outside waters, see also *Seabird Avoidance Measures for Small Alaskan Longline Vessels* by Melvin and Wainstein (WSGP 2006, p.19).

Research

- Our seabird sighting data have proven extremely valuable with regard to ecosystem-based fisheries management. We strongly support efforts to institutionalize the collection and management of seabird observation data from fish stock assessment surveys at NMFS and IPHC. We also strongly support making these data available through the NPPSD.
- We strongly encourage efforts to expand this seabird survey protocol to all Alaska and Northwest Fisheries Science Center surveys to broaden the temporal and spatial scope of this data set for application to other fisheries. Incorporating this protocol into North Pacific Groundfish Observer Program data collection should also be explored to expand temporal and spatial coverage.



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