



## **2008 Seabird Colony Survey Trip Report Kenai Fjords National Park & Alaska Maritime National Wildlife Refuge**



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Alaska, Kenai Fjords National Park, Alaska Maritime National Wildlife Refuge, Gulf of Alaska, Aialik Bay, Bear Glacier Point, Aialik Peninsula, Chiswell, Nattoa, Beehive, Matushka, Crater Bay.

**Acronyms:**

|       |                                                 |
|-------|-------------------------------------------------|
| AMNWR | Alaska Maritime National Wildlife Refuge        |
| NPS   | National Park Service                           |
| KEFJ  | Kenai Fjords National Park                      |
| USFWS | U.S. Fish and Wildlife Service                  |
| NOAA  | National Oceanic and Atmospheric Administration |
| EVOS  | <i>Exxon Valdez</i> Oil Spill                   |

**Cover:** Photograph of Black-legged Kittiwake (*Rissa tridactyl*) adults and chicks at nests in the Chiswell Islands, Alaska Maritime National Wildlife Refuge.

## Abstract

During 14-18 July 2008, Kenai Fjords National Park (KEFJ) and Alaska Maritime National Wildlife Refuge (AMNWR) biologists conducted a complete resurvey of the Chiswell Islands common murre (*Uria aalge*) and black-legged kittiwake (*Rissa tridactyla*) populations. Censuses were also conducted at two colonies in KEFJ (i.e., East Aialik Cape and Bear Glacier Point) while en route to the Chiswell Islands. The boat-based surveys were conducted aboard the *M/V Gone Again* (14–16 July) and *M/V Serac* (16–18 July). The surveys were led by AMNWR Wildlife Biologist, Leslie Slater, with assistance from KEFJ Ecologist, Meg Hahr. The park provided all vessel support for the surveys including contracting a private vessel for the first part of the trip when the *M/V Serac* was unexpectedly unavailable due to mechanical problems. We surveyed the Chiswell Island murre and kittiwake colonies seven years after the last population counts were made employing the same methods used during previous monitoring efforts (Roseneau and Byrd 2002). The purpose of this survey was to obtain current information on the status of Chiswell Island murre and kittiwake populations which were injured by the 1989 *Exxon Valdez* Oil Spill (EVOS) and have yet to increase in numbers since the spill. This report is a summary of field activities associated with the surveys. The AMNWR will prepare a final report containing detailed survey results, analysis, and conclusions.

## Introduction

In August 2006, the National Park Service (NPS), U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) signed a General Agreement to increase interagency coordination in order to establish a seamless network of coastal refuges, reserves, parks and sanctuaries (USDI 2006). In the spirit of the Seamless Network Agreement, KEFJ and AMNWR biologists conducted a resurvey of seabird colonies in KEFJ in July 2007 aboard the NPS vessel the *M/V Serac* (Hahr 2008). The objectives of the trip were to revisit seabird colonies that had not been surveyed in more than 30 years, and to familiarize park biologists with USFWS monitoring protocols. Although survey effort in 2007 was limited due to poor weather and insufficient time to complete replicate counts, all 14 known seabird colonies in the park were revisited and park biologists gained field experience with USFWS protocols for monitoring colonial nesting seabirds. Additionally, biologists documented three new seabird colonies in the park (Figure 1).

KEFJ and AMNWR had planned a 10-day trip aboard the NPS vessel, the *M/V Serac*, in early July 2008 to conduct a complete census of all 17 park seabird colonies (requiring a minimum of three replicate counts at each colony on consecutive days) as well as a resurvey of AMNWR common murre and black-legged kittiwake colonies in the Chiswell Islands located at the mouth of Aialik Bay (Figure 1). Due to unanticipated mechanical problems, the *M/V Serac* was not available as planned. A contract vessel was located, the Seward-based charter fishing boat *M/V Gone Again*, a 27 foot, Glacier Craft Offshore with Twin 150 HP four-stroke Yamaha engines and a fully-equipped, heated cabin that slept two in addition to the captain, Wendy Bryden (Figure 2). Due to these

logistical issues, the length of the trip was shortened to five days limiting our efforts to conducting the murre and kittiwake population surveys in the Chiswell Islands.

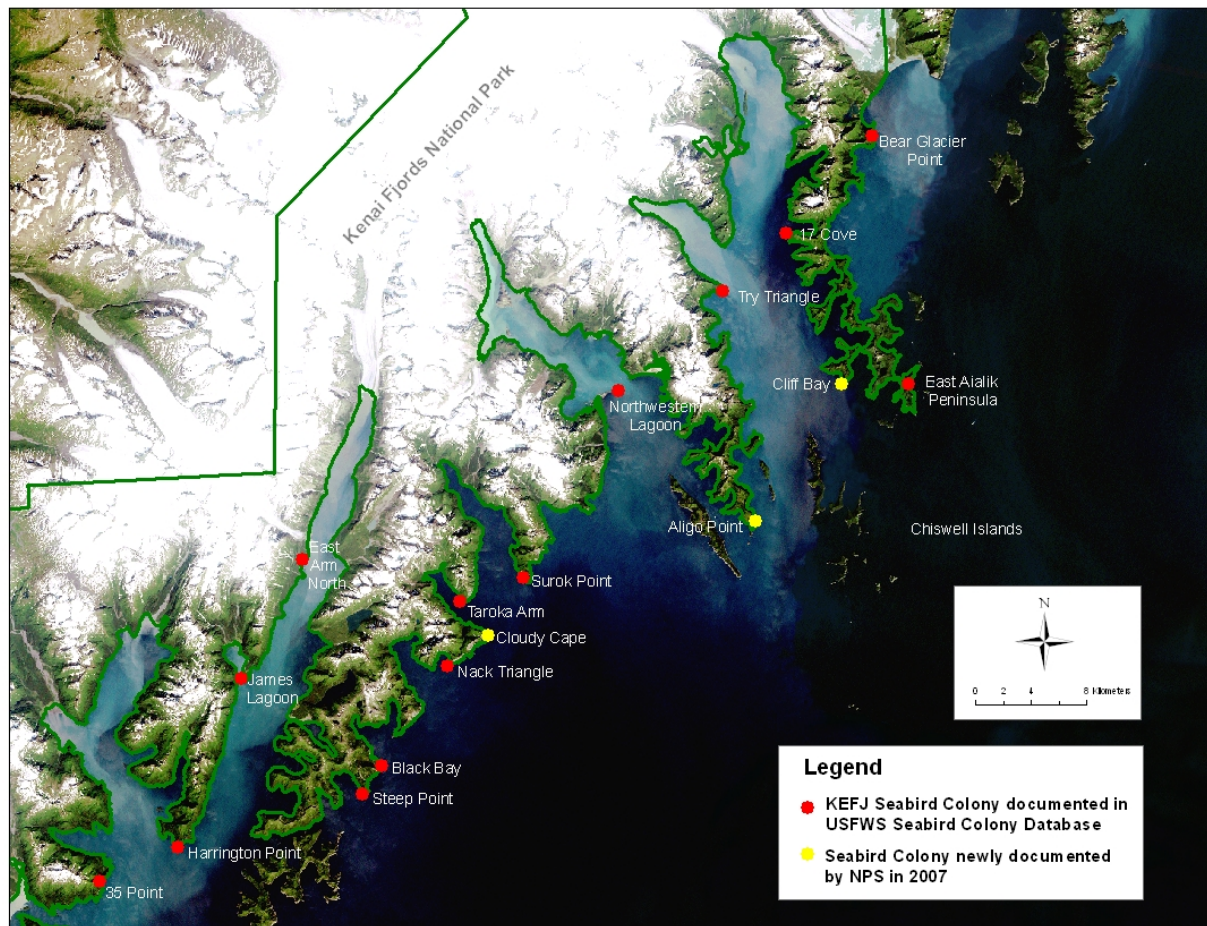


**Figure 1.** Seabird breeding colony locations in Kenai Fjords National Park.



**Figure 2.** The *M/V Gone Again*.

## Trip Details

The following includes reporting of field activities associated with seabird breeding colony surveys in KEFJ and AMNWR, 14-18 July 2008. Our objective was to conduct a complete census of the Chiswell Island common murre population and population monitoring of the Chiswell Island black-legged kittiwake population seven years after the last population counts were made using the same methods employed during previous monitoring efforts (Nysewander et al. 1993, Roseneau and Byrd 2002).

The boat-based surveys were conducted aboard the *M/V Gone Again*, a 27 foot aluminum Glacier Craft Offshore (14–16 July) and the NPS *M/V Serac*, a 53 foot fiberglass Class M/V Modutec (16–18 July). The surveys were led by AMNWR Wildlife Biologist, Leslie Slater, with assistance from KEFJ Ecologist, Meg Hahr. The park provided all vessel support for the surveys including contracting a private vessel for the first part of the trip when the *M/V Serac* was unexpectedly unavailable due to mechanical problems.

The purpose of this survey was to obtain current information on the status of Chiswell Island murre and kittiwake populations which were injured by the 1989 *Exxon Valdez* Oil Spill (EVOS) and have yet to increase in numbers since the spill. The Chiswell Islands are part of the AMNWR and are located along the southeastern coast of the Kenai Peninsula approximately seven kilometers offshore of KEFJ at the entrance to Aialik Bay (Figure 1). Study sites included Nataoa, Matushka, Chiswell, Chiswell B, Beehive, and Beehive B islands (Figure 3). Censuses were also conducted at two colonies in KEFJ (i.e., East Aialik Cape and Bear Glacier Point) while en route to the Chiswell Islands (Table 1).

We counted murres and kittiwakes from the deck of the *M/V Gone Again* and the *M/V Serac* using 10x42 binoculars and hand-held tally meters. During the counts the skipper allowed the boat to motor slowly past the nesting cliffs getting as close as was safely possible. When birds were especially dense, the skipper would maintain the position of the boat until the counts were complete. The two observers made independent counts which were then compared to see whether they were within 10% of each other. If not, both observers recounted until both counts fell within this range.

This Chiswell Island murre colonies were censused (all individuals present are counted) at the same time each day on five different, consecutive days to calculate the total number of birds present in the colony. These daily counts will then be averaged and compared to previous years counts to determine trends in population size. Monitoring of the Chiswell Island black-legged kittiwake population does not occur by census but by counting the number of birds present in specific, predefined cliff sections or plots. This was also done at the same time each day on five different, consecutive days. Because the attendance of colonial nesting seabirds at cliff nesting sites can vary substantially and unpredictably, replicate counts are essential for obtaining precise estimates of total population size. Given the often poor weather within the Gulf of Alaska, we feel fortunate to have the window we needed to successfully complete the five replicate counts recommended for monitoring the Chiswell Island murre and kittiwake populations.

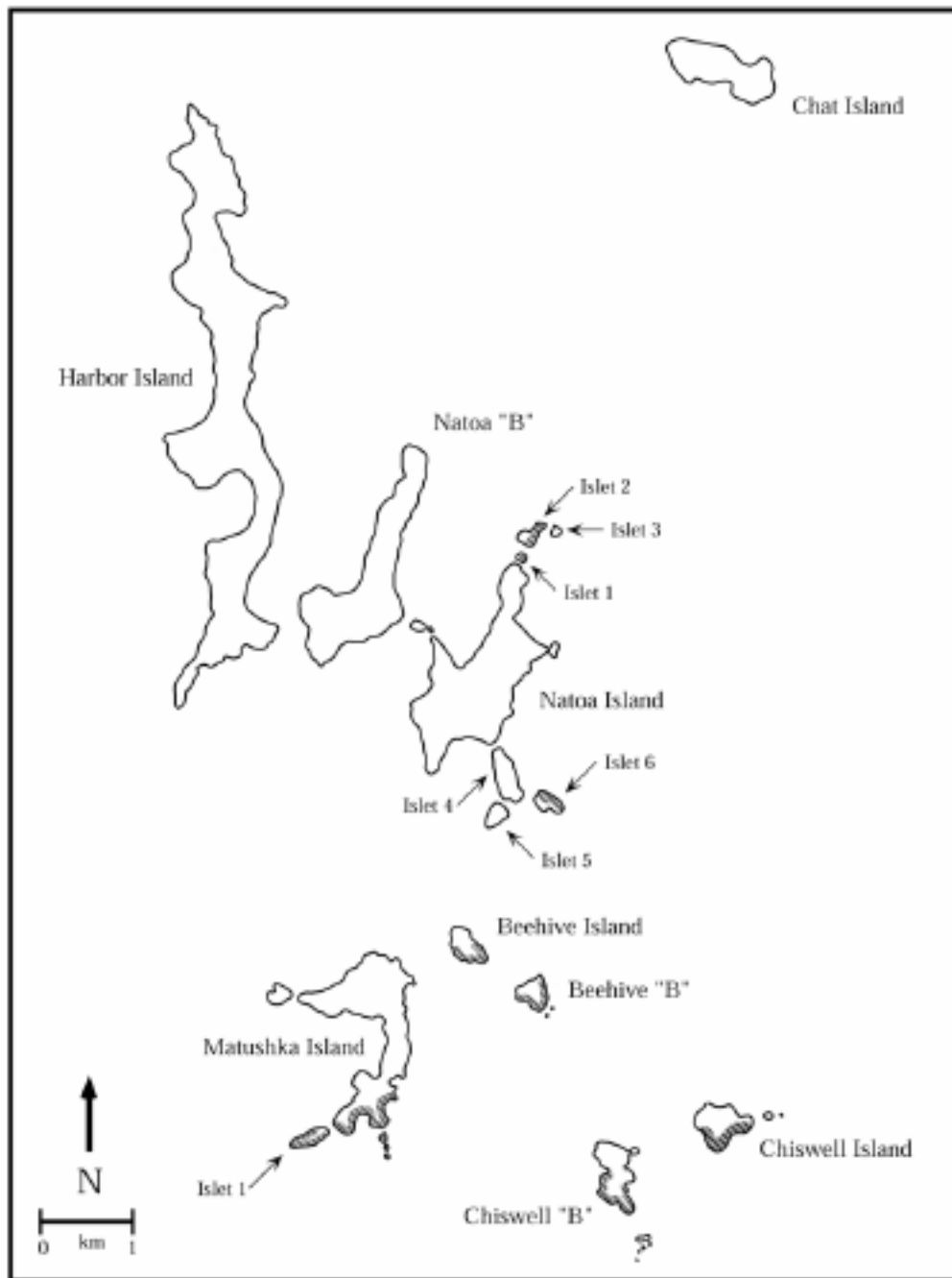


**Figure 3.** The Chiswell Islands study area, shaded areas show locations of common murre nesting habitat (Roseneau and Byrd 2002).

**Personnel:**

Leslie Slater (AMNWR)

Meg Hahr (KEFJ)

**Vessel:**

*M/V Gone Again* (14–16 July)

Wendy Bryden (Captain)

*M/V Serac* (16–18 July)

Fred Wells (Captain)

Mick Sela (Deckhand)

14 July: Meg Hahr (NPS) and Leslie Slater (USFWS) departed Seward at 0930 hrs aboard the charter vessel, *M/V Gone Again*, with Captain Wendy Bryden, headed for Aialik Bay. While en route, surveyed colonies at south end of Bear Glacier Point and Aialik Cape. Arrived at Notoa Island in the Chiswell Island Group at the mouth of Aialik Bay at approximately 1200 hrs. Conducted colony counts of common murre (COMU) and black-legged kittiwake (BLKI) population surveys (survey #1) at Beehive, Beehive “B”, Chiswell, Chiswell “B”, Matushka and Notoa Islands. Finished surveying at 2027 hrs and anchored in Three Hole Bay at 2040 hrs.

15 July: Conducted replicate colony counts and populations surveys (survey #2) in the Chiswells from 1000 until 1900. Anchored in Verdant Cove at 1930 hrs.

16 July: Conducted replicate colony counts and populations surveys (survey #3) in the Chiswells from 1000 until 1200. Met up with the NPS vessel, *M/V Serac*, at Pete’s Pass at 1200. Hahr and Slater transferred to the *Serac* for the remainder of the trip while Captain Wendy returned to Seward on the *Gone Again*. Resumed surveys in the Chiswells, finishing at 1625 hrs. Anchored in Crater Bay at 1730.

17 July: Conducted replicate colony counts and populations surveys (survey #4) in the Chiswells from 0930 until 1530. Anchored in Verdant Cove at 1630 hrs.

18 July: Conducted replicate colony counts and populations surveys (survey #5) in the Chiswells from 0930 until 1500. Return to Seward at 1830 hrs.

**Acknowledgements**

We would like to thank Captain Fred Wells of the *M/V Serac* and Captain Wendy Bryden of the *M/V Gone Again* for their excellent seamanship and tireless efforts at the helm during challenging nearshore maneuvers and rough seas. Their expertise and attention were critical to the safe and successful execution of this project. Our thanks go also to NPS deckhand, Mick Sela, for the wonderful meals and assistance he provided during our time on the *M/V Serac*. Special thanks to KEFJ Superintendent, Jeff Mow, and KEFJ Chief of Resource Management, Shelley Hall, for their financial support of this joint NPS and USFWS project. Kirk Desermia, Mike Tetreau, and Marilyn Burch, at the KEFJ headquarters, monitored our daily radio check-ins and provided us with considerable logistical support.

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**Table 1.** Summary of seabirds censused at two colonies in Kenai Fjords National Park.

| location     | time counted   |      | # of<br>adults on<br>land | # of<br>adults on<br>water<br>near<br>colony/<br>roost | # of<br>immature<br>s on land | # of<br>immature<br>s on<br>water<br>near<br>colony/<br>roost | # of<br>nests | minimum<br>count of<br>adults<br>associate<br>d with<br>colony |
|--------------|----------------|------|---------------------------|--------------------------------------------------------|-------------------------------|---------------------------------------------------------------|---------------|----------------------------------------------------------------|
| Bear Glacier | 10:20-10:55 hr | DCCO | 7                         |                                                        | 8                             |                                                               |               |                                                                |
| Bear Glacier | 10:20-10:55 hr | PECO | 14                        |                                                        | 2                             |                                                               |               |                                                                |
| Bear Glacier | 10:20-10:55 hr | GWGU | 32                        | 15                                                     |                               |                                                               |               |                                                                |
| Bear Glacier | 10:20-10:55 hr | BLKI | 23                        | 18                                                     |                               |                                                               |               |                                                                |
| Bear Glacier | 10:20-10:55 hr | PIGU | 5                         |                                                        |                               |                                                               |               | 5                                                              |
| Bear Glacier | 10:20-10:55 hr | MAMU | 1                         |                                                        |                               |                                                               |               | 1                                                              |
| Bear Glacier | 10:20-10:55 hr | HOPU | 4                         | 93                                                     |                               |                                                               |               | 97                                                             |
|              |                |      |                           |                                                        |                               |                                                               |               |                                                                |
| Aialik Cape  | 11:21-11:43 hr | DCCO | 9                         |                                                        | 2                             |                                                               |               |                                                                |
| Aialik Cape  | 11:21-11:43 hr | PECO | 22                        |                                                        | 6                             |                                                               |               |                                                                |
| Aialik Cape  | 11:21-11:43 hr | GWGU | 98                        | 17                                                     | 3                             |                                                               |               |                                                                |
| Aialik Cape  | 11:21-11:43 hr | BLKI | 3                         | 50                                                     |                               |                                                               |               |                                                                |
| Aialik Cape  | 11:21-11:43 hr | COMU |                           | 21                                                     |                               |                                                               |               |                                                                |
| Aialik Cape  | 11:21-11:43 hr | TUPU | 17                        | 12                                                     |                               |                                                               |               | 29                                                             |
| Aialik Cape  | 11:21-11:43 hr | HOPU | 9                         | 81                                                     |                               |                                                               |               | 90                                                             |

Note: Kittiwake & cormorant nests may persist from year to year if in protected location. Best estimate of colony size. Nests for BLKI are defined as mud platform to which new vegetation material added in a given year. Replicate counts (& photo-documentation of nest locations during each visit during incubation) recommended. This will account for nest attempts and nest loss to get most accurate measure of breeding effort. Cormorant nests distinguished as follows: DCCO tend to use heavier materials (about the size of Heracleum stalks in diameter); look "messier" as the materials seem less intertwined. PECO/RFCO use more grass-like and mossy materials (smaller forbs as well) to hold mud/excrement in place (L. Slater).

## **Appendix A. KEFJ Field Operational Plan.**

# Operational Update July 14 – 18, 2008

## Seabird Colony Survey, Kenai Fjords NP Coast

Field Contact: Meg Hahr (403), M/V Serac

Seward Contact: Mark Kansteiner (404, 224-7529)

### **Personnel:**

#### M/V Gone Again (14 – 16 July)

1. Meg Hahr (KEFJ)
2. Leslie Slater (U.S. Fish & Wildlife Service)
3. Wendy Bryden (Captain)

#### M/V Serac (16 – 18 July)

1. Meg Hahr
2. Leslie Slater
3. Fred Wells (Captain)
4. Mick Sela (Deckhand)

### **Boat:**

14 – 16 July: M/V Gone Again (27' aluminum glacier craft)

16 – 18 July: M/V Serac

### **Communications:**

Park VHF hand-held radio

Hand-held marine VHF radio

Marine VHF radio on the Gone Again and Serac

Park Sat Phone: 8816-6314-43576 (when on the Gone Again)

Sat Phone on the Serac

EPIRB on the Gone Again and Serac

406 MHz PLB

Meg: ADCF 08823CC0001

While on the Gone Again, 403 will make daily morning (0800 hrs.) and evening (before 2000 hrs.) check-ins via park radio or sat phone to park dispatch (700) to open/close float plans. The Serac captain will make daily morning and evening check ins with park dispatch (700)

### **Emergency Plan:**

Primary contact during work hours: Park headquarters on park VHF hand-held radio, coastal repeaters, USCG

Secondary contacts during non-work hours (after 1700):

Mark Kansteiner - 907 224 3589 (cell 907 362 7676)

Shelley Hall – 907-224-2470

Seward Police Dispatch – 907 224 3338

## **Appendix A. Continued.**

### **General Operations Plan and Schedule:**

Monday, 7/14: Depart Seward small boat harbor at 8am. Transit to Chiswell Islands to conduct seabird colony surveys. Anchor in either Three Hole or Verdant coves.

Tuesday, 7/15: Survey Chiswell colonies and horned puffin colonies in lower Aialik Bay. Anchor in either Three Hole or Verdant coves.

Wednesday, 7/16: Survey Chiswell colonies. Meet the Serac at 1200 in the Chiswells. 403 and Leslie Slater transfer to the Serac for remainder of the trip and the Gone Again returns to Seward. Travel to Outer Coast to survey colonies. Anchor in Two Arm Bay.

Thursday, 7/17: Survey Outer Coast colonies. Anchor in Two Arm Bay.

Friday, 7/18: Survey Outer Coast colonies. Return to Seward by 1600.