Subsistence Use of Birds In the Bering Strait Region, Alaska

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ABSTRACT

This report describes the subsistence use of birds and eggs in the Bering Strait region of Alaska, based on surveys of households and bird hunting experts in fifteen communities. The geographic area covered includes the coastal regions of Norton Sound, the Seward Peninsula, and St. Lawrence, Diomede and Kings islands in northwest Alaska. The report presents information on species harvested, timing of harvests, and numbers of birds and eggs harvested by community. The report also provides general information on subsistence use patterns for each community, based on interviews with local bird experts. The report represents the first comprehensive description of subsistence bird patterns for communities in the Bering Strait region.

Overall, about 1,203 households (52.2 percent) in the Bering Strait region harvested birds during the survey year. There were about 1,828 persons who hunted birds or about 1 in 5 residents hunted birds. A total of about 46,943 birds were reported harvested by households from the fifteen Bering Strait region commmunities. Seabirds represent the largest category of bird resources used (28.3 percent), followed by ducks (24.8 percent), upland game birds (21.4 percent), geese (20.5 percent), sandhill cranes (3.9 percent), tundra swans (1.0 percent), shorebirds (0.1 percent) and snowy owls (<0.1 percent). An estimated 44,320 eggs were harvested by households from the region. Seabird eggs represented 84.9 percent of all eggs gathered. Eggs were harvested by some households in all fifteen surveyed communities. Eggs of murres and gulls were the principal species of eggs gathered.

While the surveys were conducted on different years, the reported numbers are probably good estimates of the annual subsistence bird and egg harvest during the mid-1990s in the Bering Strait region.

There were distinct differences in the types of birds harvested by island communities compared with mainland communities in the region. While seabirds comprised the overwhelming portion of the bird harvests on St. Lawrence and Diomede islands (93.5 percent), they comprised only a small portion of the mainland communities' bird harvests (8.4 percent). For mainland Bering Strait communities, ducks comprised the most common category of birds harvested (30.9 percent), followed by almost equal proportions of geese (26.3 percent) and upland game birds, principally ptarmigan, (27.9 percent). The most common species of ducks harvested, in terms of numbers, were pintails, common eiders, and mallards; the most numerous types of geese harvested were Canada geese, brant, and snow geese; the most numerous seabirds were arctic terns, loons, and grebes

For migratory birds (not counting ptarmigan, grouse and owls), there are two major bird hunting seasons in the Bering Strait region - spring and fall. About 57 percent of all migratory birds were reported harvested during spring in the Bering Strait region, and about 32 percent of migratory birds were harvested during fall. These seasonal hunting periods are timed during the spring and fall migrations of ducks, geese, cranes, swans, and seabirds through the region. Sixty-four percent of upland game birds (ptarmigan, grouse, and snowy owl) are harvested in the winter months

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We wish to thank the tribal councils and city councils of all communities in the Bering Strait region, for their assistance in facilitating the projects. Thanks also are given to the many elders and local bird experts who allowed us to interview them at length about bird ecology and subsistence patterns, and to the many hunters who volunteered to report their subsistence harvests to our staff and to locally hired community resource specialists. The National Geographic Society is thanked for permission to use color bird illustrations for the hunter survey, taken from the *Field Guide to Birds of North America*, 2nd Edition, 1987. The twenty-two local community resource specialists who conducted household interviews deserve to be recognized individually for their high level of interest and work. We look forward to working with many again in the future:

Arthur Barr, Brevig Mission
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Ruby Nassuk, Koyuk
William Takak, Shaktoolik
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Lillian Weyanna, Teller
Ruth Blatchford, Unalakleet
Frank Oxereok, Wales
Emma Weyapuk, Wales
Robert Charles, White Mountain
Don Ione, White Mountain

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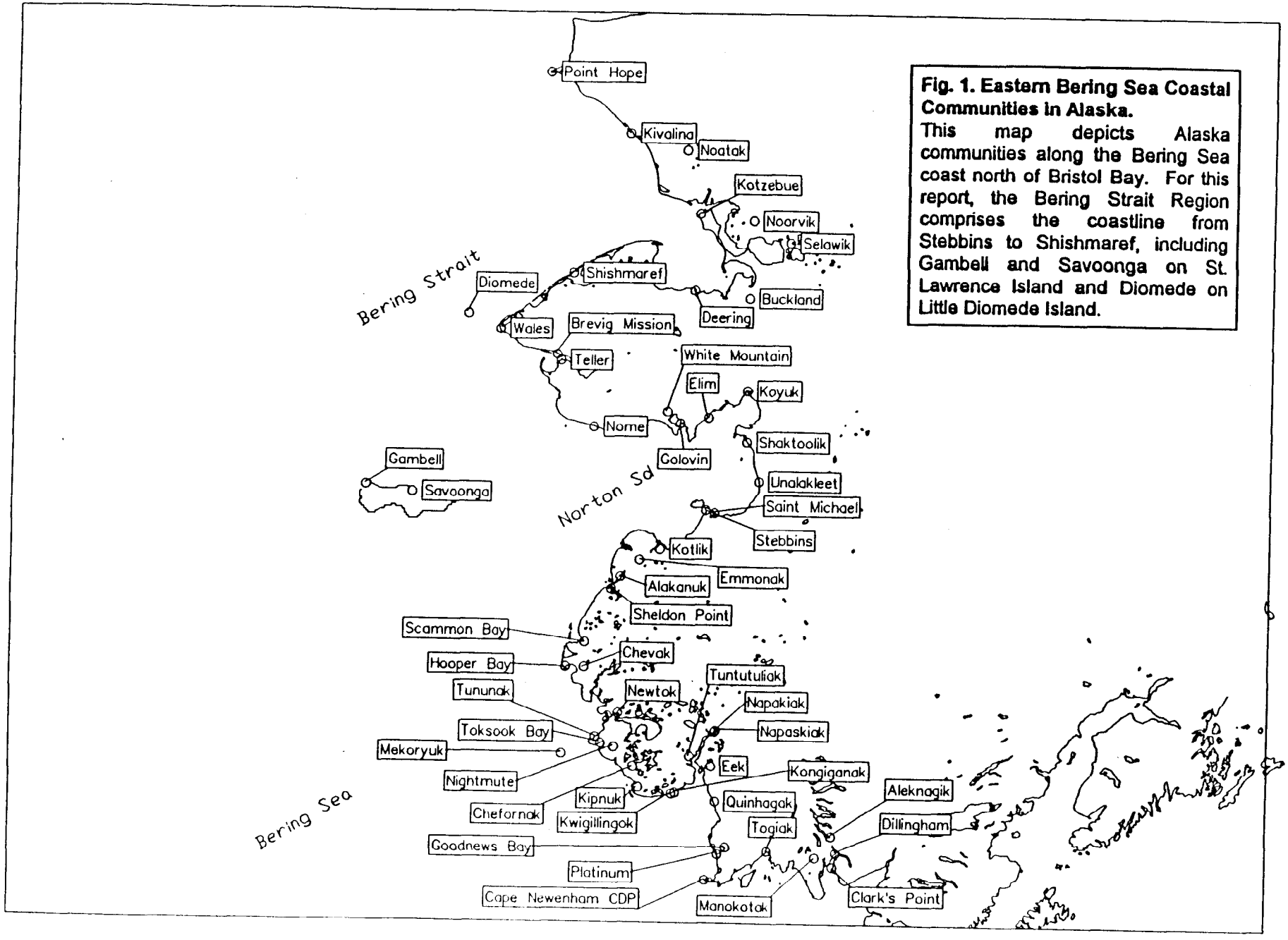


Fig. 1. Eastern Bering Sea Coastal Communities in Alaska.
This map depicts Alaska communities along the Bering Sea coast north of Bristol Bay. For this report, the Bering Strait Region comprises the coastline from Stebbins to Shishmaref, including Gambell and Savoonga on St. Lawrence Island and Diomede on Little Diomede Island.

Introduction

This report describes the subsistence use of birds and eggs in the Bering Strait region of Alaska, based on recent surveys of households and bird hunting experts in fifteen communities. The geographic area covered includes the coastal regions of Norton Sound, the Seward Peninsula, and St. Lawrence, Diomede, and King islands in northwest Alaska (Fig. 1). The report presents information on species harvested, timing of harvests, and numbers of birds and eggs harvested by community. The report also provides general information on subsistence use patterns for each community. The report represents the first comprehensive description of subsistence bird patterns for communities in the Bering Strait region.

Migratory birds are important to the culture, life, and economy of the Bering Strait region. Birds are hunted for food and raw materials by families each year. The annual subsistence patterns are parts of long-standing traditions of the Western Yup'ik, Siberian Yup'ik, and Inupiat peoples of northwest Alaska. These traditions stretch back generations. While contemporary patterns of subsistence bird use have been documented in other areas of the state, such as the Yukon-Kuskokwim Delta (cf., Wentworth and Andrew 1996, Wentworth and Seim 1995) and the North Slope (cf. Braund 1993a, 1993b), prior to this report there were no available systematic surveys to document subsistence uses for the entire Bering Strait region. Household surveys were available for only some communities and years, including Stebbins in 1980 (Wolfe 1981), Gambell in 1984 (Little and Robbins 1984), Shishmaref in 1983 (Sobelman 1984), Brevig Mission, Golovin, and Shishmaref in 1989 (Conger and Magdanz 1990), and Gambell and Savoonga in 1993 (Wentworth 1994). The incomplete coverage of communities and years by previous surveys made it difficult to provide a comprehensive description of subsistence bird use patterns in Bering Strait.

This project was an effort to provide a more complete picture of subsistence bird uses in the Bering Strait region. The project was a collaborative effort involving several organizations. The information from ten communities derived from surveys jointly conducted by Kawerak Inc. (the Alaska Native regional nonprofit organization for the Bering Strait region) and the Division of Subsistence of the Alaska Department of Fish and Game. Surveys in Gambell and Savoonga were done cooperatively by the villages and the U.S. Fish and Wildlife Service. Funding for the research came from several sources – the U.S. Fish and Wildlife Service, the National Park Service, and the Alaska Department of Fish and Game. The research efforts received endorsement by leaders of the local governments of each community. Most surveys were conducted by local researchers employed for the project, and 1,028 households voluntarily participated in surveys to document their bird harvests. In addition, bird hunting experts in each community participated in interviews about birds and subsistence patterns. Through this collaborative effort, comparable information on subsistence bird use patterns was collected across fifteen communities, forming the basis for this report.

Table 1. Communities and Households Surveyed, Bering Strait Region

	Study Year	Total Households	Sampled House-holds	Percent Surveyed	Study Year Population	1995 Population	Mean Household Size	Percent Alaska Native	Predominate Cultural Groups
Brevig Mission	95	58	56	96.6%	242	242	4.18	92.4%	Inupiat
Diomede	95	41	39	95.1%	141	141	3.44	93.8%	Inupiat
Elim	94	72	36	50.0%	268	281	3.72	91.7%	Yup'ik
Gambell	93	116	109	94.0%	588	628	5.07	91.7%	Siberian Yup'ik
Golovin	89	41	33	80.5%	169	148	4.12	92.9%	Inupiat
Koyuk	95	70	37	52.9%	282	282	4.03	94.8%	Inupiat
Nome									
King Island Community	95	55	49	89.1%	242	242	4.40	100.0%	Inupiat
Nome (except King Island)	95	1,057	184	17.4%	3,269	3,269	3.09	52.1%	Euroamerican, Yup'ik, Inupiat, Siberian Yup'ik
Savoonga	93	107	98	91.6%	574	604	5.36	95.2%	Siberian Yup'ik
Shaktoolik	94	49	46	93.9%	218	199	4.46	94.4%	Inupiat
Shishmaref	95	140	54	38.6%	560	560	4.00	94.5%	Inupiat
Stebbins	94	94	60	63.8%	472	475	5.02	94.8%	Yup'ik
Teller	95	78	40	51.3%	300	300	3.85	90.5%	Inupiat
Unalakleet	95	210	116	55.2%	797	797	3.79	81.8%	Yup'ik, Inupiat
Wales	94	50	42	84.0%	152	173	3.05	88.8%	Inupiat
White Mountain	95	67	29	43.3%	219	219	3.28	87.8%	Inupiat
Total Surveyed Communities		**2,305**	**1,028**	**44.6%**	**8,494**	**8,560**	**3.68**	**76.5%**	

Methodology

This report presents information collected with household surveys in 15 of 17 communities in the Bering Strait region (see Table 1; the two communities which were not surveyed were Port Clarence and St. Michael). For the region as a whole, 1,028 households were surveyed, representing 44.6 percent of all households in the study communities (Table 1). Subsistence use information comes from three sources – bird surveys in ten communities for 1994 or 1995; bird surveys on St. Lawrence Island for 1993; and complete subsistence surveys in three communities for 1989, 1994 or 1995; each of these sources are described below.

Bird Surveys in Ten Communities for 1994 or 1995

Bird surveys were conducted in ten communities (Elim, Brevig Mission, Diomede, Koyuk, Nome – including the King Island Native Community, Shaktoolik, Stebbins, Teller, Unalakleet, and White Mountain) as a joint program between Kawerak Inc. and the Division of Subsistence of the Alaska Department of Fish and Game, using U.S. Fish and Wildlife and State of Alaska funding. Funding was not available to do all communities in a single year, so this set of communities was covered over a two-year period. Harvest information pertains to 1994 in three places (Elim, Shaktoolik, and Stebbins) and to 1995 in seven places (Brevig Mission, Diomede, Koyuk, Nome – including the King Island Native Community, Teller, Unalakleet, and White Mountain).

The project in these ten communities focused specifically on subsistence use of birds and eggs. Permission to conduct household surveys was secured from Native governments (Indian Reorganization Act Councils or Traditional Councils) or representative leaders. Local leaders helped to review project designs and household lists and to identify potential local researchers and bird experts. Local researchers were hired to conduct systematic household surveys. Surveys were voluntary and hunter confidentiality was assured. Hunters (or other heads of household) were asked to recall their household's bird and egg harvests during the spring, fall, summer, and winter months of the previous year. A color chart of birds was used to help identify species, allowing for greater precision in harvest reports. The survey also asked for information on the sharing of birds and eggs between households. In some communities, a list of local names for birds and descriptions of distinguishing characteristics of bird species was used as another identification aid.

Local researchers attempted to survey all households in the small communities (60 households or less). For larger communities, the target was a randomly-drawn, 50 percent sample of all households. Table 1 summarizes the sampled households by community. Because of its large size, Nome was treated differently. Households belonging to the King Island Native Community were identified as a distinct subcommunity in Nome, and an effort was made to interview all of them (49 of 55 households were interviewed). For the remainder of Nome, a random sample of 184 households (17.4 percent) was drawn from a listing of all occupied dwellings. The subsistence use patterns of each group is presented in this report.

In addition to the household surveys, interviews were conducted with knowledgeable bird experts in each community to collect information on local bird ecology and general subsistence uses of birds and eggs. Information from surveys and interviews were forwarded to the Division of Subsistence for checking, data entry, and data processing. The Division of Subsistence submitted community summary reports to Kawerak, Inc. for each surveyed community.

Bird Surveys on St. Lawrence Island for 1993

Bird surveys on St. Lawrence Island were conducted through a cooperative program between the U.S. Fish and Wildlife Service and the communities of Gambell and Savoonga in 1994 (Wentworth 1994). The harvest information pertains to the year 1993. Surveys were conducted by local researchers under contracts with the Native Village of Gambell and Native Village of Savoonga Indian Reorganization Act Councils. Surveys were done with 109 of 116 households (94 percent) in Gambell and 98 of 107 households (92 percent) in Savoonga. Households were asked to recall harvests of birds and eggs during two survey periods – spring (April 15 - June 30) and fall (August 15 - October 31). Survey data was forwarded to the U.S. Fish and Wildlife Service for checking, data entry, and data processing. Harvest information as presented in Wentworth (1994) has been incorporated into this summary of the Bering Strait region.

Subsistence Surveys in Golovin (1989), Shishmaref (1995), and Wales (1994)

Information about birds was gathered as part of comprehensive subsistence surveys covering a full complement of wild resources in three communities (Golovin, Shishmaref, and Wales). The subsistence survey in Golovin was conducted by the Division of Subsistence and pertains to the year 1989 (Conger and Magdanz 1990). Researchers attempted to survey all households (33 of 41 households were surveyed). As recent funding levels did not allow bird surveys in all Bering Strait communities in 1994-95, the 1989 bird harvest data for Golovin are used in the summaries of this report. The subsistence surveys in Shishmaref and Wales were conducted by the Division of Subsistence and Kawerak as part of the Bering Land Bridge National Preserve project funded by the National Park Service. The bird information pertains to 1994 in Wales and to 1995 in Shishmaref. In Wales, surveys were attempted in all households (42 of 50 households were surveyed). In Shishmaref, the sampling goal was a randomly-drawn sample of 50 households (54 of 140 households were surveyed). In each community, households were asked to recall their harvests of all major categories of fish, wildlife, and plants during the past year. Birds and eggs were included in the surveys. The surveys in Wales and Shishmaref used color bird identification guides described above. Survey information was checked, entered, and processed by the Division of Subsistence. Information pertaining to subsistence use of birds was extracted from the data set and included in this summary report.

For the purposes of this report, information is summarized for two groups of communities – mainland coastal communities and island communities (Gambell, Savoonga, and Diomede). The mainland and the islands display relatively distinctive subsistence use patterns, which are appropriately described separately. There were two unsurveyed communities in the Bering Strait region – Saint Michael and Port Clarence. Bird surveys were conducted at Saint Michael in 1995 by the U.S. Fish and Wildlife Service as part of the Yukon-Kuskokwim Delta migratory bird project annual survey; however, the results were not available for inclusion in this summary report.

Subsistence Bird Harvests in the Bering Strait Region

Estimates of subsistence harvests of birds and eggs for fifteen surveyed communities in the Bering Strait region are presented in Table 2. A total of about 46,943 birds were reported harvested by households from the fifteen communities in the Bering Strait region. In descending order, the following types of birds were reported harvested: 13,271 seabirds (28.3 percent), 11,662 ducks (24.8 percent), 10,028 upland game birds (21.4 percent), 9,627 geese (20.5 percent), 1,816 sandhill cranes (3.9 percent), 463 tundra swans (1.0 percent), 62 shorebirds (0.1 percent), and 19 snowy owls (<0.1 percent) (Table 2 and Fig. 2). While surveys were conducted on different years, the reported subsistence bird harvest numbers presented in Table 2 are probably good estimates of the annual subsistence bird harvest during the mid-1990s in the Bering Strait region.

There were distinct differences in the types of birds harvested in island communities compared with mainland communities in the Bering Strait region (Fig. 4 and 5). On St. Lawrence and Diomede islands, seabirds comprised 93.5 percent of the reported subsistence bird harvest, and only small numbers of ducks and geese were reported harvested during the survey year (Fig. 5). St. Lawrence and Diomede islands are home to large, productive seabird colonies, which accounts for the importance of seabirds in the subsistence harvest. For island communities, the largest harvest of migratory birds was reported at Gambell (6,191 birds), followed by Savoonga (2,573 birds) and Diomede (2,194 birds) (Table 2). Additional descriptions of bird hunting and egg gathering patterns on St. Lawrence Island during the early 1980s can be found in Little and Robbins (1984).

Households in mainland communities reported a different harvest pattern. Ducks, geese, and upland game birds were the primary types of birds taken in mainland communities, while seabirds comprised only about 8.4 percent of the year's bird harvest (Fig. 4). The composition of the mainland harvest reflects the location of communities along the flyways of ducks, geese, and other migratory species. Of mainland communities, the largest harvests of migratory birds were reported in Nome (6,002 birds; 23.1 percent of the mainland harvest of migratory birds), Shishmaref (5,102 birds; 19.7 percent), and Stebbins (4,545 birds, 17.5 percent); together, these three communities accounted for 15,649 birds (60.3 percent of the mainland harvest of migratory birds) (Table 2). Other communities reporting harvests greater than 1,000 migratory birds were White Mountain (2,232 birds), Unalakleet (1,918 birds), Golovin (1,309 birds), and Koyuk (1,216 birds).

Nome's bird harvests were large primarily because of its large population; on a per capita basis, Nome's migratory bird harvests were the lowest among communities in the Bering Sea region -- 1.74 birds per person for Nome (except King Island) and 1.30 birds per person for the King Island community in Nome (Table 3). Of mainland communities, the largest per capita harvests of migratory birds were reported at White Mountain (10.17 birds per person), Stebbins (9.64 birds), Shishmaref (9.11 birds), and Golovin (7.73 birds). Other mainland communities reported per capita harvests between 2.23 to 3.68 birds per capita. Of the island communities, per capita harvests were largest at Diomede (15.57 birds per capita), following by Gambell (10.53) and Savoonga (4.48 birds). For the entire region, the per capita harvest of migratory birds was 4.34 birds per person (Table3). Bird harvests per household are shown in Table 4.

Table 2. Bird Harvests by Community and Study Year, Bering Strait Region

	Study Year	Geese	Ducks	Cranes	Swans	Shore birds	Seabirds	Total Migratory Birds	Upland Game Birds	Owls	Total Birds
BERING STRAIT MAINLAND											
Brevig Mission	95	382	288	16	2	0	5	693	203	0	896
Elim	94	314	558	26	8	0	0	906	272	0	1,178
Golovin	89	591	588	106	20		1	1,306	957		2,263
Koyuk	95	380	536	293	8	0	0	1,216	221	0	1,437
Nome											
King Island Community	95	66	56	16	3	0	174	315	126	0	441
Nome (except King Island)	95	1,143	1,482	253	52	46	2,711	5,687	4,038	0	9,725
Shaktoolik	94	352	198	239	0	0	0	788	228	0	1,016
Shishmaref	95	2,088	2,862	78	44	0	31	5,102	1,487	9	6,599
Stebbins	94	1,755	2,159	331	248	16	38	4,545	915	5	5,465
Teller	95	156	476	21	16	0	0	669	156	0	825
Unalakleet	95	802	775	319	22	0	0	1,918	518	0	2,436
Wales	94	164	302	26	7	0	61	561	133	5	698
White Mountain	95	1,273	834	90	28	0	7	2,232	774	0	3,006
TOTAL MAINLAND		**9,466**	**11,115**	**1,814**	**458**	**62**	**3,028**	**25,938**	**10,028**	**19**	**35,985**
		26.3%	30.9%	5.0%	1.3%	0.2%	8.4%	72.1%	27.9%	0.1%	100.0%
ST LAWRENCE-DIOMEDE ISLANDS											
Diomede	95	0	0	2	0	0	2,192	2,194	0	0	2,194
Gambell	93	126	484		5		5,576	6,191			6,191
Savoonga	93	35	63		0		2,475	2,573			2,573
TOTAL ISLANDS		**161**	**547**	**2**	**5**	**0**	**10,243**	**10,958**	**0**	**0**	**10,958**
		1.5%	5.0%	0.0%	0.0%	0.0%	93.5%	100.0%	0.0%	0.0%	100.0%
TOTAL BERING STRAIT REGION		**9,627**	**11,662**	**1,816**	**463**	**62**	**13,271**	**36,896**	**10,028**	**19**	**46,943**
		20.5%	24.8%	3.9%	1.0%	0.1%	28.3%	78.6%	21.4%	0.04%	100.0%

Fig. 2. Subsistence Bird Harvests, Bering Strait Region

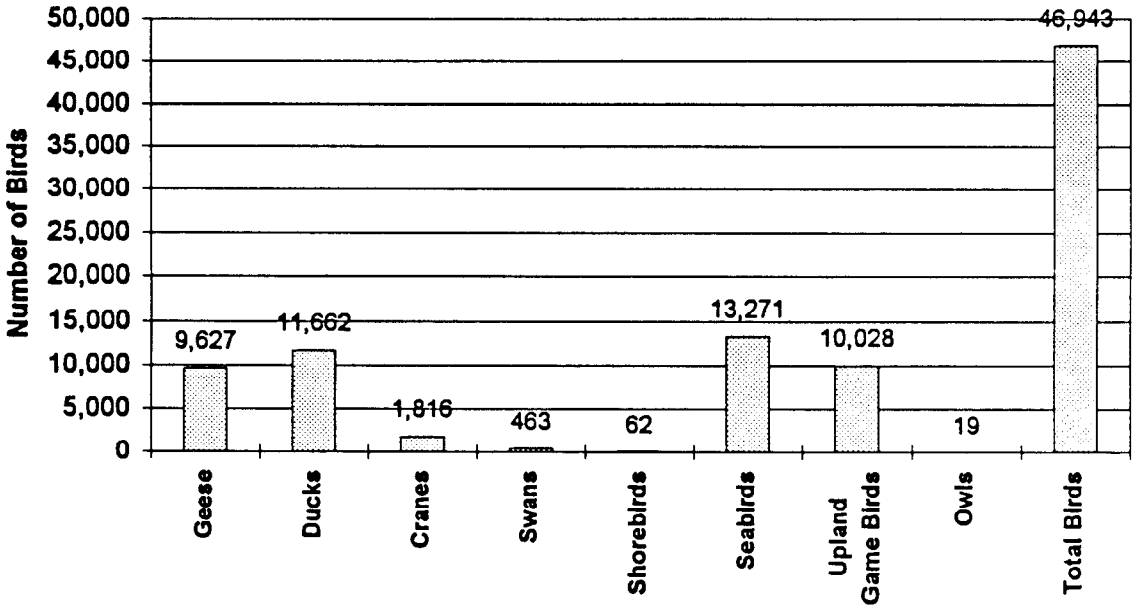


Fig. 3. Subsistence Egg Harvests, Bering Strait Region

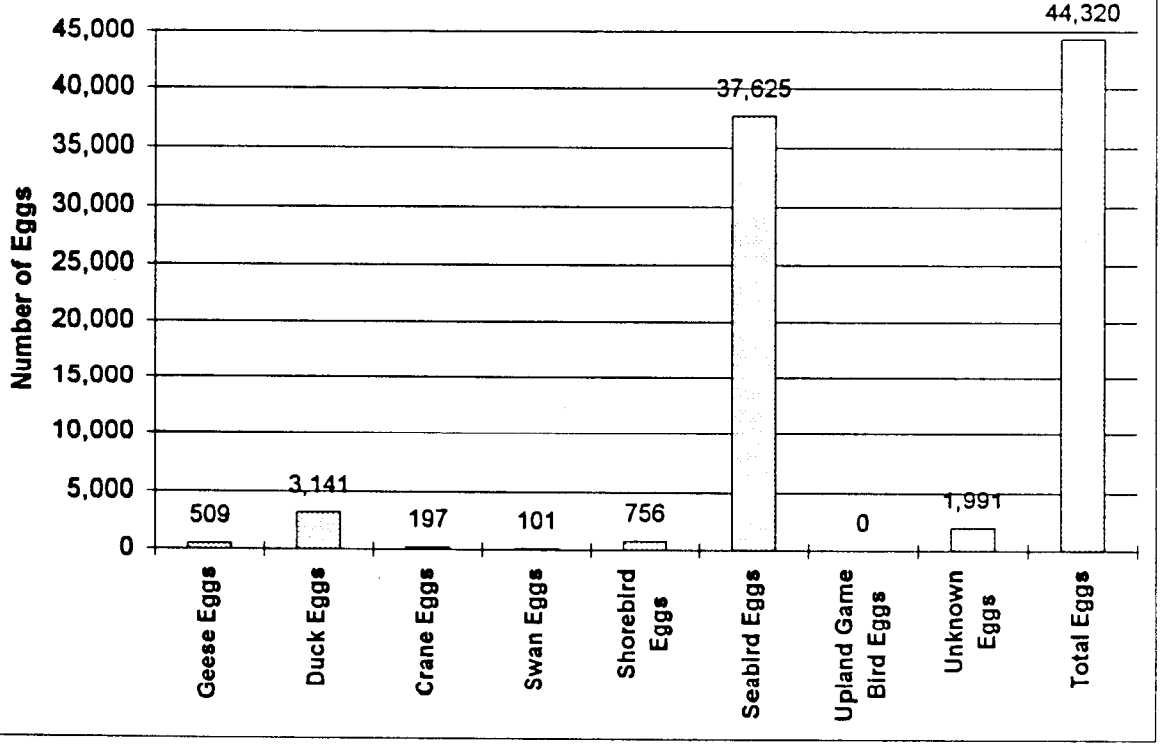


Fig. 4.
Composition of Bird Harvests
Mainland Bering Strait Communities

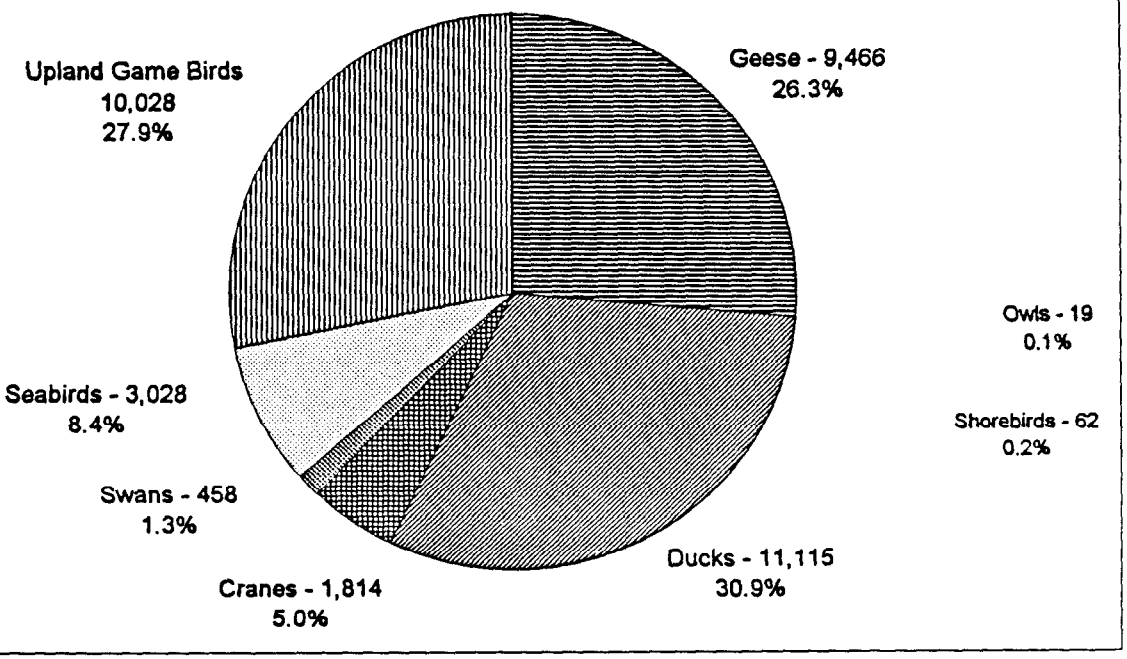


Fig. 5.
Composition of Bird Harvests
St. Lawrence-Diomede Islands

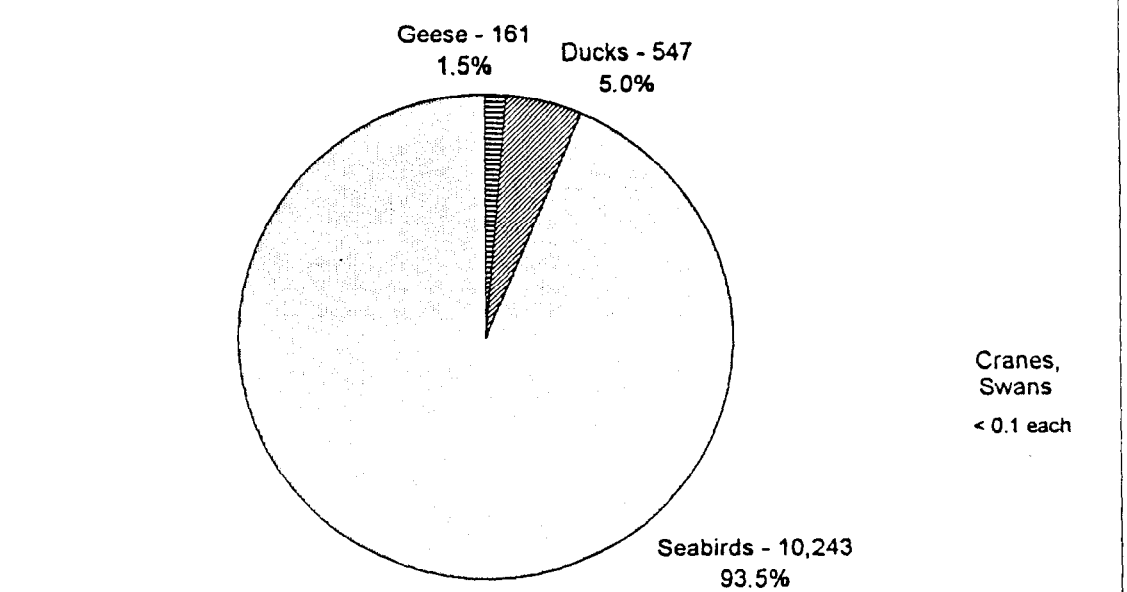


Table 3. Per Capita Bird Harvests, Bering Strait Region (Number of Birds Per Person)

	Year	Geese	Ducks	Cranes	Swans	Shorebirds	Seabirds	Total Migratory Birds	Upland Game Birds	Owls	Total Birds
BERING STRAIT MAINLAND											
Brevig Mission	95	1.58	1.19	0.07	0.01	0.00	0.02	2.86	0.84	0.00	3.70
Elim	94	1.17	2.08	0.10	0.03	0.00	0.00	3.38	1.01	0.00	4.40
Golovin	89	3.50	3.48	0.63	0.12	0.00	0.01	7.73	5.66	0.00	13.39
Koyuk	95	1.35	1.90	1.04	0.03	0.00	0.00	4.31	0.78	0.00	5.10
Nome											
King Island Community	95	0.27	0.23	0.07	0.01	0.00	0.72	1.30	0.52	0.00	1.82
Nome (except King Island)	95	0.35	0.45	0.08	0.02	0.01	0.83	1.74	1.24	0.00	2.98
Shaktoolik	94	1.61	0.91	1.09	0.00	0.00	0.00	3.61	1.04	0.00	4.65
Shishmaref	95	3.73	5.11	0.14	0.08	0.00	0.06	9.11	2.66	0.02	11.78
Stebbins	94	3.72	4.58	0.70	0.53	0.03	0.08	9.64	1.94	0.01	11.59
Teller	95	0.52	1.59	0.07	0.05	0.00	0.00	2.23	0.52	0.00	2.75
Unalakleet	95	1.01	0.97	0.40	0.03	0.00	0.00	2.41	0.65	0.00	3.06
Wales	94	1.08	1.98	0.17	0.05	0.00	0.40	3.68	0.87	0.03	4.58
White Mountain	95	5.80	3.80	0.41	0.13	0.00	0.03	10.17	3.53	0.00	13.70
TOTAL MAINLAND		1.32	1.55	0.25	0.06	0.01	0.42	3.61	1.39	0.00	5.00
ST LAWRENCE-DIOMEDE ISLANDS											
Diomede	95	0.00	0.00	0.01	0.00	0.00	15.56	15.57	0.00	0.00	15.57
Gambell	93	0.21	0.82		0.01		9.48	10.53			10.53
Savoonga	93	0.06	0.11		0.00		4.31	4.48			4.48
TOTAL ISLANDS		0.12	0.42	0.00	0.00	0.00	7.86	8.41	0.00	0.00	8.41
TOTAL BERING STRAIT REGION		**1.13**	**1.37**	**0.21**	**0.05**	**0.01**	**1.56**	**4.34**	**1.18**	**0.00**	**5.53**

Table 4. Bird Harvests per Household, Bering Strait Region (Number of Birds Per Household)

	Year	Geese	Ducks	Cranes	Swans	Shorebirds	Seabirds	Total Migratory Birds	Upland Game Birds	Owls	Total Birds
BERING STRAIT MAINLAND											
Brevig Mission	95	6.59	4.97	0.28	0.03	0.00	0.09	11.95	3.50	0.00	15.45
Elim	94	4.36	7.75	0.36	0.11	0.00	0.00	12.58	3.78	0.00	16.36
Golovin	89	14.41	14.34	2.59	0.49	0.00	0.02	31.85	23.34	0.00	55.20
Koyuk	95	5.43	7.66	4.19	0.11	0.00	0.00	17.37	3.16	0.00	20.53
King Island Community	95	1.20	1.02	0.29	0.05	0.00	3.16	5.73	2.29	0.00	8.02
Nome (not incl. King Island)	95	1.08	1.40	0.24	0.05	0.04	2.56	5.38	3.82	0.00	9.20
Shaktoolik	94	7.18	4.04	4.88	0.00	0.00	0.00	16.08	4.65	0.00	20.73
Shishmaref	95	14.91	20.44	0.56	0.31	0.00	0.22	36.44	10.62	0.07	47.13
Stebbins	94	18.67	22.97	3.52	2.64	0.17	0.40	48.35	9.73	0.05	58.14
Teller	95	2.00	6.10	0.27	0.21	0.00	0.00	8.58	2.00	0.00	10.58
Unalakleet	95	3.82	3.69	1.52	0.10	0.00	0.00	9.13	2.47	0.00	11.60
Wales	94	3.29	6.05	0.52	0.14	0.00	1.21	11.21	2.66	0.10	13.97
White Mountain	95	19.00	12.45	1.34	0.42	0.00	0.10	33.31	11.55	0.00	44.87
TOTAL MAINLAND		4.64	5.45	0.89	0.22	0.03	1.48	12.71	4.91	0.01	17.63
ST LAWRENCE/DIOMEDE ISLANDS											
Diomede	95	0.00	0.00	0.05	0.00	0.00	53.46	53.51	0.00	0.00	53.51
Gambell	93	1.09	4.17		0.04		48.07	53.37			53.37
Savoonga	93	0.33	0.59		0.00		23.13	24.05			24.05
TOTAL ISLANDS		0.61	2.07	0.01	0.02	0.00	38.80	41.51	0.00	0.00	41.51
TOTAL BERING STRAIT REGION		**4.18**	**5.06**	**0.79**	**0.20**	**0.03**	**5.76**	**16.01**	**4.35**	**0.01**	**20.37**

Subsistence Egg Harvests in the Bering Sea Region

The estimated subsistence harvest of bird eggs reported for the Bering Sea Region was 44,320 eggs (Table 4 and Fig. 3). By far, seabird eggs were the predominate types of egg gathered (37,625 eggs; 84.9 percent of all eggs gathered). Much smaller quantities of other types of eggs were gathered, including duck eggs (3,141 eggs), shorebird eggs (756 eggs), geese eggs (509 eggs), crane eggs (197 eggs), and swan eggs (101 eggs). Mainland communities reported harvesting 26,857 eggs while island communities reported harvesting 17,463 eggs. The composition of egg harvests in mainland and island communities is compared in Table 4, showing that a greater variety of eggs are available in mainland communities.

Eggs were gathered in all fifteen surveyed communities during the survey year (Table 4). The largest numbers were gathered in four places: Nome (9,017 eggs; 20.3 percent of the region's total harvest), Gambell (7,043 eggs, 15.9 percent), Savoonga (6,532 eggs, 14.7 percent), and Shishmaref (5,560 eggs, 12.5 percent); together, the egg harvest of these four communities (28,152 eggs) comprised 63.5 percent of the region's egg harvest. Other communities with egg harvests greater than 1,000 eggs were Diomede (3,888 eggs), White Mountain (2,253 eggs), Elim (2,190 eggs), Brevig Mission (2,019 eggs), Shaktoolik (1,318 eggs), Koyuk (1,222 eggs), and Wales (1,125 eggs),

The greatest harvests of eggs were on the island communities, if one measures it in terms of eggs gathered per person (Table 5). On St. Lawrence-Diomede islands, an average of 13.40 eggs per person were reported gathered during the survey year. By comparison, mainland communities reported gathering an average of 3.73 eggs per person. The top three ranked communities in per capita egg harvests were on the islands -- Diomede (27.6 eggs per person), Gambell (11.98 eggs per person), and Savoonga (11.38 eggs per person). These large harvests reflect the highly productive seabird colonies on the Bering Sea islands, which are traditionally used for food by residents. Among mainland communities, the largest per capita egg harvests were reported in White Mountain (10.27 eggs per person), Shishmaref (9.93 eggs per person), Brevig Mission (8.33 eggs per person), and Elim (8.17 eggs per person), and Wales (7.38 eggs per person). The King Island community in Nome reported a greater per capita egg harvest (5.39 eggs per person) compared with the average of other Nome residents (2.36 eggs per person). The lowest eggs harvests were reported at Unalakleet (0.40 eggs per person). Egg harvests per household are shown in Table 7.

Subsistence Users in the Bering Strait Region

Overall, about 1,203 households in the whole Bering Strait region reported harvesting birds during the survey year, representing a little more than half (52.2 percent) of all households (Table 8). Birds are used as food by a larger number of households in the Bering Strait region. As shown in Table 8, about 1,283 households used birds for food during the survey year on the Bering Sea mainland, representing 62.9 percent of all mainland households (estimates for the whole region are not possible because household use information was not collected on surveys conducted on St. Lawrence Island). Of mainland communities, about 1,041 households (51.0 percent) had members that harvested migratory birds during the

Table 5. Egg Harvests by Community and Study Year, Bering Strait Region

	Year	Geese Eggs	Duck Eggs	Crane Eggs	Swan Eggs	Shorebird Eggs	Seabird Eggs	Upland Game Bird Eggs	Unknown Eggs	Total Eggs
BERING STRAIT MAINLAND										
Brevig Mission	95	0	604	0	0	145	1,270	0	0	2,019
Elim	94	0	924	22	6	0	1,238	0	0	2,190
Golovin	89	25	62	0	4	0	642	0	0	733
Koyuk	95	115	53	47	19	0	988	0	0	1,222
Nome										
King Island Community	95	0	7	0	0	0	1,300	0	0	1,307
Nome (except King Island)	95	34	184	0	0	0	7,492	0	0	7,710
Shaktoolik	94	6	147	6	0	0	1,159	0	0	1,318
Shishmaref	95	84	551	28	0	523	2,383	0	1,991	5,560
Stebbins	94	0	307	24	6	78	363	0	0	778
Teller	95	129	80	0	29	0	82	0	0	320
Unalakleet	95	0	12	0	0	10	300	0	0	322
Wales	94	0	14	5	5	0	1,101	0	0	1,125
White Mountain	95	116	180	65	32	0	1,860	0	0	2,253
TOTAL MAINLAND		**509**	**3,125**	**197**	**101**	**756**	**20,178**	**0**	**1,991**	**26,857**
		1.9%	11.6%	0.7%	0.4%	2.8%	75.1%	0.0%	7.4%	100.0%
ST LAWRENCE-DIOMEDE ISLANDS										
Diomede	95	0	0	0	0	0	3,888		0	3,888
Gambell	93	0	16				7,027			7,043
Savoonga	93	0	0				6,532			6,532
TOTAL ISLANDS		**0**	**16**	**0**	**0**	**0**	**17,447**	**0**	**0**	**17,463**
		0.0%	0.1%	0.0%	0.0%	0.0%	99.9%	0.0%	0.0%	100.0%
TOTAL BERING STRAIT REGION		**509**	**3,141**	**197**	**101**	**756**	**37,625**	**0**	**1,991**	**44,320**
		1.1%	7.1%	0.4%	0.2%	1.7%	84.9%	0.0%	4.5%	100.0%

Table 6. Per Capita Egg Harvests, Bering Strait Region (Number of Eggs Per Person)

	Year	Geese Eggs	Duck Eggs	Crane Eggs	Swan Eggs	Shorebird Eggs	Seabird Eggs	Upland Game Bird Eggs	Unknown Eggs	Total Eggs
BERING STRAIT MAINLAND										
Brevig Mission	95	0.00	2.49	0.00	0.00	0.60	5.24	0.00	0.00	8.33
Elim	94	0.00	3.45	0.08	0.02	0.00	4.62	0.00	0.00	8.17
Golovin	89	0.15	0.37	0.00	0.02	0.00	3.80	0.00	0.00	4.34
Koyuk	95	0.41	0.19	0.17	0.07	0.00	3.50	0.00	0.00	4.33
Nome										
King Island Community	95	0.00	0.03	0.00	0.00	0.00	5.36	0.00	0.00	5.39
Nome (except King Island)	95	0.01	0.06	0.00	0.00	0.00	2.29	0.00	0.00	2.36
Shaktoolik	94	0.03	0.67	0.03	0.00	0.00	5.31	0.00	0.00	6.04
Shishmaref	95	0.15	0.98	0.05	0.00	0.93	4.26	0.00	3.56	9.93
Stebbins	94	0.00	0.65	0.05	0.01	0.17	0.77	0.00	0.00	1.65
Teller	95	0.43	0.27	0.00	0.10	0.00	0.27	0.00	0.00	1.07
Unalakleet	95	0.00	0.02	0.00	0.00	0.01	0.38	0.00	0.00	0.40
Wales	94	0.00	0.09	0.03	0.03	0.00	7.23	0.00	0.00	7.38
White Mountain	95	0.53	0.82	0.30	0.15	0.00	8.47	0.00	0.00	10.27
MAINLAND AVERAGE		**0.07**	**0.43**	**0.03**	**0.01**	**0.11**	**2.81**	**0.00**	**0.28**	**3.73**
ST LAWRENCE-DIOMEDE ISLANDS										
Diomede	95	0.00	0.00	0.00	0.00	0.00	27.60	0.00	0.00	27.60
Gambell	93	0.00	0.03	0.00	0.00	0.00	11.95	0.00	0.00	11.98
Savoonga	93	0.00	0.00	0.00	0.00	0.00	11.38	0.00	0.00	11.38
ISLAND AVERAGE		**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**13.39**	**0.00**	**0.00**	**13.40**
BERING STRAIT REGION AVERAGE		**0.06**	**0.37**	**0.02**	**0.01**	**0.09**	**4.43**	**0.00**	**0.23**	**5.22**

Table 7. Egg Harvests per Household, Bering Strait Region (Number of Eggs Per Household)

	Year	Geese Eggs	Duck Eggs	Crane Eggs	Swan Eggs	Shorebird Eggs	Seabird Eggs	Upland Game Bird Eggs	Unknown Eggs	TOTAL EGGS
BERING STRAIT MAINLAND										
Brevig Mission	95	0.00	10.41	0.00	0.00	2.50	21.90	0.00	0.00	34.81
Elim	94	0.00	12.83	0.31	0.08	0.00	17.19	0.00	0.00	30.42
Golovin	89	0.61	1.51	0.00	0.10	0.00	15.66	0.00	0.00	17.88
Koyuk	95	1.64	0.76	0.67	0.27	0.00	14.11	0.00	0.00	17.46
Nome										
King Island Community	95	0.00	0.13	0.00	0.00	0.00	23.64	0.00	0.00	23.76
Nome (except King Island)	95	0.03	0.17	0.00	0.00	0.00	7.09	0.00	0.00	7.29
Shaktoolik	94	0.12	3.00	0.12	0.00	0.00	23.65	0.00	0.00	26.90
Shishmaref	95	0.60	3.93	0.20	0.00	3.73	17.02	0.00	14.22	39.71
Stebbins	94	0.00	3.27	0.26	0.06	0.83	3.86	0.00	0.00	8.28
Teller	95	1.65	1.03	0.00	0.37	0.00	1.05	0.00	0.00	4.10
Unalakleet	95	0.00	0.06	0.00	0.00	0.05	1.43	0.00	0.00	1.53
Wales	94	0.00	0.28	0.10	0.10	0.00	22.02	0.00	0.00	22.50
White Mountain	95	1.73	2.69	0.97	0.48	0.00	27.76	0.00	0.00	33.63
MAINLAND AVERAGE		**0.25**	**1.53**	**0.10**	**0.05**	**0.37**	**9.89**	**0.00**	**0.98**	**13.16**
ST LAWRENCE-DIOMEDE ISLANDS										
Diomede*	95	0.00	0.00	0.00	0.00	0.00	94.83	0.00	0.00	94.83
Gambell	93	0.00	0.14				60.58			60.72
Savoonga	93	0.00	0.00				61.05			61.05
ISLAND AVERAGE		**0.00**	**0.06**		**0.00**		**66.09**			**66.15**
BERING STRAIT REGION AVERAGE		**0.22**	**1.36**	**0.09**	**0.04**	**0.33**	**16.32**	**0.00**	**0.86**	**19.23**

Table 8. Households That Used, Hunted, Harvested, Gave, or Received Birds During Survey Year, Bering Strait Region

		Percent of Households					Number of Households				
	Year	Used	Hunted	Harvested	Gave	Received	Used	Hunted	Harvested	Gave	Received
BERING STRAIT MAINLAND											
Brevig Mission*	95	60.7%	46.4%	44.6%	26.8%	25.0%	35	27	26	16	15
Elim**	94	75.0%	69.4%	61.1%	25.0%	27.8%	54	50	44	18	20
Golovin**	89	97.0%	78.8%	78.8%	51.5%	51.5%	40	32	32	21	21
Koyuk*	95	94.6%	86.5%	86.5%	48.6%	37.8%	66	61	61	34	26
Nome											
King Island Community*	95	69.4%	46.9%	46.9%	34.7%	38.8%	38	26	26	19	21
Nome (except King Island	95	47.8%	41.3%	39.1%	17.9%	27.2%	505	437	413	189	288
Shaktoolik**	94	95.7%	84.8%	76.1%	56.5%	52.2%	47	42	37	28	26
Shishmaref**	95	75.6%	64.4%	64.4%	55.6%	24.4%	106	90	90	78	34
Stebbins**	94	90.0%	90.0%	90.0%	65.0%	23.3%	85	85	85	61	22
Teller*	95	80.0%	42.5%	42.5%	30.0%	55.0%	62	33	33	23	43
Unalakleet*	95	73.3%	62.9%	55.2%	31.0%	36.2%	154	132	116	65	76
Wales**	94	52.4%	42.9%	35.7%	23.8%	35.7%	26	21	18	12	18
White Mountain*	95	96.6%	93.1%	89.7%	62.1%	27.6%	65	62	60	42	18
TOTAL MAINLAND		**62.9%**	**53.8%**	**51.0%**	**29.7%**	**30.8%**	**1,283**	**1,097**	**1,041**	**606**	**628**
ST LAWRENCE-DIOMEDE ISLANDS											
Diomede*	94	64.1%	46.2%	46.2%	35.9%	35.9%	26	19	19	15	15
Gambell**	93			59.0%					68		
Savoonga**	93			70.0%					75		
TOTAL ISLANDS				**61.5%**					**162**		
TOTAL BERING STRAIT REGION				**52.2%**					**1,203**		

* Percent includes all birds (migratory birds, upland game birds, and owls). ** Percent includes migratory birds only.

Table 9. Estimated Number of Persons Who Hunted Birds During the Survey Year, Bering Strait Region

	Hunting Households	Persons Who Hunted Birds per Hunting Household	Number of Bird Hunters
BERING STRAIT MAINLAND			
Brevig Mission	27	1.52	41
Elim	50	1.30	65
Golovin*	32	*1.52*	49
Koyuk*	61	*1.52*	92
Nome			
King Island Community	26	1.52	39
Nome (except King Island)	437	1.28	559
Shaktoolik	42	1.60	66
Shishmaref*	90	*1.52*	137
Stebbins	85	1.76	149
Teller	33	1.24	41
Unalakleet	132	1.72	227
Wales*	21	*1.52*	*33*
White Mountain	62	1.38	86
TOTAL MAINLAND	1,097	1.44	1,584
ST LAWRENCE-DIOMEDE ISLANDS			
Diomede	19	1.89	36
Gambell*	*68*	*1.52*	103
Savoonga*	*75*	*1.52*	114
TOTAL ISLANDS	162	1.56	253
TOTAL BERING STRAIT REGION	1,259	1.46	1,838

* Assumption that there were 1.52 persons who hunted per hunting household

survey year. The numbers of households using birds is higher than the number of households harvesting birds due to sharing of subsistence food. Not every household is able to hunt birds. Through sharing, non-hunting households are able to eat birds that other households take. Sharing of birds was a common practice. As shown in Table 8, in mainland communities about 606 households (29.7 percent) reported giving away birds to other households, and about 628 households (30.8 percent) reported receiving birds from other households.

In some communities, a great majority of households reported using birds for food during the study year. Communities in which more than three-quarters of all households reported eating birds included Elim, Golovin, Koyuk, Shaktoolik, Shishmaref, Stebbins, Teller, and White Mountain. The community with the lowest percentage of households using birds was Nome; but even here, a substantial portion (47.8 percent) of households reported using birds during the study year.

It is difficult estimating the precise number of persons hunting birds each year in the Bering Strait region. Some households have more than one person who are hunters, and in any given year, a number of factors may influence whether hunters in a household choose to hunt for birds. As shown in Table 9, we estimate that there were about 1,838 persons who hunted birds in the Bering Strait region during the survey period. This comes to about 1.46 bird hunters per household that hunted birds in the Bering Strait region (that is, 1,838 active bird hunters divided by 1,259 households that reported hunting birds). This also averages to about 0.80 bird hunters per household in the Bering Strait region (that is, 1,838 active bird hunters divided by 2,305 households in the region). The estimate of active bird hunters derives from the survey information in nine communities, where households were asked the number of people who hunted birds during the survey period. There were six communities where this question was not asked; for these communities, the number of bird hunters per hunting household was assumed to be 1.52 hunters, which is the straight mean of the six communities where the question was asked. The estimate of 1,838 bird hunters probably a fairly good estimate of the number of persons who hunted birds in the region. It means that 21.6 percent of the region's population hunted birds during the survey year; that is, about 1 out of 5 people hunted birds.

Bird Harvests by Season

For migratory birds (not counting ptarmigan, grouse, and owls), there are two major bird hunting seasons in the Bering Strait region – spring and fall (see Fig. 6). About 57 percent of all migratory birds were reported harvested during spring in the Bering Strait region, and about 32 percent of migratory birds were harvested during fall (Fig. 6). These seasonal hunting periods are timed during the spring and fall migrations of ducks, geese, crane, swans, and seabirds through the region. Hunters take birds when they are seasonally available. Smaller numbers of migratory birds were reported harvested during other seasons: summer (8 percent), winter (1 percent), and season unknown (2 percent). During winter, migratory birds have left the region. However, winter is the major season for harvesting ptarmigan, grouse, and snowy owl: 64 percent of these game birds were reported harvested during winter (see Fig. 13). The harvest by season for all types of birds (migratory and game birds) are shown in Fig. 14.

Fig. 6. Migratory Bird Harvests by Season, Bering Strait Region

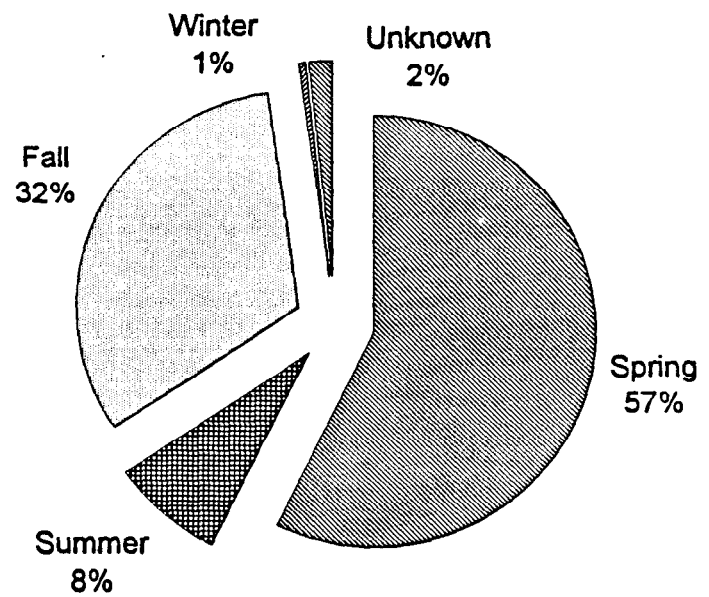


Fig. 7. Geese Harvests by Season, Bering Strait Region

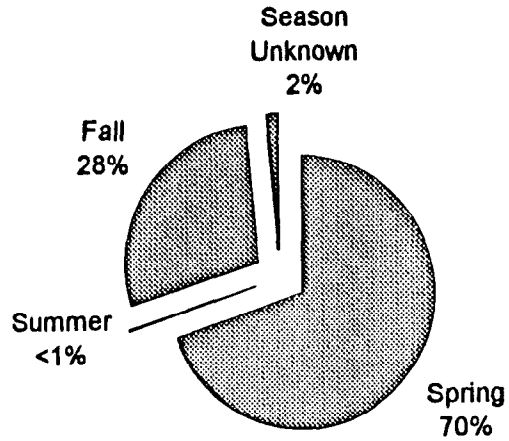


Fig. 8. Duck Harvests by Season, Bering Strait Region

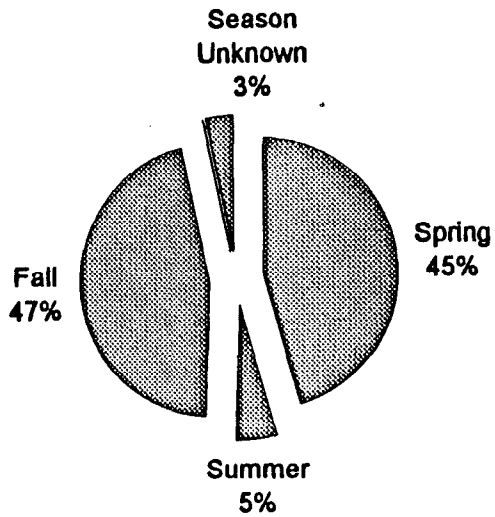


Fig. 9. Swan Harvests by Season, Bering Strait Region

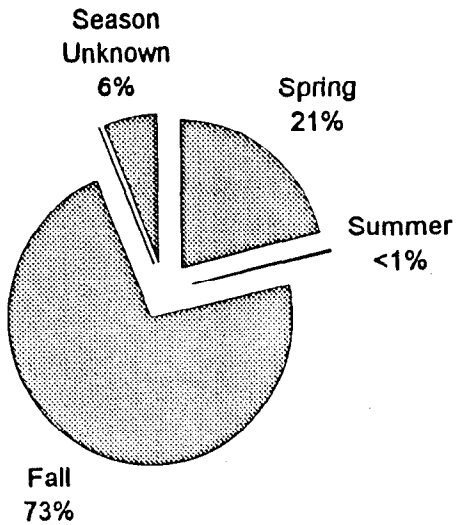


Fig. 10. Crane Harvests by Season, Bering Strait Region

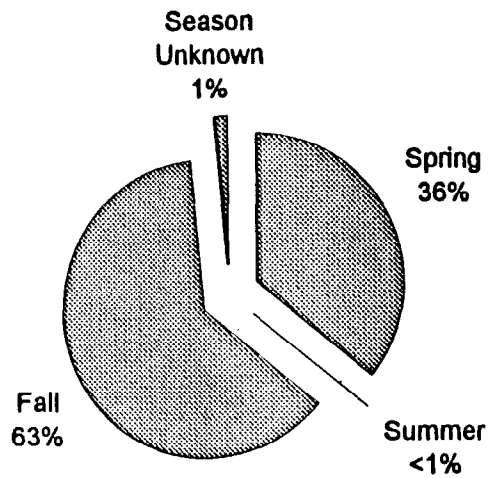


Fig. 11. Shorebird Harvests by Season, Bering Strait Region

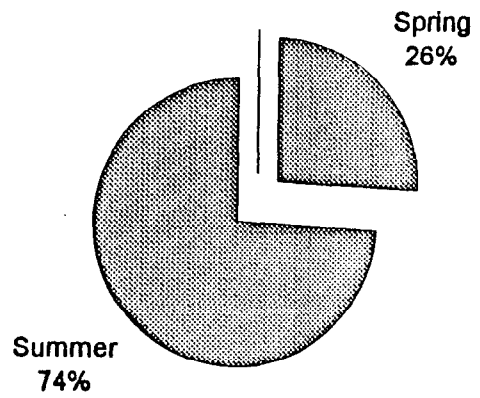


Fig. 12. Seabird Harvests by Season, Bering Strait Region

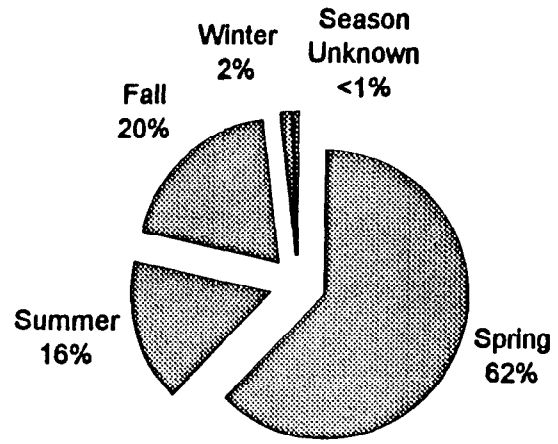
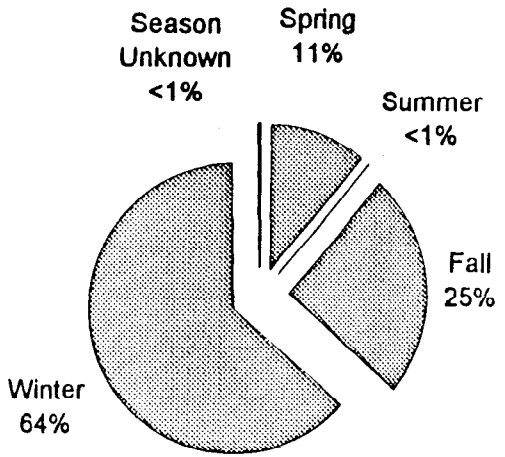


Fig. 13. Other Bird* Harvests by Season, Bering Strait Region



*Includes ptarmigan, grouse, and snowy owl

Fig. 14. All Bird Harvests by Season, Bering Strait Region

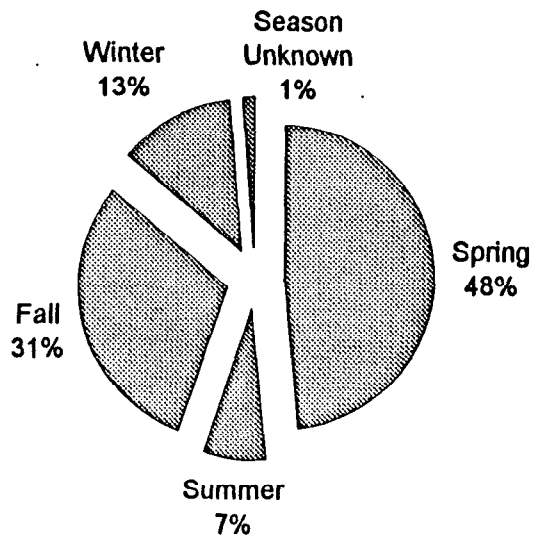


Table 10. Migratory Bird Harvests by Season and Year, Bering Strait Region (Number of Birds)

	Study Year	Geese						Ducks						Crane					
		Spring	Summer	Fall	Winter	Season Unknown	Total Geese	Spring	Summer	Fall	Winter	Season Unknown	Total Ducks	Spring	Summer	Fall	Winter	Season Unknown	Total Crane
BERING STRAIT MAINLAND																			
Brevig Mission	95	358	0	25	0	0	383	201	0	82	0	4	287	16	0	0	0	0	16
Elim	94	240	0	74	0	0	314	198	0	360	0	0	558	12	0	14	0	0	26
Golovin	89	445	0	147	0	0	592	332	0	256	0	0	588	45	0	61	0	0	106
Koyuk	95	312	0	68	0	0	380	382	0	153	0	0	535	121	0	172	0	0	293
Nome																			
King Island Community	95	4	1	61	0	0	66	5	3	46	0	0	54	0	0	16	0	0	16
Nome (except King Island)	95	533	6	604	0	0	1,143	592	207	654	0	29	1,482	63	0	190	0	0	253
Shaktoolik	94	159	0	189	0	4	352	42	0	157	0	0	199	67	0	160	0	12	239
Stebbins	94	1,318	8	318	0	111	1,755	652	238	1,161	0	108	2,159	75	0	251	0	5	331
Teller	95	126	0	22	0	0	148	308	0	100	0	72	480	21	0	0	0	0	21
Unalakleet	95	585	0	218	0	0	803	512	0	262	0	0	774	159	0	159	0	0	318
Wales	94	74	0	90	0	0	164	168	0	47	0	87	302	4	0	23	0	0	27
White Mountain	95	1,107	0	166	0	0	1,273	355	0	477	0	0	832	39	0	44	0	7	90
Total		**5,261**	**15**	**1,982**	**0**	**115**	**7,373**	**3,747**	**448**	**3,755**	**0**	**300**	**8,250**	**622**	**0**	**1,090**	**0**	**24**	**1,736**
Percent of All Migratory Birds		71.4%	0.2%	26.9%	0.0%	1.6%	100.0%	45.4%	5.4%	45.5%	0.0%	3.6%	100.0%	35.8%	0.0%	62.8%	0.0%	1.4%	100.0%
ST LAWRENCE-DIOMEDE ISLAND																			
Diomede	95	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
Gambell	93	0		126			126	254		230			484						
Savoonga	93	0		35			35	0		63			63						
Total		**0**	**0**	**161**	**0**	**0**	**161**	**254**	**0**	**293**	**0**	**0**	**547**	**2**	**0**	**0**	**0**	**0**	**2**
Percent of All Migratory Birds		0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	46.4%	0.0%	53.6%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
TOTAL BERING STRAIT REGION		**5,261**	**15**	**2,143**	**0**	**115**	**7,534**	**4,001**	**448**	**4,048**	**0**	**300**	**8,797**	**624**	**0**	**1,090**	**0**	**24**	**1,738**

Table 10. (continued) Migratory Bird Harvests by Season and Year, Bering Strait Region (Number of Birds)

		Swan						Shorebirds						Seabirds					
	Study Year	Spring	Summer	Fall	Winter	Season Unknown	Total Swan	Spring	Summer	Fall	Winter	Season Unknown	Total Shorebirds	Spring	Summer	Fall	Winter	Season Unknown	Total Seabirds
BERING STRAIT MAINLAND																			
Brevig Mission	95	1	0	1	0	0	2	0	0	0	0	0	0	1	0	4	0	0	5
Elim	94	4	0	4	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0
Golovin	89	12	0	8	0	0	20							0	1	0	0	0	1
Koyuk	95	4	0	4	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0
Nome																			
King Island Community	95	0	0	3	0	0	3	0	0	0	0	0	0	35	138	1	0	0	174
Nome (except King Island)	95	6	0	46	0	0	52	0	46	0	0	0	46	2,424	115	172	0	0	2,711
Shaktoolik	94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stebbins	94	31	2	196	0	19	248	16	0	0	0	0	16	0	14	22	0	2	38
Teller	95	4	0	12	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0
Unalakleet	95	18	0	4	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0
Wales	94	0	0	1	0	6	7	0	0	0	0	0	0	1	0	0	0	60	61
White Mountain	95	9	0	18	0	0	27	0	0	0	0	0	0	0	7	0	0	0	7
Total		**89**	**2**	**297**	**0**	**25**	**413**	**16**	**46**	**0**	**0**	**0**	**62**	**2,461**	**275**	**199**	**0**	**62**	**2,997**
Percent of All Migratory Birds		21.5%	0.5%	71.9%	0.0%	6.1%	100.0%	25.8%	74.2%	0.0%	0.0%	0.0%	100.0%	82.1%	9.2%	6.6%	0.0%	2.1%	100.0%
ST LAWRENCE-DIOMEDE ISLAND																			
Diomede	95	0	0	0	0	0	0	0	0	0	0	0	0	105	1,883	0	210	0	2,198
Gambell	93	0		5			5							4,410		1,166			5,576
Savoonga	93	0		0			0							1,248		1,227			2,475
Total		**0**	**0**	**5**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**5,763**	**1,883**	**2,393**	**210**	**0**	**10,249**
Percent of All Migratory Birds		0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	56.2%	18.4%	23.3%	2.0%	0.0%	100.0%
TOTAL BERING STRAIT REGION		**89**	**2**	**302**	**0**	**25**	**418**	**16**	**46**	**0**	**0**	**0**	**62**	**8,224**	**2,158**	**2,592**	**210**	**62**	**13,246**

Table 10. (continued) Migratory Bird and Other Bird Harvests by Season and Year, Bering Strait Region (Number of Birds)

		All Migratory Birds - All Seasons						Other Birds - All Seasons					
	Study Year	Spring	Summer	Fall	Winter	Season Unknown	Total Migratory Birds	Spring	Summer	Fall	Winter	Season Unknown	Total Other Birds
BERING STRAIT MAINLAND													
Brevig Mission	95	577	0	112	0	4	693	128	0	10	65	0	203
Elim	94	454	0	452	0	0	906	0	0	100	172	0	272
Golovin	89	834	1	472	0	0	1,307	0	0	0	0	0	0
Koyuk	95	820	0	396	0	0	1,216	91	0	30	100	0	221
Nome													
King Island Community	95	44	142	127	0	0	313	3	0	32	91	0	126
Nome (except King Island)	95	3,619	374	1,666	0	29	5,688	133	0	1,522	2,384	0	4,039
Shaktoolik	94	268	0	506	0	16	790	88	0	9	118	13	228
Stebbins	94	2,092	262	1,948	0	245	4,547	163	0	0	757	0	920
Teller	95	459	0	134	0	72	665	25	0	12	0	0	37
Unalakleet	95	1,274	0	643	0	0	1,917	60	0	45	518	0	623
Wales	94	247	0	161	0	153	561	124	0	5	7	2	138
White Mountain	95	1,510	7	705	0	7	2,229	27	0	141	605	0	773
Total		**12,198**	**786**	**7,322**	**0**	**526**	**20,832**	**842**	**0**	**1,906**	**4,817**	**15**	**7,580**
Percent of All Migratory Birds		58.6%	3.8%	35.1%	0.0%	2.5%	100.0%	11.1%	0.0%	25.1%	63.5%	0.2%	100.0%
ST LAWRENCE-DIOMEDE ISLAND													
Diomede	95	107	1,883	0	210	0	2,200	0	0	0	0	0	0
Gambell	93	4,664		1,527			6,191						
Savoonga	93	1,248		1,325			2,573						
Total		**6,019**	**1,883**	**2,852**	**210**	**0**	**10,964**	**0**	**0**	**0**	**0**	**0**	**0**
Percent of All Migratory Birds		54.9%	17.2%	26.0%	1.9%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL BERING STRAIT REGION		**18,217**	**2,669**	**10,174**	**210**	**526**	**31,796**	**842**	**0**	**1,906**	**4,817**	**15**	**7,580**

Table 11. Bird Species Harvested, Bering Strait Region

	Bering Strait Mainland	St. Lawrence-Diomede Islands	Total	Percent
DUCKS				
Pintail	5,799	12	5,859	50.6%
Common Eider	722	294	1,016	8.8%
Mallard	833	0	847	7.3%
Ducks (species unspecified)	711	0	716	6.2%
Teal	642	0	647	5.6%
Scaup	450	10	460	4.0%
Shoveler	443	0	445	3.8%
Wigeon	438	0	445	3.8%
Oldsquaw	357	60	417	3.6%
King Eider	222	67	289	2.5%
Scoter	266	2	196	1.7%
Harlequin	0	51	51	0.4%
Merganser	51	0	51	0.4%
Canvasback	49	0	49	0.4%
Steller Eider	4	42	46	0.4%
Spectacled Eider	23	9	32	0.3%
Goldeneye	3	0	3	0.0%
Bufflehead	0	0	0	0.0%
Eider (species unspecified)	0	0	0	0.0%
Total	**11,013**	**547**	**11,568**	**100.0%**
GEESE, SWANS AND CRANES				
Brant	2,627	15	2,642	22.5%
Lesser Canada Geese (taverner/parvipes)	2,134	1	2,135	18.2%
Snow Geese	1,909	133	2,042	17.4%
Sandhill Cranes	1,814	2	1,816	15.5%
Canada Geese (species unspecified)	1,608	0	1,608	13.7%
White-fronted Geese	549	0	549	4.7%
Cackling Canada Geese	471	0	471	4.0%
Tundra Swans (Whistling)	458	0	458	3.9%
Emperor Geese	111	13	124	1.1%
Geese (species unspecified)	5	0	5	0.0%
Swans (species unspecified)	0	5	5	0.0%
Total	**11,570**	**151**	**11,721**	**100.0%**

Table 11 (cont). Bird Species Harvested, Bering Strait Region

	Bering Strait Mainland	St. Lawrence-Diomede Islands	Total	Percent
SEABIRDS AND SHOREBIRDS				
Arctic Terns	2,061	5,424	7,485	55.6%
Red-Throated Loons	487	2,682	3,169	23.6%
Red-Necked Grebes	25	1,000	1,025	7.6%
Loons (species unspecified)	172	753	925	6.9%
Pigeon Guillemots	8	301	309	2.3%
Yellow-billed Loons	144	0	144	1.1%
Seabirds (species unspecified)	20	100	120	0.9%
Arctic (Pacific) Loons	58	4	62	0.5%
Common Snipes	62	0	62	0.5%
Puffins	4	51	55	0.4%
Common Loons	41	0	41	0.3%
Murres (species unspecified)	2	34	36	0.3%
Gulls	0	12	12	0.1%
Thick-Billed Murres	4	0	4	0.0%
Cormorants	0	3	3	0.0%
Common Murres	0	0	0	0.0%
Auklets	0	0	0	0.0%
Total	**3,088**	**10,364**	**13,452**	**100.0%**
UPLAND GAME BIRDS AND OWLS				
Ptarmigan	9,684	0	9,684	96.4%
Grouse	343	0	343	3.4%
Snowy Owls	19	0	19	0.2%
Total	**10,046**	**0**	**10,046**	**100.0%**

Table 12. Egg Species Harvested, Bering Strait Region

Bird Egg Type	Bering Strait Mainland	St. Lawrence-Diomede Islands	Total	Percent
Murre Eggs	9,796	17,362	27,158	61.3%
Gull Eggs	9,776	0	9,776	22.1%
Bird Eggs (species unspecified)	1,991	0	1,991	4.5%
Common Eider Eggs	1,557	10	1,567	3.5%
Duck Eggs (species unspecified)	754	0	754	1.7%
Pintail Eggs	626	0	626	1.4%
Shorebird Eggs (species unspecified)	535	0	535	1.2%
Lesser Canada Geese Eggs	320	0	320	0.7%
Sandhill Crane Eggs	197	0	197	0.4%
Tern Eggs	185	0	185	0.4%
Auklet Eggs	73	85	158	0.4%
Common Snipe Eggs	155	0	155	0.3%
Seabird Eggs (species unspecified)	115	0	115	0.3%
Geese Eggs (species unspecified)	113	0	113	0.3%
Tundra Swan Eggs	101	0	101	0.2%
Puffin Eggs	93	0	93	0.2%
Common Loon Eggs	79	0	79	0.2%
Plover Eggs	64	0	64	0.1%
Oldsquaw Eggs	52	0	52	0.1%
Scaup Eggs	47	0	47	0.1%
Cackling Canada Eggs	39	0	39	0.1%
Mallard Eggs	34	0	34	0.1%
Snow Geese Eggs	29	0	29	0.1%
Scoter Eggs	27	0	27	0.1%
Teal Eggs	20	0	20	0.0%
Loon Eggs (species unspecified)	20	0	20	0.0%
Red-throated Loon Eggs	10	0	10	0.0%
White-fronted Geese Eggs	8	0	8	0.0%
King Eider Eggs	1	6	7	0.0%
Spectacled Eider Eggs	6	0	6	0.0%
Bufflehead Eggs	0	0	0	0.0%
Canvasback Eggs	0	0	0	0.0%
Steller's Eider Eggs	0	0	0	0.0%
Goldeneye Eggs	0	0	0	0.0%
Harlequin Eggs	0	0	0	0.0%
Merganser Eggs	0	0	0	0.0%
Shoveler Eggs	0	0	0	0.0%
Wigeon Eggs	0	0	0	0.0%
Black Brant Eggs	0	0	0	0.0%
Emperor Geese Eggs	0	0	0	0.0%
Cormorant Eggs	0	0	0	0.0%
Guillemot Eggs	0	0	0	0.0%
Yellow-billed Loon Eggs	0	0	0	0.0%
Upland Game Bird Eggs	0	0	0	0.0%
Total	**26,823**	**17,463**	**44,286**	**100.0%**

Seasonal harvest periods by major type of bird are shown in Figs. 7-13. For geese, spring is by far the most productive hunting period in the Bering Strait region: 70 percent of the geese harvest occurred during spring, with 28 percent during fall (Fig. 7). The subsistence duck harvest was evenly split between spring and fall (46 percent of the ducks taken in each season), with 5 percent of ducks reported taken during summer (Fig. 8). By contrast, fall was the most productive hunting period for swan (73 percent) and sandhill crane (63 percent) (Fig. 9 and 10). Most seabirds were harvested during spring (62 percent), with other seabird harvests during summer (16 percent) and fall (20 percent). Most of the small shorebird harvest was reported taken during summer (74 percent), and the remainder in spring (26 percent). As stated above, the harvest seasons for ptarmigan, grouse, and snowy owl different substantially from those of migratory birds: 64 percent were harvested in winter, 25 percent in fall, and 11 in spring.

Bird and Egg Harvests by Species

The species of birds harvested in Bering Strait are shown in Table 8, ranked by the number harvested. Among ducks, the pintail was the most commonly harvested duck during the survey period – 5,859 pintails were harvested, representing 50.6 percent of all ducks killed in the Bering Strait region. Almost all pintails were taken by hunters from mainland communities. About nine other species comprise most of the remainder of the ducks – the common eider, mallard, teal, scaup, shoveler, widgeon, oldsquaw, king eider, and scoter. Ducks species reported harvested in relatively smaller numbers include the harlequin, merganser, canvasback, Steller's eider, spectacled eider, and goldeneye.

Among the geese, Canada geese were the most common type reported harvested – hunters reported harvesting about 4,214 Canada geese of all subspecies during the survey year. Three categories of Canada geese were reported harvested by hunters – lesser (2,135 birds), cackling (471 birds), and unspecified Canada geese (1,608 birds). Species identification is particularly troublesome in regards to lessers and cackling Canada geese. The two species undoubtedly overlap in distribution in portions of the Bering Strait region, although lesser Canadas are thought to predominate (Tom Rothe, ADF&G, personal communication). These two small species of Canada geese closely resemble each other in size and color. Bill length is probably one of the better ways to distinguish a lesser from a cackling Canada, however, most Canada geese were eaten by the time surveys were conducted, so bill lengths could not be measured during the study period. The survey's color bird charts depicting each goose type was not very useful in distinguishing the birds, as the pictures of lessers and cacklers were quite similar. In addition, the local geese taxonomies used by hunters to classify Canada geese commonly differed from the Linnaean system. Some hunters distinguished among Canada geese using other features. Hunters were asked to categorize their Canada geese harvests into one of the three categories on the survey, as best they could. The large number of "unspecified Canada geese" indicates the difficulty many hunters faced in assigning harvests to either the lesser or cackling Canada categories. Because of these factors, the total Canada goose harvest number is probably a relatively precise estimate, while the estimates for the lesser, cackling, and unspecified Canada geese categories are less precise. The topic of species identification of Canada geese in the Bering Strait region warrants additional study.

Table 13. Migratory Bird Harvests (Number of Birds) by Species and Community, Bering Strait Region - Ducks, Geese, Swans, and Cranes

		DUCKS																		GEESE								SWANS/ CRANES		
	Year	Ducks (species unspecified)	Buffleheads	Canvasbacks	Common Eiders	King Eiders	Spectacled Eiders	Steller Eiders	Goldeneyes	Harlequins	Mallards	Mergansers	Oldsquaws	Pintails	Scaup	Scoters	Shovelers	Teals	Wigeons	Geese (species unspecified)	Brant	Cackling Canada Geese	Lesser Canada Geese (taverner/parvipes)	Canada Geese (species unspecified)	Emperor Geese	Snow Geese	White-fronted Geese	Swans (species unspecified)	Tundra Swans (Whistling)	Sandhill Cranes
BERING STRAIT MAINLAND																														
Brevig Mission	95		0	0	61	4	0	0	0	0	12	0	5	102	62	20	9	8	4		209	2	86	23	4	54	4		2	16
Elim	94		0	4	12	0	0	0	0	0	18	0	0	374	0	0	32	86	32		68	136	64		0	10	36		8	26
Golovin	89	12	0						0		107	0	0	426	0	1		41	0		345			214	7	6	19		20	106
Koyuk	95		0	0	8	0	0	0	0	0	40	0	0	403	0	0	4	26	55		11	8	219	21	0	25	96		8	293
Nome																														
King Island Community	95		0	0	19	3	0	0	0	0	11	4	17	0	0	0	0	0	1		10	24	19	1	6	7	0		3	16
Nome (except. King Is.)	95	632	0	29	52	75	17	0	0	0	161	0	40	304	0	0	34	115	23		115	69	333	402	23	195	6		52	253
Shaktoolik	94		0	1	6	0	0	0	0	0	7	0	0	140	0	0	9	25	11		38	109	144		3	20	37		0	239
Shishmaref	95		0	0	311	47	0	0	3	0	149	47	146	1686	202	72	17	62	121		793		0	830	50	146	218		44	78
Stebbins	94		0	3	136	17	2	0	0	0	100		25	1183	162	89	252	128	61		14	72	213	60	5	1341	50		248	331
Teller	95		0	0	49	0	0	4	0	0	92	0	55	101	10	84	8	49	25		21	23	94	8	0	8	2		16	21
Unalakleet	95	49	0	0	0	0	0	0	0	0	132	0	0	462	4	0	14	49	65	5	7	0	592	36	0	89	72		22	319
Wales	94		0	0	68	76	4	0	0	0	0	0	69	73	1	0	7	0	5		130		0	11	13	8	2		7	26
White Mountain	95	18	0	12	0	0	0	0	0	0	104	0	0	545	9	0	58	53	35		866	28	370	2	0	0	7		28	90
TOTAL MAINLAND		**711**	**0**	**49**	**722**	**222**	**23**	**4**	**3**	**0**	**933**	**51**	**357**	**5799**	**450**	**266**	**444**	**642**	**438**	**5**	**2627**	**471**	**2134**	**1608**	**111**	**1909**	**549**	**0**	**458**	**1814**
ST. LAWRENCE-DIOMEDE ISLANDS																														
Diomede	95		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0		0	0	0		0	2
Gambell	93				262	59	0	42		47			60	12	0	2					7		1		1	118		5		
Savoonga	93				32	8	9	0		4			0	0	10	0					8		0		12	15		0		
TOTAL ISLAND		**0**	**0**	**0**	**294**	**67**	**9**	**42**	**0**	**51**	**0**	**0**	**60**	**12**	**10**	**2**	**0**	**0**	**0**	**0**	**15**	**0**	**1**	**0**	**13**	**133**	**0**	**5**	**0**	**2**

Table 14. Migratory Bird Harvests (Number of Birds) by Species and Community, Bering Strait Region - Seabirds, Shorebirds, and Upland Game Birds

	Year	Seabirds (species unspecified)	Cormorants (pelagic & species unspecified)	Red-Necked Grebes	Pigeon Guillemots	Gulls (various species & species unspecified)	Arctic Terns	Arctic (Pacific) Loons	Common Loons	Red-Throated Loons	Yellow-billed Loons	Loons (species unspecified)	Common Murres	Thick-Billed Murres	Murres (species unspecified)	Puffins (various species & species unspecified)	Auklets (various species & species unspecified)	Common Snipes	Grouse	Ptarmigan	Snowy Owls
BERING STRAIT MAINLAND																					
Brevig Mission	95					0	0	3	0	0	2		0	0		0	0	0	0	203	0
Elim	94					0	0	0	0	0	0		0	0		0	0	0	36	236	0
Golovin	89											1								957	
Koyuk	95					0	0	0	0	0	0		0	0		0	0	0	21	200	0
Nome																					
King Island Community	95					1	0	1	0	0	0		2	0		35	135	0	1	124	0
Nome (except. King Is.)	95	29				0	0	0	17	0	0		471	172	144	0	1878	46	46	3993	0
Shaktoolik	94					0	0	0	0	0	0		0	0		0	0	0	0	228	0
Shishmaref	95		25			0	0	0	0	0	0	3	0	0		3	0	0	0	1487	9
Stebbins	94					0	0	0	3	0	0		14	0		20	0	16	0	915	5
Teller	95					0	0	0	0	0	0		0	0		0	0	0	0	156	0
Unalakleet	95					0	0	0	0	0	0		0	0		0	0	0	80	438	0
Wales	94	12	0			0	0	0	0	0	0		0	0		0	48	0	0	133	5
White Mountain	95					7	0	0	0	0	0		0	0		0	0	0	159	614	0
TOTAL MAINLAND		**41**	**25**	**0**	**0**	**8**	**0**	**4**	**20**	**0**	**2**	**4**	**487**	**172**	**144**	**58**	**2061**	**62**	**343**	**9684**	**19**
ST. LAWRENCE-DIOMEDE ISLANDS																					
Diomede	95		6			0		0	0	0	0		74			0	2118	0			0
Gambell	93		500	1	12	203		24	34		17		1422	115		4	2836				
Savoonga	93		494	2	0	98		27	66		17		1186	638		0	470				
TOTAL ISLAND		**0**	**1000**	**3**	**12**	**301**	**0**	**51**	**100**	**0**	**34**	**0**	**2682**	**763**	**0**	**4**	**5424**	**0**	**0**	**0**	**0**

Table 15. Bird Egg Harvests (Number of Eggs) by Species and Year Bering Strait Region

	Year	Bird Eggs (species unspecified)	Duck Eggs (species unspecified)	Bufflehead Eggs	Canvasback Eggs	Common Eider Eggs	King Eider Eggs	Spectacled Eider Eggs	Steller's Eider Eggs	Goldeneye Eggs	Harlequin Eggs	Mallard Eggs	Merganser Eggs	Oldsquaw Eggs	Pintail Eggs	Scaup Eggs	Scoter Eggs	Shoveler Eggs	Teal Eggs	Wigeon Eggs	Geese Eggs (species unspecified)	Black Brant Eggs	Cackling Canada Eggs	Lesser Canada Geese Eggs	Emperor Geese Eggs	Snow Geese Eggs	White-fronted Geese Eggs	Tundra Swan Eggs	Sandhill Crane Eggs
BERING STRAIT MAINLAND																													
Brevig Mission	95		1	0	0	527	0	0	0	0	0	0	0	2	27	47	0	0	0	0		0	0	0	0	0	0	0	0
Elim	94			0	0	760	0	0	0	0	0	0	0	40	124	0	0	0	0	0		0	0	0	0	0	0	6	22
Golovin	89		62																		25							4	
Koyuk	95			0	0	23	0	0	0	0	0	17	0	0	13	0	0	0	0	0		0	8	108	0	0	0	19	47
Nome																													
King Island Community	95			0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Nome (except. King Is.)	95		115	0	0	0	0	0	0	0	0	0	0	0	69	0	0	0	0	0		0	0	34	0	0	0	0	0
Shaktoolik	94			0	0	121	0	0	0	0	0	17	0	0	0	0	0	0	0	0		0	6	0	0	0	0	0	6
Shishmaref	95	1991	551	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84	0	0	0	0	0	0	0	28
Stebbins	94			0	0	30	0	6	0	0	0	0	0	0	251	0	0	0	20	0		0	0	0	0	0	0	0	24
Teller	95		4	0	0	0	0	0	0	0	0	0	0	0	49	0	27	0	0	0	4	0	0	88	0	29	8	29	0
Unalakleet	95		11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Wales	94		10	0	0	1	1	0		0	0	0	0	1	1	0	0	0	0	0		0	0	0	0	0	0	5	5
White Mountain	95			0	0	88	0	0	0	0	0	0	0	0	92	0	0	0	0	0		0	25	90	0	0	0	32	65
TOTAL MAINLAND		**1991**	**764**	**0**	**0**	**1557**	**1**	**6**	**0**	**0**	**0**	**34**	**0**	**62**	**626**	**47**	**27**	**0**	**20**	**0**	**113**	**0**	**39**	**320**	**0**	**29**	**8**	**101**	**197**
ST. LAWRENCE-DIOMEDE ISLANDS																													
Diomede	95			0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Gambell	93					10	6																						
Savoonga	93					0	0																						
TOTAL ISLAND		**0**	**0**	**0**	**0**	**10**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Table 15 (continued). Bird Egg Harvests (Number of Eggs) by Species and Year, Bering Strait Region

	Year	Shorebird Eggs (species unspecified)	Common Snipe Eggs	Plover Eggs (species unspecified)	Seabird Eggs (Unspecified)	Cormorant Eggs	Guillemot Eggs	Gull Eggs (various species & unspecified species)	Tern Eggs	Loon Eggs (species unspecified)	Common Loon Eggs	Red-throated Loon Eggs	Yellow-billed Loon Eggs	Murre Eggs (various species & unspecified species)	Puffin Eggs (species unspecified)	Auklet Eggs (species unspecified)	Upland Game Bird Eggs
BERING STRAIT MAINLAND																	
Brevig Mission	95	12	68	64			0	1141	113	0	5	10	0	0	0	0	0
Elim	94		0	0			0	1140	0	0	74	0	0	24	0	0	0
Golovin	89		0	0				458	0					184			
Koyuk	95		0	0			0	965	23	0	0	0	0	0	0	0	0
Nome																	
King Island Community	95		0	0			0	29	0	0	0	0	0	1257	1	13	0
Nome (except. King Is.)	95		0	0	115		0	1229	0	0	0	0	0	6147	0	0	0
Shaktoolik	94		0	0			0	356	0	11	0	0	0	791	0	0	0
Shishmaref	95	523	0	0			0	2383	0	0	0	0	0	0	0	0	0
Stebbins	94		78	0		0	0	149	49	6	0	0	0	67	92	0	0
Teller	95		0	0			0	82	0	0	0	0	0	0	0	0	0
Unalakleet	95		9	0			0	248	0	2	0	0	0	22	0	0	0
Wales	94		0	0		0	0	452	0	1	0	0	0	588	0	60	0
White Mountain	95		0	0			0	1144	0	0	0	0	0	716	0	0	0
TOTAL MAINLAND		**535**	**155**	**64**	**115**	**0**	**0**	**9776**	**185**	**20**	**79**	**10**	**0**	**9786**	**93**	**73**	**0**
ST. LAWRENCE-DIOMEDE ISLANDS																	
Diomede	95		0	0		0	0	0	0	0	0	0	0	3818	0	70	0
Gambell	93													7027		0	
Savoonga	93													6517		15	
TOTAL ISLAND		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**17362**	**0**	**85**	**0**

After Canada geese, brant was the most common goose species reported harvested the survey year (2,642 brant), most taken by mainland communities. Other geese taken included snow geese (2,042 birds), white-fronted geese (549 birds), and emperor geese (124 birds). Hunters reported harvesting 1,616 sandhill cranes and 458 tundra swans.

Among seabirds and shorebirds, arctic terns were the most commonly harvested bird (7,485 terns, or 55.6 percent of all seabirds and shorebirds). Most of the terns were harvested on St. Lawrence-Diomede islands. After terns, loons were the most common seabird taken: hunters reported harvesting 4,341 loons of all species – these included red-throated loons (3,169 birds), yellow billed loons (144 birds), arctic loons (62 birds), common loons (41 birds), and unspecified loons (925 birds). Categorizing the loon harvest into the species categories of the survey chart posed problems for some hunters, which accounts for the number of unspecified loons. Another seabird commonly harvested was the red-necked grebe (1,025 birds). Other seabirds taken in smaller numbers included the pigeon guillemot, common snipe, puffins, murres, gulls, and cormorants.

By far, murre eggs were the most commonly gathered eggs during the survey period (27,158 murre eggs) (Table 9). Murre eggs were collected by mainland and island communities. On St. Lawrence and Diomede islands, almost all the eggs collected were murre eggs. On mainland communities, gull eggs (9,776 eggs) and common eider eggs (1,557 eggs) were also commonly taken. Together, murre, gull, and common eider eggs represented 86.9 percent of the subsistence eggs harvested in the Bering Sea region (Table 9). Households from mainland communities reported gathering smaller numbers of eggs from a wide range of other species listed in Table 17.

Community Reports

The appendix provides community summaries of subsistence bird patterns for ten communities which were part of the Northwest Migratory Bird Survey Project in 1994-95, conducted by Kawerak and the Division of Subsistence of the Alaska Department of Fish and Game. Community summaries were prepared and sent to each community's sponsoring body for review and approval. The reports describe subsistence bird patterns for each community, with tables and charts. For communities where key respondent interviews took place, notes from those interviews are attached to the community report. These community reports are included in this regional overview. In addition, similar community summaries were prepared for three places – Golovin (1989), Shishmaref (1995), and Wales (1994). The findings of the 1988-1989 study in Golovin can be found in the ADFG Division of Subsistence Technical Paper No. 188, The Harvest of Fish and Wildlife in Three Alaska Communities: Brevig Mission, Golovin, and Shishmaref, by Annie Olanna Conger and James Magdanz (February 1990). A full report on the results of the comprehensive subsistence surveys in Shishmaref in 1995 and Wales in 1994 is planned by the Division of Subsistence and the National Park Service.

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APPENDIX

Commmunity Summaries of Subsistence Bird Patterns

Bird Harvests in Brevig Mission, January through December 1995

Results of a cooperative project by Kawerak, Inc.
and the Division of Subsistence, Alaska Department of Fish and Game,
funded by the U.S. Fish and Wildlife Service
June 1996

Introduction

Birds are important to families in northwest Alaska. They are an important part of the culture and traditional way of life of Alaska Natives. Birds and bird eggs are eaten for food, and feathers are used in hand-crafted items. This report presents information on bird harvests in Brevig Mission in 1995. The information results from a cooperative project in 1995-96.

The Project

Several groups worked together on the project to gather information on birds at Brevig Mission. The Brevig Mission Traditional Council approved the project by resolution. A survey of households was done by a local researcher hired and supervised by Kawerak, Inc. The project was designed by the Division of Subsistence, Alaska Department of Fish and Game, who also put the information into tables and into this report. Money for the project came from the U.S. Fish and Wildlife Service. Preliminary results were reviewed by Kawerak and the Division of Subsistence, ADF&G.

How the Information Was Collected

A survey was used to gather information on bird harvests. Surveys were done in 56 of the 58 households (97 percent) in Brevig Mission. Also, two bird experts from Brevig Mission were interviewed about bird ecology and traditional uses of birds. Surveys were done December 16-27, 1995 in Brevig Mission. On the survey, people were asked about bird hunting during the 12-month period, January 1995 through December 1995. Participation in the surveys was voluntary. To protect confidentiality, no person's name is used in any reports of the information.

Findings

Households in Brevig Mission reported the following things about their use of birds in 1995:

- Almost one-half (46.4 percent) of all households had members that hunted birds. Slightly fewer households (44.6 percent) harvested birds (Fig. 4).
- A majority of households (60.7 percent) used birds (Fig. 4).
- Sharing of birds was common, with 26.8 percent of households giving birds to other families, and 25.0 percent of households receiving birds from others (Fig. 4).
- At least 23 kinds of birds were caught including white-fronted geese, cackling Canada geese, lesser Canada geese, snow geese, black brant, northern pintail, American widgeon, mallard, northern shoveler, greater scaup, lesser scaup, green-winged teal, oldsquaw, black scoter, surf scoter, common eider, king eider, arctic loon, red-throated loon, willow ptarmigan, rock ptarmigan, sandhill crane, and tundra swan (Table 1).
- At least 10 kinds of eggs were gathered, including: northern pintail, greater scaup, oldsquaw, common eider, common loon, red-throated loon, glaucous gull, arctic tern, plover, and common snipe (Table 1).
- An estimated 896 birds were caught by households in Brevig Mission in 1995. Hunters reported that fewer snow geese and black brant passed through the area in 1995 than in previous years.

Bird harvests fell into the following general categories: geese (42.7 percent), ducks (32.1 percent), upland game birds (22.7 percent), cranes (1.7 percent), seabirds (0.6 percent), and swans (0.2 percent) (Fig. 1).

- The five kinds of birds caught in greatest numbers in 1995 were black brant (209 birds), willow ptarmigan (186 birds), northern pintail (102 birds), lesser Canada geese (86 birds), and greater scaup (62 birds) (Table 1).

- An estimated 2,019 eggs were gathered by households in Brevig Mission in 1995. Most eggs were from glaucous gulls (1,141 eggs), common eider (527 eggs), and arctic tern (113 eggs) (Table 1).

- Egg harvests fell into the following general categories: seabirds (62.9 percent), ducks (29.9 percent), and shorebirds (7.2 percent) (Fig. 2).

- Birds were taken in spring (78.7 percent), fall (13.5 percent), and winter (7.3 percent). The season was unknown for 0.5 percent of the harvest (Fig. 3).

- The classifications of Canada geese harvests into "cackling Canada" or "lesser Canada" by hunters are uncertain because of the close resemblance of the two species and the difficulties distinguishing them in the colored bird guide used in the survey. Interviewed expert hunters in Brevig Mission reported that cackling Canada geese are not found in the local area, except on extremely rare occasions.

- Local distinctions between bird species did not always correspond with western scientific distinctions shown in the bird guide. In addition, hunters typically identify birds by their sound, behavior, and habitat, as well as by their looks. The lack of this information in the bird guide led to uncertainty about the identity of a few of the species harvested.

- A few hunters may have underreported their harvests of some bird species in fear of enforcement consequences despite assurances that the information was confidential.

- Information from interviewed hunters about birds in the Brevig Mission area is attached as an appendix.

Computerized Data Files

This information is available as computer files at the Division of Subsistence, Department of Fish and Game, Box 3-2000, Juneau, Alaska 99802 (907-465-4147).

Acknowledgments

A sincere thank-you is given to all households and hunting experts who generously volunteered to be surveyed or interviewed for this project. A special thanks is given to Sandy Iknokinok of Kawerak, who obtained IRA approvals, hired community assistants, and supervised data collection; Arthur Barr of Brevig Mission, who conducted the household surveys; Susan Georgette of the Division of Subsistence, ADF&G, who trained surveyors, interviewed hunters, and analyzed data; and the Brevig Mission Traditional Council, who supported the project.

Table 1. BREVIG MISSION
Bird Harvests, January 1995 - December 1995[1]

Bird Species		Total Harvests		Bird Harvest By Season[2]				
		Birds	Eggs	Winter	Spring	Summer	Fall	nknown
Geese	White-fronted Geese	4			4			
	Emperor Geese	4			4			
	Cackling Canada Geese	2			2			
	Lesser Canada Geese	86			70		16	
	Canada Geese Unknown	23			20		3	
	Snow Geese	54			54			
	Black Brant	209			204		5	
	Unknown Geese							
Ducks	Northern Pintail	102	27		87		15	
	American Wigeon	4					4	
	Mallard	12			6		6	
	Northern Shoveler	9			1		8	
	Greater Scaup	62	47		46		17	
	Lesser Scaup							
	Canvasback							
	Green-winged Teal	8			8			
	Common Merganser							
	Red-breasted Merganser							
	Bufflehead							
	Harlequin							
	Oldsquaw	5	2		5			
	Common Goldeneye							
	Black Scoter	5			5			
	Surf Scoter	15			4		10	
	White-winged Scoter							
	Common Eider	61	527		39		22	
	King Eider	4						4
	Spectacled Eider							
	Steller's Eider							
	Ducks Unknown		1					
Seabirds	Common Loon		5					
	Arctic Loon	3			1		2	
	Red-throated Loon	2	10				2	
	Yellow-billed Loon							
	Unknown Loon							
	Common Murre							
	Thick-billed Murre							
	Unknown Murre							
	Black Guillemot							
	Sabine's Gull							
	Mew Gull							
	Glaucous Gull		1141					
	Herring Gull							
	Unknown Gull							
	Arctic Tern		113					
	Auklets							
	Puffins							
	Unknown Migratory Bird							
Shorebirds	Plover		64					
	Common Snipe		68					
	Other Shorebirds		12					
Game Birds	Willow Ptarmigan	186		65	111		10	
	Rock Ptarmigan	17			17			
	Grouse							
Snowy Owl								
Sandhill Crane		16			16			
Tundra Swan		2			1		1	

[1] Based on a census survey of 56 of 58 households, expanded to all households. Data were collected by a local researcher on contract with Kawerak, through cooperative agreements between ADFG, Division of Subsistence, Kawerak, and USFWS. Research was approved by resolution of the Brevig Mission Traditional Council. Project funded by USFWS.

[2] Winter=Nov, Dec, Jan, Feb; Spring=Mar, Apr, May; Summer = Jun, Jul; Fall=Aug, Sep, Oct

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

BREVIG MISSION
Bird Harvest Patterns
January 1995 - December 1995

Fig. 1 **Brevig Mission Bird Harvests, January 1995 - December 1995, by Bird Type**

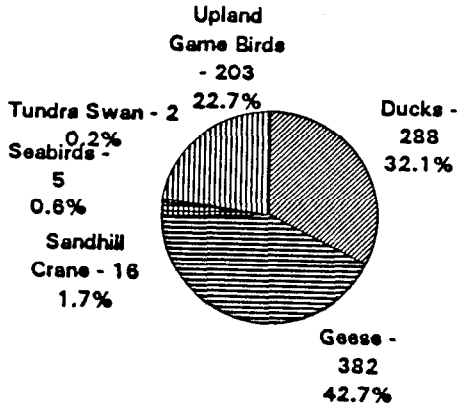


Fig. 2 **Brevig Mission Egg Harvests, January 1995 - December 1995, by Bird Type**

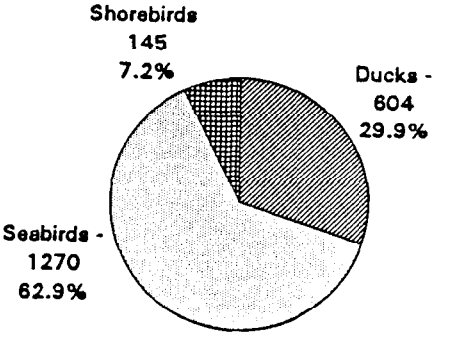


Fig. 3 **Brevig Mission Bird Harvests, January 1995 - December 1995, by Season**

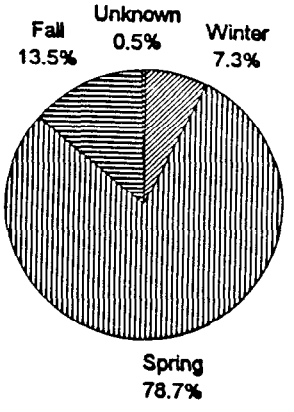
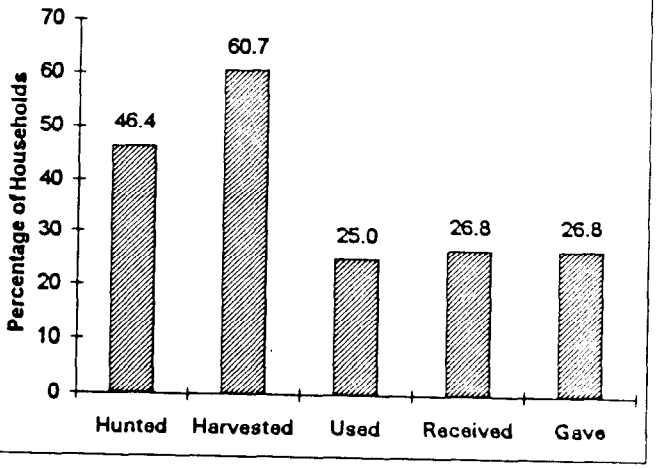


Fig. 4 **Percentage of Brevig Mission Households that Hunted, Harvested, Used, Received, or Gave Birds, 1995**



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

Migratory Bird Project
Brevig Mission Key Respondent Notes
Researcher: Susan Georgette

Brevig Mission. Black brant. Migration. Population levels.
We see brants in July and August. Not in fall time. It's really different this year. Usually we see lots. This year hardly any. They maybe took a shortcut. We don't know which way.
CODE[69-43-011296

Brevig Mission. Black brant. Population levels. Migration.
Never see brants this year. Usually flocks fly by. Then another flock. Then wait a little bit and then another goes by. This year hardly any. Probably took a shortcut. Maybe over the open water. I don't know where they go.
CODE[69-43-011296

Brevig Mission. Canada geese. Cackling Canada geese.
We have Canada geese. We see them upriver in fall time. They're just like always in population upriver. We don't see cackling Canada geese.
CODE[69-43-011296

Brevig Mission. Emperor geese. Nesting area.
We see emperors over the water. They fly low, pass by and nest up north somewhere. They nest up past Wales. We see them in May and June, hardly ever after that.
CODE[69-43-011296

Brevig Mission. White-fronted geese. Canada geese.
Speckle-bellies (white-fronts) sometimes travel with Canada geese.
CODE[69-43-011296

Brevig Mission. Snow geese.
Snow geese were hard to see this year. They went across open water or took a shortcut. They usually pass by our spring camps at Port Clarence.
CODE[69-43-011296

Brevig Mission. Pintail. Widgeon. Scaup. Mallard. Shoveler. Eggs.
Pintails and widgeons are the most common ducks seen around here. We see scaups upriver. Not too many mallards. A few shovelers. We find a few duck eggs. They're hard to find.
CODE[69-43-011296

Brevig Mission. Oldsquaw. Merganser. Population levels. Harlequin.
Lots of oldsquaws and pies (mergansers) around. There's as many as usual. We see harlequins once in awhile. Old-time Eskimos ate pies and oldsquaws. People don't eat them much now.

Brevig Mission. King eider. Common eider. Population levels. Eggs.
King and common eider are the most common around here. King eider seem the same in number. We see them in spring, April and May. We always see a few once we start setting crab pots in mid-April. We never find king eider eggs. They nest someplace else. We find common eider eggs, along the coast, on islands.
CODE[69-43-011296

Brevig Mission. Yellow-billed loon. Red-throated loon. Eggs.
We have yellow-billed and red-throated loons. They nest on the lakes. People use the eggs but don't hunt loons.
CODE[69-43-011296

Brevig Mission. Gull eggs. Tern eggs.
People use gull eggs. There's lots all over. In July we get tern eggs.
CODE[69-43-011296

Brevig Mission. Plover eggs. Snipe.
Young kids hunt plover eggs. Lots of them around (golden, semi-palmated). Old people like snipe in the fall when they're fat.
CODE[69-43-011296

Brevig Mission. Ptarmigan. Population levels,
Used to be ptarmigan all over the hills. We don't see them much now. They moved somewhere. Maybe upriver. You see lots of them up there.
CODE[69-43-011296

Brevig Mission. Snowy owl.
We see snowy owls, mostly in springtime. They nest all over.
CODE[69-43-011296

Brevig Mission. Sandhill crane. Seasonality.
We see lots of cranes. A few nests. In spring and fall we see cranes. We hunt a few of them. Mostly old people like to eat them.
CODE[69-43-011296

Brevig Mission. Tundra swan. Nesting area. Population levels.
We see lots of swans. They nest upriver. A few people like to eat them once in awhile. Seems like they're about the same in number.
CODE[69-43-011296

Brevig Mission. Hunting season. Migration. Sandhill crane. Ducks. Geese.
We start hunting about the middle part of April. Then stop in summer and hunt again in fall to the early part of October. Birds pass through here going up north. Some go to the Siberian side. Cranes mostly go to Siberia. They come by in the thousands. Sometimes they pass by all day.
CODE[69-43-011296

Brevig Mission. White-fronted geese. Canada geese. Population levels. Nesting area. Cackling Canada geese.
White-fronts and Canadas sometimes travel together. Canada geese are first to arrive, about late April upriver. The white-fronts come next. The white-fronts seem to be increasing. They might nest upriver. Canadas nest upriver. There is lots of them. I only saw a cackling Canada goose once in my lifetime.
CODE[69-28-011296

Brevig Mission. Emperor geese. Population levels.
We don't see too many emperors. Before we used to see them in the spring, now we hardly see them.
CODE[69-28-011296

Brevig Mission. Snow geese. Population levels. Migration.
Hardly any snow geese came through this year. Down on the coast we usually catch the main line. It might be the weather. But I think they're getting fewer. They used to run all week. Now maybe only three or four days. They come through in late May or early June.
CODE[69-28-011296

Brevig Mission. Black brant. Population levels.
Brant are way down. Maybe they were following the ocean rather than following land. They come by in June. It was an early spring this year. Brant were late.
CODE[69-28-011296

Brevig Mission. Pintail. Widgeon. Scaup. Shoveler. Nesting area. Tundra swan. Canada geese. Population levels. Eggs.
We have pintails, widgeons, scaups, and shovelers. They all nest around here. Scaups nest on ponds and lagoons. Pintails, swans, and Canadas all come about the same time. Scaup a little later. There seem to be more pintails and widgeons. Scaups are about the same. We don't hunt spoonbills (shovelers) much. I know where to find eggs of scaups, pintails, and shovelers. I don't know about widgeon eggs.
CODE[69-28-011296

Brevig Mission. Green-winged teal.
We see teal. We call them "pocket ducks" because they are so small. People sometimes catch them when there's nothing else around.
CODE[69-28-011296

Brevig Mission. Merganser.
We don't hunt mergansers too much. They're fishy. My grandpa used to hunt them, the young ones in summer or fall.
CODE[69-28-011296

Brevig Mission. Bufflehead. Harlequin.
We don't see buffleheads. We see harlequins in the ocean. People catch them. They're almost like little eider ducks. People catch them in June. They come after everything opens up out there. Not in spring, usually in June. They're not in big flocks, usually five or six of them together.
CODE[69-28-011296

Brevig Mission. Oldsquaw.
Nobody hunts oldsquaws. They're too tough. They keep flying after you shoot them. When they're losing their wing feathers, some people hunt them when they're good and fat.
CODE[69-28-011296

Brevig Mission. Processing / Preservation. Ducks. Geese.
Mostly people eat birds fresh. Mostly in soup. Some people hunt them in fall to keep for the winter.
CODE[69-28-011296

Brevig Mission. Surf scoter. Black scoter. White-winged scoter. Seasonality.
This summer for the first time I caught a surf scoter. They mix with black scoters. They're in lagoons and in the big pond behind town. They come late, in middle or later June. We get white-winged scoters, too. They're fall ducks. Don't see them in spring too much.
CODE[69-28-011296

Brevig Mission. King eider. Nesting area.
King eiders are spring ducks. They come in late April, early May. They're over the ocean. We see them when we're out boating. They don't nest around here. I've never found one egg. They must go up north to nest.
CODE[69-28-011296

Brevig Mission. Common eider. Nesting area. Ecology. Population levels.
Common eider nest around here. They arrive in late May, after the king eiders. They eat clams, black clams. I caught an eider with a clam in its mouth. They eat them whole. We've found the broken shells in their stomach. Common eiders are about the same in population. They nest on islands, on the beach, in the tundra. We don't see any eiders other than king and common around here.
CODE[69-28-011296

Brevig Mission. Yellow-billed loon. Red-throated loon. Loon eggs. Ecology.
We see king loons (yellow-billed) and red-throated loons. I don't think people hunt them but people hunt their eggs. People who walk to hunt find them. Loons arrive late in spring and nest in lagoons.

The red-throated loons arrive first. The big ones (yellow-billed) come late, about mid-June. I used to hunt them for my grandmother in the spring. She'd boil them up. You have to skin them because their skin is so tough.
CODE[69-28-011296

Brevig Mission. Sandhill crane.
People don't hunt cranes too much. Once in awhile. Cranes eat mice. That's why people don't like to eat them. People can be picky now about what they eat.
CODE[69-28-011296

Brevig Mission. Glaucous gull. Mew gull. Gull eggs. Nesting area.
Glaucous gulls are the big ones. Mew gulls the small ones. People mostly get the eggs of glaucous gulls, the big eggs. The mew gulls might not nest around here much.
CODE[69-28-011296

Brevig Mission. Arctic tern. Tern eggs.
People get tern eggs in summer. They nest in June. They lay two to three eggs at most. Eggs are usually good for a couple weeks after they're laid.
CODE[69-28-011296

Brevig Mission. Plover eggs. Golden plover. Semi-palmated plover.
We get both kinds of plover eggs (golden and semi-palmated). My kids take a four-wheeler into the tundra to look for them. The semi-palmated eggs are hard to find. They are big eggs for a small bird. We get eggs in June. The golden plovers lay their eggs in maybe late May. In fall time, kids sometimes hunt plovers. I'm not sure what for. They're learning how to be good hunters.
CODE[69-28-011296

Brevig Mission. Snipe.
Old people used to eat snipe. But those old people are all gone now. One time I was hunting ptarmigan and I saw an old man shooting. I thought he had found ptarmigan but when I went over there, he had seven or eight snipe.
CODE[69-28-011296

Brevig Mission. Ptarmigan.
There's been hardly any snow this year, so we haven't been able to get any ptarmigan yet. There are lots back in the willows.
CODE[69-28-011296

Brevig Mission. Snowy owl.
We see snowy owls once in awhile. They're loners. We see one at a time. People don't eat them any more.
CODE[69-28-011296

Brevig Mission. Tundra swan.
Not many people hunt swans. They're heavy to carry, 20 to 25 pounds. You have to boil them awhile to cook them. Some people never hunt them.
CODE[69-28-011296

Brevig Mission. White-fronted geese. Emperor geese. Canada geese. Black brant. Pintail. Mallard. Oldsquaw. Common eider. King eider. Loon. Mew gull. Arctic tern. Golden plover. Snipe. Ptarmigan. Snowy owl. Sandhill crane. Tundra swan.
One respondent provided Inupiaq names for these birds:

White-fronted goose tuu¦iq;
Emperor goose nasua¦iq;
Lesser Canada goose ¦i¦irairuuk;
Snow goose ka±uuq;
Black brant ¦i¦inu±;
Northern pintail yuu_huk;

Mallard yuu_uaruk;
Oldsquaw ahahniq;
Common eider iyuiqiik;
King eider kiiniiliq;
Common loon kaqshuk;
Arctic loon kaq¦atuuk;
Mew gull niuyuk;

Arctic tern kiyuak;
Golden plover tuuliq;
Common snipe nuug¦iq;
Willow ptarmigan ahshu_hiq;
Snowy owl uqpik;
Sandhill crane tati_zhiq;
Tundra swan kuqruk
CODE[69-53-011296

Bird Harvests in Diomede, January through December 1995

Results of a cooperative project by Kawerak, Inc.
and the Division of Subsistence, Alaska Department of Fish and Game,
funded by the U.S. Fish and Wildlife Service
June 1996

Introduction

Birds are important to families in northwest Alaska. They are an important part of the culture and traditional way of life of Alaska Natives. Birds and bird eggs are eaten for food, and feathers are used in hand-crafted items. This report presents information on bird harvests in Diomede in 1995. The information results from a cooperative project in 1995-96.

The Project

Several groups worked together on the project to gather information on birds at Diomede. The Diomede IRA Council approved the project by resolution on January 19, 1996. A survey of households was done by a local researcher hired and supervised by Kawerak, Inc. The project was designed by the Division of Subsistence, Alaska Department of Fish and Game, who also put the information into tables and into this report. Money for the project came from the U.S. Fish and Wildlife Service. Preliminary results were reviewed by Kawerak and the Division of Subsistence, ADF&G.

How the Information Was Collected

A survey was used to gather information on bird harvests. Surveys were done in 39 of the 41 households (95 percent) in Diomede. Surveys in Diomede were done during the month of March 1996. On the survey, people were asked about bird hunting during the 12-month period, January 1995 through December 1995. Participation in the surveys was voluntary. To protect confidentiality, no person's name is used in any reports of the information.

Findings

Households in Diomede reported the following things about their use of birds in 1995:

- Almost one-half (46.2 percent) of all households hunted and harvested birds (Fig. 4).
- Nearly two-thirds (64.1 percent of all households used birds (Fig. 4).
- Sharing of birds was common, with 35.9 percent of all households giving birds to other families and 35.9 percent of all households receiving birds from others (Fig. 4).
- Four kinds of birds were taken by Diomede hunters: auklets, common murre, cormorant, and sandhill crane (Table 1).
- Three kinds of eggs were gathered by Diomede residents: common murre, unknown murre, and auklet (Table 1).
- An estimated 2,200 birds were caught by households in Diomede in 1995. The vast majority of these were auklets (2,118 birds). Other birds harvested included common murre (74 birds), cormorant (6 birds), and sandhill crane (2 birds) (Table 1). Bird harvests fell into the following general categories: seabirds (99.9 percent), and cranes (0.1 percent). (Fig. 1)
- An estimated 3,880 eggs were gathered by households in Diomede in 1995. Egg harvests included eggs from common murre (3,608 eggs), unknown murre (210 eggs), and auklets (70

eggs) (Table 1). The Diomede egg harvest consisted entirely (100 percent) of seabird eggs (Fig. 2).

- Birds were taken in spring (4.9 percent) and summer (85.5 percent). Season of harvest was unknown for 9.6 percent of the harvest (Fig. 3).

- A few hunters may have underreported their harvests of some bird species in fear of enforcement consequences despite assurances that the information was confidential.

Computerized Data Files
This information is available as computer files from the Division of Subsistence, Alaska Department of Fish and Game, Box 3-2000, Juneau, Alaska 99802 (907-465-4147).

Acknowledgments
A sincere thank-you is given to all households and hunters who generously volunteered to be surveyed. A special thanks is given to Sandy Iknokinok of Kawerak, who obtained IRA approvals, hired community assistants, and supervised data collection; Otto Soolook of Diomede, who conducted the household surveys; Susan Georgette of the Division of Subsistence, ADF&G, who trained surveyors, interviewed hunters, and analyzed data; and the Diomede IRA Council, who supported the project.

Table 1. DIOMEDE
Bird Harvests, January 1995 - December 1995[1]

Bird Species		Total Harvests		Bird Harvest By Season[2]				
		Birds	Eggs	Winter	Spring	Summer	Fall	nknown
Geese	White-fronted Geese							
	Emperor Geese							
	Cackling Canada Geese							
	Lesser Canada Geese							
	Canada Geese Unknown							
	Snow Geese							
	Black Brant							
	Unknown Geese							
Ducks	Northern Pintail							
	American Wigeon							
	Mallard							
	Northern Shoveler							
	Greater Scaup							
	Lesser Scaup							
	Canvasback							
	Green-winged Teal							
	Common Merganser							
	Red-breasted Merganser							
	Bufflehead							
	Harlequin							
	Oldsquaw							
	Common Goldeneye							
	Black Scoter							
	Surf Scoter							
	White-winged Scoter							
	Common Eider							
	King Eider							
	Spectacled Eider							
	Steller's Eider							
	Ducks Unknown							
Seabirds	Cormorant	6				6		
	Common Loon							
	Arctic Loon							
	Red-throated Loon							
	Yellow-billed Loon							
	Common Murre	74	3608			74		
	Thick-billed Murre							
	Unknown Murre		210					
	Black Guillemot							
	Sabine's Gull							
	Mew Gull							
	Glaucous Gull							
	Herring Gull							
	Unknown Gull							
	Arctic Tern							
	Auklets	2118	70		105	1803		210
	Puffins							
	Unknown Seabird							
Shorebirds	Plover							
	Common Snipe							
	Other Shorebirds							
Game Birds	Willow Ptarmigan							
	Rock Ptarmigan							
	Grouse							
Snowy Owl								
Sandhill Crane		2			2			
Tundra Swan								

[1] Based on a census survey of 39 of 41 households, expanded to all households. Data were collected by a local researcher on contract with Kawerak, through cooperative agreements between ADFG, Division of Subsistence, Kawerak, and USFWS. Research was approved by resolution of the Diomede IRA Council. Project funded by USFWS.

[2] Winter=Nov, Dec, Jan, Feb; Spring=Mar, Apr, May; Summer = Jun, Jul; Fall=Aug, Sep, Oct

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

DIOMEDE
Bird Harvest Patterns
January 1995 - December 1995

Fig. 1 **Diomede Bird Harvests, January 1995 - December 1995, by Bird Type**

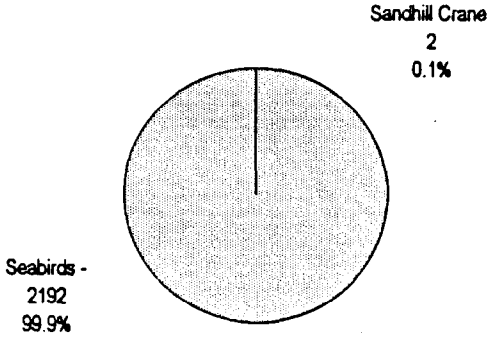


Fig. 2 **Diomede Egg Harvests, January 1995 - December 1995, by Bird Type**

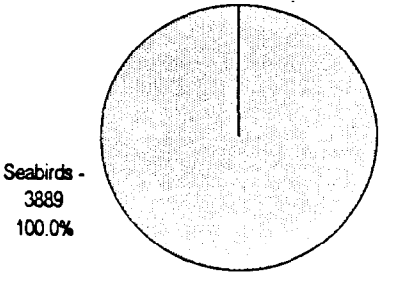


Fig. 3 **Diomede Bird Harvests, January 1995 - December 1995, by Season**

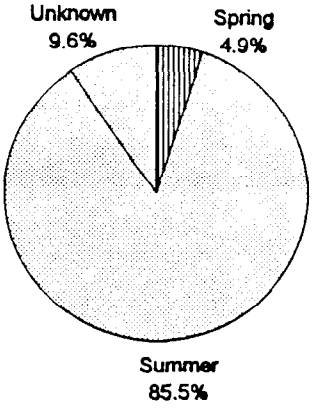
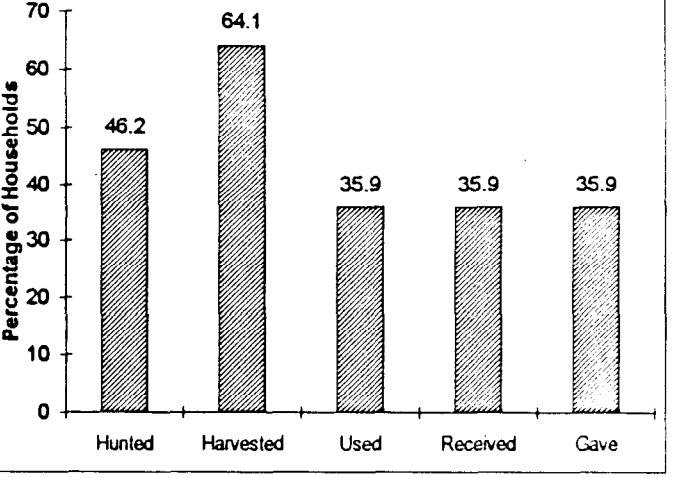


Fig. 4 **Percentage of Diomede Households that Hunted, Harvested, Used, Received, or Gave Birds, 1995**



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

Bird Harvests in Elim, November 1993 through October 1994

Results of a Cooperative Project by the
Division of Subsistence, Alaska Department of Fish and Game, in cooperation with
Kawerak Inc., the Elim IRA Traditional Council, and the U.S. Fish and Wildlife Service
April 1995

Introduction

Birds are important to families in northwest Alaska. They are an important part of the culture and traditional way of life of Alaska Natives. Birds and bird eggs are eaten for food, and feathers are used in hand-crafted items. This report presents information on bird harvests in Elim during November 1993 through October 1994. The information are results from a cooperative project in 1994-95.

The Project

Several groups worked together on the project to gather information on birds at Elim. The Elim IRA Council approved the project by resolution (94-25) on November 7, 1994. A survey of households was done by a local researcher hired and supervised by Kawerak Inc. The project was designed by the Division of Subsistence, Alaska Department of Fish and Game, who also put the information into tables and into this report. Money for the project was given by the U.S. Fish and Wildlife Service. Preliminary results were reviewed by Kawerak and the Division of Subsistence, ADF&G.

How the Information Was Collected

A survey was used to gather information on bird harvests. Surveys were done in 36 randomly selected households of a total of 72 households (50.0 percent) in Elim. Also, three bird experts from Elim were interviewed about bird ecology and traditional uses of birds. Surveys were done between January 4, 1995 and January 28, 1995 in Elim. On the survey, people were asked about bird hunting during the 12-month period, November 1993 through October 1994. To protect confidentiality, no person's name will be used in any reports of the information, unless that person gives permission to do so.

Findings

During the 12-month period, November 1993 through October 1994, households in Elim reported a number of things about their use of birds:

- Three quarters of all households used birds (54 households, or 75.0 percent) (see Fig. 4).
- More than two thirds of all households had bird hunters (50 households, or 69.4 percent) (see Fig. 4).
- Sharing of birds was common – 18 households (25.0 percent) reported giving birds to other households, and 20 households (27.8 percent) reported receiving birds from other households (see Fig. 4).
- At least 17 kinds of birds were harvested – white-fronted geese, cackling Canada geese, lesser Canada geese, snow geese, black brant, northern pintail, American widgeon, mallard, northern shoveler, canvasback, green-winged teal, common eider, willow ptarmigan, rock ptarmigan, grouse, sandhill crane, and tundra swan (see Table 1).
- At least 10 kinds of eggs were gathered – northern pintail, oldsquaw, common eider, common loon, common murre, mew gull, glaucous gull, unknown gull, sandhill crane, and tundra swan (see Table 1).

- About 1,178 birds were harvested by households in Elim during the 12-month period, November 1993-October 1994 (see Table 1).

- The top five birds in numbers harvested during the 12-month period were northern pintail (374 birds), willow ptarmigan (232 birds), cackling Canada geese (136 birds), black brant (68 birds), and lesser Canada geese (64 birds) (see Table 1).

- About 2,130 eggs were gathered by households in Elim during 1994. Most eggs were from sea birds – a combination of gull eggs from glaucous, mew, and unknown gulls (1,140 eggs), common loon (74 eggs), and common murre eggs (24 eggs). Some duck eggs were also important - common eider eggs (760 eggs), northern pintail eggs (124 eggs), and oldsquaw eggs (40 eggs) (see Table 1).

- Birds were taken in spring (38.5 percent), fall (45.9 percent), and winter (14.6 percent) (see Fig. 3).

- The season of harvest was different for types of birds – for instance, most geese were harvested in spring; most ducks were taken in fall; all ptarmigan were taken in fall and winter, while sandhill cranes were harvested equally in spring and fall (see Table 1).

- The classifications of Canada geese harvests into "cackling Canada" or "lesser Canada" by hunters are uncertain because of the close resemblance of the two species and the difficulties distinguishing them with the illustrations in the colored bird guide used in the survey. Additional work documenting harvested birds and bird classification systems would help to clarify this issue.

- The information on bird harvests are shown in detail in Table 1 and Figures 1-4.

- Information from hunting experts about birds and bird hunting in the Elim area are attached as an appendix.

Computerized Data Files

This information is available as computer files at Kawerak, Division of Natural Resources, P.O. Box 948, Nome, Alaska 99762 (907-443-5231) or the Division of Subsistence, Alaska Department of Fish and Game, Box 3-2000, Juneau, Alaska 99802 (907-465-4147). Information requests can be made from either group.

Acknowledgments

A thank you is given to all the households and bird hunting experts who graciously volunteered to be surveyed on the project. A special thanks is given to Jake Olanna of Kawerak, who supervised data collection; Stanton Nakarak of Elim, who conducted the household surveys; Dave Andersen of the Division of Subsistence, ADF&G, who trained surveyors, interviewed expert hunters, and analyzed data; and the Elim IRA Council, who gave support to the project.

Table 1. ELIM
Bird Harvests, November 1993 - October 1994[1]

Bird Species		Total Harvests		Bird Harvest By Season[2]				
		Birds	Eggs	Winter	Spring	Summer	Fall	nknown
Geese	White-fronted Geese	36			34		2	
	Emperor Geese							
	Cackling Canada Geese	136			88		48	
	Lesser Canada Geese	64			44		20	
	Canada Geese Unknown							
	Snow Geese	10			6		4	
	Black Brant	68			68			
Ducks	Northern Pintail	374	124		148		226	
	American Wigeon	32			4		28	
	Mallard	18			6		12	
	Northern Shoveler	32			8		24	
	Greater Scaup							
	Lesser Scaup							
	Canvasback	4					4	
	Green-winged Teal	86			20		66	
	Common Merganser							
	Red-breasted Merganser							
	Bufflehead							
	Harlequin							
	Oldsquaw		40					
	Common Goldeneye							
	Black Scoter							
	Surf Scoter							
	White-winged Scoter							
	Common Eider	12	760		12			
	King Eider							
	Spectacled Eider							
	Steller's Eider							
	Ducks Unknown							
Seabirds	Common Loon		74					
	Arctic Loon							
	Red-throated Loon							
	Yellow-billed Loon							
	Common Murre		24					
	Thick-billed Murre							
	Unknown Murre							
	Black Guillemot							
	Sabine's Gull							
	Mew Gull		20					
	Glaucous Gull		60					
	Unknown Gull		1060					
	Arctic Tern							
	Auklets							
	Puffins							
	Other Seabirds							
Shorebirds	Plover							
	Common Snipe							
	Other Shorebirds							
Game Birds	Willow Ptarmigan	232		172			60	
	Rock Ptarmigan	4					4	
	Grouse	36					36	
Snowy Owl								
Sandhill Crane		26	22		12		14	
Tundra Swan		8	6		4		4	

[1] Based on a random survey of 36 of 72 households, expanded to all households. Data were collected by a local researcher on contract with through a cooperative agreement between ADFG, Division of Subsistence and Kawerak. Research was approved by resolution of the Elim IRA Council. Project funded by USFWS.

[2] Winter=Nov, Dec, Jan, Feb; Spring=Mar, Apr, May; Summer = Jun, Jul; Fall=Aug, Sep, Oct

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1994.

ELIM
Bird Harvest Patterns
November 1993 - October 1994

Fig. 1

Elim Bird Harvests, November 1993 - October 1994, by Bird Type

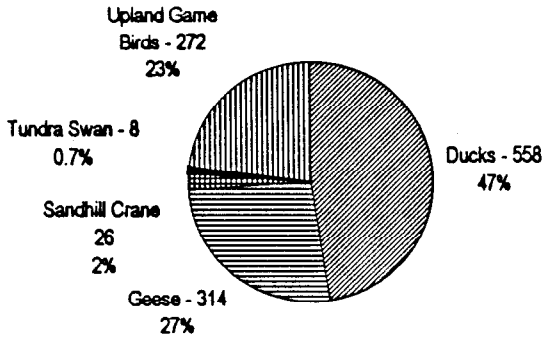


Fig. 2

Elim Egg Harvests, November 1993 - October 1994, by Bird Type

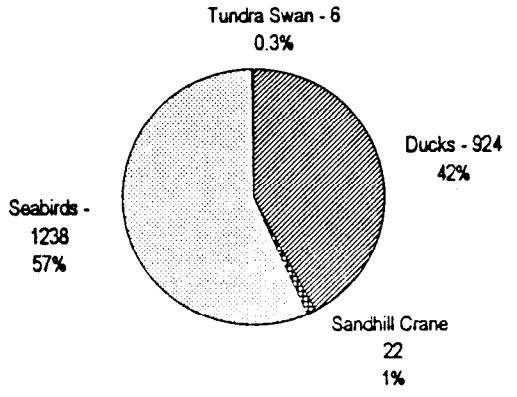


Fig. 3

Elim Bird Harvests, November 1993 - October 1994, by Season

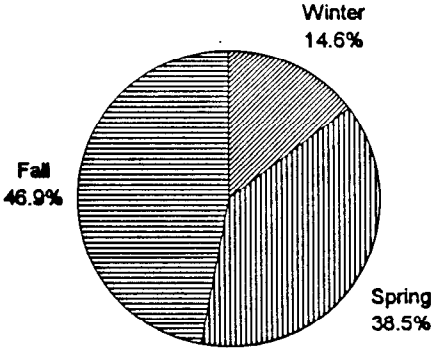
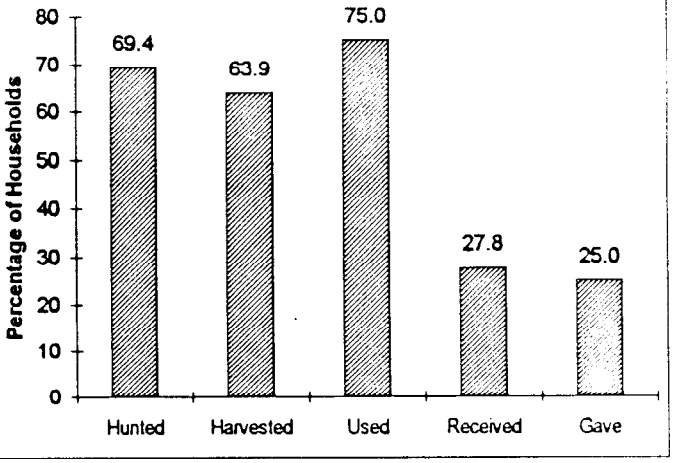


Fig. 4 **Percentage of Elim Households that Hunted, Harvested, Used, Received, or Gave Birds, 11/93 - 10/94**



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1994.

Migratory Bird Project
Elim Key Respondent Notes
Researchers: Dave Andersen and Amy Paige

Elim, emperor geese
Very few emperors are seen in the Elim area. They are seen just "once in a while" and they seem "very tame". "They seem to be more of an ocean bird, that's where I have seen them is out on the ocean. I think they nest down in the Aleutians some place."
CODE[126-03-011195

Elim, snow geese, population status
"I think these ones are declining. We saw more of them when I was young...over on the Koyuk Flats and Shaktoolik Flats. Those ones act tame too.....they will come right up to you. Snow geese are skinny in the fall time. Most birds fatten up then but not these white ones.....so we don't hunt them.....but we don't see many anyway."
CODE[126-03-011195

Elim, white fronted geese, Canada geese
Respondent says white fronted geese are among the first birds to arrive in the spring. These early arrivals are often mixed with Canada geese. They pass through the Elim area in large flocks for about a week. Local name for white fronts is "yellow foot".
CODE[126-03-011195

Elim, black brant, migration
Brant were described as "vary wary birds" in the spring. A few big flocks pass through the Elim area in the spring but more of them go through the Golovin Bay area just to the west. They do not nest locally. There are two kinds of brant...."The big ones come in flocks first then small ones arrive. The small ones fly different.....very fast and lively." Brant don't pass through Elim in the fall. Respondent thinks that they go south via Nunivak Island "straight out over the ocean".
CODE[126-03-011195

Elim, waterfowl hunting areas
Elim is located on the coast of Norton Sound at the mouth of a small creek with steep hills rising quickly behind the town. The townsite itself is not a prime waterfowl hunting area. Most waterfowl hunting takes place at a low coastal delta area about 10 miles east of Elim in the vicinity of Moses Point. Behind the Moses Point spit (inland) the Kwik, Tubutulik, and Kwiniuk Rivers enter the ocean through a broad area of lakes and flats and lagoons. These flats and the coastal approaches to them are the major waterfowl hunting areas for Elim residents. (Researcher observation and information gathered from casual conversations with several Elim residents. DA)
CODE[126-00-011195

Elim, sandhill cranes
Cranes pass through the Elim area on their way to Siberia via Diomede Island. Cranes sometimes eat mice. Their chicks are hatched before some birds even lay their eggs. A few nest in the Elim area but not many.
CODE[126-03-011195

Elim, pintails, nesting, teal, mallard, widgeon, oldsquaw, mergansers, harlequin, goldeneye, shovelers
Pintails are locally known as sprigs. They nest locally and are present in good numbers both in the spring and fall. Teal, widgeon, and shovelers are also present in the area throughout the summer indicating that they nest in the area. Mallards are present but in very small numbers. Other ducks that are seen in small numbers include canvasbacks, harlequin, and goldeneye. Harlequin ducks can be found "way up the rivers". Oldsquaw are sometimes called "pintails" here. They are around

all summer, nesting in the area in good numbers. They are considered a "fish duck" and there is little hunting of them. Mergansers are present in less numbers than oldsquaw. They are also considered a fish duck and are not generally eaten.
CODE[126-03-011195

Elim, eiders, common eider, population status, migration, king eider
Common eider are found in the Elim area. Respondent believes they are increasing in numbers compared to several years ago. He has heard that long ago they were a major food resource. Their numbers have been down for a while but they now appear to be "coming back". He sees them up above their camp at Caches (near Moses Point). There are no Steller's or spectacled eider in this area. King eider go through Norton Sound in March headed north but they are way out on the ocean, not along the coast.
CODE[126-03-011195

Elim, loons
"Lots of loons around but no one hunts them. "There is a bird called a 'king loon'.....real big one....with light colored head (looking closely at our bird chart.....) I don't see it here. We see it out on the ocean and in the bays. It has real good meat."
CODE[126-03-011195

Elim, murres, puffins, gulls, eggs
Common murres are the most abundant murre species. They seem to be getting forced out of the Cape Denbigh area by gulls and moving to the "bluff" area closer to Nome. Respondent use to climb for murre eggs at Denbigh when he was "young and foolish". Horned puffins are still around on the cliffs but no one bothers them. Lots of mew and glaucous gulls and terns around. Gulls nest in the grassy flats around the 18th or 20th of May. A few local residents still like to gather gull eggs.
CODE[126-03-011195

Elim, ptarmigan
Respondent noted that ptarmigan have a "travel route" around the Seward peninsula area. They use to travel through Elim in the fall by the thousands....."so thick we could catch them in nets". Their numbers seem to be down right now.
CODE[126-03-011195

Elim, Canada geese, molting
Both cackling and lesser Canadian geese were identified as being present and nesting in the Elim area by the respondent. Cacklers ("the small ones") arrive first followed by larger numbers of the lesser Canadians. "They nest on the flats and molt up inside the rivers.....They have their young ones with them already when the molt in July and early August. Some areas are so thick with them that they cover the hills along the river bank". The respondent had heard about hunting geese during their molt back in the old days but that is not done any more.
CODE[126-03-011195

Elim, swans
Many swans pass through the Elim area. There appears to be more than ever. They are the last ones to leave the area (in October) and they are usually flying very high when they pass over the Elim area. Some nest in the area, most keep going farther north.
CODE[126-03-011195

Elim, rabbits, caribou
"Rabbits are coming back now.....starting to see lots of them. There are too many caribou now. The old people are saying that they are going to starve themselves out and take many years to come back. There are more now than I've ever seen in this area. We use to have to hung for them at Buckland.....now they are just close by. They are lean because they are always on the move looking for food. Moving all the time makes their hides real thick. When we hunt them we always check out the liver....the liver is a 'test organ" for the health of any animal like caribou, walrus,

rabbit.....whatever. You always cut open the liver and if there is anything wrong with the liver the animal is not good to use."
CODE[126-03-011195

Elim, Waterfowl hunting-general, preparation, preservation
Respondent described the hunting method most often used for waterfowl as pass shooting. No use of decoys or dogs. Hunters don't take large numbers of birds at one time, only what they can distribute and use immediately. Some birds are frozen for later use. Before freezers birds were preserved by brining them is salt. Respondent has also heard of some people drying bird meat down on the Yukon Delta area. Today, birds are generally baked or boiled. The gizzard, heart and liver are also fried-up and eaten. "Down on the Yukon delta they use seal oil to eat birds but not so much around here."
CODE[126-03-011195

Elim, white fronted geese, migration
Local names for this goose are "freckle breast" or "yellow-foot". They are about the first to arrive in the spring. They are around in fairly small numbers. They are fat when they first get here. Respondent thinks there may be a "small version" of this goose that goes to Canada via the Deadhorse area. He reported seeing these "small white fronts" at Franklin Bluffs (North Slope) when he worked there. Most local [Elim] birds [White-fronts] head farther north to nest but he thinks that a small number of them probably nest in the Elim area.
CODE[126-23-011295

Elim, traditional rule
This applies generally to most ducks and geese....."We don't bother them much after they lay their eggs. We let them rest all summer. Sometimes we take their eggs but we don't hunt them. We know that if you take their eggs early they will lay more. Taking the eggs doesn't hurt [reduce] the birds."
CODE[126-23-011295

Elim, Black Brant, migration,
There are two kinds of brant....big ones and small ones. "The big ones arrive first and taste the best. Smaller ones arrive second about a week later....they taste fishy so we don't hunt them as much. We use to get brant by the sled-load in the old days when I was young. We brined them up in 60 gallon barrels for the winter." Brant are only seen here in the spring when they pass through the area headed north. He thinks a few of the small ones may nest locally. The fall south migration route for brant is through Shishmaref and out over the ocean. He has heard they winter in Mexico. Brant don't seem to eat much when they stop here in the spring. He thinks they are just resting and that they live on their fat. In 1944 he shot a brant that still had it's neck [craw] full of wild rice. From this he thinks that they come a very long way in a short period of time because there is no wild rice to be found anywhere around here.
CODE[126-23-011295

Elim, geese-general, feeding
Spring melt creates open tundra areas on exposed hillsides that have last years berries on them. Geese know this and feed on those berries sometimes in the spring. Blackberries are a favorite food of geese passing through in the fall.
CODE[126-23-011295

Elim, emperor geese
Respondent says he has only seen two emperor geese in his lifetime. He saw them in 1969. He remarked that they were very large birds and thinks they are mainly found on the open saltwater areas farther south, i.e. the Y-K Delta.
CODE[126-23-011295

Elim, snow geese

Respondent says he sees a few snow geese here but not many. He has heard that there are lots in the St. Lawrence Island area and near Shishmaref. They sometimes land in the Elim area in the fall and can be shot but he does not like the looks of their black skin. In the spring, "the few that pass this way are way up.....too high to shoot."
CODE[126-23-011295

Elim, pintails
Lots of them around. They nest in the flats behind Moses Pt. They come right after the white-fronted geese and the Canadian geese. We call them spriggs.
CODE[126-23-011295

Elim, mallards
A few mallards nest in the area but most go farther north. His wife doesn't like to eat them because she thinks they all go through Anchorage and eat sewage or have people feeding them bread.
CODE[126-23-011295

Elim, teal
Respondent maintains that there are 3 kinds of teal found in the Elim area even though our chart only lists green-winged teal. He says there are two sizes of green-winged teal (big and small) and one other species that looks just like a miniature sprig (pintail).
CODE[126-23-011295

Elim, mergansers
"They are okay to eat in the spring but after a while they start tasting too fishy. "They are good seiners".....he says he has seen several birds work together to herd small fish into shallow water where they can be eaten.
CODE[126-23-011295

Elim, oldsquaw
"We call these squaw ducks or [Native Name]. These are a pest. Too noisy and too many of them. Hardly anyone hunts them. Their population is increasing."
CODE[126-23-011295

Elim, eider, common eider, preparation, eggs, population
Only the common eider is present in the Elim area. Respondent noted that king eiders go through the Nome vicinity. Respondent tries to get 5 or 6 common eider each spring "just for a taste". He has a special way of preparing them.....bones out the meat and grinds it up in a meat grinder with chopped onion and then makes patties out of this mixture. He says that eider are very hard to pluck. Their numbers appear to be stable....not too many but not declining. People also gather eider eggs. He described them at "late layers" waiting until early June to lay their eggs. "If you find a nest with just 3 or 4 eider eggs it is a pretty new nest and the eggs are probably fresh. We'll take those eggs. If you find a nest with 6 or 8 eggs it's an old nest and the eggs are probably too far along. If you take those they may not be good and the birds might not lay more so we leave those alone."
CODE[126-23-011295

Elim, eggs, gulls, cranes, nesting
Cranes and seagulls are the first birds to lay eggs. Cranes lay as early as May 10. In the Anchorage area he has seen gulls lay eggs in late April.
CODE[126-23-011295

Elim, hunting methods
No decoys are used by local hunters. Duck or goose calls are used to call birds in. Goose calls will work on most geese, cranes, pintails, and mallards. Some ducks won't respond to a call.
CODE[126-23-011295

Elim, loons, murres, oil spill
"There are lots of those 'big loons' around [uncertain of the species]. "The small loons dropped off after that big oil spill [Exxon Valdez]. Not many around after that. Murres and puffins declined after that spill too." "Loons are okay to eat if you are hungry. You eat them with seal oil. They are very popular with King Islanders." Respondent also mentioned the 'King Loon' describing it as a huge loon with white on its head and a 4 foot wing-span.
CODE[126-23-011295

Elim, cranes
"Those guys [cranes] eat mice. Shishmaref people won't eat cranes even though they all go through that way." Respondent says that he thinks they go to Siberia. Many pass through the Elim area and a few stop here to nest but most go on the Siberia. He likes to get one to eat "every now and then" and reports that they are delicious either in the spring or fall.
CODE[126-23-011295

Elim, swans, traditional rule
Respondent reports that there is hardly any hunting of swans. "we hear there is a big fine for shooting them. Sometimes we like to shoot the dirty looking ones [tan colored juveniles] in the fall because they are tender. We don't bother the old ones though. They are like us, they mate for life and we don't like to think about shooting one and having the other one be sad for the rest of their life."
CODE[126-23-011295

Elim, ptarmigan, grouse, feathers
Respondent reports that there are not many ptarmigan around now compared to years ago. Willow ptarmigan are the ones usually present in the Elim area. Rock ptarmigan are called "mountain ptarmigan". "I use grouse feathers to decorate the [carved] masks I make and sell. Grouse are survival food....you can kill them easy without a gun....just a stick or use a boot-lace to make a noose on a pole and slide it over their head....they just sit there. Just like tom-cod.....tom-cod are survival food on the ocean and grouse is our survival food on the land.....they are both easy to catch and you can eat them raw if you don't have a fire."
CODE[126-23-011295

Elim, gulls
People collect gull eggs sometimes but they don't hunt the birds. Respondent identified mew and glaucous gulls as the most common. This past fall he saw a gull that was pure white....no black or gray anywhere....its legs looked blue. He had never seen that species of gull before around Elim. [possibly an ivory gull???]
CODE[126-23-011295

Elim, traditional belief
"I'm going to tell you something .....We use to really live on those ducks long time ago. Now we mostly eat chicken. We get spoiled by store food. But those ducks and geese.....there are lots of the ones we hunt for food. If we stop hunting them there won't be as many then. God puts them there for us to use.....makes lots for us if we use them and don't waste them. If we stop hunting them there maybe won't be as many. Look at these ones here [pointing to picture of mergansers].....they have lots of babies.....maybe 15 or 17 young ones at a time but we don't hunt them.....and where do they all go?? We never see many because we don't hunt them. Same with these here (loons)....lots of babies with them but they come back just one or two here and there. That's because we don't hunt them.. The ones we hunt.....there are lots of them around. The more we hunt the more there are for us to use. I think it works that way."
CODE[126-28-011195

Elim. Common Eider. Population. Habitat
We call the Eider "amauligaaluk". We see them in springtime, usually in pairs - male and female. We hardly see any singles. We see them in the bay, six or so together. Some stay all winter. We

see them in big flocks - maybe 20 or so - in January thaws, even in December when there's open water along the shore ice. We see them when we hunt seals, along the shore ice. They are mostly brown. We hardly ever see them in their other colors. We see the Common Eider in spring plumage where they nest along the creeks and the flats of the Quik River and around Moses Point
CODE[126-20-110894

Elim. King Eider. Migration
King Eider just pass through on their way north. There used to be more about 25 years ago. Not many out there these years. They travel through in flocks of 20 to 40 in April.
CODE[126-20-110894

Elim. Common Eider. Feeding
The Common Eider eat clams ("amozak"), an all black clam with white spots & barnacles. [Sketch looks like a razor clam.] When the baby birds hatch, the mother brings them down to Cape Darby to get clams. They disappear after the young ones fly - around last part of July.
CODE[126- -110894

Elim. Common Eider. Preference
We hardly eat Eider ducks around here. My mom and dad did.
CODE[126-20-110894

Elim. Kittlitz's Murrelet.
We see Kittlitz's Murrelets around here all winter. They land and dive underwater, and they go fast - like flying- underwater.
CODE[126-20-110894

Elim. Brant. Population. Migration.
We used to go up and get 30-40 Brant every spring. Hardly any up there now for the last ten years. Up in the flats by the Quik River and Moses Point. They stick around in the mud flats. They arrive around May 20th and after to the 30th or by first part of June. They are mostly passing through. They don't nest here. They climb way up high, circling, then they bunch up and take off straight up north. They make a lot of noise. There may be about 100 in a flock. They used to be in the thousands. On May 20, 1959 - I remember because that was the day I left for the army - up past East Point, there were thousands. Brant don't come through in fall migration. Never seen them then.
CODE[126-20-110894

Elim. Brant. Feeding
Brant eat grass roots and seeds around lakes. Later on, around the first part of June, they eat salmon fingerlings swimming on the surface, at the mouth of the Quik River. Terns like them too - millions of young salmon.
CODE[126-20-110894

Elim. Bird Hunting Methods
Now I hardly go out Brant hunting. I get groceries. I used to hunt by myself. I teach my boys. When we go hunting, we travel by snow machine. Brant have good eyes. I don't think birds are color blind. I don't think so. I use natural features as blinds - the grass and bushes.
CODE[126-20-110894

Elim. White-fronted Geese. Season. Nesting
We get White-fronted geese too. They head south early. By the last part of August. The White-fronted geese come here first in spring - during last of April. They nest around here - the Tukktulik and Quik rivers, in grassy areas.
CODE[126-20-110894

Elim. Lesser Canada Geese. Season. Nesting
The Lesser Canadas come next (after the White-fronted) and they nest in the same areas.
CODE[126-20-110894

Elim. Emperor Geese
Once in a great while you see Emperor geese in this area. They are too easy to hunt. You can walk right up to them.
CODE[126-20-110894

Elim. Snow Geese
Some years we have lots of Snow geese. They come with the Brant. Their numbers are steady.
CODE[126-20-110894

Elim. Eggs
Some few people do get geese eggs, especially before we started to get regular grocery delivery. Mostly people get gull eggs up on the flats. But people don't like them so much, since they see the gulls around the dump. We used to get murre eggs on Cape Denbigh. We don't bother with plover or snipe.
CODE[126-20-110894

Elim. Seabird species
We don't hunt loons, murres , cormorants, scaup, fish ducks, gulls, teals.
CODE[126-20-110894

Elim. Ducks
We may get some pintails or Lesser Canadas when the feathers come off [ergo during molt]. You have to surprise them, then use shotgun.
CODE[126-20 -110894

Elim. Bird Hunting technology
Steel shot doesn't kill them right away. They glide down and die somewhere else, so you can't find them. Steel shot is slower and different. Bird is crippled and flies a long way before dropping. You can't get lead shot now.
CODE[126-20-110894

Elim. Customary rules
We always say "never let anything go to waste. never take more than you can handle, just leave the guts. Don't harass game, don't make fun of game, or kill for fun of it. Test eggs in water - if they float they're too big to take."
CODE[126-20-110894

Elim. Cranes. Season
Cranes come in the fall, around mid September. We see lots of pintails and widgeons. Pintails and Widgeons are the most abundant duck species. There are thousands in the fall in the flats. They are eating roots of grasses in fall and spring. We also have lots of White-fronteds, Lessers, and Snow geese
CODE[126-20-110894

Bird Harvests in Golovin, July 1988 through June 1989

Results of a Project by the
Division of Subsistence, Alaska Department of Fish and Game,
in cooperation with and partially funded by the
U.S. Fish and Wildlife Service
February 1990

Introduction

Birds are important to families in northwest Alaska. They are an important part of the culture and traditional way of life of Alaska Natives. Birds and bird eggs are eaten for food, and feathers are used in hand-crafted items. This report presents information on bird harvests in Golovin during July 1988 through June 1989.

The Project

Kawerak Inc., the Bering Strait Coastal Resource Area and the Golovin IRA Council approved the project. A survey of households was done by a researcher familiar with the community and hired by the Division of Subsistence. The project was designed by the Division of Subsistence, Alaska Department of Fish and Game, who also put the information into tables and into this report. Money for the project came partly from the U.S. Fish and Wildlife Service.

How the Information Was Collected

A survey was used to gather information on all wild resources used by residents, including bird resources. Surveys were attempted with all Golovin households. Of the 41 households in the community, surveys were completed with 33 (or 80 percent). Surveys were done in June 1989. On the survey, people were asked about use of all resources including bird hunting and egg gathering during the 12-month period, July 1988 through June 1989. To protect confidentiality, no person's name will be used in any reports of the information, unless that person gives permission to do so.

Findings

During the 12-month period, July 1988 through June 1989, households in Golovin reported a number of things about their use of birds:

- All households used birds (100.0 percent) (see Fig. 4).
- Almost all households had bird hunters and harvested birds in the study period (90.9 percent) (see Fig. 4).
- Sharing of birds was common -- almost two-thirds of Golovin households (63.6 percent) reported giving birds to other households, and more than half (60.6 percent) reported receiving birds from other households (see Fig. 4).
- At least 13 kinds of birds were harvested -- ptarmigan, pintails, black brant, Canada geese, sandhill crane, mallards, teal, tundra swan, white-fronted geese, emperor geese, snow geese, scoter and loon. (see Table 1).
- At least 4 kinds of eggs were gathered -- gull, murre, unspecified ducks and unspecified geese, and swans (see Table 1).
- About 2,263 birds were harvested by households in Golovin during the 12-month period, July 1988 through June 1989 (see Table 1).

- The top five birds in numbers harvested during the 12-month period were ptarmigan (957 birds), pintails (426 birds), black brant (345 birds), and unspecified Canada geese (214 birds), and sandhill cranes (106 birds) (see Table 1).

- About 733 eggs were gathered by households in Golovin during 1988-89. Most eggs were from sea birds – gull eggs (458 eggs), and murre eggs (184 eggs). Some duck, geese and swan eggs were also important - unspecified duck eggs (62 eggs), and unspecified geese eggs (25 eggs), and tundra swan eggs (4 eggs). (see Table 1).

- Birds were taken in spring (36.8 percent), fall (20.7 percent). Ptarmigan harvests accounted for the all the birds taken in some unknown season (42.5 percent) (see Fig. 3).

- The season of harvest was different for types of birds – for instance, most geese were harvested in spring; and while more than half of the ducks were also harvested in spring, many ducks were taken in fall. Most sandhill cranes were harvested in fall, but many were also taken in the spring (see Table 1).

- The information on bird harvests are shown in detail in Table 1 and Figures 1-4.

Table 1. GOLOVIN
Bird Harvests, July 1988 - June 1989[1]

Bird Species		Total Harvests		Bird Harvest By Season[2]			
		Birds	Eggs	Spring	Summer	Fall	Unknown
Geese	White-fronted Geese	19		3		16	
	Emperor Geese	7		7			
	Canada Geese Unknown	214		107		107	
	Snow Geese	6		6			
	Black Brant	345		322		23	
	Unknown Geese		25				
Ducks	Pintail	426		236		191	
	Wigeon						
	Mallard	107		73		34	
	Scaup						
	Teal	41		17		24	
	Oldsquaw						
	Scoter	1				1	
	Eider						
	Ducks Unknown	12	62				
Seabirds	Loon	1			1		
	Murre		184				
	Gull		458				
	Arctic Tern		0				
Shorebirds	Plover		0				
	Snipe		0				
Game Birds	Ptarmigan	957					957
Sandhill Crane		106		45		61	
Tundra Swan		20	4	12		8	

[1] Based on a census survey of 33 of 41 households, expanded to all households. Data were collected during a retrospective survey administered by A.O. Conger to 80 percent of the occupied households in Golovin during June 1989.

[2] Spring= Apr, May, June; Summer = Jul, Aug; Fall= Sep, Oct

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1990.

GOLOVIN
Bird Harvest Patterns
July 1988 - June 1989

Fig. 1

Golovin Birds Harvests, July 1988 - June 1989, By Bird Type

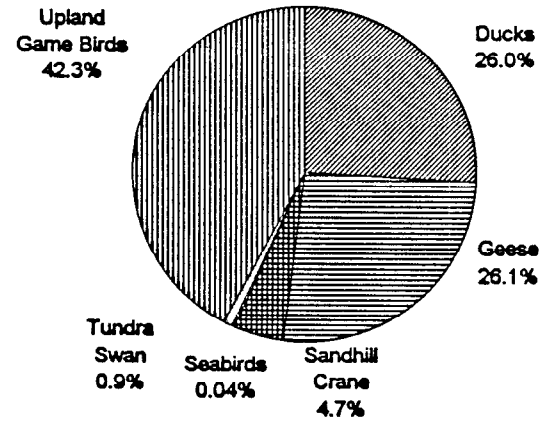


Fig. 2

Golovin Egg Harvests, July 1988 - June 1989, By Bird Type

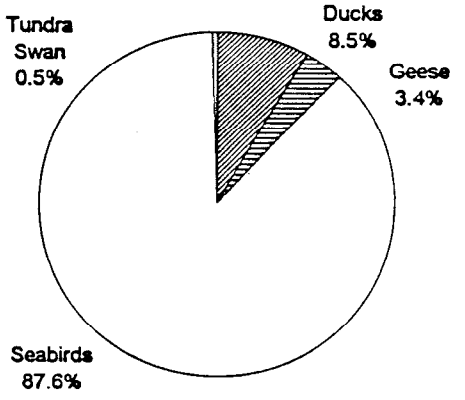


Fig. 3

Golovin Bird Harvests, July 1988 - June 1989, By Season

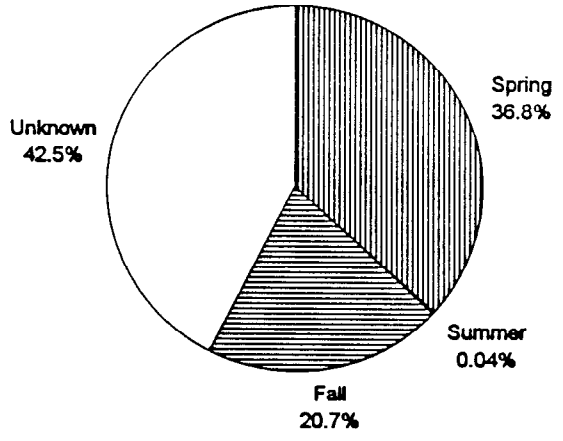
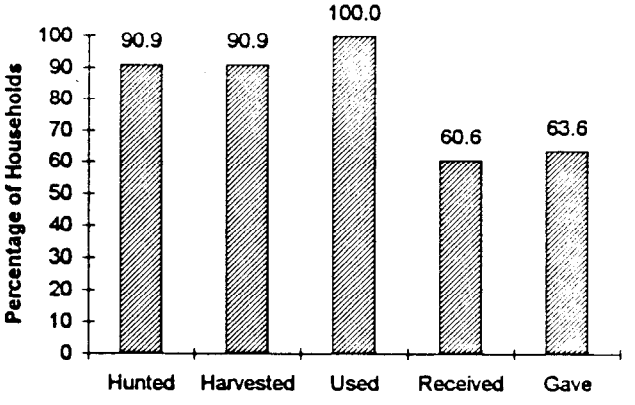


Fig. 4

Percentage of Golovin Households that Hunted, Harvested, Used, Received or Gave Birds, 1988 -1989



Source: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 1990

Bird Harvests in Koyuk, January through December 1995

Results of a cooperative project by Kawerak, Inc.
and the Division of Subsistence, Alaska Department of Fish and Game,
funded by the U.S. Fish and Wildlife Service
June 1996

Introduction

Birds are important to families in northwest Alaska. They are an important part of the culture and traditional way of life of Alaska Natives. Birds and bird eggs are eaten for food, and feathers are used in hand-crafted items. This report presents information on bird harvests in Koyuk in 1995. The information results from a cooperative project in 1995-96.

The Project

Several groups worked together on the project to gather information on birds at Koyuk. The Koyuk IRA Council approved the project by resolution on November 7, 1995. A survey of households was done by a local researcher hired and supervised by Kawerak, Inc. The project was designed by the Division of Subsistence, Alaska Department of Fish and Game, who also put the information into tables and into this report. Money for the project came from the U.S. Fish and Wildlife Service. Preliminary results were reviewed by Kawerak and the Division of Subsistence, ADF&G.

How the Information Was Collected

A survey was used to gather information on bird harvests. Surveys were done in 37 randomly selected households of a total of 70 households (53 percent) in Koyuk. Also, three bird experts from Koyuk were interviewed about bird ecology and traditional uses of birds. Surveys were done January 7-16, 1996 in Koyuk. On the survey, people were asked about bird hunting during the 12-month period, January 1995 through December 1995. Participation in the surveys was voluntary. To protect confidentiality, no person's name is used in any reports of the information.

Findings

Households in Koyuk reported the following things about their use of birds in 1995:

- Almost all households (86.5 percent) had bird hunters. The same 86.5 percent of all households harvested birds (Fig. 4).
- Almost all households (94.6 percent) used birds (Fig. 4).
- Sharing of birds was common. Almost one-half (48.6 percent) of households gave birds to other families, and 37.8 percent of households received birds from others (Fig. 4).
- At least 16 kinds of birds were caught, including: white-fronted geese, cackling Canada geese, lesser Canada geese, snow geese, black brant, northern pintail, American wigeon, mallard, northern shoveler, green-winged teal, common eider, willow ptarmigan, rock ptarmigan, spruce grouse, sandhill crane, and tundra swan (Table 1).
- At least 12 kinds of eggs were gathered, including: cackling Canada geese, lesser Canada geese, northern pintail, mallard, common eider, Sabine's gull, mew gull, glaucous gull, herring gull, arctic tern, sandhill crane, and tundra swan (Table 1).
- An estimated 1,438 birds were caught by households in Koyuk in 1995. Bird harvests fell into the following general categories: ducks (37.2 percent), geese (26.4 percent), cranes (20.4 percent), upland game birds (15.4 percent), and swans (0.5 percent) (Fig. 1)

- The five kinds of birds caught in greatest numbers in 1995 were northern pintail (403 birds), sandhill crane (293 birds), lesser Canada geese (219 birds), willow ptarmigan (189 birds), and white-fronted geese (96 birds) (Table 1).

- An estimated 1,222 eggs were gathered by households in Koyuk in 1995. Most eggs were from mew gulls (482 eggs), glaucous gulls (316 eggs), lesser Canada geese (108 eggs), Sabine's gulls (95 eggs), and herring gulls (72 eggs) (Table 1).

- Egg harvests fell into the following general categories: seabirds (80.8 percent), geese (9.4 percent), ducks (4.3 percent), cranes (3.9 percent), and swans (1.5 percent) (Fig. 2).

- Birds were taken in spring (63.4 percent), fall (29.6 percent), and winter (7.0 percent) (Fig. 3).

- The classifications of Canada geese harvests into "cackling Canada" or "lesser Canada" by hunters are uncertain because of the close resemblance of the two species and the difficulties distinguishing them in the colored bird guide used in the survey. Interviewed expert hunters in Koyuk, however, reported that cackling Canada geese occur in the local area, although not in great numbers.

- Local distinctions between bird species did not always correspond with western scientific distinctions shown in the bird guide. In addition, hunters typically identify birds by their sound, behavior, and habitat, as well as by their looks. The lack of this information on the bird guide led to uncertainty about the identity of a few of the species harvested.

- A few hunters may have underreported their harvests of some bird species in fear of enforcement consequences despite assurances that the information was confidential.

- Information from interviewed hunters about birds in the Koyuk area is attached as an appendix.

Computerized Data Files

This information is available as computer files at the Division of Subsistence, Alaska Department of Fish and Game, Box 3-2000, Juneau, Alaska 99802 (907-465-4147).

Acknowledgments

A sincere thank-you is given to all households and hunting experts who generously volunteered to be surveyed or interviewed for this project. A special thanks is given to Sandy Iknokinok of Kawerak, who obtained IRA approvals, hired community assistants, and supervised data collection; Ruby Nassuk of Koyuk, who conducted the household surveys; Susan Georgette of the Division of Subsistence, ADF&G, who trained surveyors, interviewed hunters, and analyzed data; and the Koyuk IRA Council, who supported the project.

Table 1. KOYUK
Bird Harvests, January 1995 - December 1995[1]

Bird Species		Total Harvests		Bird Harvest By Season[2]				
		Birds	Eggs	Winter	Spring	Summer	Fall	nknown
Geese	White-fronted Geese	96			87		9	
	Emperor Geese							
	Cackling Canada Geese	8	8		6		2	
	Lesser Canada Geese	219	108		174		45	
	Canada Geese Unknown	21			21			
	Snow Geese	25			25			
	Black Brant	11					11	
	Unknown Geese							
Ducks	Northern Pintail	403	13		293		110	
	American Wigeon	55			38		17	
	Mallard	40	17		30		9	
	Northern Shoveler	4					4	
	Greater Scaup							
	Lesser Scaup							
	Canvasback							
	Green-winged Teal	26			15		11	
	Common Merganser							
	Red-breasted Merganser							
	Bufflehead							
	Harlequin							
	Oldsquaw							
	Common Goldeneye							
	Black Scoter							
	Surf Scoter							
	White-winged Scoter							
	Common Eider	8	23		6		2	
	King Eider							
	Spectacled Eider							
	Steller's Eider							
	Ducks Unknown							
Seabirds	Common Loon							
	Arctic Loon							
	Red-throated Loon							
	Yellow-billed Loon							
	Unknown Loon							
	Common Murre							
	Thick-billed Murre							
	Unknown Murre							
	Black Guillemot							
	Sabine's Gull		95					
	Mew Gull		482					
	Glaucous Gull		316					
	Herring Gull		72					
	Unknown Gull							
	Arctic Tern		23					
	Auklets							
	Puffins							
	Unknown Migratory Bird							
Shorebirds	Plover							
	Common Snipe							
	Other Shorebirds							
Game Birds	Willow Ptarmigan	189		85	91		13	
	Rock Ptarmigan	11		11				
	Grouse	21		4			17	
Snowy Owl								
Sandhill Crane		293	47		121		172	
Tundra Swan		8	19		4		4	

[1] Based on a random survey of 37 of 70 households, expanded to all households. Data were collected by a local researcher on contract with Kawerak, through cooperative agreements between ADFG, Division of Subsistence, Kawerak, and USFWS. Research was approved by resolution of the Koyuk IRA Council. Project funded by USFWS.

[2] Winter=Nov, Dec, Jan, Feb; Spring=Mar, Apr, May; Summer = Jun, Jul; Fall=Aug, Sep, Oct

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

KOYUK
Bird Harvest Patterns
January 1995 - December 1995

Fig. 1 **Koyuk Bird Harvests, January 1995 - December 1995, by Bird Type**

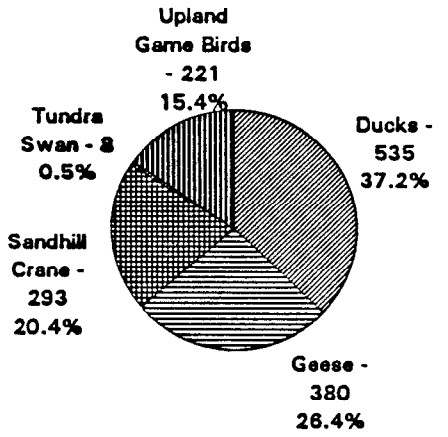


Fig. 2 **Koyuk Egg Harvests, January 1995 - December 1995, by Bird Type**

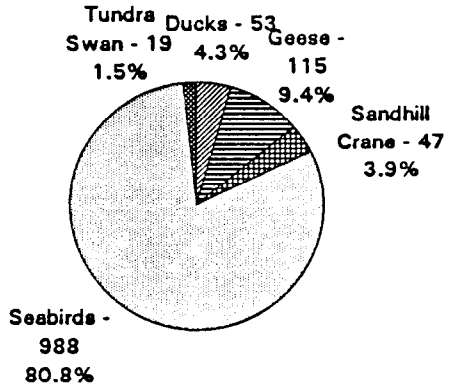


Fig. 3 **Koyuk Bird Harvests, January 1995 - December 1995, by Season**

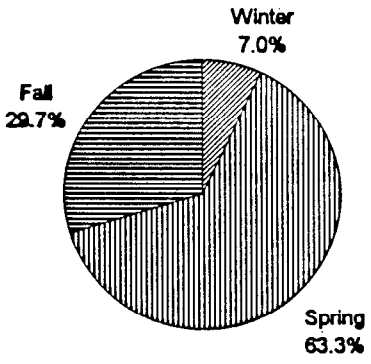
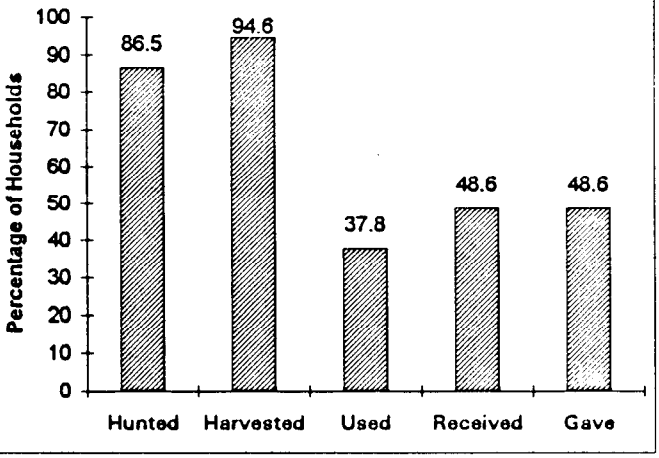


Fig. 4 **Percentage of Koyuk Households that Hunted, Harvested, Used, Received, Gave Birds, 1995**



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

Migratory Bird Project
Koyuk Key Respondent Notes
Researcher: Susan Georgette

Koyuk. Sandhill crane. Population level. Migration. Ecology. Seasonality.
Sandhill cranes come through by the millions. Their numbers are probably increasing. They arrive around the middle of May. You know it's going to be warm when they show up. People like them in both the spring and fall. Once they show up they go through here for two weeks straight after resting in this area. The first part of September they start traveling through again. They pass by here if there's a north wind. The ones we call Siberian cranes stop to rest at Brevig then stop to rest at Koyuk. Cranes can't travel as long as geese.
CODE[204-04-121195

Koyuk. White-fronted geese. Canada geese. Cackling Canada geese. Population levels.
We have lots of speckle-bellies (white-fronted geese). We have lots of Canada geese, some cackling Canadas. The numbers of Canadian geese are fairly heavy.
CODE[204-04-121195

Koyuk. Emperor geese.
Emperor geese are rare here. They stick closer to the open ocean. Koyuk is considered too inland for emperors.
CODE[204-04-121195

Koyuk. Snow geese. Seasonality. Migration. Ecology.
We have snow geese pass through in the spring, fewer in the fall. In the fall they go more through St. Lawrence Island. Here we get Wrangell Island snow geese. The number of snow geese we get passing through here varies from year to year depending on the weather. Stebbins and St. Michael are the snow goose's main resting area. But we get a fairly good number through this area for about two weeks in the middle of May. Snow geese are always headed northwest when they leave Koyuk in spring.
CODE[204-04-121195

Koyuk. Black brant. Geese. Migration. Seasonality. Ecology.
We have black brants here. They arrive at the end of May after break-up. The brants here go up to the arctic. They are always heading north when they leave. The snow geese are always heading northwest. All the other geese spread out -- north, west, northwest.
CODE[204-04-121195

Koyuk. White-fronted geese. Seasonality. Canada geese. Snow geese.
White-fronted geese arrive as early as mid-April depending on the weather. If the spring is mild, we've seen geese here as early as March. Geese (white-fronts) usually show up around the 24th of April. Canada geese arrive within a week. Snow geese arrive after the first week of May, about the 10th or 12th.
CODE[204-04-121195

Koyuk. White-fronted geese. Canada geese. Nesting area. Ecology.
The speckle-bellies (white-fronts) and Canada geese nest in the area. The speckle-bellies like rivers and trees. They rarely nest in the tundra. They pretty much stay where trees are. They are large numbers towards the head of Kiwalik. Canada geese nest in the tundra and rivers.
CODE[204-04-121195

Koyuk. Mallard. Population levels. Harvest levels.
The number of mallards has been growing in the past 15 years. People say their number was large, then declined, and is now growing again. People blame the lower 48 for the decline. The harvest here is fairly stable, even though there are more people now. Koyuk used to have about 130 people, now it's pushing 300. But the harvest of birds is not as heavy because people have the luxury of store-bought food. Even though more people are going out hunting.
CODE[204-04-121195

Koyuk. Northern pintail. Northern shoveler. Population levels.
American wigeon. Mallard. Seasonality. Migration. We have large numbers of pintails. The numbers of shovelers is fairly large in our area. The number of wigeons is fairly large. These and mallards are the main ducks here. The concentrations of these ducks are largest in the fall when migrating south. In spring ducks arrive about the second week of May. Ducks are more a fall time thing. They start gathering about the third week of August and stay until freeze-up.
CODE[204-04-121195

Koyuk. Canvasback. Scaup. Green-winged teal. Population levels. Merganser. Red-breasted merganser.
We hardly ever see canvasbacks. I never paid much attention to scaups. We have lots of teal. The population is fairly large in our area. Mergansers are fish ducks. There's an overpopulation of them. They're everywhere. People don't hunt them. Their meat is kind of fishy. But people eat them if they're hungry. Not too many red-breasted mergansers around here.
CODE[204-04-121195

Koyuk. Harlequin. Oldsquaw. Seasonality. Taste preference.
We've seen harlequins but I've never paid attention to them. Oldsquaws come after the middle of May. Nobody shoots them. They're a fish duck. Their meat is like leather. They're a tough bird. Nobody really bothers with sea ducks unless they have nothing else to eat.
CODE[204-04-121195

Koyuk. Black scoter. Surf scoter. White-winged scoter. Population levels. Harvest levels.
We have huge concentrations of black ducks (black scoters), especially in the fall. No one bothers them here. We don't have white-winged or surf scoters.
CODE[204-04-121195

Koyuk. Common eider. King eider. Nesting area. Harvest levels.
There are a number of common eider nesting in Norton Bay. We get a few king eiders but not that many. Eiders nest on the east side of the bay. Old folks used to eat them but hardly anyone eats them now.
CODE[204-04-121195

Koyuk. Common loon. Arctic loon. Red-throated loon. Population levels. Harvest levels.
We see common loons all over. We see arctic loons and red-throated loons. The numbers of the three species are fairly numerous. Not many people bother with loons.
CODE[204-04-121195

Koyuk. Murres. Murre eggs. Harvest levels. Ecology.
Murres are on the cliffs down the coast. We don't go down there too often. Occasionally we go get eggs. Probably no more than five people get murre eggs in a year. Murres lay eggs about the 21st of June. The eggs are good for about a week or so before they have little birds.
CODE[204-04-121195

Koyuk. Common gull. Mew gull. Glaucous gull. Tern. Snipe. Plovers. Population levels.
Seagulls are everywhere. The most numerous is the common gull or herring gull. We have some mew gulls. We have glaucous gulls. Occasionally we see a gull like the first winter glaucous gull but

big. We have some terns. We have lots of common snipes. We have all these plovers. We have a fairly large number of plovers.
CODE[204-04-121195

Koyuk. Willow ptarmigan. Rock ptarmigan. Population levels. Spruce grouse.
We have both kinds of ptarmigan, willow and rock. Their numbers are less than last year. They're probably on the decline now. There are still ptarmigan but their numbers aren't as heavy. Spruce grouse are fairly common here. People don't hunt them as much as they used to.
CODE[204-04-121195

Koyuk. Snowy owl.
Snowy owls are a common sight but it is rare for someone to get one.
CODE[204-04-121195

Koyuk. Tundra swan. Population levels. Seasonality.
The number of tundra swans is increasing pretty fast. They come through here in the middle of May. Toward the middle of September they start going south.
CODE[204-04-121195

Koyuk. Gull eggs. Geese eggs. Crane eggs. Harvest levels. Seasonality. Use areas. Sharing. Processing / Preservation.
Seagull eggs are the main eggs people harvest. They get them out on the flats. Not many people get eggs. They get some geese, some crane eggs, but not in any great numbers. People eat them fresh. They don't try to put them away. It's a community thing. They pass out eggs to their friends and family. It's the traditional thing. Seagulls lay their eggs about the third week of May.
CODE[204-04-121195

Koyuk. Pintails. Cranes. Geese. Seasonality. Population levels.
The favorite birds around here are sprigs (pintails), cranes, and geese. Spring hunting begins in late April and lasts until mid-May. Fall hunting is the end of August and first part of September. If you don't get cranes in the spring you have a second chance in the fall. Millions fly by. They're good to eat in the spring and fall. We have good bird hunting around here.
CODE[204-31-121195

Koyuk. Seasonality. Molting. Ducks.
We don't get birds in the summer. Summer birds are skinny. We stop hunting by the middle of May.
CODE[204-31-121195

Koyuk. Gull eggs. Seasonality.
Lots of seagulls this year. We go for seagull eggs. We get seagull eggs in late April and early May. Eggs are good for about two weeks after they're laid. We put the eggs in water. If they float, they have chicks. If they sink, they're good for eating.
CODE[204-31-121195

Koyuk. Murres. Tundra swan. Eider. Oldsquaw.
We don't get cliff birds here. We don't hunt swans. We have eiders but we don't eat them. They're fishy. We have ahaaliqs (oldsquaws) but we don't eat those either. They're fishy.
CODE[204-31-121195

Koyuk. Black brant. Snow geese.
Brants and snow geese fly by high. You're lucky if you get one.
CODE[204-31-121195

Koyuk. Golden eagle.
We see more golden eagles now than we used to.
CODE[204-31-121195

Koyuk. Emperor geese. Cackling Canada geese. Lesser Canada geese. Black brant. Snow geese.
We don't really have emperor geese. We have some cacklers. My brother caught one last spring. But lesser Canadas are more common. Brant and snow geese fly by but don't stop much.
CODE[204-7A-121195

Koyuk. Pintails. Wigeon. Mallard. Shoveler. Green-winged teal.
We have pintails. We call them sprigs. We also get wigeons, mallards, and shovelers. We have teals. We call them pocket ducks because they are so small.
CODE[204-7A-121195

Koyuk. Oldsquaws. Mergansers. Goldeneyes. Loons. Loon eggs.
We don't eat oldsquaws around here. We don't eat fish ducks (mergansers). We don't eat loons but we get their eggs if we find them. Goldeneyes are rare around here.
CODE[204-7A-121195

Koyuk. Common eider. Murres. Murre eggs. Gull eggs.
We have common eiders but not the other kinds. We don't get murres. I've never had murre eggs. We look for gull eggs, herring and mew gulls.
CODE[204-7A-121195

Koyuk. Puffins. Shorebirds.
We used to get puffins in camp when I was young but we haven't done that in a long time. We have shorebirds around here. People used to eat them a long time ago but not now.
CODE[204-7A-121195

Koyuk. Tundra swans. Population levels. Harvest levels.
People don't hunt tundra swans because they are on the (endangered) list because there weren't many. But now they're not endangered. Lots of swans around. But people never got used to eating them so don't hunt them.
CODE[204-7A-121195

Koyuk. Population levels. Cranes. Geese. Snow geese. Pintails. Mallards. Black brant.
As I see it, the population is getting low on birds. When I was growing up, the sky was full of cranes flying over. Geese, cranes, snow geese, pintails, mallards. Used to be millions and millions of geese. Even brants. Today I hardly see brants. When I drive a dog team long ago, the birds never stop flying. Young people say there are lots of birds, but they don't know what it was like.
CODE[204-7B-121295

Koyuk. Cranes. Migration. Oral traditions. Ecology.
According to some elders, birds have different migration routes. Right now most of the birds fly straight across the bay. In my earlier life they used to fly over Koyuk. Now hardly any going through here. Cranes anyway. Seems we used to get tired of hearing them hollering. According to elders not living anymore, cranes change their routes. Their routing changes every so many years. In the fall time cranes go on the ridges where there are blueberries.
CODE[204-7B-121295

Koyuk. Cranes. Nome. Migration. Oral traditions.
In Nome, old people say that cranes used to travel over Solomon. Now they travel over Nome.
CODE[204-7B-121295

Koyuk. Emperor geese. Population levels. Harvests levels.
No one hardly ever sees emperor geese. Every once in awhile someone catches one or two. Seems like they're getting a little bit more (in number).
CODE[204-7B-121295

Koyuk. Cranes.
Every once in awhile we see a white crane among the cranes.
CODE[204-7B-121295

Koyuk. Canada geese. White-fronted geese. Nesting area. Cranes. Snow geese.
The main geese here are Canadas and yellow-footers (white-fronts). They nest around here. Even a few cranes nest around here. Some snow geese come through. In the fall time you can hear snow geese flying above the clouds. One time I saw a really small white goose.
CODE[204-7B-121295

Koyuk. Pintails. Mallards. Seasonality. Wigeon. Teal. Shoveler.
We get lots of pintails and mallards. They show up in May. There's wigeons, teals, shovelers. We call shovelers "aluutaq" or spoonbills. These birds nest around here.
CODE[204-7B-121295

Koyuk. Mergansers. Oldsquaws. Loons. Scaups. Harlequins. Harvest levels.
We don't hunt fish ducks (mergansers) and oldsquaws. We have loons here but we don't hunt them. We see scaups. We call them bluebills. Harlequins pass through in late fall but we don't hunt them.
CODE[204-7B-121295

Koyuk. Seasonality. Preservation. Ducks. Geese.
In the springtime we hardly hunt ducks because we have to freeze them. You can't keep them in the spring. After the pin and molting feathers are gone we hunt them. Once it gets cold we put some away. Maybe in late September.
CODE[204-7B-121295

Koyuk. Murres. Murre eggs. Harvest levels.
Murres are at Cape Denbigh and Isaac's Point. We don't get them but Shaktoolik always gets eggs on the cliff. That's just the eggs. They don't hunt the birds.
CODE[204-7B-121295

Koyuk. Terns. Gull eggs. Nesting area. Geese eggs. Customary rules.
We have seagulls and terns. We get seagull eggs on the flats. Lakes with little islands – that's where they mostly lay eggs. Mostly the eggs we hunt are seagull eggs and those geese eggs. If you find some geese eggs, then you take them. But you don't take the whole thing. That's how I was raised. That's what the old people used to tell me.
CODE[204-7B-121295

Koyuk. Snipes. Curlews.
We have quite a few snipes. Some people used to hunt them. We have "curlews" (a long-legged shorebird) too. They're bigger than those other snipes. One old guy here used to hunt "curlews" all the time in the fall when they're fat.
CODE[204-7B-121295

Koyuk. Ptarmigan. Population levels. Hunting methods.
Willow ptarmigan hardly go through Koyuk anymore. Kind of low right now. We used to catch lots of ptarmigan when I was a kid. Right near Koyuk. Nowadays you have to go out and look for them. Maybe it's the power plant noise in the village or something. Those days we used to use nets to catch ptarmigan. Or snares. That's how we hunted. Ammunition was scarce.
CODE[204-7B-121295

Koyuk. Snowy owls. Seasonality.
We have very few snowy owls. If you spot one in winter, you might catch it. You have to shoot it. We don't see them in summertime.
CODE[204-7B-121295

Koyuk. Tundra swans. Population levels. Oral traditions.
We have lots of swans. Those swans are getting more and more. I used to hunt when I was a teenager and I'd see one or two in a lake. We never hunted them. Even now people don't. People say they're too big. That's what my grandpa used to say: "Don't get them. They're too big." Maybe that's why there's so many now.
CODE[204-7B-121295

Koyuk. Hunting methods. Ducks. Geese.
People use shotguns and blinds to hunt birds. There are certain places to watch and wait. Places where birds go through the most.
CODE[204-7B-121295

Koyuk. Customary rules.
As soon as the birds got here in the spring, they would tell us to hunt. When the birds start laying eggs, people don't hunt at that time. They "Leave those birds alone. They're laying eggs," they'd say.
CODE[204-7B-121295

Koyuk. Seasonality. Molting. Ducks. Geese.
When young birds were getting bigger, my parents caught birds to eat in summer for a change of diet. My parents ate fish all summer and sometimes wanted to eat something different.
CODE[204-7B-121295

Koyuk. Processing / Preservation. Customary rules. Technology.
Some people used to dry birds. In the springtime we usually only got enough to eat for a short period of time. People don't like to see food spoil. "Don't get too many. Just enough to eat," my parents told me. They used to make pokes and stuff to put food away. If they wanted to have a change of diet. In the fall time, they try to put away more food for winter. No freezers at that time. Mostly they put away ducks and geese by salting in the old days. Pretty good that way. Salted them in wooden barrels. That was all we had. Then soaked them in water to desalt them. When they were just about right, they'd cook them. Now everyone freezes birds. People kind of lazy to pluck lots of them now.
CODE[204-7B-121295

Koyuk. Eiders. Seasonality. Nesting area. Population levels. Eider eggs.
Eider ducks are good eating. We eat them. They make good soup. They come a little bit later than cranes and geese. It's springtime before we see any. Common eiders nest around here. Seems like they've gone down a little bit. But seems like they're getting more and more again. They lay eggs in certain places, near creek mouths. Eggs are good for eating. The Eskimo name for eider is "mitiq".
CODE[204-7B-121295

Koyuk. Cranes. Migration. Oral traditions.
When I was young, cranes used to be the first ones to arrive in this area. But now it's the opposite. We see pintail, loon, or something first. They come first. I'm expecting cranes. But they come late. My grandma used to say, "The first things that travel through will come last. It's going to switch. It's going to be opposite." I often think about what she said. When I see ducks other than cranes first, I think about what she said. Everything's changing. Same with people. "People will forget their relatives," she used to say. And that's what's happened.
CODE[204-7B-121295

Koyuk. Canada geese. Black brant. Emperor geese. White-fronted geese. Seasonality.
We have Canada geese here, the bigger ones. We have brants. They go through but don't nest here. We don't have emperors. I've seen them before but never around here. In the Nome area. We have yellow-footers (white-fronts). They come earlier than the Canadian geese. They leave earlier, too. People catch them sometimes.
CODE[204-70-121195

Koyuk. Snow geese. Seasonality.
Snow geese come through but not a lot of them. Lucky if we see any. They come the same time as Canada geese. Early in the spring. Then they're gone. I don't know where they go. They don't nest here.
CODE[204-70-121195

Koyuk. Pintails. Mallards. Wigeon. Shoveler. Scaups. Seasonality.
We have pintails, mallards, wigeon, and shovelers or spoonbills. We see scaups but we don't hunt them. I don't know why. All those ducks come about the same time. May, last part of April for the early ones.
CODE[204-70-121195

Koyuk. Population levels. Ducks. Geese.
I've never noticed an increase or decrease in ducks. It seems to be a stable level. I've never noticed changes in geese.
CODE[204-70-121195

Koyuk. Mergansers. Bufflehead. Harlequin. Goldeneye. Oldsquaw.
We have mergansers or "fish ducks" in the rivers. People don't hunt those. We don't have many bufflehead, harlequin, goldeneye, or oldsquaw.
CODE[204-70-121195

Koyuk. King eider. Common eider. Nesting area. Eider eggs.
There are no king eiders around here but we have common eiders. Not too many, but some are around. Some lay their eggs around here. If we can find their eggs we're lucky. We'll take them. Last summer for the first time I found eggs on the beach, right on the beach in the high water area. Some lay eggs along the lakes. I've never hunted eggs in my life.
CODE[204-70-121195

Koyuk. Common loons. Red-throated loons.
We have common loons. Maybe red-throated loons. We have two types of loons here -- the bigger ones and the smaller ones. We don't bother with loons or eggs.
CODE[204-70-121195

Koyuk. Murres. Auklets. Murre eggs.
Murres are on the cliffs close to Shaktoolik and Nome. We don't go get eggs from here. There are a few auklets along the cliffs, but I don't know what kind. I've never looked at them.
CODE[204-70-121195

Koyuk. Sabine's gulls. Gull eggs. Terns.
Sabine's gulls come through in spring but we never see them in summer. They're just going through. We have seagulls and terns. If we're lucky to find seagull eggs, we take them and eat them.
CODE[204-70-121195

Koyuk. Snipes. Snowy owls.
We have snipes. A few different types. We have a few snowy owls around here.
CODE[204-70-121195

Koyuk. Ptarmigan. Population levels.
We have willow ptarmigan. I used to travel as a kid and ptarmigan were thick. Now I've been asking around where ptarmigan are.
CODE[204-70-121195

Koyuk. Spruce grouse.
We have grouse, spruce hens we call them. Not too many. They're in the trees if you want them.
CODE[204-70-121195

Koyuk. Tundra swan. Population levels. Harvest levels.
People aren't getting many swans. There are too many now. They're noisy, especially in camp at night. Here we don't hardly bother with them. Other places people eat them. When I was growing up there was a fine for hunting them, so we never get used to eating them.
CODE[204-70-121195

Koyuk. Cranes. Crane eggs.
We have lots of cranes in spring and fall. Sometimes we find their eggs.
CODE[204-70-121195

Bird Harvests in King Island Community, Nome
January through December 1995

Results of a cooperative project by Kawerak, Inc.
and the Division of Subsistence, Alaska Department of Fish and Game,
funded by the U.S. Fish and Wildlife Service
June 1996

Introduction
Birds are important to families in northwest Alaska. They are an important part of the culture and traditional way of life of Alaska Natives. Birds and bird eggs are eaten for food, and feathers are used in hand-crafted items. This report presents information on bird harvests in the King Island community in Nome in 1995. The information results from a cooperative project in 1995-96.

The Project
Several groups worked together on the project to gather information on the use of birds by the King Island community in Nome. The King Island Native Community approved the project by resolution on November 16, 1995. A survey of households was done by a local researcher hired and supervised by Kawerak, Inc. The project was designed by the Division of Subsistence, Alaska Department of Fish and Game, who also put the information into tables and into this report. Money for the project came from the U.S. Fish and Wildlife Service. Preliminary results were reviewed by Kawerak and the Division of Subsistence, ADF&G.

How the Information Was Collected
A survey was used to gather information on bird harvests. Surveys were done in 49 of the 55 King Island households (89 percent) in Nome. Also, two bird experts from the King Island community were interviewed about bird ecology and traditional uses of birds. Surveys were done December 6-23, 1995 in Nome. On the survey, people were asked about bird hunting during the 12-month period, January 1995 through December 1995. Participation in the surveys was voluntary. To protect confidentiality, no person's name is used in any reports of the information.

Findings
King Island households in Nome reported the following things about their use of birds in 1995:

- Almost one-half (46.9 percent) of all households had members that hunted birds. The same 46.9 percent of all households harvested birds (Fig. 4).
- A majority (69.4 percent) of all households used birds (Fig. 4)
- Sharing of birds was common, with 34.7 percent of all household giving birds to other families and 38.8 percent of all households receiving birds from others (Fig. 4).
- At least 22 kinds of birds were caught, including: emperor geese, cackling Canada geese, lesser Canada geese, snow geese, black brant, American wigeon, mallard, common merganser, red-breasted merganser, oldsquaw, common eider, king eider, arctic loon, common murre, glaucous gull, auklet, puffin, willow ptarmigan, rock ptarmigan, grouse, sandhill crane, and tundra swan (Table 1).
- At least 5 kinds of eggs were gathered, including: common eider, common murre, glaucous gull, auklet, and puffin (Table 1).
- An estimated 411 birds were caught by King Island households in Nome in 1995. Bird harvests fell into the following general categories: seabirds (39.4 percent), upland game birds (28.5

percent), geese (15.0 percent), ducks (12.7 percent), cranes (3.6 percent), and swans (0.8 percent) (Fig. 1).

- The five kinds of birds caught in greatest numbers in 1995 were: auklets (135 birds), willow ptarmigan (77 birds), rock ptarmigan (47 birds), puffins (35 birds), and cackling Canada geese (24 birds) (Table 1).

- An estimated 1,308 eggs were gathered by King Island households in Nome in 1995. The vast majority of the eggs harvested were those of the common murre (1,257 eggs) (Table 1).

- Egg harvests fell into the following general categories: seabirds (99.5 percent), and ducks (0.5 percent) (Fig. 2).

- Birds were taken in spring (10.9 percent), summer (32.3 percent), fall (36.1 percent), and winter (20.6 percent) (Fig. 3).

- King Island bird and egg harvests occurred in four geographic areas. Some of the harvest took place on King Island, including all of the puffin harvest, most of the auklet harvest, and about two-thirds of the common murre eggs (Table 2). Most of the remaining murre eggs were gathered on Sledge Island (Table 3). Most of the other bird and egg harvesting took place in the Nome or Woolley Lagoon areas (Table 4). One King Island household harvested birds and eggs at Diomede (Table 5).

- The classifications of Canada geese harvests into "cackling Canada" or "lesser Canada" by hunters are uncertain because of the close resemblance of the two species and the difficulties distinguishing them in the colored bird guide used in the survey.

- Local distinctions between bird species did not always correspond with western scientific distinctions shown in the bird guide. In addition, hunters typically identify birds by their sound, behavior, and habitat, as well as by their looks. The lack of this information on the bird guide led to uncertainty about the identity of a few of the species harvested.

- A few hunters may have underreported their harvests of some bird species in fear of enforcement consequences despite assurances that the information was confidential.

- Information from interviewed hunters about birds in the King Island subcommunity in Nome area is attached as an appendix.

Computerized Data Files

This information is available as computer files at the Division of Subsistence, Alaska Department of Fish and Game, Box 3-2000, Juneau, Alaska 99802 (907-465-4147).

Acknowledgments

A sincere thank-you is given to all households and hunting experts who generously volunteered to be surveyed or interviewed for this project. A special thanks is given to Sandy Iknokinok of Kawerak, who obtained IRA approvals, hired community assistants, and supervised data collection; Henry Stanislaus of the King Island Native Community, who conducted the household surveys; Susan Georgette of the Division of Subsistence, ADF&G, who trained surveyors, interviewed hunters, and analyzed data; and the King Island Native Community, who supported the project.

Table 1. KING ISLAND COMMUNITY, NOME
Bird Harvests, January 1995 - December 1995[1]

Bird Species		Total Harvests		Bird Harvest By Season[2]				
		Birds	Eggs	Winter	Spring	Summer	Fall	nknown
Geese	White-fronted Geese							
	Emperor Geese	6			3	1	1	
	Cackling Canada Geese	24					24	
	Lesser Canada Geese	19					19	
	Canada Geese Unknown	1					1	
	Snow Geese	7			1		6	
	Black Brant	10					10	
	Unknown Geese							
Ducks	Northern Pintail							
	American Wigeon	1					1	
	Mallard	11					11	
	Northern Shoveler							
	Greater Scaup							
	Lesser Scaup							
	Canvasback							
	Green-winged Teal							
	Common Merganser	2					2	
	Red-breasted Merganser	2					2	
	Bufflehead							
	Harlequin							
	Oldsquaw	17			2	3	11	
	Common Goldeneye							
	Black Scoter							
	Surf Scoter							
	White-winged Scoter							
	Common Eider	19	7		3		16	
	King Eider	3					3	
	Spectacled Eider							
	Steller's Eider							
	Ducks Unknown							
Seabirds	Common Loon							
	Arctic Loon	1					1	
	Red-throated Loon							
	Yellow-billed Loon							
	Unknown Loon							
	Common Murre	2	1257		1	1		
	Thick-billed Murre							
	Unknown Murre							
	Black Guillemot							
	Sabine's Gull							
	Mew Gull							
	Glaucous Gull	1	29			1		
	Herring Gull							
	Unknown Gull							
	Arctic Tern							
	Auklets	135	13		34	101		
	Puffins	35	1			35		
	Unknown Migratory Bird							
Shorebirds	Plover							
	Common Snipe							
	Other Shorebirds							
Game Birds	Willow Ptarmigan	77		53			25	
	Rock Ptarmigan	47		38	3		6	
	Grouse	1					1	
Snowy Owl								
Sandhill Crane		16					16	
Tundra Swan		3					3	

[1] Based on a census survey of 49 of 55 households, expanded to all households. Data were collected by a local researcher on contract with Kawerak, through cooperative agreements between ADFG, Division of Subsistence, Kawerak, and USFWS. Research was approved by resolution of the King Island Native Community Council. Project funded by USFWS.

[2] Winter=Nov, Dec, Jan, Feb; Spring=Mar, Apr, May; Summer = Jun, Jul; Fall=Aug, Sep, Oct

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

KING ISLAND COMMUNITY, NOME
Bird Harvest Patterns
January 1995 - December 1995

Fig. 1 King Island Community Bird Harvests, January 1995 - December 1995, by Bird Type

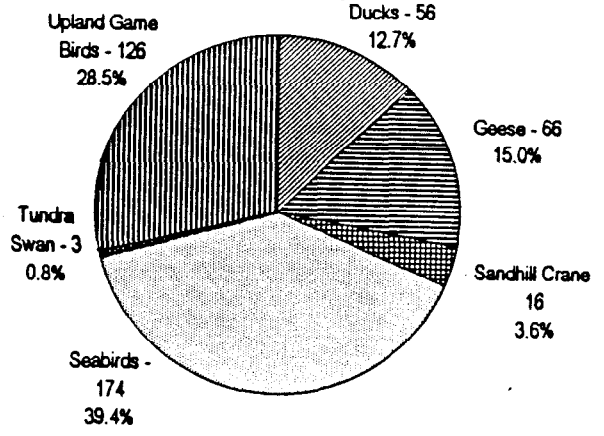


Fig. 2 King Island Community Egg Harvests, January 1995 - December 1995, by Bird Type

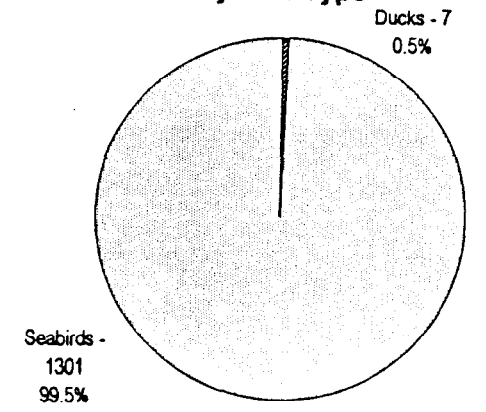


Fig. 3 King Island Community Bird Harvests, January 1995 - December 1995, by Season

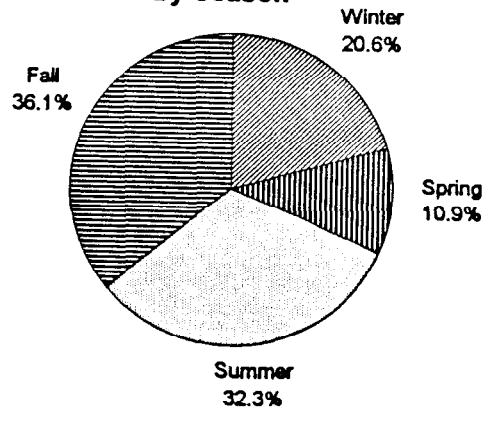
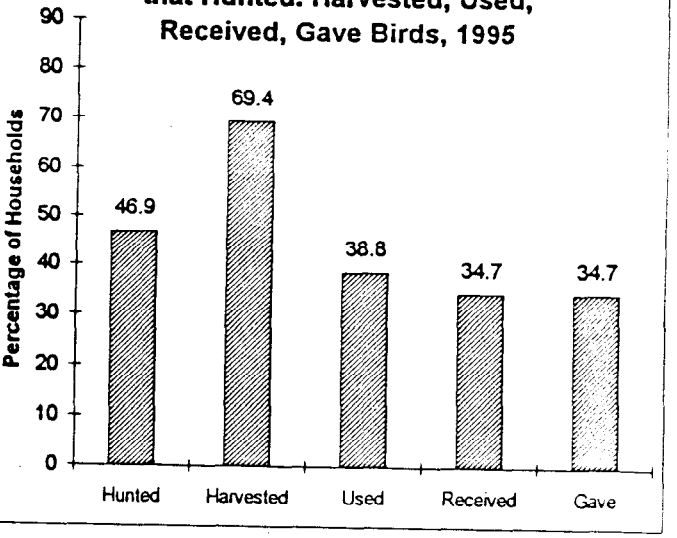


Fig. 4 Percentage of King Island Households that Hunted. Harvested, Used, Received, Gave Birds, 1995



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

Migratory Bird Project
King Island Key Respondent Notes
Researchers: Susan Georgette

King Island. Nome. Common eider. King eider. Migration. Nesting area.
We see eiders on the mainland, see them pass by on the island. They pass by the island starting in June. They don't nest on the island. They stop at Cape Woolley in the spring, going up north. They fly in pairs in summer when we see them. Probably king and common eiders.
CODE[251-26-120895

King Island. Nome. Loon. Migration. Nesting area. Feeding area.
Loons don't nest on King Island. But we see them in the fall time. They stop there just for awhile. Feeding from the bottom of the water, I guess. Some of them are those big ones.
CODE[251-26-120895

King Island. Nome. Common murre. Migration. Ecology.
Murres have eggs on the cliff or rocks. Common murre, I think. We start seeing them fly by in late April and then land on the cliff. They have eggs first part in June, depending on the weather. When it's cold, kind of later. When it's warm, about the 10th they have eggs.
CODE[251-26-120895

King Island. Nome. Emperor geese.
We see emperor geese sometimes.
CODE[251-26-120895

King Island. Nome. Guillemot. Guillemot eggs.
We have black guillemots on King Island. And their eggs. They look like this in winter (points at winter picture on bird chart). Inside cracks are their eggs. We don't get too many guillemot eggs. We're just busy with murre eggs.
CODE[251-26-120895

King Island. Nome. Gull. Murre. Tern.
(Looks at gulls on bird chart) We have different kind of gulls that nest with murres. We see terns when they migrate past but they don't nest on the island.
CODE[251-26-120895

King Island. Nome. Parakeet auklet. Crested auklet. Least auklet. Population levels.
We have lots of those (parakeet auklets). They even sit around in the old houses. We have lots of crested auklets. For several years they've been going down seems like. Maybe fishermen catch them in their nets out at sea. They're gaining now. We've started to see more. We have lots of least auklets on King Island (not pictured in bird chart).
CODE[251-26-120895

King Island. Nome. Tufted puffin. Horned puffin. Population levels.
We have tufted puffins. Looks like they're increasing on the side of the island. We hardly had any when I was growing up. We have horned puffins. Lots of those are on the island after nesting is over.
CODE[251-26-120895

King Island. Nome. Plovers. Shorebirds. Migration.
We don't have many plovers and shorebirds on the island. We see them passing by on migration. We see them at camp on the mainland.
CODE[251-26-120895

King Island. Nome. Snowy owl.
We see snowy owls sometimes on the island.
CODE[251-26-120895

King Island. Nome. Sandhill crane. Nesting area.
Cranes fly by when they come. Once in awhile they stop by on the island but they never stay long. They don't nest there.
CODE[251-26-120895

King Island. Nome. Tundra swan. Nesting area. Population levels.
Swans just fly by. They don't nest on the island. They seem to be increasing at Woolley Lagoon. All kinds of birds were there when we arrived early in camp this spring. But when everyone came to camp the birds go.
CODE[251-26-120895

King Island. Nome. Ducks. Oldsquaw. Hunting season.
We see ducks on the island, but I don't know which kind. Brown ones. They stop in the fall and we hunt them. We have oldsquaws. We hunt those in the fall time when they come by.
CODE[251-26-120895

King Island. Nome. Canada geese. Black brant. Snow geese. Seasonality.
We see Canada geese or brant (not sure which) flying by at camp (Cape Woolley). Snow geese go by in the fall when they are heading south. They came by in the thousands one fall at Cape Douglas and the ground looked like snow.
CODE[251-26-120895

King Island. Nome. Ducks. Oldsquaw. Guillemot. Murre. Crested auklet. Horned puffin. Taste preference. Seasonality. Parakeet auklet.
In fall, ducks and oldsquaws are our favorite to eat. And guillemots. We eat those in fall time. Murres when they first land on the island in late April are a favorite. We like crested auklets and horned puffins. Parakeet auklets take longer to cook. They're harder than crested auklets. In summer we hunt horned puffins. But not auklets after they start mating.
CODE[251-26-120895

King Island. Nome. Auklet eggs. Murre eggs. Puffin eggs. Seasonality.
We eat those auklet eggs but they're small and easy to break. Kids hunt them. Murres and puffins are our favorite eggs. We get eggs in June.
CODE[251-26-120895

King Island. Nome. Seasonality. Guillemot. Ducks. Auklet.
We begin hunting as soon as the birds landed. It ends the last part of June or July when we go to the mainland (Cape Woolley). By the time we get back in fall (August), the birds are gone so we get guillemots, ducks. Auklets leave the island as soon as the young can go in the water; they don't wait until they can fly. Auklets lay their eggs inside the rocks. That's why they're faster than puffins.
CODE[251-26-120895

King Island. Nome. Technology. Hunting methods. Auklet. Meal preparation.
We use rifles, .22s, .177s, to get birds. We walk on the island. When I was young, we used slingshots to get birds when they were landing at night. (His daughter added that in the mornings and evenings when she was a girl they used to catch auklets under the rocks with their hands and wring their necks.)
We boil birds or make them into soup.
CODE[251-26-120895

King Island. Nome. Customary rules.
Never hear of any rules. We hunt them when we need them.
CODE[251-26-120895

King Island. Nome. Use areas. Ducks. Geese. Eggs. Seabirds. Diomede Island.
One King Islander now lives in Brevig Mission but still uses the island. Three or four King Island families who live in Anchorage return every spring to hunt, bringing back walrus meat, half-dried birds, etc. to Anchorage. Some King Island families have relatives on Diomede Island and gather eggs there.
CODE[251-09-122195

King Island. Nome. Eggs. Sledge Island.
People use Sledge Island to wait out bad weather. While there, hunters climb around looking for eggs.
CODE[251-09-122195

King Island. Nome. Murres. Murre eggs. Biology.
There are thousands of murre eggs on King Island. When you take eggs, murres lay more but the shells of the second batch are thinner. If you take those and murres lay eggs a third time, the shells are really fragile.
CODE[251-09-122195

King Island. Nome. Auklets. Gulls. Kittiwakes. Eggs.
Some of the auklets and gulls on King Island are different from those shown on the bird chart. Kittiwakes, for instance, are found on King Island. People use them for eggs.
CODE[251-09-122195

King Island. Nome. Murres. Murre eggs.
Once in awhile people shoot murres to eat. But mostly they eat the eggs.
CODE[251-09-122195

King Island. Nome. Auklets. Eggs. Seasonality.
On King Island, we used to get auklets. They arrive at the end of May and go away in September. The young grow up and fly away. We use auklet eggs. They're small eggs. They lay one or two eggs only.
CODE[251-09-013096

King Island. Nome. Eggs.
The road opens late (to Cape Woolley) and school gets out late so by the time we get to camp it's too late to get eggs. We don't hunt many eggs.
CODE[251-09-013096

King Island. Nome. Oldsquaw.
Oldsquaws have lots of eggs. 8 or 9 in each nest. They're good eggs to eat.
CODE[251-09-013096

King Island. Nome. Snow geese.
We see snow geese in the fall time at Cape Woolley. They come from Russia in August. Lots of them. Sometimes they look like snow on the tundra.
CODE[251-09-013096

King Island. Nome. Canada geese.
Sometimes we get Canada geese. They're really easy to take the feathers off. Sometimes it's too wet at camp for Canada geese.
CODE[251-09-013096

King Island. Nome. Sandhill crane. Geese.
Cranes stop at King Island to rest on their way from Russia. We don't see many geese on the island.
CODE[251-09-013096

King Island. Nome. Ptarmigan.
We used to hunt ptarmigan on the road to Cape Woolley. Now there's hardly any ptarmigan there. Maybe too many snowmachines, too much noise. Someone said there were lots up on Kougarok. Ptarmigan have lots of eggs, fourteen or fifteen. It's hard to find their eggs. One time I was looking for a ptarmigan nest because the male was nearby. I couldn't find the nest. I took off my coat because I was getting hot and threw my coat on the willows. My coat started moving, so I looked under it. I had to look real hard, but found the nest under the willows. They had a trail under the willows to their nest. They cover their nest with leaves and grass.
CODE[251-09-013096

King Island. Nome. Loons.
We see loons, but we don't hunt them. In the old days, people used to get them. A long time ago we used to hunt their eggs.
CODE[251-09-013096

King Island. Nome. King eider. Eider.
King eiders are good to eat. We don't see other kinds of eiders.
CODE[251-09-013096

King Island. Nome. Parakeet auklets. Non-food product.
We used to make parkies out of parakeet auklets. You take off the skin and the fat, put flour on it, air dry it.
CODE[251-09-013096

King Island. Nome. Murres. Auklets.
We used to make mattress for the kids out of murre and auklet feathers. Auklets make good mattresses.
CODE[251-09-013096

King Island. Nome. Sandhill crane. Sea ducks. Non-food products. Wings.
Cranes and sea duck wings are still used for small brooms for sweeping.
CODE[251-09-013096

King Island. Nome. Murres. Non-food products.
Long time ago my grandma made a bag out of murre skins. It was kind of like a basket.
CODE[251-09-013096

King Island. Nome. Horned puffins. Seasonality. Biology.
Horned puffins are deep water birds. They eat small fish. Good fish. Not like the mud and worms around here in the water. Puffins arrive at the end of May. They make their eggs under rocks. No nest. They have fat babies.
CODE[251-09-013096

King Island. Nome. Hunting methods. Auklets.
We used to hunt under rocks for auklets with our hands and wring their necks. But sometimes they bite. We never used nets to catch birds on King Island. Only Diomede uses nets.
CODE[251-09-013096

King Island. Nome. Sledge Island. Eggs.
We don't go to Sledge Island much. People used to hunt eggs there, but the government took it.
CODE[251-09-013096

King Island. Nome. Black guillemots. Guillemot eggs. Non-food products.
We have black guillemots on King Island. Their eggs are good to eat. They have really thin shells and are easy to break. The birds are good to eat, too. Their red feet were used for fancy fish hooks. They're really bright.
CODE[251-09-013096

King Island. Nome. Arctic tern.
Terns are really dangerous. They attack you if you get near their nest.
CODE[251-09-013096

King Island. Nome. Snowy owls. Owls.
We see lots of snowy owls. They make good soup. Teller Road has snowy owls in the spring. There is also a small brown owl that's good to eat.
CODE[251-09-013096

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Introduction

Birds are important to families in northwest Alaska. They are an important part of the culture and traditional way of life of Alaska Natives. Birds and bird eggs are eaten for food, and feathers are used in hand-crafted items. This report presents information on bird harvests in Nome in 1995. The information results from a cooperative project in 1995-96.

The Project

Several groups worked together on the project to gather information on birds in Nome. The Nome Eskimo Community approved the project with a letter of approval dated January 24, 1996. A survey of households was done by a group of 5 local researchers hired and supervised by Kawerak, Inc. The project was designed by the Division of Subsistence, Alaska Department of Fish and Game, who also put the information into tables and into this report. Money for the project came from the U.S. Fish and Wildlife Service. Preliminary results were reviewed by Kawerak and the Division of Subsistence, ADF&G.

How the Information Was Collected

A survey was used to gather information on bird harvests. Surveys were done in 184 randomly selected households of a total of 1,057 households (17.4 percent) in Nome. A subgroup of Nome residents known as the King Islanders were excluded from this survey because that subgroup had already been surveyed as part of this project in a previous survey effort. Surveys were done between February 28 and March 29, 1996 in Nome. On the survey, people were asked about bird hunting during the 12-month period, January 1995 through December 1995. Participation in the surveys was voluntary. To protect confidentiality, no person's name is used in any reports of the information.

Findings

Households in Nome reported the following things about their use of birds in 1995:

- 41.3 percent of all households had members that hunted birds. Slightly fewer households (39.1 percent) harvested birds (Fig. 4).
- Nearly one-half (47.8 percent) of all households used birds (Fig. 4).
- Sharing of birds between households was common. More than one-quarter (27.2 percent) of all Nome households received birds from other households and 17.9 percent gave birds to other households (Fig. 4).
- At least 26 kinds of birds were caught including white-fronted geese, emperor geese, cackling Canada geese, lesser Canada geese, snow geese, black brant, northern pintail, American wigeon, mallard, northern shoveler, canvasback, green-winged teal, oldsquaw, common eider, king eider, spectacled eider, common loon, common murre, thick-billed murre, auklets, common snipe, willow ptarmigan, rock ptarmigan, grouse, sandhill crane, and tundra swan (Table 1).
- At least 6 kinds of eggs were gathered including, lesser Canada geese, northern pintail, common Murre, thick-billed murre, mew gull, and glaucous gull (Table 1).

- An estimated 9,726 birds were caught by households in Nome in 1995. Bird harvests fell into the following general categories: upland game birds (41.6 percent), seabirds (27.7 percent), ducks (15.3 percent), geese (11.8 percent), cranes (2.6 percent), shorebirds (0.5 percent), and swans (0.5 percent) (Fig. 1)

- The five kinds of birds caught in greatest numbers in 1995 were: willow ptarmigan (3,510 birds), auklets (1,878 birds), unknown ducks (632 birds), rock ptarmigan (483 birds), and common murre (471 birds) (Table 1).

- An estimated 7,709 eggs were gathered by households in Nome in 1995. Most eggs were from common murre (3,361 eggs), thick-billed murre (2,298 eggs), and mew gull (649 eggs) (Table 1).

- Egg harvests fell into the following general categories: seabirds (97.1 percent), ducks (2.4 percent), and geese (0.5 percent) (Fig. 2).

- Birds were taken in spring (38.6 percent), fall (32.8 percent), winter (24.6 percent), and summer (3.9 percent). The season of harvest was unknown for 0.3 percent of the bird harvest (Fig. 3).

- The classifications of Canada geese harvests into "tackling Canada" or "lesser Canada" by hunters are uncertain because of the close resemblance of the two species and the difficulties distinguishing them in the colored bird guide used in the survey..

- Local distinctions between bird species did not always correspond with western scientific distinctions shown in the bird guide. In addition, hunters typically identify birds by their sound, behavior, and habitat, as well as by their looks. Both these led to uncertainty about the identity of a few of the species harvested.

- A few hunters may have underreported their harvests of some bird species in fear of enforcement consequences despite assurances that the information was confidential.

Computerized Data Files

This information is available as computer files from the Division of Subsistence, Alaska Department of Fish and Game, Box 3-2000, Juneau, Alaska 99802 (907-465-4147).

Acknowledgments

A sincere thank-you is given to the Nome Eskimo Community who approved the project and to all Nome households who generously agreed to be surveyed as part of this project. A special thanks is given to Linda Conley, City Clerk for the City of Nome, for her assistance and to Sandy Iknokinok of Kawerak, who obtained community approvals, hired community assistants, and supervised data collection. Community assistants included Dorcas Bloom, Bryan Outwater, John J. Rogers, Shane Iknokinok, and William Walluk. Susan Georgette of the Division of Subsistence, ADF&G, helped train surveyors and assisted with the random selection of survey households.

Table 1. NOME (Non-King Island Component)
Bird Harvests, January 1995 - December 1995[1]

Bird Species		Total Harvests		Bird Harvest By Season[2]				
		Birds	Eggs	Winter	Spring	Summer	Fall	nknown
Geese	White-fronted Geese	6					6	
	Emperor Geese	23			23			
	Cackling Canada Geese	69					69	
	Lesser Canada Geese	333	34		80		253	
	Canada Geese Unknown	402			149	6	247	
	Snow Geese	195			172		23	
	Black Brant	115			109		6	
	Unknown Geese							
Ducks	Northern Pintail	304	69		201		103	
	American Wigeon	23			6		17	
	Mallard	161			29	46	86	
	Northern Shoveler	34			34			
	Greater Scaup							
	Lesser Scaup							
	Canvasback	29					29	
	Green-winged Teal	115			52		63	
	Common Merganser							
	Red-breasted Merganser							
	Bufflehead							
	Harlequin							
	Oldsquaw	40			40			
	Common Goldeneye							
	Black Scoter							
	Surf Scoter							
	White-winged Scoter							
	Common Eider	52			52			
	King Eider	75			46		29	
	Spectacled Eider	17			17			
	Steller's Eider							
	Ducks Unknown	632	115		115	161	327	29
Seabirds	Cormorant							
	Common Loon	17					17	
	Arctic Loon							
	Red-throated Loon							
	Yellow-billed Loon							
	Common Murre	471	3361		316	57	98	
	Thick-billed Murre	172	2298		57	57	57	
	Unknown Murre	144	488		144			
	Black Guillemot							
	Sabine's Gull							
	Mew Gull		649					
	Glaucous Gull		115					
	Herring Gull							
	Unknown Gull		465					
	Arctic Tern							
	Auklets	1878			1878			
	Puffins							
	Unknown Seabird	29	115		29			
Shorebirds	Plover							
	Common Snipe	46				46		
	Other Shorebirds							
Game Birds	Willow Ptarmigan	3510		2097	132		1281	
	Rock Ptarmigan	483		287			195	
	Grouse	46					46	
Snowy Owl								
Sandhill Crane		253			63		190	
Tundra Swan		52			6		46	

[1] Based on a random survey of 184 of 1057 households, expanded to all households. Data were collected by a local researcher on contract with Kawerak, through cooperative agreements between ADFG, Division of Subsistence, Kawerak, and USFWS. Research was approved by resolution of the Nome Eskimo Community. Project funded by USFWS.

[2] Winter=Nov, Dec, Jan, Feb; Spring=Mar, Apr, May; Summer = Jun, Jul; Fall=Aug, Sep, Oct

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

NOME (Non-King Island Component)
Bird Harvest Patterns
January 1995 - December 1995

Fig. 1 **Nome (Non-King Is.) Bird Harvests, January 1995 - December 1995, by Bird Type**

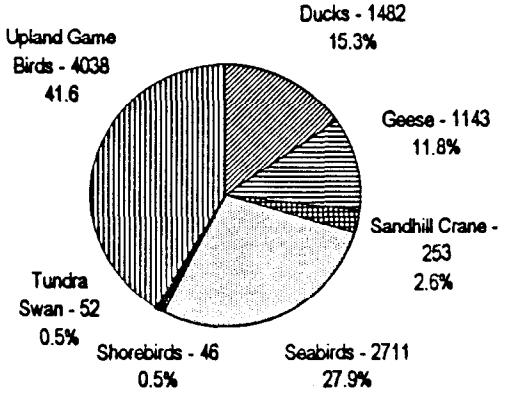


Fig. 2 **Nome (Non-King Is.) Egg Harvests, January 1995 - December 1995, by Bird Type**

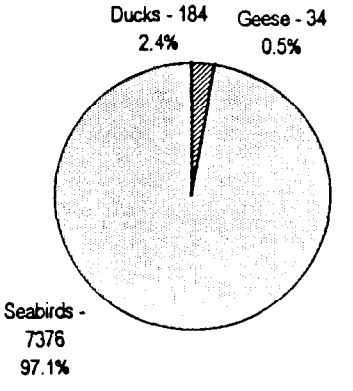


Fig. 3 **Nome (Non-King Is.) Bird Harvests, January 1995 - December 1995, by Season**

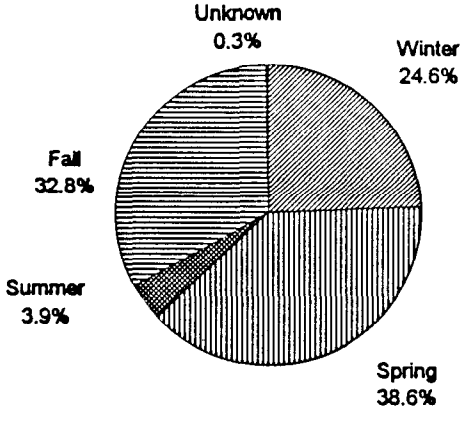
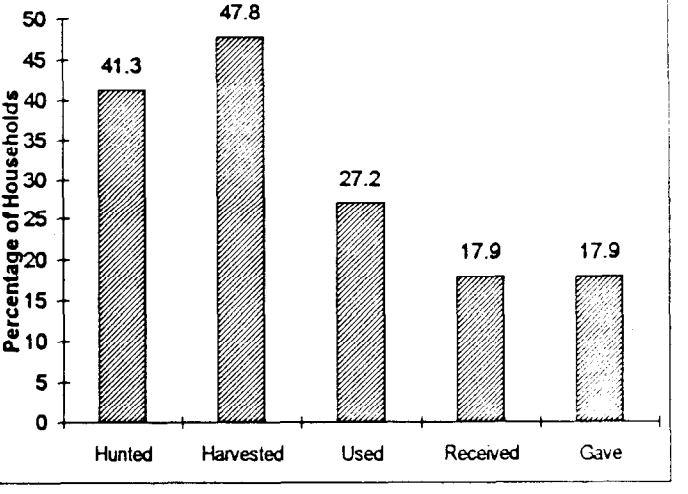


Fig. 4 **Percentage of Nome (Non-King Is.) Households that Hunted, Harvested, Used, Received, or Gave Birds, 1995**



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

Bird Harvests in Shaktoolik, November 1993 through October 1994

Results of a Cooperative Project by the
Division of Subsistence, Alaska Department of Fish and Game, in cooperation with
Kawerak Inc., the Shaktoolik IRA Traditional Council, and the U.S. Fish and Wildlife Service
April 1995

Introduction

Birds are important to families in northwest Alaska. They are an important part of the culture and traditional way of life of Alaska Natives. Birds and bird eggs are eaten for food, and feathers are used in hand-crafted items. This report presents information on bird harvests in Shaktoolik during November 1993 through October 1994. The information are results from a cooperative project in 1994-95.

The Project

Several groups worked together on the project to gather information on birds at Shaktoolik. The Shaktoolik IRA Council approved the project by resolution (94-14) on October 15, 1994. A survey of households was done by a local researcher hired and supervised by Kawerak Inc. The project was designed by the Division of Subsistence, Alaska Department of Fish and Game, who also put the information into tables and into this report. Money for the project was given by the U.S. Fish and Wildlife Service. Preliminary results were reviewed by Kawerak and the Division of Subsistence, ADF&G.

How the Information Was Collected

A survey was used to gather information on bird harvests. Surveys were done in 46 of 49 households (93.9 percent) in Shaktoolik. Also, three bird experts from Shaktoolik were interviewed about bird ecology and traditional uses of birds. Surveys were done between November 9 and December 31, 1994 in Shaktoolik. On the survey, people were asked about bird hunting during the 12-month period, November 1993 through October 1994. To protect confidentiality, no person's name will be used in any reports of the information, unless that person gives permission to do so.

Findings

During the 12-month period, November 1993 through October 1994, households in Shaktoolik reported a number of things about their use of birds:

- Almost all households used birds (47 households, or 95.7 percent) (see Fig. 4).
- Almost all households had bird hunters (42 households, or 84.8 percent). Slightly fewer households (76.1 percent) harvested birds. (see Fig. 4).
- Sharing of birds was common – 28 households (56.5 percent) reported giving birds to other households, and 26 households (52.2 percent) reported receiving birds from other households (see Fig. 4).
- At least 16 kinds of birds were harvested – white-fronted geese, emperor geese, cackling Canada geese, lesser Canada geese, snow geese, black brant, northern pintail, American widgeon, mallard, northern shoveler, canvasback, green-winged teal, common eider, willow ptarmigan, rock ptarmigan, and sandhill crane (see Table 1).
- At least 12 kinds of eggs were gathered – cackling Canada geese, mallard, oldsquaw, common eider, common loon, arctic loon, common murre, Sabine's gull, mew gull, glaucous gull, unknown gull, and sandhill crane (see Table 1).

- About 1,015 birds were harvested by households in Shaktoolik during the 12-month period, November 1993-October 1994 (see Table 1).

- The top five birds in numbers harvested during the 12-month period were sandhill crane (239 birds), willow ptarmigan (152 birds), northern pintail (140 birds), lesser Canada geese (144 birds), and cackling Canada geese (109 birds) (see Table 1).

- About 1,318 eggs were gathered by households in Shaktoolik during 1994. Most eggs were from sea birds – common murre eggs (791 eggs), glaucous gull eggs (191 eggs), common eider eggs (121 eggs), and mew gull eggs (see Table 1).

- Birds were taken in spring (35.0 percent), fall (49.5 percent), and winter (11.6 percent); the season was not known for some birds (2.8 percent) (see Fig. 3).

- The season of harvest was different for types of birds – for instance, most snow geese and black brant were harvested in spring; most ducks were taken in fall; all ptarmigan were taken in winter (see Table 1).

- The classifications of Canada geese harvests into "cackling Canada" or "lesser Canada" by hunters are uncertain because of the close resemblance of the two species and the difficulties distinguishing them with the illustrations in the colored bird guide used in the survey. Additional work documenting harvested birds and bird classification systems would help to clarify this issue.

- The information on bird harvests are shown in detail in Table 1 and Figures 1-4.

- Information from hunting experts about birds and bird hunting in the Shaktoolik area are attached as an appendix.

Computerized Data Files

This information is available as computer files at Kawerak, Division of Natural Resources, P.O. Box 948, Nome, Alaska 99762 (907-443-5231) or the Division of Subsistence, Alaska Department of Fish and Game, Box 3-2000, Juneau, Alaska 99802 (907-465-4147). Information requests can be made from either group.

Acknowledgments

A thank you is given to all the households and bird hunting experts who graciously volunteered to be surveyed on the project. A special thanks is given to Jake Olanna of Kawerak, who supervised data collection; William Takak of Shaktoolik, who conducted the household surveys; Amy Paige of the Division of Subsistence, ADF&G, who trained surveyors, interviewed expert hunters, and analyzed data; and the Shaktoolik IRA Council, who gave support to the project.

Table 2. SHAKTOOLIK BIRD NAMES

English Name	Local Name Shaktoolik [9]	*Other Local Name (and source)*
GEESE		*lagit (pl) [5] [1]; nigliq [4]; ligliq [8]*
White-fronted Goose	liqlivik	*neqleq [5] (Y) [1]; 'leqleq [5] (K,C); niqlivialuk [4]*
Emperor Goose	nachaullek	*nacaullek [5] [1]; mitilugruak*
Cackling Canada Goose	liqliq	*tuutangayak [5] (G,Y) [1]; tuutangayayagaq [5] (Y); tuutaalquciq [5] (Kot); 'lagiq [5] (K,C); lakcakar [5] (K,C); lqsragutilik [4]*
lesser Canada Goose	tuutalhusig	*tuutangayagpak [5] (Y) 'lagiq [5] (K,C); niglivik [2] [3] lqsragutilik [4]*
lesser Snow Goose	kanguq	*kanguq [1] [5]; kanuq [4]; qunuk [2]*
Black Brant	liqliqnaq	*neqlernaq [5] (Y) [1]; 'leqlernaq [5] (K,C); nigliq [3]; niglingaq [4]*
DUCKS		*tengmiaraat (pl) [1]; uqsuqaq [5]; qaugak [4]; tinmiagruich [8]*
Northern Pintail	iugak, kurugaq	*uqsuqag [5] (K,C); uqulegaq [5] (Y); aut'raaq [5] (G); lvugaq; kuluraq [2]*
American Wigeon	uuwiuhiq	*qatkegglig [5]; qaqliq [1]*
Mallard	iugakpak	*uqsuqerpak [5] (K,C); uqulkatagpak [5] (Y); eretaarpak [1]; kurugakktak; ugiuguk [2]*
Northern Shoveler		*curcurpak [5] (Y); sugg'erpak [5] (K,C)*
Greater Scaup		*kep'alek [5]; qaqluktuuq*
lesser Scaup		
Canvasback		
Green-winged Teal		*tengesqaar [5] (Y) [1]; kemek'ungiaraq [5] (K)*
Common Merganser		*payirpaq [5]*
Red-breasted Merganser		*payiq [5]; aqpaqsruayuuq*
Bufflehead		
Harlequin		*cetuskar [5] (aq)*
Oldsquaw		*aarraangiiq [5]; aaqhaaliq [4]; ahaaliq [2]*
Common Goldeneye		*anarniilnguq [5]*
Black Scoter		*tungunqegglig [5]*
Surf Scoter		*akacakayak [5]; aviluktuq [4]*
White-winged Scoter		*akacakayak [5]*
Common Eider	aiyuwik	*metraq [5]; amauligruaq [4]; amauligaaluk [2]*
King Eider		*qengallek [5]; qinalik [4]; kigaligaaluk [2]*
Spectacled Eider		*qaugeq [5]; tuutalluk [4]; qavaasuk [2]*
Steller's Eider		*caqiar [5] (aq); lgniqauqtuq [4]*
Common loon	malgi?	*tuullek [5]; malgi*
Arctic loon	qaqsrauq	*tunutellek [5]; qaqsrauq*
Red-throated loon		*qaqatak [5]; qaqsraupiagruk [4]*
Yellow-billed loon		*tuullek [5]; tuullik;*
Common murre	atpak	*alpaq [5]; atpak; aakpaliq [2]*
Thick-billed murre		*aakpaluuzaq [2]*
Black guillemot		*lnaqiq*
Sabine's Gull	nachtnaq	*nacallngar [5]*
Mew Gull	kuuksiugayuk	*naruyaq [5]; nauyak*
Glaucous Gull	nauyaq	*naruyaarpak [5] (G); narusvak [5] (Y); kukisvak [5] (C)*
Arctic Tern		*teqiyaar [5]*
Auklets		
Puffins		
Plover		*tullik [8], Gurra, guraq [8]*

English Name	Local Name Shaktoolik	*Other Local Name (and source)*
Common Snipe		
Willow ptarmigan	agargik	*qangqiiq [5] (K); kangqiiq [5] (Y); gangqiiq; nasaullik [4]; aqargiq [8]*
Rock ptarmigan	ittuk	*aqaziigiq [2]*
Grouse		*napaaqtum, aqargiq [8]*
Snowy Owl		*ukpik [2] [8]*
Sandhill Cranes	tatirgaq	*qucillgaq [5] (K,C); qucillngaq [5] (Y); qut'raaq [5] (G); tatirqaq; tatizigaq [2]; tattirgaq [8]*
Tundra Swans		*qugyuk [5] [1]; qerratalria [5] [1]; qugruk; kukzuk [2]*

[1] Andrews, E. The Akulmiut: Territorial Dimensions of a Yupik Eskimo Society. Tech. Pap. 177, ADFG 1989

[2] Burch, E. Subsistence Production in Kivalina, Alaska: A Twenty Year Perspective. Tech. Pap. 128, ADFG 1985

[3] Ellanna, l. Bering Strait Insular Eskimo: A Diachronic Study of Ecology & Population Structure. Tech. Pap. 77, May 1983.

[4] Braund, S. North Slope Subsistence Study Barrow 1987, 1988, 1989. April 1993.

[5] Wentworth, 1993 USFWS. G = General; K = Kuskokwim; Y = Yukon; C = Coastal.

[6] Veltre & Veltre. A Preliminary Baseline Study of Subsistence Resource Utilization in the Pribilof Islands. Tech. Pap. 57, 1981

[7] Veltre & Veltre. Resource Utilization in Atka, Aleutian Islands, Alaska Tech. Pap 88, 1983

[8] Georgette, Susan and Hannah Ioon. Subsistence Use of Fish and Wildlife in Kotzebue, A Northwest Alaska Regional Center Tech. Pap. 167, ADFG 1993

[9] Recorded by local community resource specialist from knowledgeable Shaktoolik residents.

Table 1. SHAKTOOLIK
Bird Harvests, November 1993 - October 1994[1]

Bird Species		Total Harvests		Bird Harvest By Season[2]				
		Birds	Eggs	Winter	Spring	Summer	Fall	Unknown
Geese	White-fronted Geese	37			22		15	
	Emperor Geese	3					3	
	Cackling Canada Geese	109	6		36		68	4
	Lesser Canada Geese	144			43		101	
	Canada Geese Unknown							
	Snow Geese	20			20			
	Black Brant	38			37		1	
Ducks	Northern Pintail	140			32		108	
	American Wigeon	11					11	
	Mallard	7	17		2		5	
	Northern Shoveler	9					9	
	Greater Scaup							
	Lesser Scaup							
	Canvasback	1			1			
	Green-winged Teal	25					25	
	Common Merganser							
	Red-breasted Merganser							
	Bufflehead							
	Harlequin							
	Oldsquaw		9					
	Common Goldeneye							
	Black Scoter							
	Surf Scoter							
	White-winged Scoter							
	Common Eider	6	121		6			
	King Eider							
	Spectacled Eider							
	Steller's Eider							
	Ducks Unknown							
Seabirds	Common Loon		7					
	Arctic Loon		4					
	Red-throated Loon							
	Yellow-billed Loon							
	Common Murre		791					
	Thick-billed Murre							
	Unknown Murre							
	Black Guillemot							
	Sabine's Gull		2					
	Mew Gull		120					
	Glaucous Gull		191					
	Unknown Gull		43					
	Arctic Tern							
	Auklets							
	Puffins							
	Other Seabirds							
Shorebirds	Plover							
	Common Snipe							
	Other Shorebirds							
Game Birds	Willow Ptarmigan	152		104	35			13
	Rock Ptarmigan	76		14	53		9	
	Grouse							
Snowy Owl								
Sandhill Crane								
Tundra Swan		239	6		67		160	12

[1] Based on a census survey of 46 of 49 households, expanded to all households. Data were collected by a local researcher on contract with Ka through a cooperative agreement between ADFG, Division of Subsistence and Kawerak. Research was approved by resolution of the Shaktoolik I Council. Project funded by USFWS.

[2] Winter=Nov, Dec, Jan, Feb; Spring=Mar, Apr, May; Summer = Jun, Jul; Fall=Aug, Sep, Oct

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1994.

SHAKTOOLIK
Bird Harvest Patterns
November 1993 - October 1994

Fig. 1 **Shaktoolik Bird Harvests, November 1993 - October 1994, by Bird Type**

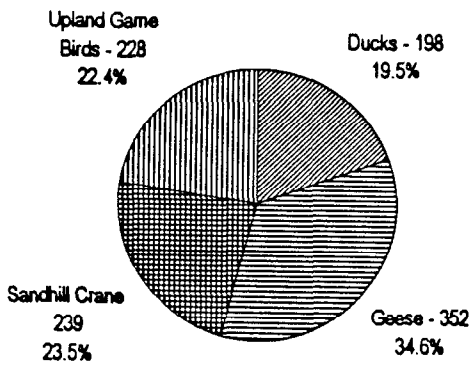


Fig. 2 **Shaktoolik Egg Harvests, November 1993 - October 1994, by Bird Type**

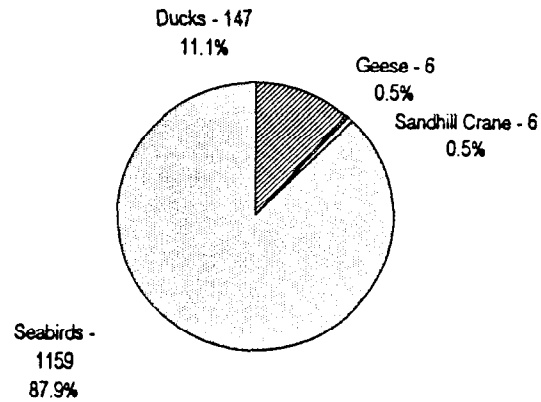


Fig. 3 **Shaktoolik Bird Harvests, November 1993 - October 1994, by Season**

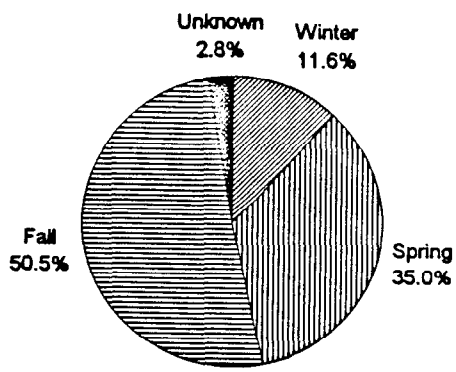
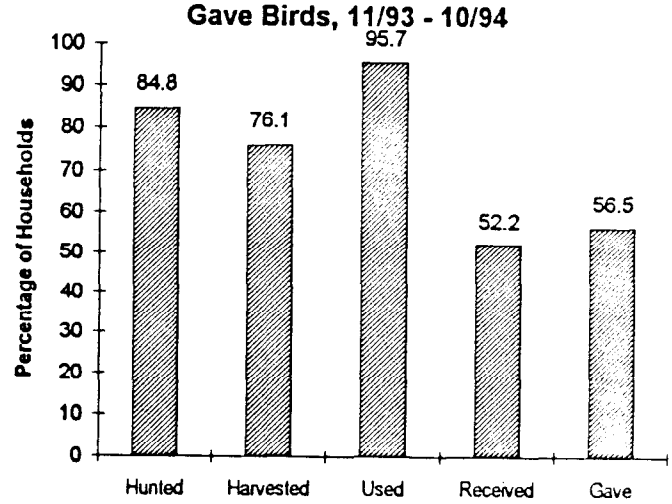


Fig. 4 **Percentage of Shaktoolik Households that Hunted, Harvested, Used, Received, Gave Birds, 11/93 - 10/94**



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1994.

Migratory Bird Project
Shaktoolik Key Respondent Notes
Researcher: Amy Paige

Shaktoolik. Common Eider. King Eider
"I think the Common eider are numerous in this area, especially in the springtime. We can see flocks of them going in the evening, flying toward the flats from the sea. But the other Eiders, like the King eiders, rarely ever see any in this area. Seem like they are more toward the capes and on the western coast of Alaska. We saw those King Eiders when I was a kid at Nunivak Island, but when we came here they told us that the Eiders that we were getting in the spring here - the Common Eiders - were the only Eiders we see here. Since 1956 I must have seen just one flock of those King Eider.
CODE[307-27-111194

Shaktoolik. Common Eider. Habitat. Feeding and Nesting
In spring the common eider arrive in latter part of April. They migrate through here. They come a few days after the snow geese. They are feeding and nesting around here. They travel, flying from the sea to the flats when the rivers and lakes open up. They eat little smolt, and flat fish and plankton. Some Common Eider nest here. Others migrate on. Those which are staging here stay just a week or so, then fly on. You see them around Solomon, and west of Cape Darby and Rocky Point. When the ice thaws and there is more open water, they move on. They head straight out to coastal waters. Some will be here.
CODE[307-27-111194

Shaktoolik. Common Eider. Population levels
Common Eider seem like they are increasing. Very few people hunt Common Eider. In August you can see more of them, after the nesting and molting.
CODE[307-27-111194

Shaktoolik. Common Eider. Hunting Season
It is best to hunt them in the fall; first to middle of September.
CODE[307-27-111194

Shaktoolik. Emperor Geese Populations
We see some Emperor here. Maybe two flocks of 20-30. But can't always tell how many in the flocks. They fly high, usually after April 20th, depending on the weather. Their numbers seem about the same. They don't stay around Shaktoolik. They'll be out on the flats adjacent to the village, and toward Cape Denbigh. They head to the hills and higher plains. They head inland to drier areas at night. Respondent doesn't think this area is very good for Emperors.
CODE[307-27-111194

Shaktoolik. Canada and Snow Geese
The most abundant birds here are the Canada goose and the Snow goose.
CODE[307-27-111194

Shaktoolik. Brant. Migration. Population
Respondent thinks the Brant have decreased here since the 60s. They come late - mid-May. They migrate through. There are fewer here now. Respondent lived in Nome in the 70s. There used to be more then. It depends on timing. They're here for such a short time it's easy to miss them.
CODE[307-27-111194

Shaktoolik. Brant. Habitat. Feeding
Brant will stay closer to sea water. If there's shore ice they'll be out there. They fly in and out of sloughs, over water, and feed in the main streams, rather than the tributaries. Brants eat

crustaceans - little mussels, clams that float up. They're fast, especially when they arrive late. Respondent thinks some do nest around Shaktoolik. Hears them during the nesting season. But doesn't notice when they're leaving. Brants are not all that hardy. They wait till there is open water - they prefer warmer time, wait till things open up.
CODE[307-27-111194

Shaktoolik. Bird Hunting season
Spring hunting starts when the cranes and geese and brant come through. Before the days of the refrigerator, these birds where the first fresh meat since winter. Birds come before the time for hunting marine mammals - around mid April. Hunting tapers off by the first week of May - by then the birds are preparing to nest. If the birds are "leaning out", loosing fat, that means they are preparing to nest. By a certain time in May, quit hunting birds altogether. Hunt swan even later, wait until they loose their fat - hunt the young bachelors. Crane too - hunt in June for young adults. Taylor Lagoon, east of Topkak, east of Solomon has increased numbers of saws around that area.
CODE[307-27-111194

Shaktoolik. Eggs.
If the yolks are beginning to form, stop taking eggs.
CODE[307-27-111194

Shaktoolik. Lesser Canada goose. Sandhill Crane.
The Lesser Canada geese and the Sandhill Cranes are most abundant birds. Also the pintail. Respondent prefers geese and cranes, and pintail in spring. The fall season for pintails opens too late.
CODE[307-27-111194

Shaktoolik. Gulls, Terns
We don't hunt gulls, terns or curlews. But we see them and know them.
CODE[307-27-111194

Shaktoolik. Bird Hunting season
When birds are getting close to the nesting season, and late in summer, we don't take them. People used to take geese during the m molt, just a few. That doesn't take place here now. People are lazy. They used to corral them,. That was before the freezer days in the early 60s. Don't hear of it any more. Certain families knew where they molted.
CODE[307-27-111194

Shaktoolik. Customary rules
Take only what you need, or what you can use. A lot of young guys hunt and distribute the birds to others who need it. If we didn't have that the elders would loose their health. We need native foods to stay healthy. There's a difference between native foods and store bought foods. Wild meat is healthier. That's why spring bird hunting is important.
CODE[307-27-111194

Shaktoolik. Customary rules. Technology.
Natives are not hunting in the traditional style, but hunting requires hardships. Modern technology can cause more difficulty - dog teams could cross places where snow machines can't.
CODE[307-27-111194

Shaktoolik. Eider. Habitat
There are quite a few eider here. Respondent had seen all three kinds of eider - Common, King and Spectacled - at various locations around the state, mostly in summertime. He had traveled down around the Aleutians, Shemya. In this area we see them in the last part of May. Some common eider stay all summer to the middle of September. Then they go south. They nest in the flats right here.
CODE[307-35-111094

Shaktoolik. Common Eider. Population
Common Eider seem to be increasing. We do see Steller's eider here, but only a few here. People on Saint Lawrence Island see eiders in summer. They fly with their young from here.
CODE[307-35-111094

Shaktoolik. King Eider
King eider are here for a couple of weeks. We see them in flocks of 10-40; sometimes even 100-200.
CODE[307-35-111094

Shaktoolik. Emperor Geese
The Emperor come mid April. Some stay here, others migrate on. Emperor are the earliest to arrive. They land on the mud flats, and any place where there is bear ground. Most stop only for a few days. Others stay around. They eat berries - blue and black berries - frozen berries. There seem to be more Emperors now than in the past. There are 75-100 in a flock, but it varies from 200 to 100. In July, the young are in the surrounding lakes. They gather into flocks after the molt. The leave mid September to early October. We don't see them after early October.
CODE[307-35-111094

Shaktoolik. Black Brant.
Respondent just sees Brant in spring, in last part of May and first part of June. They stay about a week. Doesn't know what they eat. There seem to be more and more Brant. Numbers vary between 5 and 300. Brant spend more time in the Golovin area and other places.
CODE[307-35-111094

Shaktoolik. Bird hunting season.
Respondent usually hunt some in spring and fall. Spring hunting starts last part of April and stops by mid-May. "We need to taste them in spring. Just get enough for home. When they start nesting we don't hunt them. There's no hunting for birds in summer. Hunting starts again first part of September.
CODE[307-35-111094

Shaktoolik. White-fronted Goose. Lesser Canada Goose.
The white-fronted and lesser Canada geese are the most abundant birds here.
CODE[307-35-111094

Shaktoolik. Hunting methods.
Hunters use shot gun for bird hunting. Travel is by snow machine or boat, depending on spring thaw conditions. Respondent indicates he uses bird calls to attract the geese and ducks.
CODE[307-35-111094

Shaktoolik. Bird Egg Harvest.
We take some eggs if there are only a few in the nest and it is early in the nesting season. There is no use taking them after there are too many eggs in the nest, because the baby birds have grown and they are not good to eat.
CODE[307-35-111094

Shaktoolik. Biologists. Resource Management.
Respondent expressed the opinion that the biologists are too far away, and there are too few of them to really know about the birds. Believes the population estimates are not accurate. Fly-over surveys miss many birds which hide in the over-hanging grasses of the rivers and creeks.
CODE[307-35-111094

Shaktoolik. White-fronted geese, population

We call these (White-fronted) 'Leqleq. These birds are named the way they sound, mostly. There used to be lots of them around in fall time, hundreds and hundreds of them. Now you don't see them any more, fall time or spring time. They don't come through in flocks anymore. Just one, two, four sometimes. We don't know what happened to those. They just quite coming through here.
CODE[307-41-110994

Shaktoolik. White-fronted geese, Migration, Weather
I guess for all waterfowl across the flats here, it seems like they decline after we have real bad, severe storms, after the whole area was covered with salt water. No land, everything is covered. We had lots of reindeer here long time ago, but they don't keep them in the flats around here. They stay up in the hills, further away. There are a few reindeer who stay around here to be near people for protection.
CODE[307-41-110994

Shaktoolik. Emperor geese, Population decline, Seasonality
They don't go through here. You don't even see them now. I don't think I ever get one in my life, because I never had a chance to. When we see them, long ago, we get them, but you don't even see them now. We call them Nacaullek. We see them in the spring time, in late April, early May.
CODE[307-41-110994

Shaktoolik. Emperor geese, Population, Environmental conditions
When we see them, we have quite a bit of southerly wind, that has quite a bit to do with it, the ones that go through here. Otherwise maybe they go further out. When we don't have no south wind, we don't see them. Not lots, just stray ones. They don't nest in this area, never did that I know. I haven't seen one for many years. Last time I saw one was when we were hunting with dog teams, that was long time ago. Don't know what they eat. They don't stay, they just go through. They just fly low, and just keep going. Maybe when they're tired they land, but I never see them on the land around here.
CODE[307-41-110994

Shaktoolik. Brant, Population change, Habitat, Feeding area
They don't nest around here, they still go through here, but not that much. You just got to be there when they go through, very few flocks, not flock after flock, like there used to. These birds like to hang around mud. Maybe there's little plants that they eat in the mud, probably mud grass. Mud flats to the north. Around Malikfik Bay, and Sineak Creek.
CODE[307-41-110994

Shaktoolik. Brant. Population. Environmental conditions
The brant go through in June. When it's calm and there's a southerly wind. When it's windy they don't by-pass, they stay across there for days sometimes. That's when we used to hunt them. Now we don't hardly ever see them anymore. In the 1940's-1950's the flocks were 200-300. They seemed like a black cloud over there; they used to be that thick! It's unbelievable, but it used to be like that. They go northwest, across when they leave.
CODE[307-41-110994

Shaktoolik. Brant. Biology. Population decline
There're two species of brant. The bigger ones come after the smaller ones, the smaller ones used to be real thick, not the bigger ones. They look alike, only thing is one is bigger than the other. Come about the same time, the bigger ones come just a bit later. They're two different species. The bigger ones are paler. Sometimes, those smaller ones when we used to hunt, you shoot lots of them with one shot - ten-twelve with one shot. Years ago. Only ones you see now are the bigger ones. Them smaller ones, I don't know what happened to them. They don't go through no more.
CODE[307-41-110994

Shaktoolik. Spectacled Eider. Population levels. Nesting areas

When I was a teen I used to get lots of these Spectacled eider between mouth of Sineak Creek and Malikfik, on the sand bars of the Malikfik Bay. There used to be hundreds of them, big flocks sitting around on the sand bar, but they didn't hang around, they just go through here. This kind (Spectacled), long ago. Some used to lay eggs in the flats. We call them "igvaluk" "one with glasses". They don't come through here at all now. They disappeared. Only used to see them in the spring. We didn't see them in the fall.
CODE[307-41-110994

Shaktoolik. Common Eider. Feeding area. Biology.
We call them "Aiyut". or "metraq". Now, today, we only got this kind - Common Eider. Last two seasons they seem to be increasing. When I first started to hunt there used to be lots of them and we hunted them quite a bit. When all the other birds start to get real skinny, that's when we used to hunt them. Usually they don't stay long, they just go through. Seems like they eat clams.
CODE[307-41-110994

Shaktoolik. Common Eider. Nesting behavior. Feeding behavior.
Some do nest around here. They have some kind of grub sack to carry the little clams back to the nest. The common eider nest in the flats. They nest in June. It depends what kind of spring break up we have. They nest early when there's no snow or when its not frozen. They nest late when there's too much ice.
CODE[307-41-110994

Shaktoolik. Common Eider. Food.
The eider eat mostly clams, maybe shrimp. They go out in the ocean and dive down for food. I never checked to see what they eat. They don't have no stomach. Their gizzard is full of sand and rocks.
CODE[307-41-110994

Shaktoolik. Common Eider. Molt. Migration
I don't see them fly away. They swim out with their young ones; right after salmonberry season they all disappear. They always go out every time when the young ones hatch, it seems like, they always disappear, they always go out some place. Probably molt out there. After the young ones hatch only, you could see them. Up around Teller they sure hunt them up there, flocks of them.
CODE[307-41-110994

Shaktoolik. Spectacled Eider. Population
They don't come through here any more. They disappear.
CODE[307-41-110994

Shaktoolik. Bird hunting methods. Seasonality.
It depends on what species you're hunting. You got to know where different species go through, what they eat (will tell you where to look for them). We make some kind of a blind. No problem, we all know Canada geese eat blackberries in the fall, in late August, September. In spring time they eat grass roots. Spring hunting starts in last part of April, May. They just hunt when they're fresh, when they first come just to taste mostly. When they stay longer they get skinny.
CODE[307-41-110994

Shaktoolik. Cackling Canada Geese.
These cacklers lay eggs down the coast on the islands, and the beaches and creek area, on sand bars.
CODE[307-41-110994

Shaktoolik. Hunting seasons. Summer. Molt. Habitat. Taste

Don't hunt birds in summer. They're too skinny, not enough to eat. My dad said when he was a young man, they used to molt in the creeks back here, and they don't anymore. They used to get young geese. They don't taste as good after a while. Change of food or something.
CODE[307-41-110994

Shaktoolik. Taste Preference. White-fronted Goose, Snow Goose, Brant.
The best eating is this one (White-fronts) and this one (snow goose) and the Brants. When they first come they're good. When they stay a little longer they get real skinny. After a week we don't hunt them anymore. The taste is not there no more. I think change of food or something.
CODE[307-41-110994

Shaktoolik. Taste Preference. Green-winged Teal.
This one (green-winged teal) They're too small. You got to get a bunch of them.
CODE[307-41-110994

Shaktoolik. Customary rules. Harvest levels. Hunting methods.
The only traditional rule I hear from the elders, is not to over harvest, just take what you need. That's about all, because everybody learns their own way to hunt. I think it would be a mistake if I followed what the other says. I learn to hunt my own way. He, he hunts his own way too. Everybody don't hunt alike. There are different ways of hunting birds. When you need them you hunt them anytime. That was before we got stores around here, we got some families always run out of food, and whatever they can hunt they hunt any time. Most ptarmigans are good when the salmonberries are ripe.
CODE[307-41-110994

Shaktoolik. Customary rules. Eggs.
Only thing is they don't hunt them when they know the birds have eggs. I guess them old people they have a lot of respect for everything they hunt. You have to get eggs right after they lay eggs. If they start to get yellow they don't keep, you have to eat them right away. (HHID 16 - You know how I grew up picking eggs, you take one egg from a large clutch, you take it to warm water to see it it sinks or floats; if it floats, it has young bird in it). That's what everybody do.
CODE[307-41-110994

Shaktoolik. Eggs. Processing/Preservation.
We freeze eggs - pop them out of the shells and keep them. Long ago, they dip them in seal oil, it closes the pores, and makes them air tight and they keep.
CODE[307-41-110994

Shaktoolik. Hunting methods. Technology
We don't shoot for nothing. It used to be that it was only $1.50 a box for shells, but money was hard to come by in those days. I remember my dad went out hunting for the teacher, he took a box of 25 shells and came back with 12 shots left and with 85 pintails and geese. Them old timers, mom says when he sneaks up them ducks were eating blackberries, he made sure he got close enough, and them get enough. We use 12-gauge, everybody mostly use 12-gauge. Everybody walk. When I first start to hunt I take kayak, paddle across and then walk. If I had a kayak, I'd bring them to the kayak. Sometimes I stay over night; sometimes I don't. Years ago. You have to cross two rivers in fall time when you want to hunt across there. These times, take boat with outboard, take too much stuff, food, make it worse. It was better with kayak. They don't use kayaks now. They use other kinds of boats now. They go certain places, and leave the boat and walk. They mostly watch for them, they don't sneak 'em anymore. It used to be fun that way. When you sneak, it's tough on your belly. [What do you mean by "sneak"?] Crawling on your belly. I used to go across the flats and sit down behind a stump, and watch 'em. Then I'd sneak 'em on my belly. As long as you don't go up and down, just go straight, move real slow. They always have one to watch, every time. One just to look around. That one you got to watch. If you disappear and let him see you again, or holler at 'em, they'll take off. The closer you get to the one that watches, he'll just stand there and never more, as

long as you move slowly. Try to hide behind grass, show yourself. That's how I used to get them. Everybody has his way of hunting. CODE[307-41-110994

Shaktoolik. Hunting methods.
I just tell my grandchildren and my boys. I tell them everything little thing I know. About how to hunt different animals. My boy, he love to hunt seal, he love to hunt caribou. He says birds too small. His most interest is fishing. He was out fishing again this winter, on factory trawler now.
CODE[307-41-110994

Shaktoolik. Oldsquaw. Pintail.
I've seen pintail during February and March. I've seen Oldsquaw when there's lots of ice out there and there's little leads close to the point out there. I see them when I go crabbing. Sometimes when it's real cold out there and trying to freeze, they look for little leads. But I never seen no eiders in winter, no. We see them in springtime all right, when we hunt seal.
CODE[307-41-110994

Bird Harvests in Shishmaref, January through December 1995

Results of a cooperative project by Kawerak, Inc.
and the Division of Subsistence, Alaska Department of Fish and Game,
and the U.S. National Park Service
funded by the U.S. National Park Service
June 1996

Introduction

Birds are important to families in northwest Alaska. They are an important part of the culture and traditional way of life of Alaska Natives. Birds and bird eggs are eaten for food, and feathers are used in hand-crafted items. This report presents information on bird harvests in Shishmaref in 1995. The information results from a cooperative project in 1995-96.

The Project

Several groups worked together on the project to gather information on birds at Shishmaref. The Native Village of Shishmaref IRA Council approved the project by resolution in January 1996. A survey of households was done by Division of Subsistence staff together with local researchers hired and supervised by Kawerak, Inc. The project was designed by the Division of Subsistence, Alaska Department of Fish and Game, in cooperation with the U.S. National Park Service. Money for the project came from the U.S. National Park Service.

How the Information Was Collected

A survey was used to gather information on harvests of all wild resources, including bird harvests. Surveys were done in 54 randomly selected households of a total of 140 households (30.0 percent) in Shishmaref. Surveys were done between January 26, 1996 and February 6, 1996 in Shishmaref. On the survey, people were asked about wild resources harvested, including bird hunting during the 12-month period, January 1995 through December 1995. Participation in the surveys was voluntary. To protect confidentiality, no person's name is used in any reports of the information.

Findings

Households in Shishmaref reported the following things about their use of birds in 1995:

- More than three-quarters (77.8 percent) of all households had members that hunted birds or gathered eggs. The same number of households (77.8 percent) harvested birds in the survey period (Fig. 4).

- More than three-quarters (82.2 percent) of all households used birds (Fig. 4).

- Sharing of birds was common. Almost two-thirds (64.4 percent) of all households gave birds to other families, and 40.0 percent received birds from others (Fig. 4).

- At least 24 kinds of birds were caught including pintail, ptarmigan, Canada geese, black brant, common eider, white-fronted geese, greater scaup, mallard, oldsquaw, snow geese, American wigeon, sandhill crane, scoter, green-winged teal, emperor geese, merganser, king eider, tundra swan, cormorant, shoveler, owl, goldeneye, loon, and puffin. (Table 1).

- At least 6 kinds of eggs were gathered. Egg gatherers in Shishmaref gathered gull eggs in greatest numbers, as well as duck, geese and shorebird eggs. They were generally uncertain about the many species of eggs being taken, listing them as unknown bird eggs, unknown geese eggs, unknown duck eggs, and unknown shorebirds eggs. A small number of sandhill crane eggs were reported for the survey period (Table 1).

- An estimated 6,599 birds were caught by households in Shishmaref in 1995. Bird harvests fell into the following general categories: geese (31.6 percent), ducks (43.4 percent), upland game birds (22.5 percent), cranes (1.2 percent), swans (0.7 percent), and seabirds (0.5 percent) (Fig. 1)

- The five kinds of birds caught in greatest numbers in 1995 were northern pintail (1,686 birds), ptarmigan (1,487 birds), Canada geese (unknown) (830 birds), black brant (793 birds), and common eider (311 birds) (Table 1).

- An estimated 5,560 eggs were gathered by households in Shishmaref in 1995. Most eggs were from gulls (2,383 eggs), with the rest from unknown ducks, unknown geese, unknown migratory birds and unknown shorebirds (Table 1).

- Egg harvests fell into the following general categories: seabirds (42.9 percent), unknown migratory birds (35.8 percent), ducks (9.9 percent), shorebirds (3.1 percent), geese (1.5 percent), and sandhill crane (0.5 percent) (Fig. 2).

- Seasons in which birds were taken were not documented in this survey.

- Local distinctions between bird species did not always correspond with western scientific distinctions shown in the bird guide. In addition, hunters typically identify birds by their sound, behavior, and habitat, as well as by their looks. The lack of this information on the birds guide led to uncertainty about the identity of a few of the species harvested.

Computerized Data Files
This information is available as computer files from the Division of Subsistence, Alaska Department of Fish and Game, Box 3-2000, Juneau, Alaska 99802 (907-465-4147).

Acknowledgments
A sincere thank-you is given to all households and hunting experts who generously volunteered to be surveyed or interviewed for this project. A special thanks is given to Eddie Olanna, Perry Weyiounna, and Perry Curtis Weyiounna of Shishmaref, who conducted the household surveys; Jim Magdanz of the Division of Subsistence, ADF&G, who trained surveyors, interviewed hunters, and analyzed data; and the Native Village of Shishmaref IRA Council, who supported the project.

SHISHMAREF
Bird Harvests, January 1995 - December 1995[1]

Bird Species		Total Harvests		Bird Harvest By Season[2]				
		Birds	Eggs	Winter	Spring	Summer	Fall	Unknown
Geese	White-fronted Geese	218						
	Emperor Geese	50						
	Cackling Canada Geese							
	Lesser Canada Geese							
	Canada Geese Unknown	830						
	Snow Geese	146						
	Black Brant	793						
	Unknown Geese		84					
Ducks	Northern Pintail	1686						
	American Wigeon	121						
	Mallard.	149						
	Northern Shoveler	17						
	Greater Scaup	202						
	Lesser Scaup							
	Unknown Scaup							
	Canvasback							
	Green-winged Teal	62						
	Common Merganser							
	Red-breasted Merganser							
	Unknown Merganser	47						
	Bufflehead							
	Harlequin							
	Oldsquaw	146						
	Common Goldeneye	3						
	Black Scoter							
	Surf Scoter							
	White-winged Scoter							
	Unknown Scoter	72						
	Common Eider	311						
	King Eider	47						
	Spectacled Eider							
	Steller's Eider							
	Unknown Eider							
	Ducks Unknown		551					
Seabirds	Cormorant	25						
Seabirds	Common Loon							
	Arctic Loon							
	Red-throated Loon							
	Yellow-billed Loon							
	Unknown Loon	3						
	Common Murre							
	Thick-billed Murre							
	Unknown Murre							
	Black Guillemot							
	Sabine's Gull							
	Mew Gull							
	Glaucous Gull							
	Herring Gull							
	Unknown Gull		2383					
	Arctic Tern							
	Auklets							
	Puffins	3						
	Unknown Seabird							
Shorebirds	Plover							
	Common Snipe							
	Other Shorebirds		523					
Game Birds	Ptarmigan	1487						
	Grouse							
Snowy Owl		9						
Sandhill Crane		78	28					
Tundra Swan		44						
	Unknown Birds		1991					

[1] Based on a census survey of 54 of 140 households, expanded to all households. Data were collected by a local researcher on contract with Kawerak, through cooperative agreements between ADFG, Division of Subsistence, Kawerak, and USNPS. Research was approved by resolution of the Wales IRA Council. Project funded by USNPS.
[2] Winter=Nov, Dec, Jan, Feb; Spring=Mar, Apr, May; Summer = Jun, Jul; Fall=Aug, Sep, Oct

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

SHISHMAREF
Bird Harvest Patterns
January 1995 - December 1995

Fig. 1

Shishmaref Bird Harvests
January 1995 - December 1995

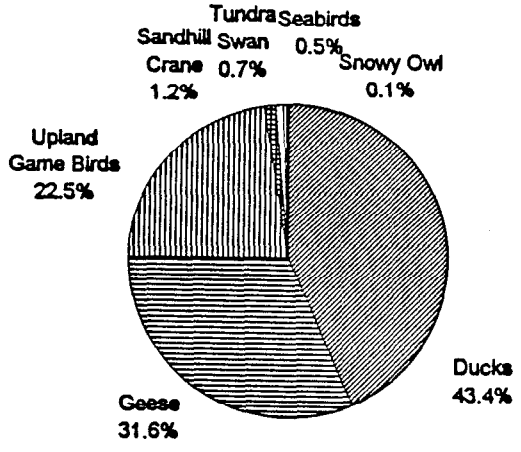


Fig. 2

Shishmaref Egg Harvests,
January 1995 - December 1995

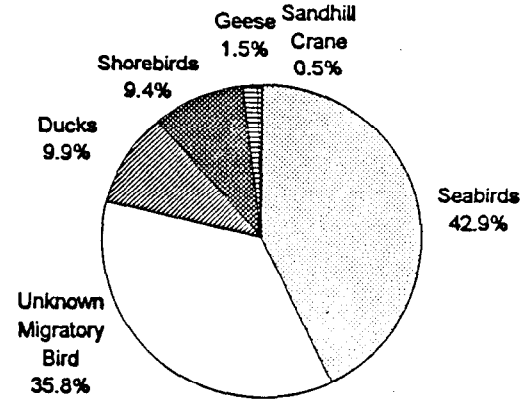
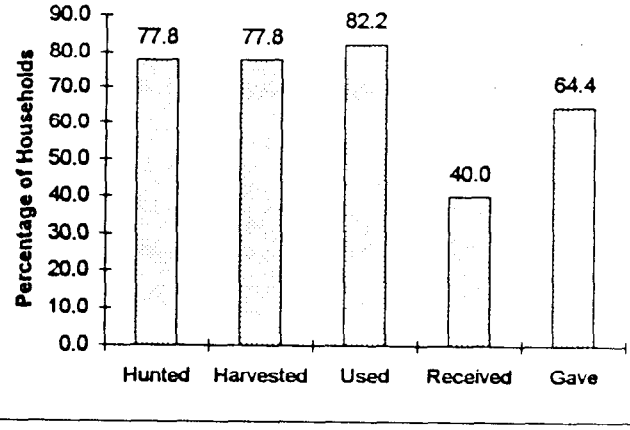


Fig. 3

Data on season of harvest not collected.

Fig. 4

Percentage of Shishmaref Households that Harvested, Used, Received, or Gave Birds, 1995



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey 1996

Bird Harvests in Stebbins, November 1993 through October 1994

Results of a Cooperative Project by the
Division of Subsistence, Alaska Department of Fish and Game, in cooperation with
Kawerak Inc., the Stebbins IRA Traditional Council, and the U.S. Fish and Wildlife Service
April 1995

Introduction

Birds are important to families in northwest Alaska. They are an important part of the culture and traditional way of life of Alaska Natives. Birds and bird eggs are eaten for food, and feathers are used in hand-crafted items. This report presents information on bird harvests in Stebbins during November 1993 through October 1994. The information are results from a cooperative project in 1994-95.

The Project

Several groups worked together on the project to gather information on birds at Stebbins. The Stebbins IRA Council approved the project by resolution (94-10-07-04) on October 7, 1994. A survey of households was done by two local researchers hired and supervised by Kawerak Inc. The project was designed by the Division of Subsistence, Alaska Department of Fish and Game, who also put the information into tables and into this report. Money for the project was given by the U.S. Fish and Wildlife Service. Preliminary results were reviewed by Kawerak and the Division of Subsistence, ADF&G.

How the Information Was Collected

A survey was used to gather information on bird harvests. Surveys were done in 60 of 94 households (63.8 percent) in Stebbins. Also, three bird experts from Stebbins were interviewed about bird ecology and traditional uses of birds. Surveys were done between November 29, 1994 and March 10, 1995 in Stebbins. On the survey, people were asked about bird hunting during the 12-month period, November 1993 through October 1994. To protect confidentiality, no person's name will be used in any reports of the information, unless that person gives permission to do so.

Findings

During the 12-month period, November 1993 through October 1994, households in Stebbins reported a number of things about their use of birds:

- Almost all households used birds (85 households, or 90.0 percent) (see Fig. 4).
- Almost all households had bird hunters (85 households, or 90.0 percent). All households with bird hunters were successful at harvesting birds in the survey period. (see Fig. 4).
- Sharing of birds was common – 61 households (65.0 percent) reported giving birds to other households, and 22 households (23.3 percent) reported receiving birds from other households (see Fig. 4).
- At least 29 kinds of birds were harvested – white-fronted geese, emperor geese, cackling Canada geese, lesser Canada geese, snow geese, black brant, northern pintail, American widgeon, mallard, northern shoveler, greater and lesser scaup, canvasback, green-winged teal, oldsquaw, surf scoter, black scoter, common eider, king eider, spectacled eider, common loon, common murre, puffins, common snipe, willow and rock ptarmigan, snowy owl, sandhill crane, tundra swan (see Table 1).
- At least 14 kinds of eggs were gathered – northern pintail eggs, green-winged teal eggs, common eider eggs, spectacled eider eggs, common loon eggs, Mew gull eggs, glaucous gull

eggs, and other gull eggs, puffin eggs, common snipe eggs, sandhill crane eggs, and tundra swan eggs (see Table 1).

- About 5465 birds were harvested by households in Stebbins during the 12-month period, November 1993-October 1994 (see Table 1).

- The top five birds in numbers harvested during the 12-month period were snow geese (1341 birds), northern pintail (1183 birds), willow ptarmigan (788 birds), sandhill crane (331 birds), and northern shoveler (252 birds) (see Table 1).

- About 779 eggs were gathered by households in Stebbins during the 12-month period, November 1993-October 1994. The top five species of bird eggs were northern pintail eggs (251 eggs), glaucous gull eggs (119 eggs), common murre eggs (67 eggs), common eider eggs (30 eggs), and arctic tern eggs (49 eggs) (see Table 1).

- Birds were taken in spring (41.3 percent), fall (35.6 percent), and winter (13.8 percent); the season was not known for some birds (4.5 percent) (see Fig. 3).

- The season of harvest was different for types of birds – for instance, most snow geese and white fronted geese were harvested in spring; most ducks were taken in fall, although many ducks were harvested in both spring and fall; willow ptarmigan harvests were highest in winter, while rock ptarmigan were more frequently taken in the early spring (see Table 1).

- The classifications of Canada geese harvests into "tackling Canada" or "lesser Canada" by hunters are uncertain because of the close resemblance of the two species and the difficulties distinguishing them with the illustrations in the colored bird guide used in the survey. Additional work documenting harvested birds and bird classification systems would help to clarify this issue.

- The information on bird harvests are shown in detail in Table 1 and Figures 1-4.

- Information from hunting experts about birds and bird hunting in the Stebbins area are attached as an appendix.

Computerized Data Files

This information is available as computer files at Kawerak, Division of Natural Resources, P.O. Box 948, Nome, Alaska 99762 (907-443-5231) or the Division of Subsistence, Alaska Department of Fish and Game, Box 3-2000, Juneau, Alaska 99802 (907-465-4147). Information requests can be made from either group.

Acknowledgments

A thank you is given to all the households and bird hunting experts who graciously volunteered to be surveyed on the project. A special thanks is given to Jake Olanna of Kawerak, who supervised data collection; Cornelius Dan and Ted Katcheak of Stebbins, who conducted the household surveys; Amy Paige of the Division of Subsistence, ADF&G, who trained surveyors, interviewed expert hunters, and analyzed data; and the Stebbins IRA Council, who gave support to the project.

Table 2. STEBBINS BIRD NAMES

English Name	Local Name Stebbins	Other Local Name (and source)
GEESE		lagit (pl) [5] [1]; nigliq [4]; ligliq [8]
White-fronted Goose	neqleq	neqleq [5] (Y) [1]; 'leqleq [5] (K,C); niglivialuk [4]
Emperor Goose	nacaullek	nacaullek [5] [1]; mitilugruak
Cackling Canada Goose	tuutangayak	tuutangayak [5] (G,Y) [1]; tuutangayayagaq [5] (Y); tuutaalquciq [5] (Kot); 'lagiq [5] (K,C); lakcakar [5] (K,C); iqsragutilik [4]
Lesser Canada Goose		tuutangayagpak [5] (Y) 'lagiq [5] (K,C); niglivik [2] [3] Iqsragutilik [4]
Lesser Snow Goose	tuutangayak	kanguq [1] [5]; kanuq [4]; qunuk [2]
Black Brant	neqlernaq	neqlernaq [5] (Y) [1]; 'leqlernaq [5] (K,C); nigliq [3]; niglingaq [4]
DUCKS		tengmiaraat (pl) [1]; uqsuqaq [5]; qaugak [4]; tinmiagruich [8]
Northern Pintail	uqsuqaq	uqsuqag [5] (K,C); uqulegaq [5] (Y); aut'raaq [5] (G); Ivugaq; kuluraq [2]
American Wigeon		qatkeggliq [5]; qaqliq [1]
Mallard	uqsuqerrpak	uqsuqerpak [5] (K,C); uqulkatagpak [5] (Y); eretaarpak [1]; kurugakktak; ugiuguk [2]
Northern Shoveler	curcurpet	curcurpak [5] (Y); sugg'erpak [5] (K,C)
Greater Scaup	kep'alek	kep'alek [5]; qaqluktuuq
Lesser Scaup	kep'alek	
Canvasback		
Green-winged Teal	tengesqaar	tengesqaar [5] (Y) [1]; kemek'ungiaraq [5] (K)
Common Merganser	payit	payirpaq [5]
Red-breasted Merganser	payiq	payiq [5]; aqpaqsruayuuq
Bufflehead		
Harlequin		cetuskar [5] (aq)
Oldsquaw	aliaaliq	aarraangiiq [5];aaqhaaliq [4]; ahaaliq [2]
Common Goldeneye		anarniilnguq [5]
Black Scoter	kukumyeq	tungunqeggliq [5]
Surf Scoter	cenayaq	akacakayak [5]; aviluktuq [4]
White-winged Scoter		akacakayak [5]
Common Eider	metraq (fem.) qauqe (male)	metraq [5]; amauligruaq [4]; amauligaaluk [2]
King Eider		qengallek [5]; qinalik [4]; kigaligaaluk [2]
Spectacled Eider	qaugeq	qaugeq [5]; tuutalluk [4]; qavaasuk [2]
Steller's Eider		caqiar [5] (aq); Igniqauqtuq [4]
Common loon	tuullek	tuullek [5]; malgi
Arctic loon		tunutellek [5]; qaqsrauq
Red-throated loon	qaqatak	qaqatak [5]; qaqsraupiagruk [4]
Yellow-billed loon	tuullik	tuullek [5]; tuullik;
Common murre	alpaq	alpaq [5]; atpak; aakpaliq [2]
Thick-billed murre	alpaq	aakpaluuzaq [2]
Black guillemot		Inagiq
Sabine's Gull	naruyaq	nacallngar [5]
Mew Gull	naruyaq	naruyaq [5]; nauyak
Glaucous Gull	naruyaq, narusuak	naruyaarpak [5] (G); narusvak [5] (Y); kukisvak [5] (C)
Arctic Tern	teqiyaar	teqiyaar [5]
Auklets		
Puffins	qilangk	
Plover	qiuracitak	tullik [8], gurra, guraq [8]
Common Snipe	kukukuaq	

English Name	Local Name Stebbins	Other Local Name (and source)
Willow ptarmigan	aqasiigiq	qangqiiq [5] (K); kangqiiq [5] (Y); gangqiiq; nasaullik [4]; aqargiq [8]
Rock ptarmigan	aqasiigiq	aqaziigiq [2]
Grouse	ellciiyak	napaaqtum, aqargiq [8]
Snowy Owl	anipaq	ukpik [2] [8]
Sandhill Cranes	quciilagaq	qucillgaq [5] (K,C); qucillngaq [5] (Y); qut'raaq [5] (G); tatirqaq; tatizigaq [2]; tattirgaq [8]
Tundra Swans	qugyak	qugyuk [5] [1]; qerratalria [5] [1]; qugruk; kukzuk [2]

[1] Andrews, E. The Akulmiut: Territorial Dimensions of a Yupik Eskimo Society. Tech. Pap. 177, ADFG 1989

[2] Burch, E. Subsistence Production in Kivalina, Alaska: A Twenty Year Perspective. Tech. Pap. 128, ADFG 1985

[3] Ellanna, L. Bering Strait Insular Eskimo: A Diachronic Study of Ecology & Population Structure. Tech. Pap. 77, May 1983

[4] Braund, S. North Slope Subsistence Study Barrow 1987, 1988, 1989. April 1993

[5] Wentworth, 1993 USFWS. G = General; K = Kuskokwim; Y = Yukon; C = Coastal

[6] Veltre & Veltre. A Preliminary Baseline Study of Subsistence Resource Utilization in the Pribilof Islands. Tech. Pap. 57, 1981

[7] Veltre & Veltre. Resource Utilization in Atka, Aleutian Islands, Alaska Tech. Pap 88, 1983

[8] Georgette, Susan and Hannah Loon. Subsistence Use of Fish and Wildlife in Kotzebue, A Northwest Alaska Regional Center, Tech. Pap. 167, ADFG 1993

Thanks to Margaret Marlin for assistance in transcribing local Stebbins names of birds.

Table 1. STEBBINS
Bird Harvests, November 1993 - October 1994[1]

Bird Species		Total Harvests		Bird Harvest By Season[2]				
		Birds	Eggs	Winter	Spring	Summer	Fall	Unknown
Geese	White-fronted Geese	50			42		8	
	Emperor Geese	5			5			
	Cackling Canada Geese	72			33		39	
	Lesser Canada Geese	213			91		122	
	Canada Geese Unknown				11		49	
	Snow Geese	1341			1136	8	88	110
	Black Brant	14					13	2
Ducks	Northern Pintail	1183	251		393	160	551	78
	American Wigeon	61			13	16	31	2
	Mallard	100			30		71	
	Northern Shoveler	252			94	16	130	13
	Greater Scaup	28			13		16	
	Lesser Scaup	16			8	8		
	Unknown Scaup	118			22		92	3
	Canvasback	3			3			
	Green-winged Teal	128	20		24	3	91	11
	Common Merganser							
	Red-breasted Merganser							
	Bufflehead							
	Harlequin							
	Oldsquaw	25			3	9	13	
	Common Goldeneye							
	Black Scoter	6				6		
	Surf Scoter	71				5	66	
	White-winged Scoter	9					9	
	Unknown Scoter	3					3	
	Common Eider	136	30		49	14	72	2
	King Eider	17				2	16	
	Spectacled Eider	2	6		2			
	Steller's Eider							
Seabirds	Common Loon	3	6				3	
	Arctic Loon							
	Red-throated Loon							
	Yellow-billed Loon							
	Common Murre	14	67				13	2
	Thick-billed Murre							
	Black Guillemot							
	Sabine's Gull							
	Mew Gull		14					
	Glaucous Gull		119					
	Unknown Gull		16					
	Arctic Tern		49					
	Auklets							
	Puffins	20	92			14	6	
	Other Seabirds							
Shorebirds	Plover							
	Common Snipe	16	78		16			
	Other Shorebirds							
Game Birds	Willow Ptarmigan	788		735	53			
	Rock Ptarmigan	127		22	105			
	Grouse							
Snowy Owl		5			5			
Sandhill Crane		331	24		75		251	5
Tundra Swan		248	6		31	2	196	19

[1] Based on a random survey of 60 of 95 households, expanded to all households. Data were collected by a local researcher on contract with Kawerak, through a cooperative agreement between ADFG, Division of Subsistence and Kawerak. Research was approved by resolution of the Stebbins IRA Council. Project funded by USFWS.

[2] Winter=Nov, Dec, Jan, Feb; Spring=Mar, Apr, May; Summer = Jun, Jul; Fall=Aug, Sep, Oct

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1994.

STEBBINS
Bird Harvest Patterns
November 1993 - October 1994

Fig. 1

Stebbins Bird Harvests, November 1993 - October 1994, by Bird Type

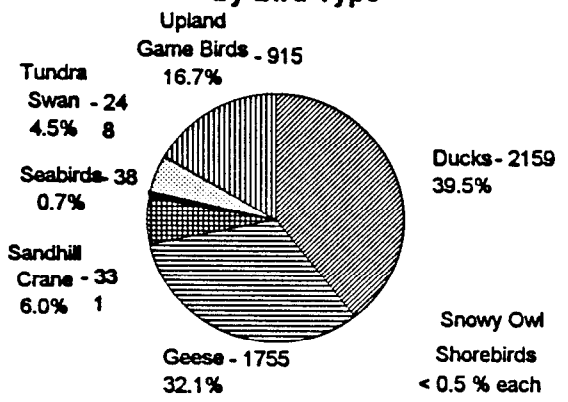


Fig. 2

Stebbins Egg Harvests, November 1993 - October 1994, by Bird Type

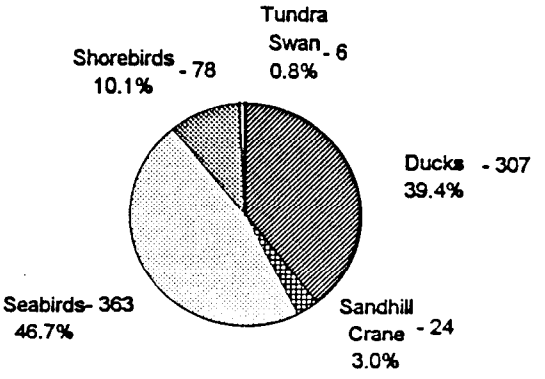


Fig. 3

Stebbins Bird Harvests, November 1993 - October 1994, by Season

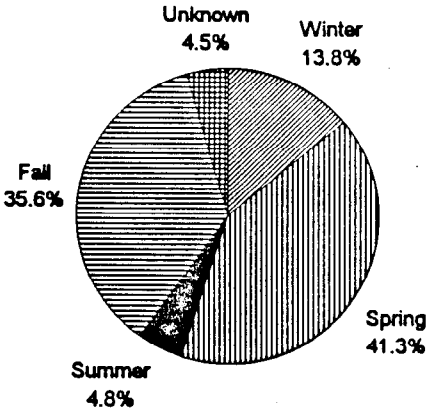
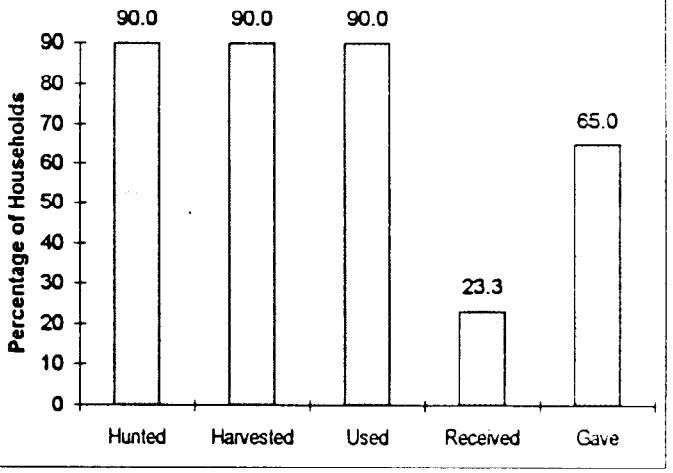


Fig. 4 **Percentage of Stebbins Households that Hunted, Harvested, Used, Received, or Gave Birds, 11/93 - 10/94**



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1994.

Migratory Bird Project
Stebbins Key Respondent Notes
Researcher: Amy Paige

Stebbins. Common Eider. Population levels. Habitat
Well, the common eider, in my opinion anyway, until a few years ago they were very few,. the eiders coming back to Stuart Island. But in the last four years they seem to be increasing. See more and more of them in July, especially around July and August, around Stuart Island, there are quite a few common eider around Stuart Island. The common eider beginning to show up more and more in my opinion.
CODE[327-48-112994

Stebbins. Spectacled Eider. Seabirds. Population levels. Environment. Oil Spill
As far as I can remember there was never an abundance of Spectacled Eider around here; just a few flocks here and there. They seem to be about that level you can still see them around , but there has never been an abundance of Spectacled Eider. I have no idea why this is. It could be ... The oil spill around Alaska might have had an effect on them. It sure affected that ocean bird, ... murre, and the puffins, after that oil spill. When we're out seal hunting in the spring we see quite a few of them dying out there on top of the ice. And some of them are just too weak to swim around, so they just go up on the floating ice and just die out there, so there are quite a few murres and puffins that were affected and I believe the eiders too, since they are ocean birds, the oil spill might have had an affect on them.
CODE[327-48-112994

Stebbins. Common Eider. Seasons. Nesting areas.
The common eider come in the spring time, probably in May. Some do nest around here. They do nest out in the flats and down on the island, Stuart Island. But I think the majority of them probably nest somewhere else. But a few of them do nest in the flats and around Stuart Island. I think they're one of the last birds to leave in the fall. I think some of them start leaving in September and then depending on the ice out there you can still see a few of them in late September.
CODE[327-48-112994

Stebbins. Common Eiders. Harvest levels.
Don't know very much about the habits of eider ducks. We try to keep away from hunting them, because we're made aware they're endangered species. And as far as their habits, I've never really paid close attention to that.
CODE[327-48-112994

Stebbins. Common Eiders. Meal Preparation. Taste Preference.
Well, as far as the old people here, they like it, you know, they skin the eider, and then scrape the fat off the skin. That's what they used to do. Yeah, they like the fat, and scrape it off the hide and eat it. But now days, our elders are dying out, and hardly any of the young generation do that, you know, eat the eider fat like the elders used to.
CODE[327-48-112994

Stebbins. Common Eider. Non-food products.
They used to use it for parkies too. The skin , the hide with the fur (feathers) on it; they'd dry it out and used to use it for parkies.
CODE[327-48-112994

Stebbins. Common Eider. Hunting methods. Technology.
Boats are used mostly in hunting the Eider ducks. And if we do, get any eiders, it's usually for my mother-in-law. She's elderly, and that's one of her favorite birds. Hunting happens when I'm doing

something else, like when hauling wood in summer, and they're around, I get one or two. I use a 20 or 16 gauge shotgun.
CODE[327-48-112994

Stebbins. Eider. Meal Preparation. Taste Preference.
Well, let's see, like in the old days, she don't pluck them, she skins them. And they like to eat it medium rare, boiled medium rare. It's OK. It's all right. A stew, but medium rare! Maybe because they're ocean birds, and they have that fishy taste to them, maybe that's why they like them medium rare.
CODE[327-48-112994

Stebbins. Common Eider. Feeding behavior. Feeding area.
They're probably eating small needlefish, small smelts, snails. In the spring, they're out on the tundra. But a lot of them, they like to hang around the island, Stuart Island. I think that's where most of their feed is at, anyway. Out on the island. I don't know, I know they probably live off small fish.
CODE[327-48-112994

Stebbins. Common Eider. Migration. Seasons. Ecology
In the spring, when they're passing through, we probably only see 'em a week and a half, or so, and then most of them are gone. I would think they head down south again. I think most of them head down south again. Because even when you go up north toward Unalakleet or Golovin , I don't see very many of them up that way. I think majority of them go back further south, to nest somewhere down there somewhere. When they arrive, they're coming from the south usually. Well, they hit from all directions I guess, when they get here, but they don't stay here long, But I always think they head back down further south to lay their eggs.
CODE[327-48-112994

Stebbins. Spectacled Eider. Steller's Eider. Population levels
I've never seen Steller's around here, except the Spectacled Eider. Not very many of them. They are fewer than the common eider, that's for sure, and I've never seen them increase or anything. We just see a few flocks here and there, and that's about it, and I don't even see 'em nest around here, only the common eider. Not very many Spectacled Eider in the flocks we see, maybe seven, eight. Small flocks.
CODE[327-48-112994

Stebbins. Eider. Harvest levels.
Well, we've been encouraging a lot of our hunters too, you know, that they are endangered, and try not to hunt them so much. Like I say it's mostly the elders that likes 'em, more so than the younger generation. Not very many people hunt large quantities ... just occasionally.
CODE[327-48-112994

Stebbins. Emperor geese. Population levels
The emperor geese, when I was young they used to lay their eggs out in the flats, out in the tundra. It's been long time since ... we hardly see them around for a while, but they're coming back again. The last three years I began to see a few more flocks of these birds. And I'm sure they're nesting too, again out in the flats, a very few of them though, but there was a time when you hardly see any at all, in the spring, but now they're beginning to show up again.
CODE[327-48-112994

Stebbins. Emperor geese. Population levels. Harvest levels.
I don't think (the decline in numbers) is weather-related. I think they were just over-harvested down south somewhere a few years back, before the treaty was established between Canada and Yukon Delta. I think they were just being over-harvested somewhere. [You mean the goose management plan?] Yeah. Same thing with the Brant, and the white-fronted goose. They're all about the same level, they're just starting to, I feel, coming back again. Because you get to see a little more of these

White-fronted geese every spring, these last few years. Same thing with the Brant. We hardly ever hunt any Brant around here. Seems like they're just passing through when we see them.
CODE[327-48-112994

Stebbins. Emperor geese. Seasons. Migration. Nesting areas
Emperors come in May. And they don't lay eggs around here either. They probably head back south again, and lay their eggs down there in the Yukon delta. Both the emperor. and, I think it's the black Brant, lays most of their eggs around White Mountain and Golovin, in that lagoon they got there. Because I noticed when I was up there that seems to be the birds that they're hunting for subsistence. I've never seen the white-fronted goose, or anyone here many years get eggs. I don't think they lay their eggs out here. Only the Emperor goose.
CODE[327-48-112994

Stebbins. Emperor goose. Feeding. Nesting areas. Biology
When they get here in May they're feeding on the same food as the white (snow) goose is eating, I guess. ...I don't even know what they call them in English ... grass roots, and .....A lot of them like to feed around the edges of rivers, the small creeks where tall grasses are. The eat grass roots and those plants that grow in lakes. I don't even know what they call them. ..... They're in the bottom of lakes, or the edges, sweet.... And of course, a lot of them feed on berries too, you know. A lot of times you see white geese get off the flats and go up to higher ground to eat berries. All of them do that... frozen berries from the previous year.
CODE[327-48-112994

Stebbins. Emperor Geese. Population levels.
Sometimes I see probably like ten Emperors in a flock. Twelve in a flock. Mostly around seven, between seven and twelve. Right now when you see a flock of geese, they always seem to be in odd numbers, you know. (Ha, ha!) seven, nine, or five, or three. For some reason they all seem to be in that numbers. [Maybe an adolescent, hoping the old man'll croak!] I don't know what it is. Maybe that's what it is. Hoping the old man gets shot.
CODE[327-48-112994

Stebbins. Emperor Geese. Harvest levels
I don't hunt them any more. We're kind of waiting for them to get more. I think a lot of the people in the villages are real supportive of the efforts trying to repopulate these endangered species, groups, a lot of them try not to hunt many of them, unless you have to. CODE[327-48-112994

Stebbins. Bird Hunting methods. Seasonality
That's the most time when we hunt, in the spring, because they're passing through. It's the only time we can harvest them for subsistence. Put them away for winter use [Is it basically the last couple of weeks in May, first week in June?] Mostly in May. As soon as the ice melts, they're gone, mostly in May.
CODE[327-48-112994

Stebbins. Population levels. Bird Abundance
(Of the three) the Emperor is more abundance than the Brant. Hardly see the Emperor in the fall. Mostly see them in the spring. More and more white geese (snow goose) are coming back in the fall. The Snow Goose is coming back more and more in the fall time, and so is the Lesser Canada Goose, but don't hardly see any Brant or Emperor or White-fronted goose in the fall time. Just the Lesser Canada goose and the Snow goose in the fall time.
CODE[327-48-112994

Stebbins. Population levels. Summer. Surf Scoter
If there are few spring geese, people supplement with surf scoter in July. There are few black scoter around now.
CODE[327-48-112994

Stebbins. Customary rules.
Well, one of the things I used to tell my boys, was not to hunt the female that has laid eggs. When you're a young guy you want to shoot at any thing up close, and those females when they fly up off their nest... It excites a young hunter, you know, because they're flying close by and they're flying low, and for that reason we try to tell them those are the birds that have eggs, and should be left alone. Besides that, they're usually very skinny. Not very good eating anyway.
CODE[327-48-112994

Stebbins. Customary rules.
The female is always easy to tell, they're usually brown, and especially if they have eggs nearby, they're not really afraid, and they're easy to kill. They're easy to get if a guy wants to get them. But we try to discourage that, you know, for our young hunters. Because like I say, who wants to catch something if it's not very good eating. It doesn't prove anything either. We tell them, if you want to hunt something, hunt something that is challenging. Rather than hunting an old lady, or a mamma trying to protect their young.
CODE[327-48-112994

Stebbins. Customary rules. Sharing
Another thing too that we try to tell them not to over-harvest. Only take what they can store away at home. And if they're a household without any freezers, we try to encourage them not to try catch too many. A lot of the time, they don't have freezers, usually utilize their relatives freezers nearby. We tell them anyway, not to try to catch more than what they can store, otherwise they just have to give away the extras they got to the elders, that don't have any one to hunt for them. And some elders do that, you know, with no young man to hunt for them, they do buy shells for the young hunters, you know to hunt for them. [So the elders buy the shells...] Um. For the young guys, so that that person can hunt for them.
CODE[327-48-112994

Stebbins. Hunting Methods. Feeding behavior.
Good ways to hunt is to become a good shot so you don't loose so many. Target practice, otherwise you don't know how to use your shotgun, otherwise you get a lot of woundeds and a lot of them get away. Best time of day is crack of dawn, I guess, or evening before the sun sets. Birds start moving around. They feed all day, early morning they go to another feeding spot; they start moving around same thing again toward evening, feed all day, they before sun gets too low they start moving around looking for another place to feed and stay out the night.
CODE[327-48-112994

Stebbins. Hunting Methods.
In spring time we usually use snow machine. Bird hunting before the ground thaws. When they travel by snow machine they try to not get too close to the main herd wherever its at, you know, otherwise the whole flock will fly away. They use a snow machine to get close enough to where they can camp out. After they set camp, they look for a place to wait and see what happens.
CODE[327-48-112994

Stebbins. Hunting Methods. Duck Blinds
A lot of the young people today, they start ordering camouflage clothing. But a lot of them like to use just a white coverall, or gunny sack. They're just as good.
CODE[327-48-112994

Stebbins. Hunting Methods. Decoys.
Yes some use decoys. [Is that a traditional thing?] Yes that's traditional. Well, snow geese. It's easy, 'cause you can use snow, just mold it up in shape. Some are just beginning to use commercial bought decoys. But a lot of them continue to use snow, for
snow goose.
CODE[327-48-112994

Stebbins. Traditional practices. Sharing. Division of Labor
The elders have the young folks hunt for them now and then, if they have no one in the household to hunt for them.
CODE[327-48-112994

Stebbins. Habitat disruption. Technology.
One of the things we don't like, is the planes, you know, flying out and scarring some of the flocks on the ground. [What kind of planes?] Any kind, any kind of commercial airline carrier, and like they go sightseeing when they're flying up there, and get too close to the birds when they're feeding sometimes, and they fly away. Another thing we don't want to see out here is the hovercraft. That's entirely unacceptable. All the hunters are opposed to using the hovercraft.
CODE[327-48-112994

Stebbins. Bird Food Preparation. Non-food products.
Many years ago they used to do a lot of salting in barrels before freezers came along. They used to save a lot of down in those days, make pillows out of them. They even used to make parkas; they just pluck off the main feathers, and keep the down on the skin. Just pluck off the feathers and leave the down attached to the skin. They used swan, snow goose, and the eider. Those three I think. And then the loon too, they used to also use the loon to make parkas.
CODE[327-48-112994

Stebbins. Non-food products
Not any more. Gander Mountain coats nowadays. Can't recall (other uses) right now. When I was younger though I used to use the loon beak for my arrows, for my bow and arrows, use the beak for weight and point of an arrow, a loon beak. They mostly use the ptarmigan for dance mittens. I've always wanted to use the eagle, but it was not allowed to get any eagles, when they were endangered. I think if the elders had a choice, they 'd prefer the eagle feather over the ptarmigan feather.
CODE[327-48-112994

Stebbins. Eagles
Eagles come by around here in the summer.
CODE[327-48-112994

Stebbins. Eider. Season. Nesting Behavior
See the Common and Spectacled Eiders along the coast in springtime, June on the ocean. They show up in late April. See them in the flats in June. They're nesting in the flats between April and June, when they head out to the coast and ocean. They lay their eggs in the flats.
CODE[327-22-112994

Stebbins. Eider. Feeding Behavior.
They're eating clams when they first come Also Needlefish, mollusks, and black clams.
They fly back and forth from the coast to the flats. They go to the ocean and then they come back.
CODE[327-22-112994

Stebbins. Eider. Population level. Migration
Their population don't seem to change. They lay eggs in the highlands and in the flats.
We don't see them in the fall. They migrate late. They leave probably when it starts to get cold, ice forms, in October.
CODE[327-22-112994

Stebbins. Spectacled Eider.
You see Spectacled Eider further south. They lay eggs further south.
Maybe 2,4, 6 maybe in a flock. In June.
CODE[327-22-112994

Stebbins. Emperor Geese. Feeding behavior
Emperor geese eat leaves and greens and seeds. They eat plants along the lakes, berries, black and blue berries.
CODE[327-22-112994

Stebbins. Emperor Geese, Population levels. Snow Geese, Cranes
We see the Emperor Geese first in spring, in May. They come in small flocks, 2,4. Snow geese is most abundant, then cranes. Don't see the Emperors in the fall. There never really have been any. They don't nest here. Maybe a few might nest here. In the fall they come from somewhere else. We don't know where they go.
CODE[327-22-112994

Stebbins. Lesser Canada Geese. Staging area.
In spring and fall the Lesser Canada geese use this area for staging. There are flock after flock in the spring. They rest and feed in the flats, but they nest inland.
CODE[327-22-112994

Stebbins. Black Brant.
We see Black Brant once in a while. In the fall time beginning in September they're coming south again. They stage here in the flats in September, but we don't see too many of them. They don't travel together. They molt in June. They mostly concentrate in the Yukon, further south. When they go hunting they see flock after flock heading south in the fall. Hooper Bay has lots this kind (Brant).
CODE[327-22-112994

Stebbins. Snow Geese.
They mostly go further north in the spring for nesting. They stage here in the spring on their way north. They don't molt around here. Snow geese are starting to show up on their way south in the fall.
CODE[327-22-112994

Stebbins. Customary rules. Seasonality
Start hunting in May. Stop hunting last part of May, and by June stop hunting. We don't hunt when they are nesting. Only on the ocean. In the fall in September, and in August. We hunt Brant in spring and fall.
CODE[327-22-112994

Stebbins. Hunting methods.
We train young hunters first in gun safety; how to use a rifle, not to point guns at people and where to point a rifle when you're walking. We watch them. We guide them. He tells them, teaches them how to hunt. Right now the best way to teach the young ones to be good bird hunters is to go with them and show them. Yes. patient. No moving around. Be still. The young ones can't stay still. They like to move around and it scares the birds away. The young ones, we keep them apart. It's better to hunt in different spots, not too close. We make blinds with drift wood, grasses. Cover up with grasses. The only decoys we use is snow. Only snow decoys.
CODE[327-22-112994

Stebbins. Hunting methods.
Lot of times the young hunters are bad shots. We tell them to wait 'til birds get close. Sometimes he gets lots, sometimes he comes home with only one - the boy here. He's a bad hunter. Shoot a couple of times and miss it. No luck.
CODE[327-22-112994

Stebbins. Meal preparation. Non-food products.
I like to boil or roast ducks or geese. We salt them too, we used to. No more. We don't use the birds skins, no more. Old people, my grandparents, only old people use ocean birds - eiders, ocean

birds for parkies. Used to use Common and Spectacled Eiders skins for coats. No more. They used to use cormorants before, for parkas and hats. In the fall time. On the islands. His dad used to.
CODE[327-22-112994

Stebbins. Non-food products.
We use bird feathers for pillow. And I made down jacket for my husband. I made down jacket. No more now. We hardly get any ducks anymore. You could still do it. I still save my feathers for pillows, comforters.
CODE[327-22-112994

Stebbins. Bird eggs.
We cook 'em (eggs) and eat 'em. We like all of them. We used to eat all of them we find. We find the eggs in the rocks. Few of them. Murres, puffins. On the islands. The eider eggs are found in little nests in islands, and in the flats.
CODE[327-22-112994

Stebbins. Hunting. Seasonality
We don't hunt but a few ducks when they are molting; some people do, around Hooper Bay.
CODE[327-22-112994

Stebbins. Food Preparation/Preservation
Before freezers came , we salted birds and hung them. In the fall, they set them where it was cold. When he was younger, they made underground storage, out around in the hunting areas. To keep animals from getting that food, they would cover up the opening to keep cold in and prey out. Used to put food underground, dug a pit six feet down
CODE[327-22-112994

Stebbins. Customary rules
When you have enough, don't hunt. Don't hunt certain birds - crane, swans, eiders.
CODE[327-22-112994

Stebbins. Emperor Goose. Season. Environmental conditions.
These Emperor I always see them in the spring time mostly. About May, right after the beginning of May, right after it starts thawing out. Yes, quite a bit of ice or snow still here when they get here. A lot of ice and snow, and it gets cold too.
CODE[327-78-112994

Stebbins. Emperor Goose. Population
Well, I usually see them like in pairs mostly, small flocks, of maybe up to twelve, maybe less than twelve. I've never really seen them in great big flocks, in hundreds or even thousands like snow geese. Well, in my case, I've never really seen them in big flocks. I've mostly seen them in pairs or small bunches. Twelve or less, like that. It seems like since the (goose) management plan went into effect down there in the YK delta, you start noticing more. I think it's because they're increasing down there and they need to go to other places and come up this way.
CODE[327-78-112994

Stebbins. Emperor Geese. Habitat. Feeding Habits
Well, they go right around lakes, riverbanks, mud flats, along the coast. They're eating grass and grass roots, probably bugs and insects, some young sprouts, berries and stuff.
CODE[327-78-112994

Stebbins. Emperor Geese. Nesting.
Well, I think they're some that nest and stay in the area. I had one person in the village tell me he ran into a bunch of young emperor geese, when he was cruising around in a skiff, and he just let

them be, left them alone, and that's a pretty good indication they're nesting in this area That's probably July. Young ones that are just born.
CODE[327-78-112994

Stebbins. Emperor Geese. Snow Geese. Migration.
I don't know where they go, across to Russia maybe. I think that's what they do. They probably follow the white (Snow) geese. The white geese go over there and I bet, they... I don't know how far they go. They probably go back down to the delta, or like I say, fly across with them white geese like in the spring when they leave to go they go elsewhere to go nest. The Emperor geese come when the Snow geese come, about the same time.
CODE[327-78-112994

Stebbins. Emperor Geese. Feeding and Nesting habits. Population
They're feeding here in summer, a few may be nesting here. That one story that I reported is a good indication they are starting to nest. It seems they're increasing down there in the delta, and as they increase, they need to spread out, and end up heading up this way.
CODE[327-78-112994

Stebbins. Emperor Geese. Health. Population. Habitat
It's been a while since we've caught some. Last one we got was pretty healthy. Right in our area, here in Stebbins, there are some, but they're not numerous. You might see them around Stuart Island. They like to hang out along the coast too, along the coast line.
CODE[327-78-112994

Stebbins. Emperor Geese. Staging area.
We see them in the fall, we see them. They are probably staging in the area for a couple of weeks, before it gets cold.
CODE[327-78-112994

Stebbins. Black Brant. Populations. Migration Route.
Well, I've noticed more and more Brant in flocks, than I've seen of Emperors. A little more numerous than the Emperors. Flocks of about 20 or more in a bunch. I saw just one flock, just last spring. That's about the same. I don't think they hang around too. Just come in and go to other areas. They would stay around a couple of weeks maybe. They come later in early May.
CODE[327-78-112994

Stebbins. Black Brant. Population. Habitat. Feeding habits.
We see those (Brant) in the spring, down the coast, down the flats, south of Stebbins. They're eating same as the rest of them. Eating grass, roots, young sprouts. In my life time I've never seen big bunches. Only (Lesser) Canadians and white (Snow) geese.
CODE[327-78-112994

Stebbins. Black Brant. Abundance
It's not the most common bird. We spot them, spring and fall. That's when I see them. Fall time. Seems like the only time they're flying is night time. I don't think they nest around here.
CODE[327-78-112994

Stebbins. Common Eider. Populations. Spring
The ones we have around here - the Common eiders. I've noticed, in the past few years, they've been getting more in this area. They arrive in May. I think they probably come in April, the latter part of April. They'll be out there, out in the open water, out at the edge of the ice. They'll probably the first to come in. We see them when out seal hunting, right about that time, seal hunting. We spot them out there. That the best time to hunt them.

CODE[327-78-112994

Stebbins. Common Eider. Habitat. Feeding habits
They're eating snails. I know that for a fact. When below the mean high tide, right on them rocks, they got these small snails. So I've been told by my Dad, that's what they eat, snails too. Of course, they eat snails. They probably eat some plants too. Plants, like grass roots. And insects. I know they might even eat small fish too. Sardines. (Needlefish) They're diving birds too. They're sea birds. They dive. They do live out in the open, on the coast. Right on the island, up along the coast. I think their territory along the coast from St. Michael across there where they nest. The whole of Stuart Island, the whole area, mostly in rocky areas. Just about all of Stuart Island, and up and down the coast. Around the shore line, around St. Michael, in lakes.
CODE[327-78-112994

Stebbins. Common Eider. Nesting.
I've seen the nests. I'd like to see them increase more, so I don't pick eggs. Discourage my family from picking eggs, too. They have been getting more numerous in the past five years. They would begin nesting beginning in May, begin seeing them again in June and July. They probably molt right around the island here.
CODE[327-78-112994

Stebbins. Common Eider. Spring Hunting.
We hunt them in the spring time when they first come. They are fatter when they first get here. They have fat reserves when they first get here.
CODE[327-78-112994

Stebbins. Common Eider. Hunting. Nesting
We stop hunting them after they start to nest. Right about that time. They probably start nesting last part of May, first part of June I think. I just leave them alone in the summer. People used to get them in the summer.
CODE[327-78-112994

Stebbins. Common Eider. Migration. Fall.
They leave probably just before freeze up; latter part of October. They would they be around Stuart Island. They passed your house a couple weeks ago, down by your house they fly by..... oh, oh, last month. In October. A bunch of them flew by, a flock, I mean females. Pretty late too; cold too.
CODE[327-78-112994

Stebbins. Common Eider. Feeding habits.
They come the earliest and stay the latest. They're pretty sturdy birds. As long as there's open water they'll be able to eat snails, and mussels, I guess. They're most likely around where, the edge of the water. Maybe down the peninsula. How far they go south.
CODE[327-78-112994

Stebbins. Steller's Eider. King Eider
Hasn't seen Steller's Eider or a King Eider either, or the Spectacled. Doesn't think they're native to this area. Probably further south on the Delta. It's been a long time since I seen King Eider. Thinks they used to come around here, but not Spectacled.
CODE[327-78-112994

Stebbins. Customary rules.
You just take no more than what you need. If a person have enough of one thing, of different kinds of birds and animals, what you call this, some kind of self-conservation measures. Just don't take more than what you need, and share some of what you have with those that don't have it.
CODE[327-78-112994

Stebbins. Hunting Methods.

We teach young hunters gun safety; how to shoot, to be patient and careful when you go hunting. Got to sit still and wait for the geese to come by. Got to be patient. You just have to know how much to take, and that's it. Just have to know how much to take.
CODE[327-78-112994

Stebbins. Hunting methods. Decoys. Blinds
Use snow as decoys for white (Snow) geese.
CODE[327-78-112994

Stebbins. Hunting methods.
We take snow machines in the spring. Get over to a hunting site, set of camp. Not too far away from where you're going to be. Once at camp, you look around to see where they're at, see where they're bunched up. And once you've done that you make, make a camp, find a suitable camp, some place outside of that bunch. And then you've got to observe them some more and see which way they're flying around. Then you go pick a spot and then you wait for them to come by and jump through them. That's what they call it. Waiting in blinds. Sit behind a stump or you have camouflage clothes. Make a blind out of driftwood, driftwood and grass, you construct a blind. out of what's there.
CODE[327-78-112994

Stebbins. Hunting methods.
Every body has his own hunting style. That's true. But mostly you set up a blind and wait, sit and wait. Use a shotgun. 12 and 20 gauge.
CODE[327-78-112994

Stebbins. Customary rules
Just try to catch just what you need. If you catch more than enough, you share it with somebody else, either a relative, an elder or a friend. You share your windfall.
CODE[327-78-112994

Stebbins. Meal Preparation
There's three ways -you can fry 'em, you can roast, or you can make soup. They're all good. Special dinners are if you roast it.
CODE[327-78-112994

Stebbins. Non-food Products
Save the feathers and the skins too. You got to dry 'em up and make parkies out of 'em. People still do that. Makes bird skin parkas. Yeah, really warm. They got to have enough skins, maybe 20, or 10 or more birds maybe. Knows an old lady who might have some. M. old lady got bird skin parka, I know. A. I know. Bird skin parka, I think she's got one. I think she does. (M. I don't know any body right now.)
CODE[327-78-112994

Stebbins. Meal Preparation/Preservation. Non-food products.
Don't know if anybody salts birds now. Maybe somebody does. They're starting program that I saw down there now, for skin sewing lessons this year. A lot of this new generation women, they don't know how to deal with this stuff. But they're in the process of reviving some of it I guess, some of the skin sewing.
CODE[327-78-112994

Stebbins. Food value
If it fills up your belly, it's good for your health.
CODE[327-78-112994

Stebbins. Hunting conditions.

Best weather to go duck hunting, or goose hunting, when it's foggy, in springtime when it's foggy; flying low, early mornings, early evening.
CODE[327-78-112994

Stebbins. Weather
It seems like the weather has been getting milder. How that's affected the bird population, I don't really know. When it's milder, it causes less stress for the birds, that's for sure. They can stand cold up to a point, then they got to go. Once their food choices are covered then they got to go. The lakes are frozen, snow on the ground. Time to leave.
CODE[327-78-112994

Bird Harvests in Teller, January through December 1995

Results of a cooperative project by Kawerak, Inc.
and the Division of Subsistence, Alaska Department of Fish and Game,
funded by the U.S. Fish and Wildlife Service
June 1996

Introduction

Birds are important to families in northwest Alaska. They are an important part of the culture and traditional way of life of Alaska Natives. Birds and bird eggs are eaten for food, and feathers are used in hand-crafted items. This report presents information on bird harvests in Teller in 1995. The information results from a cooperative project in 1995-96.

The Project

Several groups worked together on the project to gather information on birds at Teller. The Teller Traditional Council approved the project by resolution on November 7, 1995. A survey of households was done by a local researcher hired and supervised by Kawerak, Inc. The project was designed by the Division of Subsistence, Alaska Department of Fish and Game, who also put the information into tables and into this report. Money for the project came from the U.S. Fish and Wildlife Service. Preliminary results were reviewed by Kawerak and the Division of Subsistence, ADF&G.

How the Information Was Collected

A survey was used to gather information on bird harvests. Surveys were done in 40 randomly selected households of a total of 78 households (51 percent) in Teller. Also, two bird experts from Teller were interviewed about bird ecology and traditional uses of birds. Surveys were done December 14-18, 1995 in Teller. On the survey, people were asked about bird hunting during the 12-month period, January 1995 through December 1995. Participation in the surveys was voluntary. To protect confidentiality, no person's name is used in any reports of the information.

Findings

Households in Teller reported the following things about their use of birds in 1995:

- 42.5 percent of all Teller households had members that hunted birds. The same 42.5 percent of all households harvested birds (Fig. 4).
- Eighty percent of all households used birds (Fig. 4).
- Sharing of birds was common. About one-third (30.0 percent) of households gave birds to other families and more than one-half (55.0 percent) of households received birds from others (Fig. 4).
- At least 20 kinds of birds were caught, including: white-fronted geese, cackling Canada geese, lesser Canada geese, snow geese, black brant, northern pintail, American wigeon, mallard, northern shoveler, greater scaup, lesser scaup, green-winged teal, oldsquaw, black scoter, white-winged scoter, common eider, Steller's eider, willow ptarmigan, sandhill crane, and tundra swan (Table 1).
- At least 7 kinds of eggs were gathered, including: white-fronted geese, lesser Canada geese, snow geese, northern pintail, black scoter, mew gull, and tundra swan (Table 1).

- An estimated 825 birds were caught by households in Teller in 1995. Bird harvests fell into the following general categories: ducks (57.7 percent), upland game birds (18.9 percent), geese (18.9 percent), cranes (2.6 percent) and swans (1.9 percent) (Fig. 1).

- The five kinds of birds caught in greatest numbers in 1995 were willow ptarmigan (156 birds), northern pintail (101 birds), lesser Canada geese (94 birds), mallard (92 birds), and black scoter (68 birds) (Table 1).

- An estimated 215 eggs were gathered by households in Teller in 1995. Most eggs were from lesser Canada geese (88 eggs), mew gull (78 eggs), and northern pintail (49 eggs) (Table 1).

- Egg harvests fell into the following general categories: geese (40.2 percent), seabirds (25.6 percent), ducks (25.0 percent), and swans (9.1 percent) (Fig. 2).

- Birds were taken in spring (66.7 percent) and fall (24.8 percent). The season was unknown for 8.5 percent of the harvest (Fig. 3).

- The classifications of Canada geese harvests into "tackling Canada" or "lesser Canada" by hunters are uncertain because of the close resemblance of the two species and the difficulties distinguishing them in the colored bird guide used in the survey.

- Local distinctions between bird species did not always correspond with western scientific distinctions shown in the bird guide. In addition, hunters typically identify birds by their sound, behavior, and habitat, as well as by their looks. The lack of this information on the bird guide led to uncertainty about the identity of a few of the species harvested.

- Information from interviewed hunters about birds in the Teller area is attached as an appendix.

Computerized Data Files

This information is available as computer files at the Division of Subsistence, Alaska Department of Fish and Game, Box 3-2000, Juneau, Alaska 99802 (907-465-4147).

Acknowledgments

A sincere thank-you is given to all households and hunting experts who generously volunteered to be surveyed or interviewed for this project. A special thanks is given to Sandy Iknokinok of Kawerak, who obtained IRA approvals, hired community assistants, and supervised data collection; Lillian Weyanna of Teller, who conducted the household surveys; Susan Georgette of the Division of Subsistence, ADF&G, who trained surveyors, interviewed hunters, and analyzed data; and the Teller Traditional Council, who supported the project.

Table 1. TELLER
Bird Harvests, January 1995 - December 1995[1]

Bird Species		Total Harvests		Bird Harvest By Season[2]				
		Birds	Eggs	Winter	Spring	Summer	Fall	nknown
Geese	White-fronted Geese	2	8		2			
	Emperor Geese							
	Cackling Canada Geese	23			16		8	
	Lesser Canada Geese	94	88		80		14	
	Canada Geese Unknown	8			8			
	Snow Geese	8	29		8			
	Black Brant	21			12		10	
	Unknown Geese		4					
Ducks	Northern Pintail	101	49		82		20	
	American Wigeon	25			14			12
	Mallard	92			57		23	12
	Northern Shoveler	8			8			
	Greater Scaup	6			6			
	Lesser Scaup	4			4			
	Canvasback							
	Green-winged Teal	49			25		12	12
	Common Merganser							
	Red-breasted Merganser							
	Bufflehead							
	Harlequin							
	Oldsquaw	55			20		23	12
	Common Goldeneye							
	Black Scoter	68	27		43		14	12
	Surf Scoter							
	White-winged Scoter	16			16			
	Common Eider	49			29		8	12
	King Eider							
	Spectacled Eider							
	Steller's Eider	4			4			
	Ducks Unknown		4					
Seabirds	Common Loon							
	Arctic Loon							
	Red-throated Loon							
	Yellow-billed Loon							
	Unknown Loon							
	Common Murre							
	Thick-billed Murre							
	Unknown Murre							
	Black Guillemot							
	Sabine's Gull							
	Mew Gull		78					
	Glaucous Gull							
	Herring Gull							
	Unknown Gull		4					
	Arctic Tern							
	Auklets							
	Puffins							
	Unknown Migratory Bird							
Shorebirds	Plover							
	Common Snipe							
	Other Shorebirds							
Game Birds	Willow Ptarmigan	156			94		62	
	Rock Ptarmigan							
	Grouse							
Snowy Owl								
Sandhill Crane		21			21			
Tundra Swan		16	29		4		12	

[1] Based on a random survey of 40 of 78 households, expanded to all households. Data were collected by a local researcher on contract with Kawerak, through cooperative agreements between ADFG, Division of Subsistence, Kawerak, and USFWS. Research was approved by resolution of the Teller Traditional Council. Project funded by USFWS.

[2] Winter=Nov, Dec, Jan, Feb; Spring=Mar, Apr, May; Summer = Jun, Jul; Fall=Aug, Sep, Oct

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

TELLER
Bird Harvest Patterns
January 1995 - December 1995

Fig. 1 **Teller Bird Harvests, January 1995 - December 1995, by Bird Type**

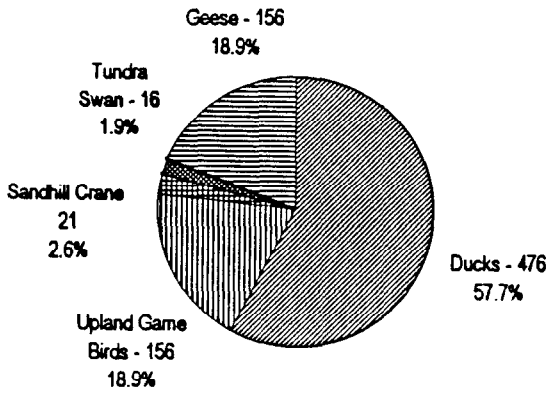


Fig. 2 **Teller Egg Harvests, January 1995 - December 1995, by Bird Type**

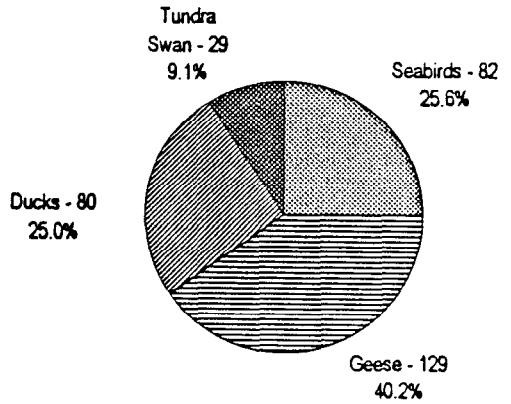


Fig. 3 **Teller Bird Harvests, January 1995 - December 1995, by Season**

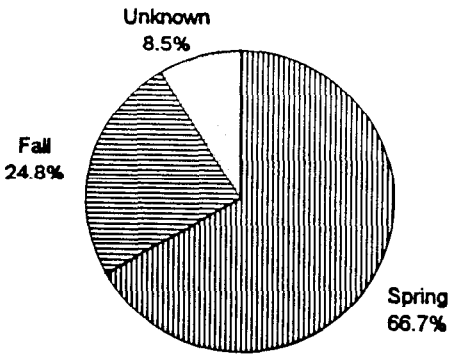
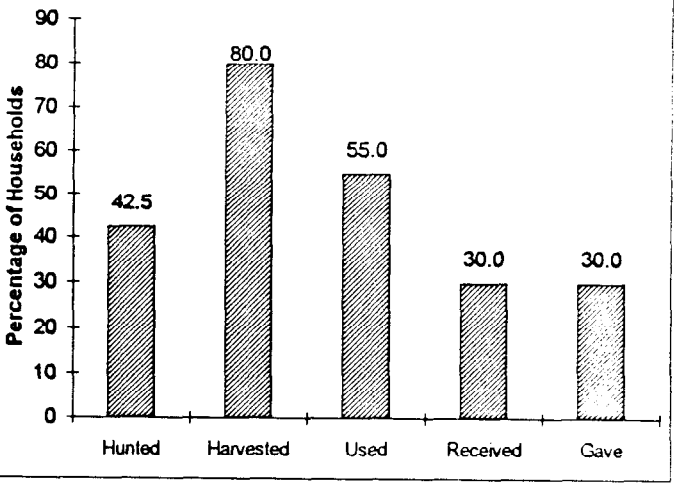


Fig. 4 **Percentage of Teller Households that Hunted, Harvested, Used, Received, Gave Birds, 1995**



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

Migratory Bird Project
Teller Key Respondent Notes
Researcher: Susan Georgette

Teller. White-fronted geese. Canada geese. Nesting area. Emperor geese. Snow geese. Black brant.
We got speckle-bellies (white-fronts). Not very many. They arrive the middle part to the last part of May. I'm talking about upriver, mostly the Kuzitrin area. We got Canadian geese, too. They nest here. Speckle-bellies nest upriver. Emperor goose, snow goose, black brant – those are down the coast.
CODE[341-65-121495

Teller. Pintails. Mallards. Teal. Shovelers. Scaups. Seasonality.
We hunt pintails, mallards, teal, shovelers. We have one of these scaups here. We hunt ducks in both spring and fall. Not in summer. They lose their fat. We wait until they get fat in fall after the young ones grow.
CODE[341-65-121495

Teller. Mergansers. Oldsquaws. Population levels.
We don't hunt mergansers. We call them fish ducks or pies. I think we have the red-breasted merganser. We don't hunt fish eaters. Their meat tastes funny. We hardly hunt oldsquaws. We have lots of oldsquaws.
CODE[341-65-121495

Teller. Bufflehead. Goldeneye. Harlequins.
We don't have buffleheads or goldeneyes. Harlequins are real rare.
CODE[341-65-121495

Teller. Black scoter. Surf scoter. White-winged scoters. Nesting area. Scoter eggs. Seasonality.
We hunt black scoters and surf scoters. But surf scoters are rare. These birds nest upriver. We also have white-winged scoters. Scoters arrive later than other birds, after the ice is gone. They lay their eggs real late, around the first of July. We don't really use their eggs. By the time the ice is gone upriver, we don't mess with eggs because they're getting ready to hatch. We call scoters "whistlers."
CODE[341-65-121495

Teller. Common eider. King eider. Murres.
We have common eider, maybe some king eider down the coast. We don't have murres. They're down the coast near Nome.
CODE[341-65-121495

Teller. Loons.
We don't eat loons. Too fishy. We have a loon we call king loon. It's the big one (probably yellow-billed loon). We have three kinds of loons here. We have one called the laughing loon or crazy loon (probably red-throated loon). At camp my grandpa used to shoot them when they were too noisy.
CODE[341-65-121495

Teller. Mew gulls. Arctic terns. Tern eggs.
We have a few mew gulls but no one hunts them. We have arctic terns. We don't use their eggs much. Tern eggs are small. We call them "coffee eggs" – you boil them up with your coffee.
CODE[341-65-121495

Teller. Processing / Preservation. Customary rules. Ducks. Geese.
Mostly people eat birds fresh. Most people don't like to pluck a frozen bird. We don't waste here.
CODE[341-65-121495

Teller. Canada geese. Scoters. White-fronted geese. Cranes.
Geese and scoters are the main birds I get. Mostly Canadians. Speckle-bellies (white-fronts) are a little more cautious than Canadians. Cranes and ducks – their heads are too small. I like to hunt the bigger ones.
CODE[341-65-121495

Teller. Auklets. Puffins. Eggs.
We don't have auklets. We have some puffins but not many. At Six-Mile Point and a few on the cliffs behind Teller. We don't use the eggs. You can't reach them unless you're a rock climber.
CODE[341-65-121495

Teller. Snipe. Sandpipers. Curlews. Harvest levels.
We have snipe. We have sandpipers. People don't eat those. Maybe when I was a kid we did when people wanted to try something new. Curlews aren't on this list. They're bigger than snipe with a bent beak. People catch them some. Sometimes they collect in big groups and people shoot five or ten of them.
CODE[341-65-121495

Teller. Spruce grouse. Ptarmigan. Ecology. Population levels.
We don't have grouse. We have ptarmigan but there aren't many around. We hardly see any. It's been 10 or 11 years since they've been thick. Ptarmigan lay 18 eggs. Rock ptarmigan are rare. There are lots of foxes the last four years. Maybe that's why there aren't many ptarmigan. All the old-timers are gone who catch and sell foxes. People don't know how to skin them. They're not worth much money. Sometimes ptarmigan kill themselves when they run into guy wires. My dad used to dogteam along the telegraph lines and just pick up dead ptarmigan in the trail. That's when there were lots of ptarmigan.
CODE[341-65-121495

Teller. Snowy owls.
We see snowy owls year-round. But only a few. We don't catch them. Maybe when I was little we did. They're hard to catch. They're hard to see in winter. In summer we don't bother them.
CODE[341-65-121495

Teller. Sandhill cranes. Nesting area.
Sandhill cranes migrate through. Only a few stay to nest. Cranes seem to come back with even more (in number) than they go north with.
CODE[341-65-121495

Teller. Tundra swan. Population levels.
We have swans. Too many. Some people like to hunt them. But you might as well have pliers to pluck them. Some people skin their birds but I think that ruins the taste. The law is part of it, too. If you get caught with a swan, it's a $500 fine. If you can't pay the fine, they take your boat, motor, gun. In Imuruk Basin, the ground is just white where the swans are feeding. Even a blind man could have shot one. Last year there were 500 swans right in front of town. It was beautiful with calm water. You could have rolled down your window and shot one. But the road was open and no one wanted to get a fine.
CODE[341-65-121495

Teller. Hunting season. Geese.
Most hunting is in the spring time. In fall the geese are wild. They are hard to catch.
CODE[341-65-121495

Teller. Hawks. Bald eagle. Mousebird.
We have other birds not on your list. We have quite a few hawks, ptarmigan hawks. Or maybe they're falcons. Only one time I saw a bald eagle. We have "mousebirds." They're like an owl. They come

out at night and fly real close. They're here until the fall. They eat bugs. At one camp a mousebird sat and looked in a window for a long time. They don't make any noise.
CODE[341-65-121495

Teller. Canada geese. Cranes. Oldsquaws.
Lot of birds say their own name. Like Canadian geese. Their Eskimo name is liqliq. Or cranes. Their name is tatigzhiq (sp?). Or oldsquaws are called ahaaniqs (sp?).
CODE[341-65-121495

Teller. Emperor geese. Snow geese. Canada geese. White-fronted geese. Black brant.
We see emperor, snow geese, Canada, and white-fronted geese. Not many black brants. Most geese probably nest about the same time, May through July.
CODE[341-92-121495

Teller. Wigeon. Shoveler. Pintails. Teal. Scaups. Harlequin. Population levels.
We have wigeons, shovelers, pintails, teal. We rarely see scaups. We see some harlequin ducks in spring and fall. Wigeons and shovelers are the most popular here. Pintails are not as popular as those. There were thousands and thousands of ducks when I was a child. They seem to be increasing.
CODE[341-92-121495

Teller. Black scoters. White-winged scoters. Population levels.
We hunt black scoters and white-winged scoters. We call black scoters "whistlers" because they whistle all the time. The population of scoters is very high.
CODE[341-92-121495

Teller. Loons. Population levels.
Common loons have a very, very high population. We have three kinds of loons here. King loons, common loons, and an unknown loon. The unknown loon is medium-sized between the king and common loon and has jagged yellow teeth. We don't use loons unless it's the last thing on earth.
CODE[341-92-121495

Teller. Common eider. King eider. Nesting area.
We have eiders. People catch a few of them. They arrive in early May. They go towards Mary's Igloo for nesting. They are common eiders. Only once in awhile we see king eiders.
CODE[341-92-121495

Teller. Seasonality. Snow geese.
There's more hunting of waterfowl in the fall than the spring. Except for snow geese. We get them when they first come. Sometimes there are thousands of them. It's really beautiful. They eat grass and seeds. Sometimes we have to go over near Woolley Lagoon to hunt them.
CODE[341-92-121495

Teller. Mew gulls. Arctic terns. Sandpipers. Population levels.
We have mew gulls and arctic terns. But we don't hunt them. We have sandpipers. They seem to be slowing down (decreasing).
CODE[341-92-121495

Teller. Auklets.
We have some auklets right in front of Four-Mile Point. It's not pictured here (on bird chart).
CODE[341-92-121495

Teller. Ptarmigan. Snowy owls.
We have ptarmigan. Rock and willow. Very occasionally we see white snowy owls.
CODE[341-92-121495

Teller. Tundra swans. Cranes. Population levels.
We have swans and cranes. People eat them but they're hard to catch. They fly high. There are definitely tons of swans. When the road first opened in spring, we saw lots of swans.
CODE[341-92-121495

Teller. Bald eagles.
Every once in awhile we see bald eagles. The last big one I saw was in 1971.
CODE[341-92-121495

Teller. Population levels. Customary rules. Cranes. Canada geese. White-fronted geese.
Last year I didn't hunt. Just watched the birds. There were thousands of cranes, Canada geese, speckle-bellies (white-fronts). We only get what we need. Ducks spoil if you don't freeze them.
CODE[341-92-121495

Teller. Hunting areas. Ducks. Geese.
We hunt towards Woolley Lagoon or towards Mary's Igloo. Also Jones Point down towards Port Clarence area. Those are the hot spots.
CODE[341-92-121495

Bird Harvests in Unalakleet, January through December 1995

Results of a cooperative project by Kawerak, Inc.
and the Division of Subsistence, Alaska Department of Fish and Game,
funded by the U.S. Fish and Wildlife Service
June 1996

Introduction

Birds are important to families in northwest Alaska. They are an important part of the culture and traditional way of life of Alaska Natives. Birds and bird eggs are eaten for food, and feathers are used in hand-crafted items. This report presents information on bird harvests in Unalakleet in 1995. The information results from a cooperative project in 1995-96.

The Project

Several groups worked together on the project to gather information on birds at Unalakleet. The Native Village of Unalakleet IRA Council approved the project by resolution on November 3, 1995. A survey of households was done by a local researcher hired and supervised by Kawerak, Inc. The project was designed by the Division of Subsistence, Alaska Department of Fish and Game, who also put the information into tables and into this report. Money for the project came from the U.S. Fish and Wildlife Service. Preliminary results were reviewed by Kawerak and the Division of Subsistence, ADF&G.

How the Information Was Collected

A survey was used to gather information on bird harvests. Surveys were done in 116 randomly selected households of a total of 210 households (55.2 percent) in Unalakleet. Also, three bird experts from Unalakleet were interviewed about bird ecology and traditional uses of birds. Surveys were done between December 4, 1995 and January 26, 1996 in Unalakleet. On the survey, people were asked about bird hunting during the 12-month period, January 1995 through December 1995. Participation in the surveys was voluntary. To protect confidentiality, no person's name is used in any reports of the information.

Findings

Households in Unalakleet reported the following things about their use of birds in 1995:

- Nearly two-thirds (62.9) of all households had members that hunted birds. Slightly fewer households (55.2 percent) harvested birds (Fig. 4).
- Almost three-quarters (73.3 percent) of all households used birds (Fig. 4).
- Sharing of birds was common. About one-third (31.0 percent) of all households gave birds to other families, and 36.2 percent received birds from others (Fig. 4).
- At least 14 kinds of birds were caught including white-fronted geese, lesser Canada geese, snow geese, black brant, northern pintail, American wigeon, mallard, northern shoveler, greater scaup, green-winged teal, willow ptarmigan, grouse, sandhill crane, and tundra swan (Table 1).
- At least 6 kinds of eggs were gathered. Egg gatherers in Unalakleet were generally uncertain about the species of eggs being taken, listing them as unknown duck, unknown loon, unknown murre, mew gull, unknown gull, and common snipe (Table 1).
- An estimated 2,435 birds were caught by households in Unalakleet in 1995. Bird harvests fell into the following general categories: geese (32.9 percent), ducks (31.8 percent), upland game birds (21.3 percent), cranes (13.1 percent), and swans (0.9 percent) (Fig. 1)

- The five kinds of birds caught in greatest numbers in 1995 were lesser Canada geese (592 birds), northern pintail (462 birds), willow ptarmigan (438 birds), sandhill crane (319 birds), and mallard (132 birds) (Table 1).

- An estimated 291 eggs were gathered by households in Unalakleet in 1995. Most eggs were from unknown gulls (243 eggs), meaning that gatherers were uncertain of the gull species the eggs came from (Table 1).

- Egg harvests fell into the following general categories: seabirds (93.2 percent), ducks (3.7 percent), and shorebirds (3.1 percent) (Fig. 2).

- Birds were taken mostly in spring (54.8 percent) with smaller amounts taken in fall (28.3 percent) and winter (17.0 percent) (Fig. 3).

- Local distinctions between bird species did not always correspond with western scientific distinctions shown in the bird guide. In addition, hunters typically identify birds by their sound, behavior, and habitat, as well as by their looks. The lack of this information on the birds guide led to uncertainty about the identity of a few of the species harvested.

- Information from interviewed hunters about birds in the Unalakleet area is attached as an appendix.

Computerized Data Files

This information is available as computer files from the Division of Subsistence, Alaska Department of Fish and Game, Box 3-2000, Juneau, Alaska 99802 (907-465-4147).

Acknowledgments

A sincere thank-you is given to all households and hunting experts who generously volunteered to be surveyed or interviewed for this project. A special thanks is given to Sandy Iknokinok of Kawerak, who obtained IRA approvals, hired community assistants, and supervised data collection; Ruth Blatchford of Unalakleet, who conducted the household surveys; Susan Georgette of the Division of Subsistence, ADF&G, who trained surveyors, interviewed hunters, and analyzed data; and the Native Village of Unalakleet IRA Council, who supported the project.

Table 1. UNALAKLEET
Bird Harvests, January 1995 - December 1995[1]

Bird Species		Total Harvests		Bird Harvest By Season[2]				
		Birds	Eggs	Winter	Spring	Summer	Fall	nknown
Geese	White-fronted Geese	72			60		13	
	Emperor Geese							
	Cackling Canada Geese							
	Lesser Canada Geese	592			429		163	
	Canada Geese Unknown	36			36			
	Snow Geese	89			49		40	
	Black Brant	7			7			
	Unknown Geese	5			4		2	
Ducks	Northern Pintail	462			302		159	
	American Wigeon	65			47		18	
	Mallard	132			76		56	
	Northern Shoveler	14			14			
	Greater Scaup	4			4			
	Lesser Scaup							
	Canvasback							
	Green-winged Teal	49			31		18	
	Common Merganser							
	Red-breasted Merganser							
	Bufflehead							
	Harlequin							
	Oldsquaw							
	Common Goldeneye							
	Black Scoter							
	Surf Scoter							
	White-winged Scoter							
	Common Eider							
	King Elder							
	Spectacled Elder							
	Steller's Elder							
	Ducks Unknown	49	11		38		11	
Seabirds	Common Loon							
	Arctic Loon							
	Red-throated Loon							
	Yellow-billed Loon							
	Unknown Loon		2					
	Common Murre							
	Thick-billed Murre							
	Unknown Murre		22					
	Black Guillemot							
	Sabine's Gull							
	Mew Gull		5					
	Glaucous Gull							
	Herring Gull							
	Unknown Gull		243					
	Arctic Tern							
	Auklets							
	Puffins							
	Unknown Migratory Bird							
Shorebirds	Plover							
	Common Snipe		9					
	Other Shorebirds							
Game Birds	Willow Ptarmigan	438		348	60		31	
	Rock Ptarmigan							
	Grouse	80		65			14	
Snowy Owl								
Sandhill Crane		319			159		159	
Tundra Swan		22			18		4	

[1] Based on a random survey of 116 of 210 households, expanded to all households. Data were collected by a local researcher on contract with Kawerak, through cooperative agreements between ADFG, Division of Subsistence, Kawerak, and USFWS. Research was approved by resolution of the Native Village of Unalakleet Council. Project funded by USFWS.

[2] Winter=Nov, Dec, Jan, Feb; Spring=Mar, Apr, May; Summer = Jun, Jul; Fall=Aug, Sep, Oct

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

UNALAKLEET
Bird Harvest Patterns
January 1995 - December 1995

Fig. 1 **Unalakleet Bird Harvests, January 1995 - December 1995, by Bird Type**

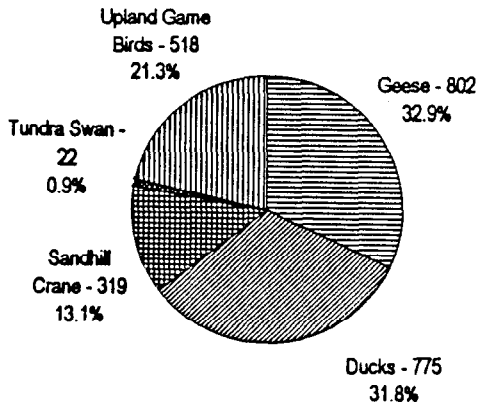


Fig. 2 **Unalakleet Egg Harvests, January 1995 - December 1995, by Bird Type**

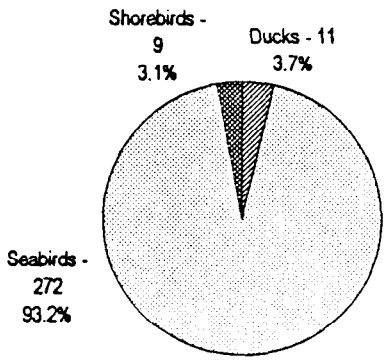


Fig. 3 **Unalakleet Bird Harvests, January 1995 - December 1995, by Season**

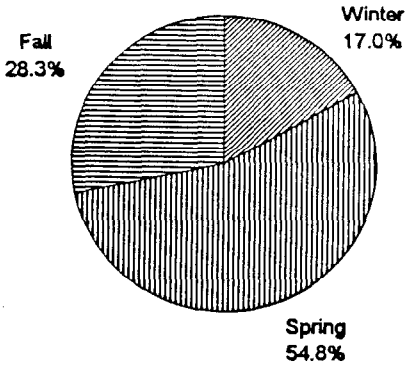
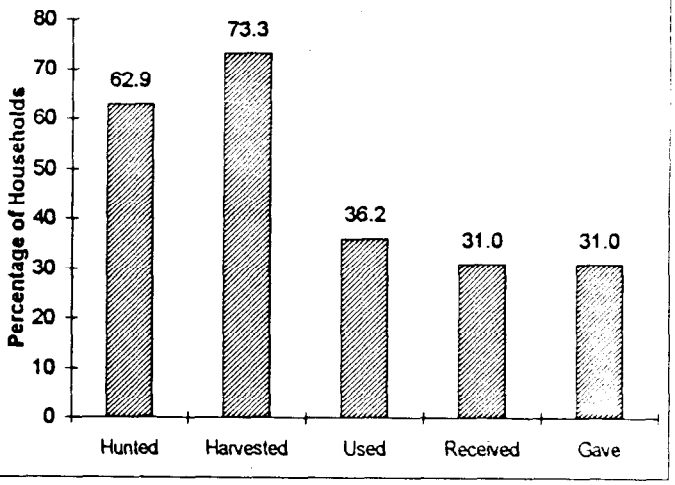


Fig. 4 **Percentage of Unalakleet Households that Hunted, Harvested, Used, Received, Gave Birds, 1995**



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

Migratory Bird Project
Unalakleet Key Respondent Notes
Researcher: Susan Georgette

Unalakleet. Hunting season. Migration. Geese. Duck.
In fall time we can see the numbers of birds flying through. In spring time, birds trickle in. Spring bird hunting begins in May, the first or second week. Maybe in very late April in some years. We get Canada geese, white (snow) geese, emperor geese, cranes, ducks, spoonbills (shovelers), pintails, mallards.
CODE[357-128-112995

Unalakleet. Gull eggs. Murre eggs. Cormorant eggs. Hunting area.
People here get few eggs. Mostly seagull eggs from down on the flats south of Unalakleet, also from Egg Island, Black Point, Besboro Island. People might take a few murre eggs but he doesn't know of many. No one uses cormorant eggs. People say those eggs don't cook, but he wasn't sure why.
CODE[357-128-112995

Unalakleet. Eider. Eider eggs. Feathers. Use area.
He sees eiders while herring fishing, usually near Besboro Island or near St. Michael. People eat eider eggs but he didn't know if they ate the birds. If people find a nest, they might take the down. His mother used to collect eider down for blankets and pillows. Now it's easier to buy things from the store.
CODE[357-128-112995

Unalakleet. Sandhill crane. Migration.
In the fall, cranes fly overhead for days. Sometimes they go inland (up Unalakleet River) rather than along the coast when migrating south. He thinks it depends on the weather.
CODE[357-128-112995

Unalakleet. Population. Harvest level. Hunting season.
There are probably about the same numbers of birds now as in the past. Hunting effort is heavier in the spring than the fall but not that many birds are being caught. That's mostly because of a change in lifestyle. People work, buy more of their food at the store.
CODE[357-128-112995

Unalakleet. Hunting season.
Fall bird hunting begins in September. The end of fall bird hunting depends on the weather. This year was a late fall. We were still boating in late September. Birds were still flying through.
CODE[357-128-112995

Unalakleet. Tundra swan. Nesting area. Migration.
A few swans are in the flats here, but the majority are in St. Michael and Koyuk areas. In spring time and fall time, we see large numbers there. Some nest around Unalakleet.
CODE[357-128-112995

Unalakleet. Ptarmigan. Prey. Population. Ecology.
There are not as many ptarmigan around town as before. You can see them out of town still. They move around. Fox skins aren't worth any money so people don't shoot them. Lots of foxes around. They might be feeding on the ptarmigan.
CODE[357-128-112995

Unalakleet. Emperor geese. Migration. Taste Preference. Nesting area. Population. White-fronted geese.
Emperor geese, called yellow-footers locally, are very rare. People hardly ever see them. They arrive in the last part of May. He doesn't really care for them; they taste fishy. Emperors are just passing

through and don't nest here. There are about the same number of them now as in the past. Respondent didn't seem to recognize white-fronted geese.
CODE[357-126-112995

Unalakleet. Lesser Canada geese. Nesting area. Population. Migration.
Quite a lot of Canada geese are in the area. They seem to be coming through less and less. They're nesting around Anchorage more. They also nest around here upriver in swampy places. Last spring there were not too many Canada geese. It was cold last spring. Fall time we see them once in awhile but mostly they fly over. They're nice and fat in the fall.
CODE[357-126-112995

Unalakleet. Snow geese. Population. Nesting area. Taste preference. Seasonality.
When he was a youngster, quite a lot of snow geese came through. Last spring hardly any came through, perhaps one or two small groups. There used to be flocks of them. Maybe there are too many hunters now around here on the flats. An old man told him that snow geese used to nest on the other side of Golsovia River and the flats on Tolstoi Point. It's his wife's favorite goose. They see them in the spring time. Hardly ever in the fall. A man once told him that if he'd had a pump shot gun rather than a single shot gun there were so many snow geese he could have "made them rain."
CODE[357-126-112995

Unalakleet. Brant. Migration. Pintail. Hunting area.
Brants hardly ever come through here. They used to. They just pass through. There are quite a few brant at Shaktoolik. If any of our guys want some, they go up to Shaktoolik flats. They go with sno-go if the trail is still good or by boat if the ice is broken. He used to hunt "sprigs" (pintails) up there in the spring when he was younger.
CODE[357-126-112995

Unalakleet. Pintail. Nesting area. Population. Mallard. Scaup. Teal. Seasonality.
"Sprigs" (pintails) show up first in the spring. They nest upriver. There are quite a lot of them. Mallards nest around here and we get a few. We also get bluebills (scaup). Green-winged teal nest around here. That's a good eating duck. But they're hard to get. They fly between the shot.
CODE[357-126-112995

Unalakleet. Red-breasted merganser. Population.
Red-breasted mergansers are upriver. Too many of them. No one eats them. They're fish ducks.
CODE[357-126-112995

Unalakleet. Oldsquaw. Wigeon. Taste preference. Pintail.
We get oldsquaws and wigeons. We like wigeons best. We also like pintails.
CODE[357-126-112995

Unalakleet. Cackling Canada geese.
Once in awhile he sees cackling Canada geese, usually only one or two together. They're about the size of a mallard.
CODE[357-126-112995

Unalakleet. Eider. Nesting area. Eider eggs. Common eider. Seasonality.
Eiders nest around the islands between Golsovia and Klikitarak rivers, but not right around here. Too many people around here. They arrive the last part of May or something like that. They nest on small islands. People look for the eggs. The birds taste fishy and they hardly ever use them for food. But they have good eggs. He thinks it is the common eider that is found down there.
CODE[357-126-112995

Unalakleet. Loon. Loon eggs. Nesting area.
No one hunts loons for food but they take the eggs if they can find them. They nest on lakes around here.

CODE[357-126-112995

Unalakleet. Murre eggs. Murre. Hunting area. Seasonality.
People go for murre eggs but not for the birds themselves. They get them at Cape Denbigh or Egg Island. Murres nest the first part of July, around July 4th. People get the eggs in July.
CODE[357-126-112995

Unalakleet. Gull eggs. Population. Hunting area.
People go after gull eggs. "We like those." There are thousands of seagulls, especially in the fall when they're eating tomcod. People get eggs from the flats, around lakes, at Black Point, Twin Islands, and Tolstoi Point.
CODE[357-126-112995

Unalakleet. Horned puffin. Auklet. Shorebirds.
He sees horned puffins, but is not familiar with auklets. Shorebirds nest around here, but no one hunts them.
CODE[357-126-112995

Unalakleet. Ptarmigan. Population. Spruce grouse. Hunting season.
Ptarmigan are not as plentiful as they used to be but there are still some around. Some spruce grouse are around here. People get them in the fall time.
CODE[357-126-112995

Unalakleet. Sandhill crane. Hunting season. Population.
Lots of cranes around here. They get quite a few. They're good to eat. Hunting cranes mostly takes place in spring but people get them in the fall if they come close enough. Cranes seem to be more plentiful now than in the past.
CODE[357-126-112995

Unalakleet. Tundra swan. Population. Pintail. Geese. Sandhill crane. Ptarmigan.
Swans seem more plentiful than they used to. He hardly ever gets them but some people get some. Pintails, geese, cranes, and ptarmigan are probably the most common birds in the area.
CODE[357-126-112995

Unalakleet. Hunting methods.
Spring birds fly really high. Since World War II, people don't do too much bird hunting. Not many people have the gift of calling in birds. We used to have some good callers. It's harder and harder to get birds each spring. Maybe too many people around here. He camps all spring.
CODE[357-207-112995

Unalakleet. Hunting season. Customary rules.
When he was young (he is now 75 years old), elders let them hunt for only 2-3 weeks in the spring until the eggs were laid. When he was a boy, they started hunting May 12 or 14, but now people seem to start earlier.
CODE[357-207-112995

Unalakleet. Ecology. Migration. Hunting season. Sandhill crane. Scaup. Shoveler. Brant. Snow geese.
The first geese seen in the spring are usually alone, a "scout" for the main body of birds. The biggest body of birds comes in at break-up. The last big body comes in after break-up; this includes cranes, bluebills (scaup), spoonbills (shoveler), brant, and "big white geese" (snow geese). People in Unalakleet don't hunt the last bunch of birds much because they are doing other, more important things by that time, such as herring and king salmon fishing.
CODE[357-207-112995

Unalakleet. Emperor geese. Hunting methods.
Emperor geese are caught very, very seldom in Unalakleet. They are so wild you can't get close to them. They don't listen to goose calls (store-bought). People don't know how to call them.
CODE[357-207-112995

Unalakleet. Lesser Canada geese. Cackling Canada geese. Seasonality.
People in Unalakleet catch (lesser) Canada geese. The small Canada geese (cacklers) come with the last bunch of birds after break-up. People don't hunt them much because they are busy with something else (herring, king salmon fishing) by then.
CODE[357-207-112995

Unalakleet. Brant. Snow geese.
Very few people in Unalakleet catch brants. They come in with the last bunch of birds after break-up. Snow geese are very rare.
CODE[357-207-112995

Unalakleet. Hunting season. Molting. Ecology. Food practices.
People in Unalakleet use ducks in spring for a change of diet. No one hunts ducks or geese in the summer. They don't bother with summer birds. Something in the meat after nesting and mating makes the meat no good, like mucous. Little feathers are coming in, too, and make them hard to pluck. Any kind of animal giving birth in the spring is no good for eating after birth. That's why fish come at that time. He doesn't know how long it will be that way; everything seems to be changing. Lots of changes in the weather now. Even the tides. For the first time in his life, he ran into a high tide with a north wind and fell through the river ice.
CODE[357-207-112995

Unalakleet. Eider. Food practices. Seasonality.
They used to catch quite a number of eiders in Unalakleet. But now a better diet is available to eat so people don't bother with eiders. Eiders smell like seal and ugruk. Eiders arrive in the middle part of May, once in awhile they see them in the first part of May while ugruk hunting. He thinks people further south get eiders.
CODE[357-207-112995

Unalakleet. Loon. Loon eggs.
People don't eat loons. Some people eat loon eggs but not too often in Unalakleet. When he was young and reindeer herding he used to eat loon eggs while traveling and camping.
CODE[357-207-112995

Unalakleet. Mallard. Pintail. Hunting season. Preservation. Migration.
People in Unalakleet mostly catch mallards and "sprigs" (pintails). They arrive the first part of May. For the first 3 or 4 days after they arrive, they're good to eat. After that they get skinny and people don't bother with them. Sometimes they see a few ducks in April but that is too early to hunt them. Ducks are at inland springs and melting lakes and the snow is too soft to travel on. People usually eat ducks fresh. They very seldom freeze them. It is too much work to pluck a lot for the freezer. He hasn't hunted birds since his wife died. Only when he is out hunting, he will drop one and eat it.
CODE[357-207-112995

Unalakleet. Hunting season. Harvest levels. Ecology. Hunting areas.
Some people in Unalakleet hunt waterfowl in the fall. But hunting is not too good around here. Gas costs $2.50 a gallon. You have to go to Shaktoolik to hunt in the fall. You come home with 2 or 3 cranes. It's not worth it. It doesn't pay anymore. It's better to buy gas to hunt moose, not ducks. When he was a boy, they never used to have moose, caribou, or king salmon in Unalakleet. In those days, they used to get lots of birds. Now they don't use as many birds. CODE[357-207-112995

Unalakleet. Eggs. Seagull eggs.
People once in awhile get eggs south of Unalakleet when they're out looking for greens or benders for sleds. It used to be women who picked greens would boil eggs if they saw them. But not many people get eggs or greens anymore. Maybe people go 2 or 3 nights a year for seagull eggs. Go out once and don't go out again. If you indulge in that too much then you have to pay the consequences later.
CODE[357-207-112995

Unalakleet. Hunting season.
Spring bird hunting is over by the end of May. At that time people are herring fishing and in June are king salmon fishing. Unless someone has nothing else to eat, they don't bother with birds.
CODE[357-207-112995

Unalakleet. Tundra swan. Migration. Eggs. Population.
There are lots of swans around Unalakleet. Once in awhile he sees someone drop one. He wouldn't shoot one now because he wouldn't want to pack it out at 75 years old. They're not that good to eat. When out hunting, he will drop one if he needs to, eat some of it, and bring the rest home. Swans arrive with the first bunch of birds. They seem to be traveling all spring. They come in two by two or four by four, not in big flocks. They only come in big flocks in the fall with their young. Swans lay their eggs at the foot of the hills where it is hard for people to walk. In the fall they fly too high to catch.
CODE[357-207-112995

Unalakleet. Sandhill crane. Seasonality. Migration.
Cranes pass by in the spring and fall. In the fall time, most of them are too high. At that time (September), people are busy fishing for dried fish. There are too many bears now and you can no longer camp on the river and dry fish. Bears come and eat the fish. Bears don't stop for nothing. He brings the fish home to dry but some people can't afford the gas to make trips back and forth to camp.
CODE[357-207-112995

Bird Harvests in Wales, January through December 1994

Results of a cooperative project by Kawerak, Inc.
and the Division of Subsistence, Alaska Department of Fish and Game,
and the U.S. National Park Service
funded by the U.S. National Park Service
June 1996

Introduction

Birds are important to families in northwest Alaska. They are an important part of the culture and traditional way of life of Alaska Natives. Birds and bird eggs are eaten for food, and feathers are used in hand-crafted items. This report presents information on bird harvests in Wales in 1995. The information results from a cooperative project in 1995-96.

The Project

Several groups worked together on the project to gather information on birds at Wales. The Wales IRA Tribal Council approved the project by resolution on November 1994. A survey of households was done by Division of Subsistence staff together with local researchers hired and supervised by Kawerak, Inc. The project was designed by the Division of Subsistence, Alaska Department of Fish and Game, in cooperation with the U.S. National Park Service. Money for the project came from the U.S. National Park Service.

How the Information Was Collected

A survey was used to gather information on bird harvests. Surveys were done in 42 randomly selected households of a total of 50 households (84.0 percent) in Wales. Surveys were done between December 8, 1994 and December 14, 1994 in Wales. On the survey, people were asked about bird hunting during the 12-month period, January through December 1994. Participation in the surveys was voluntary. To protect confidentiality, no person's name is used in any reports of the information.

Findings

Households in Wales reported the following things about their use of birds in 1995:

- Fewer than half of the households (42.9 percent) had members that hunted birds. Households which hunted in the study period (42.9 percent) reported harvesting birds (Fig. 4).

- Almost two-thirds of all households (59.5 percent) used birds (Fig. 4).

- Sharing of birds was practiced, with 23.8 percent of households giving birds to others and 38.1 percent of all households receiving birds from other households (Fig. 4).

- At least 19 kinds of birds were caught including: ptarmigan, black brant, king eiders, common eiders, oldsquaws, northern pintails, auklets, sandhill cranes, emperor geese, Canada geese, snow geese, shovelers, tundra swans, snowy owls, American wigeon, white-fronted geese, loon, and greater scaup. (Table 1).

- At least 11 kinds of eggs were gathered including: murre, gull, auklet, crane, swan, northern pintail, oldsquaw, common eider, and king eider. (Table 1).

- An estimated 699 birds were caught by households in Wales in the 12-month period December 1993 through December 1994. Bird harvests fell into the following general categories: ducks (43.3 percent), geese (23.5 percent), upland game birds (19.1 percent) seabirds (8.7 percent), cranes (3.7 percent), swans (1.0 percent), and owls (0.7 percent) (Fig.).

- The five kinds of birds caught in greatest numbers in 1995 were ptarmigan (133 birds), black brant (130 birds), king eider (76 birds), oldsquaw (69 birds), common eider (68 birds) (Table 1).

- An estimated 1,125 eggs were gathered by households in Wales in 1994. Most eggs were from murres (588 eggs), gulls (452), auklets (60 eggs), unspecified ducks (10 eggs), sandhill cranes (5 eggs) and tundra swans (5 eggs). (Table 1).

- Egg harvests fell into the following general categories: seabirds (97.9 percent), ducks (1.2 percent), cranes (0.4 percent), and swans (0.4 percent) (Fig 2).

- Birds were taken in spring (53.1 percent), fall (23.7 percent), and winter (1.0 percent). Season of harvest was unknown for 22.2 percent of the harvest (Fig. 3).

- The classifications of Canada geese harvests into "tackling Canada" or "lesser Canada" by hunters are uncertain because of the close resemblance of the two species and the difficulties distinguishing them in the colored bird guide used in the survey.

- Local distinctions between bird species did not always correspond with western scientific distinctions shown in the bird guide. In addition, hunters typically identify birds by their sound, behavior, and habitat, as well as by their looks. Both these led to uncertainty about the identity of a few of the species harvested.

- A few hunters may have underreported their harvests of some bird species in fear of enforcement consequences despite assurances that the information was confidential.

Computerized Data Files
This information is available as computer files from the Division of Subsistence, Alaska Department of Fish and Game, Box 3-2000, Juneau, Alaska 99802 (907-465-4147).

Acknowledgments
A sincere thank-you is given to all households and hunting experts who generously volunteered to be surveyed or interviewed for this project. Thanks is given to Frank Oxereok and Emma Weyapuk of Wales who conducted surveys, and to Jim Magdanz and Clarence Alexander of the Division of Subsistence, ADF&G, who trained surveyors, conducted household surveys, and analyzed data; and to the Wales IRA Tribal Council, who supported the project.

WALES
Bird Harvests, December 1993 - November 1994[1]

Bird Species		Total Harvests		Bird Harvest By Season[2]				
		Birds	Eggs	Winter	Spring	Summer	Fall	Unknown
Geese	White-fronted Geese	2			1		1	
	Emperor Geese	13			6		7	
	Cackling Canada Geese							
	Lesser Canada Geese							
	Canada Geese Unknown	11			4		7	
	Snow Geese	8			2		6	
	Black Brant	130			61		69	
	Unknown Geese							
Ducks	Northern Pintail	73	1		56		17	
	American Wigeon	5			5			
	Mallard							
	Northern Shoveler	7			7			
	Greater Scaup	1					1	
	Lesser Scaup							
	Unknown Scaup							
	Canvasback							
	Green-winged Teal							
	Common Merganser							
	Red-breasted Merganser							
	Unknown Merganser							
	Bufflehead							
	Harlequin							
	Oldsquaw	69	1				27	42
	Common Goldeneye							
	Black Scoter							
	Surf Scoter							
	White-winged Scoter							
	Unknown Scoter							
	Common Eider	68	1		42			26
	King Eider	76	1		57		2	17
	Spectacled Eider	3			1			2
	Steller's Eider							
	Unknown Eider							
	Ducks Unknown		10					
Seabirds	Cormorant							
Seabirds	Common Loon							
	Arctic Loon							
	Red-throated Loon							
	Yellow-billed Loon							
	Unknown Loon		1		1			
	Common Murre							
	Thick-billed Murre							
	Unknown Murre		588					
	Black Guillemot							
	Sabine's Gull							
	Mew Gull							
	Glaucous Gull							
	Herring Gull							
	Unknown Gull		452					
	Arctic Tern							
	Auklets	48	60					48
	Puffins							
	Unknown Seabird	12						12
	Unknown Migratory Bird							
Shorebirds	Plover							
	Common Snipe							
	Other Shorebirds							
Game Birds	Ptarmigan	133		7	124			2
	Grouse							
Snowy Owl		5					5	
Sandhill Crane		27	5		4		23	
Tundra Swan		7	5				1	6

[1] Based on a census survey of 42 of 50 households, expanded to all households. Data were collected by a local researcher on contract with Kawerak, through cooperative agreements between ADFG, Division of Subsistence, Kawerak, and USNPS. Research was approved by resolution of the Wales IRA Council. Project funded by USNPS.
[2] Winter=Nov, Dec, Jan, Feb; Spring=Mar, Apr, May; Summer = Jun, Jul; Fall=Aug, Sep, Oct

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

WALES
Bird Harvest Patterns
December 1993 - November 1994

Fig. 1

Wales Bird Harvests December 1993 - November 1994, by Bird Type

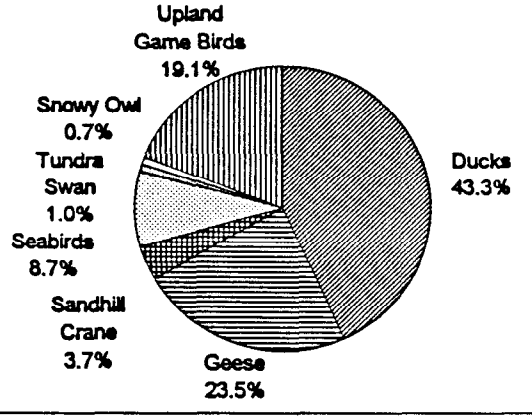


Fig. 2

Wales Egg Harvests December 1993 - November 1994, by Bird Type

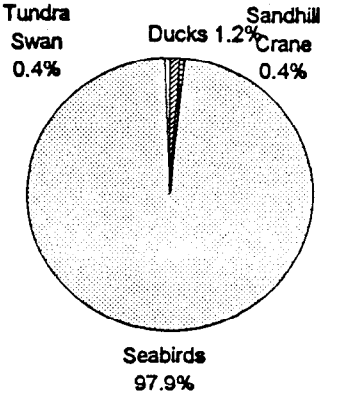


Fig. 3

Wales Bird Harvests, December 1993 - November 1994, by Season

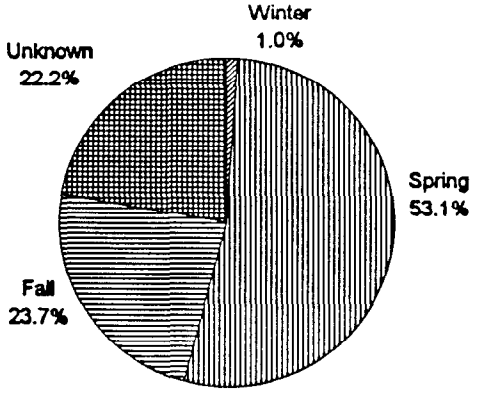
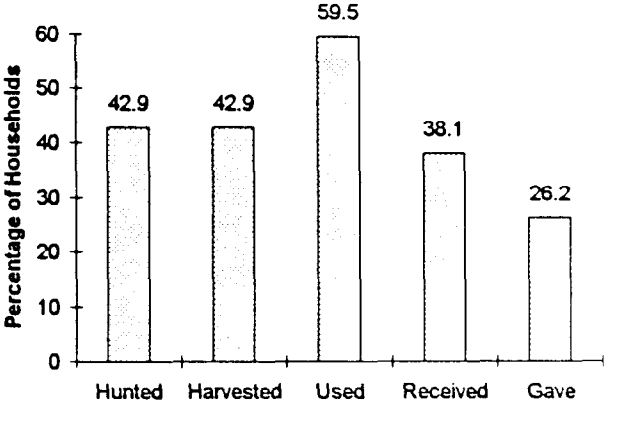


Fig. 4

Percentage of Wales Households that Hunted, Harvested, Used, Received, or Gave Birds, 1994



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1995

Bird Harvests in White Mountain, January through December 1995

Results of a cooperative project by Kawerak, Inc.
and the Division of Subsistence, Alaska Department of Fish and Game,
funded by the U.S. Fish and Wildlife Service
June 1996

Introduction

Birds are important to families in northwest Alaska. They are an important part of the culture and traditional way of life of Alaska Natives. Birds and bird eggs are eaten for food, and feathers are used in hand-crafted items. This report presents information on bird harvests in White Mountain in 1995. The information results from a cooperative project in 1995-96.

The Project

Several groups worked together on the project to gather information on birds at White Mountain. A harvest survey was approved and initiated in late 1994, but never completed. The White Mountain IRA Tribal Council re-approved the project by resolution on November 3, 1995. A survey of households was done by a local researcher hired and supervised by Kawerak, Inc. The project was designed by the Division of Subsistence, Alaska Department of Fish and Game, who also put the information into tables and into this report. Money for the project came from the U.S. Fish and Wildlife Service. Preliminary results were reviewed by Kawerak and the Division of Subsistence, ADF&G.

How the Information Was Collected

A survey was used to gather information on bird harvests. Surveys were done in 29 randomly selected households of a total of 67 households (43.3 percent) in White Mountain. In addition, a total of five bird experts from White Mountain were interviewed about bird ecology and traditional uses of birds during the previous (1994) study and the current research effort. Surveys were done between January 18 and March 8, 1996 in White Mountain. On the survey, people were asked about bird hunting during the 12-month period, January 1995 through December 1995. Participation in the surveys was voluntary. To protect confidentiality, no person's name is used in any reports of the information.

Findings

Households in White Mountain reported the following things about their use of birds in 1995:

- Nearly all households (93.1 percent) had members that hunted birds. Slightly fewer households (89.7 percent) harvested birds (Fig. 4).
- Almost all households (96.6 percent) used birds (Fig. 4).
- Sharing of birds was common, with 62.1 percent of households giving birds to others and 27.6 percent of all households receiving birds from other households (Fig. 4).
- At least 17 kinds of birds were caught including: white-fronted geese, cackling Canada geese, lesser Canada geese, black brant, northern pintail, American widgeon, mallard, northern shoveler, lesser scaup, canvasback, green-winged teal, glaucous gull, willow ptarmigan, rock ptarmigan, grouse, sandhill crane, and tundra swan (Table 1).
- At least 9 kinds of eggs were gathered including: cackling Canada geese, lesser Canada geese, northern pintail, common eider, common murre, glaucous gull, herring gull, sandhill crane and tundra swan. (Table 1).

- An estimated 3,006 birds were caught by households in White Mountain in 1995. Hunters reported that fewer snow geese and black brant passed through the area in 1995 than in previous years. Bird harvests fell into the following general categories: geese (42.4 percent), ducks (27.7 percent), upland game birds 25.7 percent) cranes (3.0 percent), swans (0.9 percent), and seabirds (0.2 percent) (Fig.).

- The five kinds of birds caught in greatest numbers in 1995 were black brant (866 birds), willow ptarmigan (568 birds), northern pintail (545 birds), lesser Canada geese (370 birds), and grouse (159 birds) (Table 1).

- An estimated 2,253 eggs were gathered by households in White Mountain in 1995. Most eggs were from glaucous gulls (982 eggs), common murre (716 eggs), and herring gulls (162 eggs) (Table 1).

- Egg harvests fell into the following general categories: seabirds (82.6 percent), ducks (8.0 percent), geese (5.1 percent), cranes (2.9 percent), and swans (1.4 percent) (Fig 2).

- Birds were taken in spring (51.2 percent), fall (28.2 percent), winter (20.1 percent), and summer (0.2 percent). Season of harvest was unknown for 0.2 percent of the harvest (Fig. 3).

- The classifications of Canada geese harvests into "cackling Canada" or "lesser Canada" by hunters are uncertain because of the close resemblance of the two species and the difficulties distinguishing them in the colored bird guide used in the survey. Interviewed expert hunters in White Mountain, however, reported that cackling Canada geese occur in the local area, although not in great numbers.

- Local distinctions between bird species did not always correspond with western scientific distinctions shown in the bird guide. In addition, hunters typically identify birds by their sound, behavior, and habitat, as well as by their looks. Both these led to uncertainty about the identity of a few of the species harvested.

- A few hunters may have underreported their harvests of some bird species in fear of enforcement consequences despite assurances that the information was confidential.

- 1994 and 1996 Information from interviewed hunters about birds in the White Mountain area is attached as an appendix.

Computerized Data Files

This information is available as computer files from the Division of Subsistence, Alaska Department of Fish and Game, Box 3-2000, Juneau, Alaska 99802 (907-465-4147).

Acknowledgments

A sincere thank-you is given to all households and hunting experts who generously volunteered to be surveyed or interviewed for this project. A special thanks is given to Sandy Iknokinok of Kawerak, who obtained IRA approvals, hired community assistants, and supervised data collection; Don Ione of White Mountain, who conducted the household surveys; David Andersen and Susan Georgette of the Division of Subsistence, ADF&G, who trained surveyors, interviewed hunters, and analyzed data; and the White Mountain IRA Tribal Council, who supported the project.

Table 1. WHITE MOUNTAIN
Bird Harvests, January 1995 - December 1995[1]

Bird Species		Total Harvests		Bird Harvest By Season[2]				
		Birds	Eggs	Winter	Spring	Summer	Fall	nknown
Geese	White-fronted Geese	7			5		2	
	Emperor Geese							
	Cackling Canada Geese	28	25		28			
	Lesser Canada Geese	370	90		206		164	
	Canada Geese Unknown	2			2			
	Snow Geese							
	Black Brant	866			866			
	Unknown Geese							
Ducks	Northern Pintail	545	92		275		270	
	American Wigeon	35					35	
	Mallard	104			18		85	
	Northern Shoveler	58			25		32	
	Greater Scaup							
	Lesser Scaup	9					9	
	Canvasback	12			5		7	
	Green-winged Teal	53			14		39	
	Common Merganser							
	Red-breasted Merganser							
	Bufflehead							
	Harlequin							
	Oldsquaw							
	Common Goldeneye							
	Black Scoter							
	Surf Scoter							
	White-winged Scoter							
	Common Eider		88					
	King Eider							
	Spectacled Eider							
	Steller's Eider							
	Ducks Unknown	18			18			
Seabirds	Cormorant							
	Common Loon							
	Arctic Loon							
	Red-throated Loon							
	Yellow-billed Loon							
	Common Murre		716					
	Thick-billed Murre							
	Unknown Murre							
	Black Guillemot							
	Sabine's Gull							
	Mew Gull							
	Glaucous Gull	7	982			7		
	Herring Gull		162					
	Unknown Gull							
	Arctic Tern							
	Auklets							
	Puffins							
	Unknown Seabird							
Shorebirds	Plover							
	Common Snipe							
	Other Shorebirds							
Game Birds	Willow Ptarmigan	568		559	9			
	Rock Ptarmigan	46		46				
	Grouse	159			18		141	
Snowy Owl								
Sandhill Crane		90	65		39		44	7
Tundra Swan		28	32		9		18	

[1] Based on a random survey of 29 of 67 households, expanded to all households. Data were collected by a local researcher on contract with Kawerak, through cooperative agreements between ADFG, Division of Subsistence, Kawerak, and USFWS. Research was approved by resolution of the White Mountain IRA Tribal Council. Project funded by USFWS.

[2] Winter=Nov, Dec, Jan, Feb; Spring=Mar, Apr, May; Summer = Jun, Jul; Fall=Aug, Sep, Oct

SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

WHITE MOUNTAIN
Bird Harvest Patterns
January 1995 - December 1995

Fig. 1 **White Mountain Bird Harvests, January 1995 - December 1995, by Bird Type**

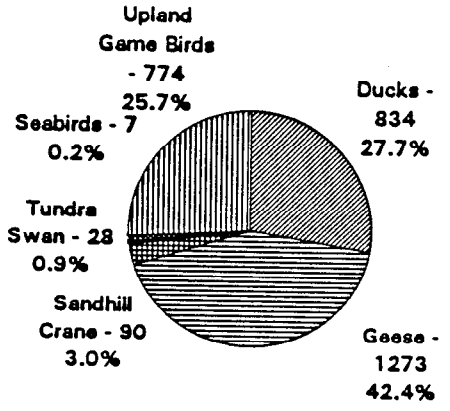


Fig. 2 **White Mountain Egg Harvests, January 1995 - December 1995, by Bird Type**

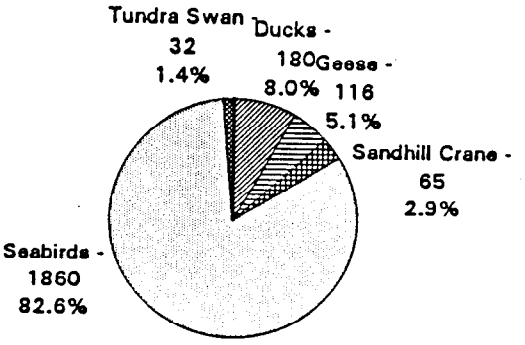


Fig. 3 **White Mountain Bird Harvests, January 1995 - December 1995, by Season**

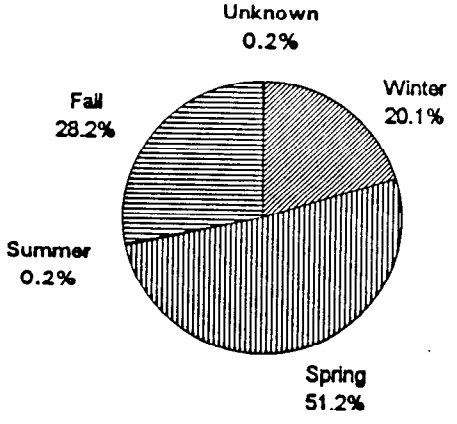
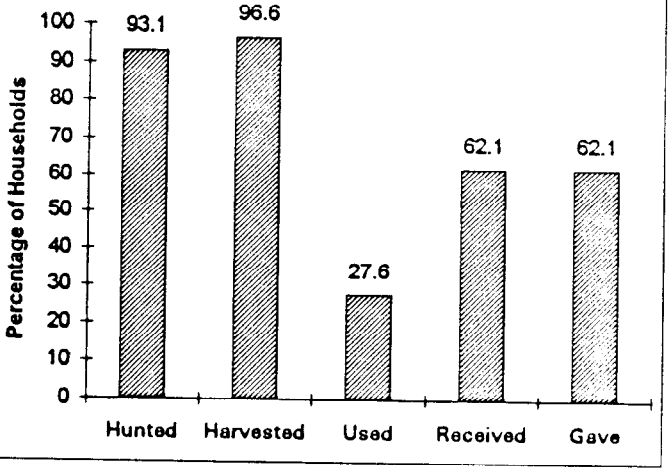


Fig. 4 **Percentage of White Mt. Households that Hunted, Harvested, Used, Received, Gave Birds, 1995**



SOURCE: Alaska Department of Fish and Game, Division of Subsistence, and Kawerak, Household Survey, 1996.

Migratory Bird Project
White Mountain Key Respondent Notes
Researchers: Dave Andersen and Susan Georgette

White Mountain. White-fronted geese. Canada geese. Cackling Canada geese. Emperor geese. Snow geese. Eggs.
We get yellow-foots (white-front) and Canada geese. We get both cackling and lesser Canadas. We get all these geese (on the bird chart) except emperors. We never see emperors. We get snow geese every once in awhile. This year I saw 18 in one flock in the fall. That's all I saw. I've never seen snow goose eggs.
CODE[367-15-011896

White Mountain. White-fronted geese. Nesting area.
White-fronted geese we see mostly in the spring passing through. Very few nest here. They pass by in twos and threes. I've never seen them in a flock. They arrive early in the spring. They eat berries in the fall and in the spring if they find them.
CODE[367-15-011896

White Mountain. Black brant. Eggs. Migration.
Brants pass through here. I've never seen brant eggs before. But if they get crippled or hurt, they will lay their eggs here if they survive. Brants come after ice break-up. We have two kinds of brant, big ones and small ones. The small ones come first, then the big ones. Brants eat roots on the mudflats.
CODE[367-15-011896

White Mountain. Pintail. Mallard. Shoveler. Canvasback. Green-winged teal. Nesting area.
Pintails are here. We call them sprigs. We have mallards, shovelers, canvasback (wigeon?), teal. We see all of these in spring and in fall. Pintails nest in short willows. Mallards nest anywhere. Canvasbacks (wigeons?) nest in flats in Reindeer Slough area off Golovin Bay. Pintails and mallards eat small tufts of grass just starting to grow. Teal are tough little birds. They keep flying through shotgun pellets.
CODE[367-15-011896

White Mountain. Oldsquaw.
We have oldsquaws. We see them on lakes. But we don't hunt them. I don't know what they eat. We only see them in spring and summer.
CODE[367-15-011896

White Mountain. Seasonality. Ducks. Hunting conditions.
Ducks are hunted in both spring and fall. But people get out more in the fall. The birds are nice and fat in fall after eating all summer. In spring, it's hard to get around. Water is around the edges, the snow is soft, it's easy to get stuck. By the time you can get around, the eggs are laid.
CODE[367-15-011896

White Mountain. Merganser. Seasonality.
We don't really pay attention to fish ducks (mergansers). We call them sawbills. Fish ducks lay eggs on gravel. They seem to be the last to leave in the fall.
CODE[367-15-011896

White Mountain. Common eider. Population levels.
We have common eiders. We just call them "eider ducks." We see more and more of them. We never see any of the other eiders. Eiders eat sweet roots.
CODE[367-15-011896

White Mountain. Sandhill crane. Eggs. Eider. Gull eggs. Seasonality.

The first ones to lay eggs here are the cranes, when the snow is still on the ground. You can go out on a sno-go early in the morning and see cranes on the dark patches of tundra. Eider ducks nest late, beginning or middle of June, depending on the weather. When the gull eggs are good, the crane eggs already have young. When the gull eggs have young, the eider eggs are ready.
CODE[367-15-011896

White Mountain. Arctic loon. Common loon. Nesting area.
We have arctic loons and common loons. They eat fish. There is only one loon nest per lake and it's hard to find the eggs. You're lucky if you find four or five nests per summer.
CODE[367-15-011896

White Mountain. Murre. Eggs.
Murres sometimes come into the river after a storm. Just one or two of them. Mostly they're found on the coast. I don't know which kind of murre. People go down on the coast to get eggs.
CODE[367-15-011896

White Mountain. Gull. Mew gull. Glaucous gull.
We have black-winged gulls here (herring gulls?). They're big but it's really dark along the edge of their wings. I've never seen this all white one (glaucous gull). We have mew gulls and another small gull that dives at you when you go near the nest.
CODE[367-15-011896

White Mountain. Puffin. Eggs. Murre. Hunting area.
We have some puffins here. We see them out on the coast on cliffs. People sometimes get their eggs, but mostly they're after murre eggs. Puffins eat little fish. People go to the mouth of the bay, to Square Rock, or to Bluff if the water is calm for cliff eggs.
CODE[367-15-011896

White Mountain. Scoter.
Scoters are fat all year. We call them whistlers. I think it's the white-winged scoter. I don't know what they eat. We see them in the river, mostly just inside the tree line. We call them "butterballs" because they're fat all the time.
CODE[367-15-011896

White Mountain. Shoveler.
There's a little shellfish we call "toe-biter." They look like they can bite. They crawl around in the mud. We've seen them in shovelers' bellies.
CODE[367-15-011896

White Mountain. Auklet.
I don't know about auklets. We have some kind of auklet but I don't know which kind. They probably stay on the coast.
CODE[367-15-011896

White Mountain. Arctic tern. Eggs. Plover. Snipe.
We leave terns alone. We don't eat their eggs. We see all these plovers and snipes, but people don't use them. Snipe eat bugs and water beetles. We sometimes mark snipe nests when we're fishing nearby so nobody bothers them.
CODE[367-15-011896

White Mountain. Rock ptarmigan. Willow ptarmigan. Eggs. Seasonality.
We call rock ptarmigan "mountain ptarmigan." The willow ptarmigan are the bigger ones. In the winter you can tell them apart because the mountain ptarmigan have more red and black on their beak. Willow ptarmigan eat soft willow tufts. They lay their eggs in tall grass next to short willows. They have pretty speckled eggs about the size of a small chicken egg. They're a brownish color. The most ptarmigan eggs I've found was 18. You have to hide yourself to find them. Some people take the

eggs but I just find them for the challenge. When the trout are coming down river, we don't bother with ptarmigan eggs. Once their young are old enough, we hunt ptarmigan year-round if we can find them.
CODE[367-15-011896

White Mountain. Spruce grouse. Ecology. Nesting area.
We have grouse here. We hunt them in the fall when they're easier to find. They flock up in the fall and come out on the road to eat pebbles. Flocks usually have five to eight birds. Once in awhile I've seen 20 to 30 in a flock. In spring they're in pairs. They eat berries and spruce needles. I've only found a grouse nest once in my life. They nest on the ground under a tree.
CODE[367-15-011896

White Mountain. Crane. Seasonality.
We have cranes here but not very many. We hunt them in the spring and fall. This kind (sandhill crane) is small and has a different sound. We have another bigger kind that looks something like the sandhill crane. In the past few years, we've seen white cranes with black wings (common cranes?). A couple years ago I saw eight. This spring I saw only two white cranes with the regular cranes. We see them only in the spring. We never see them come back in the fall. They must fly a different route in the fall.
CODE[367-15-011896

White Mountain. Curlew.
We have curlews, too. They're not on this chart. Every once in awhile people shoot them and roast them. We see them in both the fall and spring. Mostly people shoot them in the fall. They arrive right along with the ducks. They're a big bird with a bent beak. I've never found a curlew nest.
CODE[367-15-011896

White Mountain. Tundra swan. Nesting area.
Swans nest here. The most I've found was 24 nests in one day. They congregate on an island at the head of the bay that has a lot of deep little lakes with humps. The bay ice was still here. Brants were just showing up. People hunt swans.
CODE[367-15-011896

White Mountain. Snowy owl. Ecology.
Snowy owls lay eggs on the ground. We usually see them across the river on small hills with willows on top. They eat mice, small birds, and rabbits if they can get them. You can see tracks of mice in the snow and where the owl got them. I've caught a few snowy owls. My grandma used to roast them. They have light and dark meat, like little turkeys.
CODE[367-15-011896

White Mountain. Seasonality. Black brant. Ducks. Geese.
Most bird hunting takes place in both the spring and the fall. Brants are the only ones only here in the springtime. We don't see them in the fall. All the others are hunted in the spring and the fall. Only once we got brant in July. There was a flock of 13 that had got crippled or hurt. I've never heard of hunting ducks in summer. When I was a teenager, we used to catch molting geese and hold them just to see if we could do it.
CODE[367-15-011896

White Mountain. Hunting methods. Feeding area.
In the spring, we use decoys to hunt. In the fall, cranes and geese go up to the tundra to eat berries. When the tide goes out, they go to the flats to eat roots. Early morning, 5 am, and evening when the sun sets they fly to the bay from the edge of the tundra. We hide in certain places where they pass by. They can show up anywhere in the fall time. Sometimes you see them when you're picking berries. They eat blackberries and other berries. Mostly we see their droppings around blackberry patches.
CODE[367-15-011896

White Mountain. Sandhill crane. Population levels.
Cranes are starting to come back (in number). Last year and the year before, there weren't too many. But this year there were quite a few. They were landing here this year. In good weather, they sometimes just fly by. Usually we have Nome people who come to hunt ducks but this year we had hardly any. They said there was better hunting on Solomon flats.
CODE[367-15-011896

White Mountain. Population levels. Geese. Ducks. Swan.
There were quite a bit of geese and ducks this spring and fall. They were taking off in clouds. Lots of swans too. Seems like some years have a lot of ducks and some years don't, depending on the weather.
CODE[367-15-011896

White Mountain. Feathers. Non-food products.
Some people use the down from birds, but not too many anymore. Ten or fifteen years ago more people did. My grandma used to save down from all the ducks we brought home. After she washed our jackets, she'd open a hole and put more down in. Wings are sometimes used for dusters and brooms.
CODE[367-15-011896

White Mountain. Customary rules. Seasonality.
My grandma used to tell us to quit hunting ducks at the beginning of summer when they have their young. When birds are caught too early in fall, they have lots of pin feathers and they're skinny. We hunt ducks in the fall after someone tells us they caught a lot without too many pin feathers. My grandma used to tell us not to shoot any more fish ducks because they're too fishy.
CODE[367-15-011896

White Mountain. Black brant. Processing / Preservation. Harvest levels.
People eat ducks fresh and freeze them. Mostly brants get frozen. Some people catch 70 or 80 of them in a day in spring. That's a lot to pluck. People roast birds or make them in to soup.
CODE[367-15-011896

White Mountain. Cackling Canada geese. Lesser Canada geese.
Cackling Canada geese are the small, fast ones. The lesser Canadas are the slow, easy targets. Cacklers have a higher call. Cacklers are usually in smaller flocks but also mix together with the big ones. When you bump into the cacklers, they're meaner and braver than the big Canadas.
CODE[367-15-011896

White Mountain. White-fronted geese. Canada geese. Emperor geese.
Population levels. We have very few yellow-legs (white-fronts), not like the 1940s. I don't know why they declined. Maybe because of the farmers in the southern states. Canada honkers are plentiful. We hardly see emperors here. They stay around the Aleutians year-round. I saw them at Shemya when I was in the military. All these geese (on the bird chart) migrate through here except the emperors.
CODE[367-39-011896

White Mountain. Black brant. Nesting area. Snow geese. Population levels.
Brant are better (more numerous) now than four years ago. They nest up by Shishmaref. Very few nest around Golovin Bay. Snow geese are fairly the same in number. They don't come through here much. They migrate to Siberia.
CODE[367-39-011896

White Mountain. Cackling Canada geese.
We don't have very many cacklers (cackling Canada geese). Once in a great while they come around. Some are down near Dillingham.
CODE[367-39-011896

White Mountain. Canada geese. White-fronted geese. Nesting area. Black brant. Taste preference.
Canadas nest here. I don't know where the yellow-legs (white-fronts) nest. Brant and yellow-legs are good eating, better than Canadas.
CODE[367-39-011896

White Mountain. Pintails. Nesting area. Canvasbacks. Wigeon. Scaup. Green-winged teal. Mallards. Shovelers. Population levels.
Sprigs (pintails) are plentiful. They nest inside the woods or along lakes. Canvasbacks are increasing quite a bit. The canvasbacks we have here don't have red heads. They look more like these (wigeons). Bluebills (lesser scaup) and teal are plentiful. Mallards and spoonbills (shovelers) are increasing quite a bit.
CODE[367-39-011896

White Mountain. Red-breasted merganser. Taste preference.
Sawbills (mergansers) are plentiful. We have the red-breasted merganser. We have two different kinds of sawbills here, the bigger ones and the smaller ones. The common merganser might be the big one, as big as loons. People don't eat sawbills too much. They eat too much fish. When you eat fish all summer, they taste too much like fish to want to eat. They're a different meat all right but if you have a choice you get another kind of bird.
CODE[367-39-011896

White Mountain. Oldsquaw. Harlequin. Bufflehead. Goldeneye.
Oldsquaws are plentiful. We see harlequins in the river. We don't hunt them much. They nest along the river. We never see bufflehead or goldeneye.
CODE[367-39-011896

White Mountain. Customary rules.
We leave female birds alone all summer while they're nesting. We leave males alone, too. They're too lean.
CODE[367-39-011896

White Mountain. Eider. Population levels. Nesting area.
We see common eiders. They are increasing. We don't see other eiders. Some eiders nest in the creeks and sloughs.
CODE[367-39-011896

White Mountain. Black scoter. White-winged scoter. Surf scoter. Population levels.
We see black scoters and white-winged scoters once in awhile. Not surf scoters. Black scoters are getting plentiful, the ones with the yellow beak. We call them "whistlers."
CODE[367-39-011896

White Mountain. Loons. Skin. Non-food products.
We have lots of loons. We have some king loons here but not too many. All those loons are just loons to me, but we have four or five different sizes of loons here. People don't bother loons unless they want to make a waterproof shell-bag out of the breast skin. They dry the meat then, they don't waste it.
CODE[367-39-011896

White Mountain. Gulls. Sabine's gulls. Glaucous gulls. Mew gulls.
Seagulls are all over the world as long as scraps are around. We see "blackheads" (Sabine's gulls) quite a bit. We have glaucous gulls, the regular gulls around here. We have mew gulls, the small seagulls. The little ones will take your fish right off your rack.
CODE[367-39-011896

White Mountain. Guillemot. Horned puffin. Murre. Eggs.
We don't see guillemots. We have horned puffins, but we don't see the other kind of puffin. Puffins are mixed in with the murres and lay their eggs on the cliffs.
CODE[367-39-011896

White Mountain. Common snipe. Plover. Golden plover.
and plovers, but we hardly see any golden plovers. People don't eat them. They're too small to pluck.
CODE[367-39-011896

White Mountain. Spruce grouse. Population levels.
We have spruce hens but not as many as the 1940s.
CODE[367-39-011896

White Mountain. Snowy owl.
We have plenty of snowy owls. They're good eating when you have nothing else to eat. We're blessed with having a lot of game to eat.
CODE[367-39-011896

White Mountain. Crane. Tundra swan. Population levels.
We have plenty of cranes and plenty of swans. We see white cranes sometimes; they have them in Japan. The tundra swan pictured might be bigger than the ones we have here. Dillingham has the bigger swans.
CODE[367-39-011896

White Mountain. Black brant. Harvest levels. Use area. Technology. Processing / Preservation. Canada geese.
His dad used to take him hunting for brant on Golovin Bay when he was a boy. They'd go by dogteam, bringing a small kayak with them. They'd make a blind and a cooking and sleeping area, and set up the dogs about half a mile away. If they kept seeing brant flying somewhere else, they would move their camp over there. His dad would get 40, 50, or 60 brant and they'd spend two or three days plucking them. They would split them in half without the wings, head, and guts and salt them in barrels. Or they would put them in an underground cold storage. It wasn't in permafrost but it was cool. Years later, his dad started home-canning brant. He'd can the choicest parts. Then when they'd been eating fish two times a day for a few weeks in summer, they'd have something else to eat. Brant was the most common bird they put away in the spring, but they also put away Canadian geese. Brant were fat and good in the spring.
CODE[367-42-011996

White Mountain. Ptarmigan.
Ptarmigan eat willows and other things. They have rocks in their stomach to grind food, mostly white rocks.
CODE[367-66-011996

White Mountain. Black brant. Feathers. Non-food products.
Brant are good to eat. People mostly eat brant in spring. They are easy to pluck. When you pluck them, the down stays together and doesn't fly all over. I used to save all the down from birds and make my kids parkies.
CODE[367-66-011996

White Mountain. Emperor geese. Ducks.
We used to have emperors around here when I was young. My dad used to catch them. But we haven't seen them now in a long time. There are other ducks I see now that I never used to see when I was young.
CODE[367-66-011996

White Mountain. Common snipe.
People hunt snipe in the fall if there's nothing else to catch. They're small birds.
CODE[367-66-011996

White Mountain. White-fronted geese. Black brant. Canada geese. Cackling Canada geese. White-fronted geese are seen very rarely around here. Black brant and Canada geese are the ones we have the most of. Cackling Canada geese are not common.
CODE[367-66-011996

White Mountain. White-fronted geese. Canada geese. Snow geese. Black brant. Pintail. Scaup. Red-breasted merganser. Oldsquaw. Eider. Loon. Murre. Mew gull. Arctic tern. Golden plover. Snipe. Ptarmigan. Spruce grouse. Snowy owl. Sandhill crane. Tundra swan.
One elder in White Mountain provided Inupiaq names for these birds:

white-fronted goose natchau¦ik;
Canada goose liqliq;
Snow goose ka±uq;
Black brant liqli±naq;
Northern pintail iugaq;
Scaup qaq¦utuuq;
Red-breasted merganser pai;
Gull kuuchiu_ayuk;
Arctic tern ti_itquayaq;
Golden plover quraq-quraq;
Common snipe pikpipiulaq;
Willow ptarmigan a_argiq;
Rock ptarmigan a_ar_iqpiaruk;
Spruce grouse iktuk; Snowy owl ukpik;
Sandhill crane tatirgaq;
Tundra swan qukruk.

CODE[367-66-011996