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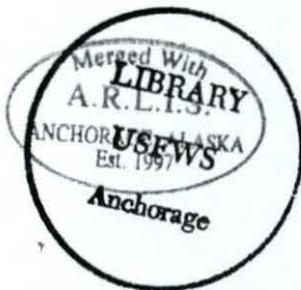
OBSERVATIONS OF BIRDS ON THE NAKNEK AND KVICHAK RIVERS, UPPER KVICHAK BAY, ILIAMNA LAKE, AND COOK INLET -- 30 August-4 September and 12-15 September 1981,

TRIP REPORT

by

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Key Words: Birds;
Bering Sea, Naknek River, Kvichak Bay, Kvichak River, Iliamna Lake;
Gulf of Alaska, Cook Inlet;
Annotated List; Abundance.



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1011 E. Tudor Road
Anchorage, Alaska 99503
October 1981

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The purpose of this report is to document and summarize casual observations of birds made aboard the U.S. Fish and Wildlife Service Research Vessel Sea Otter, in transit from King Salmon to Anchorage, Alaska (via the Naknek River, upper Kvichak Bay, Kvichak River, Iliamna Lake, and Cook Inlet), 30 August-4 September and 12-15 September 1981.

METHODS

All observations were made by the author from the pilot house of the 32' R/V Sea Otter while the boat was underway. No effort was made to conduct standardized transects on the Naknek River, upper Kvichak Bay, Kvichak River, or Iliamna Lake. I simply kept a running tally of all birds observed in front, and on either side, of the boat. On Cook Inlet, standardized transects of 10 min duration were conducted in which all birds encountered within 300 m of the boat were recorded. All individuals were identified to the lowest taxon possible, and eagles and gulls were recorded by age class. A summary of observation effort, by locality, is presented in Table 1.

RESULTS AND DISCUSSION

Naknek River

A total of 261 individuals (representing at least 14 species) were recorded during transects along approximately 37 km of the Naknek River for an average of 7.0 individuals/linear km of river (Table 2).

Waterfowl accounted for 60% of all birds seen. American Wigeon (Anas americana) and Pintail (A. acuta) were the most abundant of the five species recorded.

Gulls (of two species) accounted for 32% of all birds seen. Glaucous-winged Gulls (Larus glaucescens) outnumbered Mew Gulls (L. canus) 2.6 to 1.

Loons, grebes, shorebirds and passerines comprised the remainder of the birds seen.

Upper Kvichak Bay

Five species were recorded on upper Kvichak Bay, with Glaucous-winged Gulls and Mew Gulls predominating (Table 3).

Kvichak River

A total of 605 individuals (representing at least 22 species) were recorded during transects along approximately 110.5 km of the Kvichak River, for an average of 5.5 individuals/linear km of river (Table 4).

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Ten species of waterfowl accounted for 62% of all birds seen. The Greater Scaup (Aythya marila) was the most abundant species of duck, representing 42% of all ducks noted. American Wigeon and Pintail were the most abundant of the four species of dabbling ducks. Williamson and Peyton (1962) indicated that American Wigeons were rare to the west of Iliamna Lake, and could find no reports of the occurrence of the species on the Kvichak River. The Red-breasted Merganser (Mergus merganser) was the most abundant of the four species of sea ducks. Most mergansers were distributed in small groups of 5-8 birds ($x = 5.6$, $n = 5$). All birds were female-plumaged and apparently incapable of flight; these groups were probably females with broods. Two Oldsquaws (Clangula hyemalis) observed on the lower Kvichak River may be unusual for that locality, as this species was not mentioned by Williamson and Peyton (1962).

Gulls (of three species) accounted for 27% of all birds seen. Most (93%) were Glaucous-winged Gulls, of which 41% were adult and 59% were immature ($n = 59$). Lensink (in Williamson and Peyton 1962) considered the Mew Gull to be the most common gull along the Kvichak River; this was certainly not the case at the time of the present survey, with the Glaucous-winged Gull outnumbering the Mew Gull 15.5 to 1.

Loons, grebes, cormorants, raptors, cranes, kingfishers, and passerines comprised the remainder of the birds seen. Two Red-necked Grebes (Podiceps grisegena), a species not previously recorded from the Kvichak River (Williamson and Peyton 1962), were observed just below the "flats". Bald Eagles (Haliaeetus leucocephalus) and Marsh Hawks (Circus cyaneus) were both fairly common, especially in the vicinity of the "flats". Among Bald Eagles, 46% were adult and 54% were immature ($n = 13$). A flock of about 30 Sandhill Cranes (Grus canadensis) observed in the "flats" is of interest since Williamson and Peyton (1962) do not mention the species from this locality. Belted Kingfishers (Megaceryle alcyon) are apparently rare along the Kvichak River, as no records are cited by Williamson and Peyton (1962).

Iliamna Lake

A total of 490 individuals (representing at least 12 species) were recorded during approximately 125 km of transects on Iliamna Lake, for an average of 3.9 individuals/linear km, or about 13.1 individuals/km² (Table 5).

Gulls (of three species) accounted for 63% of all birds seen. Most (91%) were Glaucous-winged Gulls, of which 55% were adults and 45% were immature ($n = 141$). Glaucous-winged Gulls outnumbered Mew Gulls 11.2 to 1.

Double-crested Cormorants (Phalacrocorax auritus) comprised 14% of all birds seen and were most abundant in the vicinity of several islands near Tommy Point and Squirrel Point. Cormorants were actually seen sitting on two islands, where they may have nested earlier in the season (cf. Williamson and Peyton 1962).

Waterfowl accounted for just 12% of all birds seen. Harlequin Ducks (Histrionicus histrionicus) and Red-breasted Mergansers were the only species positively identified.

Loons, grebes, shorebirds, jaegers, and murrelets comprised the remainder of the birds seen. Williamson and Peyton (1962) do not mention either the Red-necked Grebe or the Horned Grebe (Podiceps auritus) as occurring on Iliamna Lake. A single Marbled Murrelet (Brachyramphus marmoratus) observed near Eagle Bluff is particularly noteworthy at this inland locality. Gabrielson (Auk 61: 105-130, 1944) saw a number of Marbled Murrelets at the head of Iliamna Lake on July 27, 1940.

Cook Inlet

Inshore Waters

A total of 620 individuals (representing at least 12 species) were recorded during the 1.54 hr of transects in the protected, Inshore Waters of Iliamna and Tuxedni bays, for an average density of 121.6 birds/km² (Table 6).

Sea ducks (of four species) accounted for 90% of all birds seen, while cormorants represented another 6%. Loons, swans, gulls, and murrelets comprised the remainder of the birds seen.

Nearshore Waters

A total of 227 individuals (representing at least 10 species) were recorded during 20 10-minute transects between White Gull Island, Iliamna Bay and Chisik Island, Tuxedni Bay (Table 7), for an average density of 12.3 birds/km².

Gulls (of two species) accounted for 71% of all birds seen. Most (96%) were Black-legged Kittiwakes (Rissa tridactyla). No more than 200-300 kittiwakes (adults in basic plumage plus immatures) were observed off transect on the water at the base of the breeding cliffs at the south-east end of Chisik Island. A few birds would occasionally land on the cliff face and depart shortly thereafter; the breeding cliffs were essentially deserted. Kittiwakes were seen fairly regularly as far north as Kalgin Island, where a local concentration of 150-200 birds was encountered in tide rips at the south end of the island.

Small alcids comprised 9% of all birds seen. All birds encountered on the transect appeared to be Brachyramphus murrelets, probably Marbled Murrelets (B. marmoratus). Birds were observed in both basic and alternate plumages. A flock of 25-30 Marbled Murrelets was seen in a tide rip near Duck Island, and a local concentration of 10-20 birds was seen in a tide rip at the south end of Kalgin Island. A few (5-10) Common Murres (Uria aalga) were seen in the water near Duck Island, but none were seen on the cliffs. A total of perhaps 10-15 Horned Puffins (Fratercula corniculata) were seen on the water near Duck Island and flying to and from the rocks, suggesting that some birds may still have had young.

Cormorants accounted for 8% of all birds seen. Both Double-crested and Pelagic (Phalacrocorax pelagicus) cormorants were present, but the former greatly outnumbered the latter.

Waterfowl accounted for 8% of all birds seen. White-winged (Melanitta deglandi) and Black (M. nigra) scoters were the only species identified.

Loons, shearwaters, and shorebirds comprised the remainder of the birds seen.

Offshore Waters

A total of 11 individuals (representing three species) were recorded during 23 10-minute transects in lower₂ and upper Cook Inlet (Table 8) for an average density of 0.6 birds/km². Birds were recorded on just 35% of the transects.

Table 1. Summary of observation effort by locality.

Location	Date	Time of Observations (ADT)	Total Elapsed Times (hours)	Total Length of Transect (km)	Total Area of Transect (km ²)
Naknek River	30 Aug	1450-1700	2.17	37.0	--
Kvichak Bay	1 Sep	1324-1605	2.68	--	--
Kvichak River (a)	1 Sep	1605-1934	3.48	50.0	--
Kvichak River (b)	2 Sep	0925-1325	4.00	44.0	--
Kvichak River (c)	2 Sep	1425-1512, 1602-1751	2.60	10.0	--
Kvichak River (d)	4 Sep	0927-1023	0.93	6.5	--
Iliamna Lake	4 Sep	1023-1830	8.12	125.0	--
Cook Inlet:					
Inshore (Iliamna Bay)	12 Sep	1400-1440	0.67	8.0	2.4
Inshore (Tuxedni Bay)	14 Sep	0950-1042	0.87	9.0	2.7
Nearshore	13 Sep	0800-1250	3.33	62.0	18.5
Offshore	15 Sep	1000-1350	3.83	63.0	18.9

Table 2.

Birds observed on the Naknek River between King Salmon and Coffee Point,
Naknek, 29 August 1981

Species	Total Individuals
Common Loon	10
Red-throated Loon	2
Red-necked Grebe	1
Double-crested Cormorant	4
Pintail	30
Green-winged Teal	9
American Wigeon	100
Black Scoter	6
Red-breasted Merganser	13
Greater Yellowlegs	1
Glaucous-winged Gull	60
Mew Gull	23
Common Raven	1
unidentified passerine	1
	—
Total Individuals	261
Individuals/linear Km	7.0

Table 3.

Birds observed on upper Kvichak Bay between Naknek and Nakeen,
4 September 1981 (qualitative observations only).

<u>Species</u>	<u>Status</u>
Black Scoter	30 birds
Northern Phalarope	3 birds
Glaucous-winged Gull	abundant
Mew Gull	common
Bonaparte's Gull	several

Table 4.

Birds observed on the Kvichak River between Nakeen and Igiugig, 1-2 and 4 September 1981

Species	Total Individuals				Grand Total
	(a) Nakeen- Levelock	(b) Levelock- "Flats"	(c) "Flats"	(d) "Flats"- Igiugig	
Common Loon	1	0	0	0	1
Arctic Loon	2	3	2	0	7
unidentified loons	0	0	2	0	2
Red-necked Grebe	0	2	0	0	2
Double-crested Cormorant	0	1	0	0	1
Whistling Swan	0	2	0	0	2
Mallard	0	5	0	0	5
Pintail	4	35	8	0	47
Green-winged Teal	0	12	6	0	18
American Wigeon	0	56	7	0	63
unidentified dabbling ducks	0	15	14	0	29
Greater Scaup	0	154	3	0	157
Oldsquaw	2	0	0	0	2
Surf Scoter	1	0	0	0	1
Black Scoter	0	4	0	0	4
unidentified scoters	0	2	0	0	2
Red-breasted Merganser	0	25	9	6	40
unidentified ducks	2	0	0	0	2
Bald Eagle	1	6	6	0	13
Marsh Hawk	1	1	5	0	7
Sandhill Crane	0	0	30	0	30
Glaucous-winged Gull	23	40	15	5	83
Herring Gull	1	0	0	0	1
Mew Gull	3	2	0	0	5
unidentified gulls	73	0	0	0	73
Belted Kingfisher	0	1	0	0	1
Gray Jay	1	0	0	0	1
unidentified passerines	0	5	0	1	6
Total Individuals	115	371	107	12	605
Individuals/linear Km	2.3	8.4	10.7	1.8	5.5

Table 5.

Birds observed on Iliamna Lake between Igiugig and Pile Bay,
4 September 1981

<u>Species</u>	<u>Total Individuals</u>
unidentified loons	2
Red-necked Grebes	2
Horned Grebe	20
Double-crested Cormorant	69
Harlequin Duck	4
Red-breasted Merganser	7
unidentified ducks	46
unidentified shorebirds	30
Parasitic Jaeger	1
Glaucous-winged Gull	280
Herring Gull	3
Mew Gull	25
Marbled Murrelet	<u>1</u>
Total Individuals	490
Individuals/Km	3.9

Table 6

Birds observed in the Inshore Waters of Iliamna and Tuxedni bays,
lower Cook Inlet, 12 and 14 September 1981

Species	Bay		Total
	Iliamna	Tuxedni	
Arctic Loon	1	0	1
Double-crested Cormorant	3	7	10
Pelagic Cormorant	1	0	1
unidentified cormorants	25	0	25
unidentified swans	0	2	2
Oldsquaw	0	1	1
White-winged Scoter	240	10	250
Surf Scoter	10	25	35
Black Scoter	240	30	270
Glaucous-winged Gull	4	0	4
Mew Gull	8	0	8
Black-legged Kittiwake	0	10	10
Marbled Murrelet	<u>1</u>	<u>2</u>	<u>3</u>
Total Individuals	533	87	620
Individuals/Km ²	222.1	32.2	121.6

Table 7.

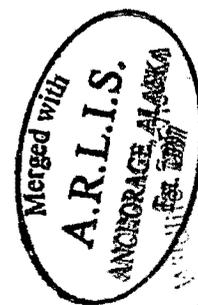
Birds observed during 20 10-minute transects in Nearshore Waters between White Gull Island, Iliamna Bay, and Chisik Island, Tuxedni Bay, lower Cook Inlet, 13 September 1981

Species	Individuals		Transects	
	Number	Percent	Number	Percent
Common Loon	1	0.4	1	5
unidentified loon	1	0.4	1	5
unidentified shearwaters	5	2.2	4	20
Double-crested Cormorant	10	4.4	3	15
Pelagic Cormorant	1	0.4	1	5
unidentified cormorants	8	3.5	5	25
White-winged Scoter	4	1.8	2	10
Black Scoter	8	3.5	2	10
unidentified scoters	6	2.6	4	20
Northern Phalarope	1	0.4	1	5
Glaucous-winged Gull	7	3.1	6	30
Black-legged Kittiwake	154	67.8	15	75
Marbled Murrelet	1	0.4	1	5
unidentified murrelets	7	3.1	3	15
unidentified small alcids	<u>13</u>	<u>5.7</u>	<u>8</u>	<u>40</u>
Total	227	100.0	20	100
Individuals/Km ²	12.3			

Table 8.

Birds observed during 23 10-minute transects in Offshore Waters of lower and upper Cook Inlet,
15 September 1981

Species	Individuals				Transects			
	Lower Inlet	Upper Inlet	Total	Percent	Lower Inlet	Upper Inlet	Total	Percent
Northern Phalarope	1	0	1	9.1	1	0	1	4.3
Glaucous-winged Gull	0	4	4	36.4	0	3	3	13.0
Black-legged Kittiwake	5	1	6	54.5	3	1	4	17.4
Totals	6	5	11	100.0	4	4	8	34.8
Individuals/Km ²	0.6	0.6	0.6					



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