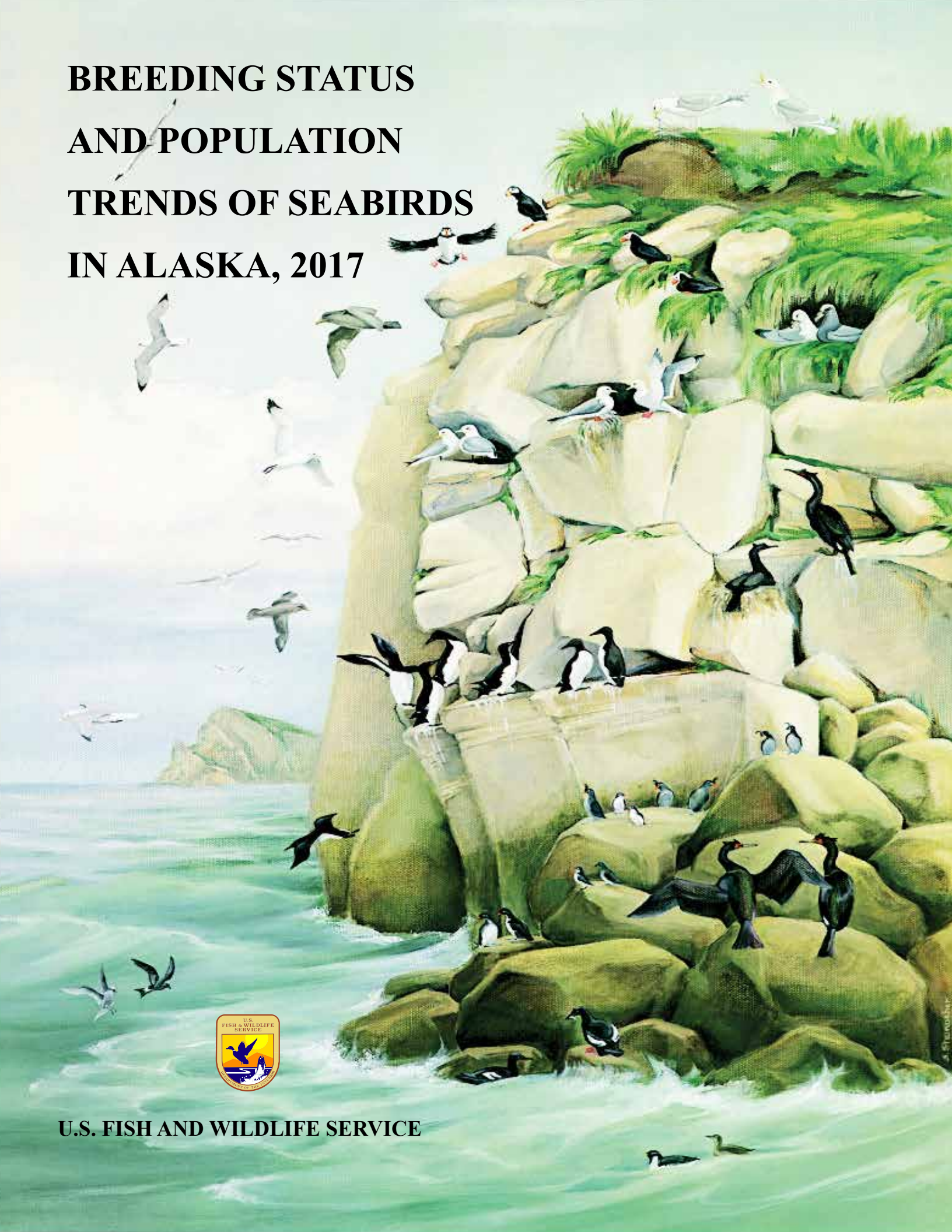


**BREEDING STATUS
AND POPULATION
TRENDS OF SEABIRDS
IN ALASKA, 2017**



U.S. FISH AND WILDLIFE SERVICE

BREEDING STATUS AND POPULATION TRENDS OF SEABIRDS IN ALASKA, 2017

Compiled By:

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The findings and conclusions in this report are those of the author(s) and do not necessarily represent the views of the U.S. Fish and Wildlife Service or the Department of the Interior.

Executive Summary

Data are collected annually for selected species of marine birds at breeding colonies on the far-flung Alaska Maritime National Wildlife Refuge (NWR), and at other areas in Alaska, to monitor the condition of the marine ecosystem and to evaluate the conservation status of species under the trust of the U. S. Fish and Wildlife Service. The strategy for colony monitoring includes estimating timing of nesting events, rates of reproductive success, and population trends of representative species of various foraging guilds (e.g., offshore diving fish-feeders, diving plankton-feeders) at geographically dispersed breeding sites. This information enables managers to better understand ecosystem processes and respond appropriately to resource issues. It also provides a basis for researchers to test hypotheses about ecosystem change. The value of the marine bird monitoring program is enhanced by having sufficiently long time-series to describe patterns for these long-lived species.

During the summer of 2017, seabird data were gathered at seven of the eight annual monitoring sites on the Alaska Maritime NWR. Birds were not monitored at St. Lazaria Island due to inadequate funding. The species monitored were murre, pigeon guillemots, ancient murrelets, auklets, puffins, kittiwakes, glaucous-winged gulls, northern fulmars, storm-petrels, and cormorants. In addition, data were gathered at five other locations which are visited intermittently, or were part of a research or monitoring program outside the refuge.

Timing of breeding (Table A)

- Statewide, in 2017 mean hatch date was early in 43%, average in 36%, and late in 21% of monitored species. Three of the four monitored auklets exhibited early timing in 2017, whereas murre and black-legged kittiwakes were later than average.
- Murre and kittiwake eggs failed to hatch on study plots at several monitored colonies in 2017 (e.g., common and thick-billed murre at Aiktak Island; black-legged kittiwakes at St. Paul Island; red-legged kittiwakes at all three monitored colonies--St. Paul, St. George, and Buldir islands), probably due to nest depredation and/or nest abandonment by adults.

Table A. Regional and statewide seabird breeding chronology^a compared to averages for past years within regions and the state of Alaska as a whole. Only regions for which there were data from 2017 are included.

Region	COMU ^b	TBMU	ANMU	PAAU	LEAU	WHAU	CRAU	HOPU	TUPU	BLKI	GWGU	FTSP	LHSP	RFCO
SE Bering	L	L	E		E			E	A		E	E	A	E
SW Bering		L		E	E	E	E	A		L	L			
N. GOA ^c	A	L		A				E	A	L	A			
Alaska	L	L	E	A	E	E	E	A	A	L	A	E	A	E

^aCodes:

“E” and red cell color indicate hatching chronology was > 3 days earlier than the average for sites in this region.

“A” and yellow cell color indicate hatching chronology was within 3 days of average.

“L” and green cell color indicate hatching chronology was > 3 days later than the average for sites in this region.

^bCOMU=common murre, TBMU=thick-billed murre, ANMU=ancient murrelet, PAAU=parakeet auklet, LEAU=least auklet, WHAU=whiskered auklet, CRAU=crested auklet, HOPU=horned puffin, TUPU=tufted puffin, BLKI=black-legged kittiwake, GWGU=glaucous-winged gull, FTSP=fork-tailed storm-petrel, LHSP=Leach’s storm-petrel, RFCO=red-faced cormorant.

^cGOA=Gulf of Alaska.

Productivity (Table B)

- Statewide, 2017 productivity was average in 47% of monitored species and below average in 53%. No monitored species had above average productivity statewide in 2017.
- In 2017, murre, tufted puffins, and kittiwakes exhibited widespread breeding failures, although the failures were not as prevalent for murre as they were in 2016, following an extensive 2015-2016 wintertime die off event.

- However, there were exceptions, with some species exhibiting above average productivity at certain colonies in 2017 (e.g., black-legged kittiwakes at Cape Lisburne; red-faced cormorants at St. Paul Island; common and thick-billed murres, glaucous-winged gulls, and pelagic cormorants at Chowiet Island).

Table B. Regional and statewide seabird breeding productivity levels^a compared to averages for past years within regions and the state of Alaska as a whole. Only regions for which there were data from 2017 are included.

Region ^b	COMU ^c	TBMU	ANMU	PAAU	LEAU	WHAU	CRAU	RHAU	HOPU	TUPU	BLKI	RLKI	GWGU	FTSP	LHSP	RFCO	PECO
N. BS/CS											H						
SE Bering	L	L	A		L				A	L	L	L	A	A	A	L	L
SW Bering		L		A	A	A	A		H	L	L	L	L	L	A		
N. GOA	H	H		A				A	L	L	L		H				H
Alaska	L	L	A	A	L	A	A	A	A	L	L	L	A	L	A	L	L

^aCodes:

“L” and red cell color indicate productivity was > 20% below the average for the region.

“A” and yellow cell color indicate productivity was within 20% of average.

“H” and green cell color indicate productivity was > 20% above the average for the region.

^bBS=Bering Sea, CS=Chukchi Sea, GOA=Gulf of Alaska.

^cCOMU=common murre, TBMU=thick-billed murre, ANMU=ancient murrelet, PAAU=parakeet auklet, LEAU=least auklet, WHAU=whiskered auklet, CRAU=crested auklet, RHAU=rhinoceros auklet, HOPU=horned puffin, TUPU=tufted puffin, BLKI=black-legged kittiwake, RLKI=red-legged kittiwake, GWGU=glaucous-winged gull, FTSP=fork-tailed storm-petrel, LHSP=Leach’s storm-petrel, RFCO=red-faced cormorant, PECO=pelagic cormorant.

Population trends during 2008-2017 (Table C)

- Statewide, 19% of species showed increasing population trends, 37% were stable, and 44% declined between 2008 and 2017.
- Low colony attendance in recent years following the 2015-2016 winter die off may be a consequence of poor localized habitat conditions, and may or may not reflect true changes in population size. Birds not attending the cliffs frequently form large rafts in nearby waters.
- In some cases, the 2017 counts were a small fraction of prior years’ counts. For example, the 2017 murre count at Aiktak Island was about 6% of the 2016 count there. Future counts will be needed to determine whether there was mortality, whether breeding birds emigrated out of the area, or whether they simply didn’t breed in 2017.

Table C. Regional and statewide seabird population trends^a between 2008 and 2017 within regions and the state of Alaska as a whole. Only sites for which there were data from at least two years (at least 5 years apart) within the target decade are included.

Region ^b	COMU ^c	TBMU	UNMU	PIGU	LEAU	RHAU	TUPU	BLKI	RLKI	GWGU	NOFU	FTSP	STPE	RFCO	PECO	UNCO
N. BS/CS			↑					↑								
SE Bering	↓	↔	↓		↓		↔	↓	↔	↓	↑		↑	↓	↓	↓
SW Bering			↔					↑	↑						↓	↔
N. GOA			↓	↑		↔	↓	↓		↔	↔	↔				
Southeast			↔	↔		↔				↑			↔		↑	
Alaska	↓	↔	↓	↔	↓	↔	↓	↔	↑	↔	↑	↔	↑	↓	↓	↓

^aCodes:

↓ and red cell color indicate a negative population trend of ≥3% per annum for this site or region.

↔ and yellow cell color indicate that per annum change was within 3% of the site average.

↑ and green cell color indicate a positive population trend of ≥3% per annum for this site or region.

^bBS=Bering Sea, CS=Chukchi Sea, GOA=Gulf of Alaska.

^cCOMU=common murre, TBMU=thick-billed murre, UNMU=unspecified murre, PIGU=pigeon guillemot, LEAU=least auklet, RHAU=rhinoceros auklet, TUPU=tufted puffin, BLKI=black-legged kittiwake, RLKI=red-legged kittiwake, GWGU=glaucous-winged gull, NOFU=northern fulmar, FTSP=fork-tailed storm-petrel, STPE=unspecified storm-petrel, RFCO=red-faced cormorant, PECO=pelagic cormorant, UNCO=unspecified cormorant.

Executive Summary	i
Table of Contents	iii
Introduction	1
Methods	1
Results.....	4
Common murre (<i>Uria aalge</i>).....	4
Breeding chronology	4
Productivity.....	4
Populations	7
Thick-billed murre (<i>Uria lomvia</i>).....	10
Breeding chronology	10
Productivity.....	10
Populations	7
Pigeon guillemot (<i>Cephus columba</i>).....	13
Populations	13
Ancient murrelet (<i>Synthliboramphus antiquus</i>).....	14
Breeding chronology	14
Productivity.....	14
Parakeet auklet (<i>Aethia psittacula</i>).....	15
Breeding chronology	15
Productivity.....	15
Least auklet (<i>Aethia pusilla</i>).....	18
Breeding chronology	18
Productivity.....	18
Populations	18
Whiskered auklet (<i>Aethia pygmaea</i>).....	21
Breeding chronology	21
Productivity.....	21
Crested auklet (<i>Aethia cristatella</i>).....	22
Breeding chronology	22
Productivity.....	22
Rhinoceros auklet (<i>Cerorhinca monocerata</i>).....	23
Productivity.....	23
Populations	23
Horned puffin (<i>Fratercula corniculata</i>).....	25
Breeding chronology	25
Productivity.....	25
Tufted puffin (<i>Fratercula cirrhata</i>).....	28
Breeding chronology	28
Productivity.....	28
Populations	31

Black-legged kittiwake (<i>Rissa tridactyla</i>)	32
Breeding chronology	32
Productivity.....	32
Populations	35
Red-legged kittiwake (<i>Rissa brevirostris</i>)	37
Breeding chronology	37
Productivity.....	37
Populations	40
Glaucous-winged gull (<i>Larus glaucescens</i>).....	41
Breeding chronology	41
Productivity.....	41
Populations	44
Northern fulmar (<i>Fulmarus glacialis</i>)	45
Populations	45
Fork-tailed storm-petrel (<i>Oceanodroma furcata</i>)	46
Breeding chronology	46
Productivity.....	46
Populations	49
Leach's storm-petrel (<i>Oceanodroma leucorhoa</i>).....	50
Breeding chronology	50
Productivity.....	50
Populations	49
Red-faced cormorant (<i>Phalacrocorax urile</i>).....	53
Breeding chronology	53
Productivity.....	53
Populations	55
Pelagic cormorant (<i>Phalacrocorax pelagicus</i>)	57
Productivity.....	57
Populations	55
Summary tables.....	59
Acknowledgments.....	62
References	62