

REFUGE NARRATIVE REPORT OF

ALEUTIAN ISLANDS NATIONAL WILDLIEE REFUGE AND

IZEMBEK BAY AREA

JZENBEL NATHWAL WINDLIFE RANGE

SEPT- DECEMBER 1960

SPEC COLL NARR AI/INWR Sep-Dec 1960 Will you please sign the two copies for Juneau and Washington and forward directly to the Regional Office, Juneau. The remaining two copies are those requested by you, however, these are incomplete since they do not have the pictures nor NR forms. One complete copy has been retained in the Kenai Office.

6.

US FISH & WILDLIFE SERVICE—ALASKA
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Anchorage, Alaska

REFUGE NARRATIVE REPORT

Merged Will

September - December, 1960

ALEUTIAN ISLANDS NATIONAL WILDLIFE REFUGE
Cold Bay, and Alaska
Izembek Bay Area

U.S. Dept. of the Interior Bureau of Sport Fisheries and Wildlife Fish and Wildlife Service Cold Bay, Alaska

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## ALEUTIAN ISLANDS NATIONAL WILDLIFE REFUGE Cold Bay, Alaska

### NARRATIVE REPORT

September 19, - December 31, 1960

#### I. GENERAL

## A. Weather Conditions.

The weather in and around Cold Bay has been windy with snow, sleet and rain. There were occasional nice days during this period.

The first hard freeze on the larger lakes and on parts of Izembek Bay occurred on November 17th. Below is a chart of the average monthly weather data.

## CLIMATOLOGICAL DATA FOR COLD BAY AREA FROM U.S. WEATHER BUREAU

Temp. Max. Min. Ave.	Sept.	Oct.	Nov.	Dec.
	70	57	18	43
	37	24	11	14
	47.2	40.7	32.8	33.3
Precipit. (in.) Snow & Sleet Total Winds (MPH) Max. Ave. for month	2.92	1.11	8.94	4.75
	0.	2.9	16.3	20.5
	39	16	58	65
	15.0	18.6	22.4	19.4

## B. Water Conditions.

The lakes and streams fluctuated from normal to flood levels in accordance with the weather.

# C. Fires.

No fires were observed or reported.

#### II. WILDLIFE

## A. Waterfowl.

1. Geese. Because I did not arrive in the Cold Bay area until September, the exact time that the waterfowl migration began is not known to me. However, large flocks of brant, lesser Canada, emperor geese, and various ducks were here when I arrived. In fact, this was my first experience

observing such a high concentration of waterfowl in one area. To see the water covered with black brant and to hear thousands of them cackling at one time was an experience I'll never forget.

To my knowledge, there were no great changes in the population of these birds from the time of my arrival until their migration to the south. At almost any time, it was possible to drive out to Grant's Point and count ten to twelve thousand brant in the Bay while looking toward Glen and Operl Islands.

On October 8th, an estimated 25,000 to 30,000 brant were observed during a boat trip from Grant's Point to Moffet Bay. Only a few hundred of these birds were seen in Moffet Bay proper. The land area there is quite level and swampy and seemed to be preferred by cackling, lesser Canada, emperor geese, and various species of ducks. It was in this particular area that the greatest concentration of cackling geese was observed this fall.

A few days later another boat trip was made to Applegate Cove with Mr. Mike Uttecht and an estimated 35,000 to 40,000 brant were observed enroute. Ten thousand (10,000) to 12,000 lesser Canada geese were sighted flying from the inland nearby after feeding on berries in the low rolling hills.

Since the birds were constantly moving while we covered the length of Izembek and Moffet Bay, in a zigzag manner, only an estimate of the total population can be made. It is believed that about 100-125,000 brant, 38-12,000 lesser Canada and cackling geese, and 10-12,000 emperors used the area for resting and feeding.

Snow geese were observed on two different occasions. A single snow goose was sighted flying with a flock of lesser Canada geese; at a later date a flock of fourteen was encountered in the Moffet Bay area.

The only white-fronted goose the author saw this fall was in a hunter's bag.

No bird bands were reported at the station this fall.

An interesting sidelight was noted while checking hunters in the field. One team of Air Force hunters was carrying a spinning rod and spoon with large treble hooks as part of their hunting equipment. They asserted that they had saved with it three geese that had dropped too far out in deep water to be retrieved any other way.

By the end of the first week in November there was quite a noticeable drop in the number of brant. On November 9, brant were observed flying very high and erratically rather than in their usual roller-coaster manner, low over the water. That evening several Gold Bay residents heard flock after flock of geese pass over town. It was the brant!

One week later, the forencen of the 16th, with a crisp 10-mile-per-hour wind blowing from the north-northwest, several large flocks of lesser Canada geese followed a similar pattern.

Izembek Bay looked like a barren birch tree that had lost its autumn splendor, except for the emperor geese and increasing number of incoming diving ducks.

2. Ducks. The largest concentration of game ducks seen this fall were pintails. This concentration near the head of Moffet Bay, estimated at 18,000-20,000 birds, was the largest group seen to take wing at anytime. Similarly, a few days later, a flock of about one-third this size was seen to take wing from a lake adjacent to Applegate Cove. Just when these birds came into and moved out of Izembek Bay is not know. It has been established that some pintails and mallards stay in the Cold Bay area and surrounding islands all winter. Although they appeared the most abundant of the puddle ducks they did not make up the bulk of the hunters' bag success.

On the basis of 132 Air Force duck hunters, mallards made up 32% of the take, pintails 29%, gadwall 21%, with green-winged teal, widgeon, scaup, harlequin, and shovelers the remaining portion. In goose hunting, emperor geese made up 73% of the take.

One male canvasback duck was taken by a local hunter from a flock of seven or eight. It was the only observation made of this species for the season.

Starting the middle of November, there was a great influx of Steller's, Pacific, and king eiders as well as old squaw and harlequin ducks in the bays. During the next few weeks their breeding plumages became conspicuous.

3. Swans. Swans were noted in family groups throughout the fall. A lake near Trout Creek, just outside town, apparently had food to their liking. It was a rare occasion when one could not see three to five adults and cygnets gliding gracefully through the water or feeding at the far end of the lake. Nineteen swans were counted on one occasion. The last observation of swans was made on October 19, shortly before the small lakes froze.

# B. Upland Game Birds.

Hunters were afforded good ptarmigan hunting during most of September, after which flocks began to form and become warier as they obtained their winter plumage. Two flocks, about 10 and 65 each, were observed near the base of Frosty Peak and Bear Creek on October 16. A distant fleeting glance of a large flock was seen in the rolling hills near Applegate Cove on November 10.

# C. Big Game Animals.

1. Brown Bear. Eleven brown bears were known to have been taken by hunters in the area this season. They ranged from cubs of the year to

seven and one-half footers. In the early part of the season, most of them were seen along the streams where spawned-out salmon were plentiful. Later they moved to the beaches and sloughs looking for food.

Eight bears, a sow with two cubs, a sow with three cubs and two singles, were counted from Outpost Number Three, a point on the narrow strip of land running between Izembek and Cold Bay, on October 19.

The "granddaddy-of-bears" was spotted feeding on a dead whale between Moffet Point and Cape Leontovitch. An old time guide, present at the time, said it was well over an eleven-foot bear. Some tracks in the sand measured twelve inches wide and eighteen inches long--thats a lot of bear foot!

Only one bear damage problem was reported during this period. A young bear did minor damage to a turbo-jet boat that was left beached over night near the mouth of Russell Creek. Twelve bear permits were issued for Unimak Island. Two bear hunters reported they had spent eighteen days on the Island and saw only one bear.

2. Caribou. Caribou were very scarce around Cold Bay this year. Two were sighted on the slopes above Moffet Bay. Three were reported as being seen near the Outer Marker and two singles between Frosty Peak and Baldy. One, near Frosty, was the only one taken by a hunter.

## D. Other Mammals.

An aerial sea otter survey was conducted in the Shumagin Islands around Simeonof and Little Koniuji on November 15. The weather was quite good that day. A light overcast allowed us to see some depth into the sea, thus enabling us to count the animals that dove ahead of us. Two other observers and I counted 28 sea otters around Simeonof and 110 around Little Koniuji. Several years ago the population was higher. Research is required to determine the reason for the smaller population. Whether this is due to an inadequate food supply or a general migration is not now known.

A single sea otter was observed approximately one-half mile from Grant's Point in Izembek Bay on October 13.

Damage was done to the FAA relay cable, coated with plastic, near the Outer Marker by either cub bears or wolverines. Nearly one mile of cable had to be replaced and other small sections spliced. The cable was then buried, as recommended by the Denver Research Laboratory, to prevent further damage.

A female fur seal took the limelight in Cold Bay on November 20. She was found by two FAA Personnel while crossing overland from Izembek Bay to Cold Bay, a land distance of approximately three miles. After being kept as houseguest for three days—watching her flamboyant ways—her weight and measurements were taken, and then released in Cold Bay.

Because of the low fur prices only two part-time trappers made a few mink sets. They reported trapping as being very poor because of the freezing conditions and water fluctuations.

## E. Fish.

Silver salmon fishing using spinning gear was very good until the first part of October in Frosty, Russell, and Trout Creeks. As late as November 3rd, a few silvers were observed in Bear Creek.

Dolly Varden fishing remained good until the weather chilled the fishermen to the point where more enjoyment could be had by talking about the favorite spots around the fireside.

### III. REFUGE DEVELOPMENT AND MAINTENANCE

# A. Physical Development.

General maintenance and tuneup work was conducted on both jeeps, using the limited knowledge of the Refuge Manager with engines. (Note: my past experience with vehicles has been to take it to the nearest garage --out here there are none.)

Pipe racks in the rear of our present warehouse were dismantled giving us about one-fourth more room for storage space.

A new floor was laid in the Headquarters kitchen. Dry-rot had worked its way through the flooring and subfloor, giving it an air conditioning effect not desirable in winter months. Floors in the kitchen and bath-room were painted.

### IV. RESOURCE MANAGEMENT

A sheep grazing permit on Adak was requested. This request was denied as it was felt sheep would not be compatible with native species and the newly started caribou herd.

## V. FIELD INVESTIGATION OR APPLIED RESEARCH

No field investigations were undertaken other than the sea otter survey mentioned earlier in the report.

#### VI. PUBLIC RELATIONS

# A. Recreational Uses.

Public relations between the Service and the U.S. Air Force duck camp was very good. They had two weekly flights, weather permitting, between

Elmendorf AFB and Gold Bay with 132 hunters using the facilities. The sergeant-in-charge kept a record throughout the season of the number and species taken by each hunter. Others to take advantage of the waterfowl hunting here were Navy and Coast Guard personnel from Kodiak. A few of the V.I.P.S using the privilege were: General Armstrong, General Necrasson, General Zistreth, General Dent, Admiral Caldwell, Colonel West and Colonel Gibbs.

# B. Refuge Visitors.

Name	Title		Purpose
Elmer Whittaker	Fire Chief	Cold Bay	Fire Inspection
Leo Pelletier	Fire Inspector	11	n n
Ken Gilpin	ADF&G	Sand Pt.	Visit .
F. S. Wood	Lt. Col.	EAFB	Business
C. H. Peterson	Major	11	<b>?</b> 1
Francis Kelly	kajo <b>r</b>	714 Site	Visit
G. E. Hussey	State Police	Kodiak	<b>\$</b> ?
Cliff Barstow	NWA Food Ser.	Seattle	Social Call
Eldon Saurs	NWA Filet	15	);
Ford Wilke	Bur. Commm. Fish	11	इंस् अ
Ruth Coffin, MD	USDHS	An <b>c</b> h.	Business
Mary Byrd	USDHS	Anch.	<del>1</del> 1
Fran Pagenkopf, PHN	ADHEN	Juneau	. #1

Submitted by:

Vernon D. Berns, Acting Refuge Manager

October 19, 1961

Approved by:

David L. Spencer

Regional Refuge Supervisor

# WATERFOWL

:			Weeks	of r	(2) e p o r		ng p	erio	d			
(1)	:			:	:	:	<u> </u>	}	:	:		:
Species :	1 :	2 :	3	: 4	: 5	:	6	7	:	8 :	9	: 10
wans:				1		1			I	1		
Whistling		Last obs				I		[				1
Trumpaton Whooper	Report	ed about 1	5 winter o	h Amchitk	a and els	sewier	e on th	e refuge	•			1
eese:								l				
Canada Lesser	38-42.	00± Larg	es <b>t</b> # seen	Oct. La	et seen l	lov 1	6.	1		į.		1
Cackling		0 t Last						1	İ			
Brant		5,000± Pe				9.				<b>\</b>		
White-fronted		en by hun						}		1		
Snow		one flock	of Lesser	Canadas:	8-9 00	served	. in one	flock.				1
Blue	none							1				
Other Emperor	10-12,	000± Winte	r he <b>re</b> and	surround	ihg isla	labr						
ucks:							, ,					ł
Mallard		+ Always	observed i	h small f	lpcks.	resen	it at er	of rep	orting	period.	•	1
Black	nons				ł	l						1
Gadwall		Last obs		· ·								
Baldpate Am. Widgeon		served bu			on the	reflige	•					<b>.</b>
Pintail		-Seen in			l				1			
Green-winged teal		Last bir	ds sighted	in Oct.		- 1						
Blue-winged teal	NOME			<u>'</u>								
Cinnamon teal	NONE				1	-				1		
Shoveler		Last obs	erved in O	et.				1				-
Wood	NONE				[							1
Redhead		erved.	**-							1		
Ring-necked		served.								-		
Canvasback		thted duri				Ī				I		
Scaup Greater		000 Last o			ore lake:	s froz	e over.					
Goldeneye		lrst obser										
Bufflehead	-	irst obser	ved in lat	e Oct.	ł			1'				
Ruddy	None			}								
Other										i		
1	S 1837	OTHER SIL	MANAGE TO SE	I	1	ı		1	I	1		i

Stellers Sider Old Squay King Fider Scotor Sarioguin Arr. in Aug.; 20,000; Fook Lute Cert.; Residents all winter. Arrive early Dec.; Post Cen.; Residents all winter. Arrive early Dec.; Rare in Izembok but common in Gold Toy. 6-5,000; Are a resident population.

In most cases the information concerning numbers is only cases work and entered in this report because required.

### **计市政会内特别**

- 1. We capt where upted only leaded day to used as the population of the refuse.
- 2. Travel was limited and very little of the refore was covered.
- 3. Linited paramenal to eater the area.
- A. Consus methods confined to use of dingy and unlking the beaches and shore lines.

		1.	Variation .
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			NEW Y

MIGRATORY BIRDS

(Nov. 1945)

(other than waterfowl)

Months of to 1940... (1) (2) (3) (5) (6)(4)Species First Seen Peak Numbers Last Seen Production Total Number Total # Total Estimated Common Name Number Date Number Date Number Colonies Young Number Date Nests I. Water and Marsh Birds: II. Shorebirds, Gulls and Terns: recidents 5000 Alaucous-winged Gull 3000 Don. 高级物物。 Posts Conta Sant. Dec. Pelacie Cormorant 100 75 75 移由的东。 Dec. 100 Oct. Semi-colmated Flover 75 Dec. Western Sandpiper 000 Acops. 30 6000 Dect. Least Sandpiper 100 Northern Thalarope 10 Sant. Doc.

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons</u> : Mourning dove White-winged dove					
IV. Predaceous Birds: Golden eagle . Bald Duck hawk Horned owl . Snow Magpie Raven Crow Valcon, Pergrina	5-6 reported 20 rest	est population  is seen on Amedita  ent population  ant population  3 eighted in			
			Reporte	ed by	

#### INSTRUCTIONS

(1) Species:

Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gavilformes to Ciconiiformes and Gruilformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. <u>Doves and Pigeons</u> (Columbiformes)

IV. <u>Predaceous Birds</u> (Falconiformes, Strigiformes and predaceous Passeriformes)

(2) First Seen: The first refuge record for the species for the season concerned.

(3) Peak Numbers: The greatest number of the species present in a limited interval of time.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated total number of the species using the refuge <u>during the period</u> concerned.

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		Service.		77.	140	
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	411	, <u>.</u>		·	, ,, ,	

# UPLAND GAME BIRDS

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			_ 140110110		23 53 134		- 4:3444.		37.900

(1) Species	(2) Density		(3 You Produ	) ng ced	(4) Sex Ratio	R	(5) emova	ls	(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat		Number broods obs'v'd.	Estimated Total	Percentag <b>e</b>	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Social Company	Tundra-like, Alde and Villow 2,720,000acres	*	0	. Xina	50± 50	13 mg 13	Ø.	0	रहे इ	
可靠某是傳統 严重企業的基础的數	1500 mg mi		<b>\$</b>	Sec.	<b>5</b> 01 50	ø	C	O	***	
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					N.					
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### INSTRUCTIONS

### Form NR-2 - UPLAND GAME BIRDS.\*

(	1)	SPECIES:	lise	correct	common	name.
١,			000	001 2000	000001	1100010

Calendar Year

(2)	DENSITY:	Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series
		grass prairie, etc. Standard type symbols listed in Wildlife Management Series Nc. 7 should be used where possible. Figures submitted should be based on actual
		observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

<sup>\*</sup> Only columns applicable to the period covered should be used.

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Calendar Year Toke

(1) Species	(2) Density	(3) Young Froduced	·		(4)	ıls			(5) sses	In	(6) troductions	(7 Estim Total Popul	ated Refuge	(g) Sex Ratio
Common Name	Cover types, total Acreage of Habitat	Number	Hunting	For Re- stocking	Sold	For Research	Predation	Disease	Winter	Number	Source	At period of Greatest use	As of Dec. 31	
est bon	Tondro-like 1500 eq ml en Unimak	¥	0	0	0	o	O	0	O	O į	o	300	30 <b>0</b>	2
Caribon	fundra-like 14,000 cores on Adek	6+	o	ō	G	ø	ō	0	ō	<b>(</b> )	6	29+	29+	458.7009
<b>思想, 望像旅</b>	Tundra-like 1500 ee mi on Unimak	17	*	0	0	€	0	0	0	e	Ö	*	2	3
						ī							43	
	,							٠.,						

Remarks:

No observations were sade. Report from U.S. Marines at Adak there were atlleast 6 new calves. So reports were sent to this office from been hunters on Unicab.

eported by	
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#### INSTRUCTIONS

## Form NR-3 - BIG GAME

- (1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.
- (2) DENSITY: Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated total number of young produced on refuge.
- (4) REMCVALS: Indicate total number in each category removed during the year.
- (5) LOSSES: On the basis of known records or reliable estimates indicate total losses in each category during the year.
- (6) INTRODUCTIONS: Indicate the number and refuge or agency from which stock was secured.
- (7) TOTAL REFUGE
  POPULATION: Give the estimated population of <u>each species</u> on the refuge at period of its greatest abundance and also as of <u>Dec. 31</u>.
- (8) SEX RATIC: Indicate the percentage of males and females of each species as determined from field observations or through removals.

3-178	5 <b>4</b>
Form	NR-4
(June	1945)

## SMALL MAMMALS

Refuge was considered as well as well as the second	Year	ending April 30,	Sé <b>n</b>
---	------	------------------	-------------

(1) (2) Species Density			(3) Removals					(4) Disposition of Fure					(5)	
								Share Trapping			uge ped	ted		Total Popula-
Common Name	Cover Types & Total	Acres Per Animal	Hun ting	Fur Harvest	Predator Control	For Re- stocking	For Re-	Permit Number	Trappers Share	Refuge share	Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	tion
Kink	1500 m. m.	*	o	o	0	0	e	O	ŧ)	o	o	0	£.	*
Red Fox	1500 m. m.	7	Ø	Q	o	0	O	0	o	C	o	0	o	\$
Land Ottor	1500 m. mi.	7	0	¢	0	n	o	0	*	Ø		¢	Ď	*
% lvorice	1500 mg. mi.	3	O	o	C	٥	Ð	C	Š.	e	e	O	O	î
Oround Hant that	1500 aq. mi.		ø	0	ಣ	0	0	ð	0	Ð	o	0	<b>c</b>	*
# <b>2#6#</b> \$ <b>6*1</b> 0%	1500 at. at.		c	Ð	0	ð	0	<b>X</b> 5	o	¢	0	0	Ö	State
Zino Fox	2.720.000 neres	*	ø	o	24	O	0	O	O	Ö	0	O	1.00	ug.
		<b>,</b> :				,								
* List removals by	Predator Animal Hunter	r				······································			,					

REMARKS: Stup force were token from Set Island and September. Follow was used on Amehibin for for control but no died enture were recovered. Izamber Sofuge not included in this report.

Reported	hν	
<b>O P O O O O</b>	- 5	Berthall Britain

### INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

(1) SPECIES:

Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)

(2) DENSITY:

Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) REMOVALS:

Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headingslisted.

(4) DISPOSITION OF FUR:

On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.

(5) TOTAL POPULATION:

Estimated total population of each species reported on as of April 30.

REMARKS:

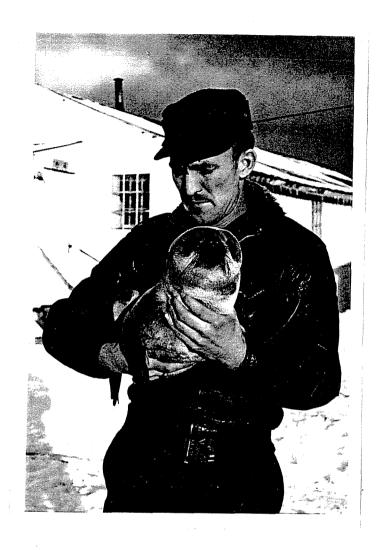
Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.

kei uge			,	arendar lear		
ALEUTIAN ISLANDS NATIONAL W	ALDRIEE BEERIGE			- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	one allo	
Total Use Visitor-Days	Hunting Use		Fishing Use	Miscellaned Use		
			·	and a second	ndon,	
Where practically by means of breakdown of the above figure	f occasionagospot or res and other relat	checks, or othe	r methods, show by per	cent and visi	tor-days the	
Hunting (on refuge lands): Percent	Visitor-Days	Acres	Miscellaneous:	Percent	Visitor-Days	
Waterfowl			Recreation *			
Upland Game		14,000	Official		50	
Big Game	-150	3 <del>974,000</del> —	Economic Use	dimenso de monte con establica	<del></del>	
Supervised by refuge by	State No. of t	olinds 960, <del>000</del>	Other			
Hunting (off refuge lands): Estimated		•	Comments:		,	
adjacent to the refuge	( The s	se figures				
should not be included in b	nting-use totals a	above).	Izembek did not band not included	become a refu l in this repa	ge until Dec.	
Acres of ponds or lakes	and miles o	of streams				
open to fishing.  INGDUP. SEC., WASH., D.C. 22919	1.	• • • • • • • • • • • • • • • • • • •	*(including picni camping, viewing			

Refuge Year 192

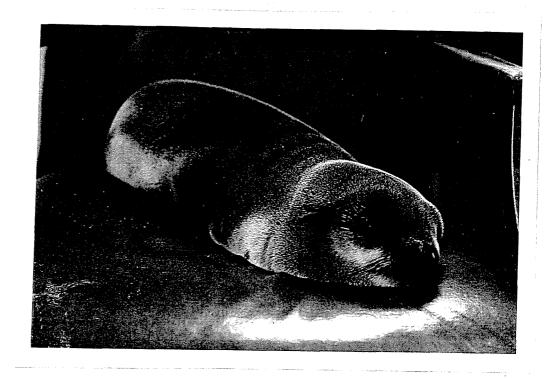
Permittee	Permit No.	Unit or Location	Actual Acreage Utilized	Use	Tons of Hay Har- vested	Period o	f Use To	Rate	Total Income	Remarks
dusierson, C.	25744	Caton Islan	4 4000F	5284		Acque Trace	1960	\$1.50./i	r* \$1.50/1	er bly oats
				,						
			·							
				,						
			, .		ī				,	

Totals:	Acreage grazed 4000¥	Animal use months	Total income Grazing 150.0
	Acreage cut for hay	Tons of hay cut	Total income Haying

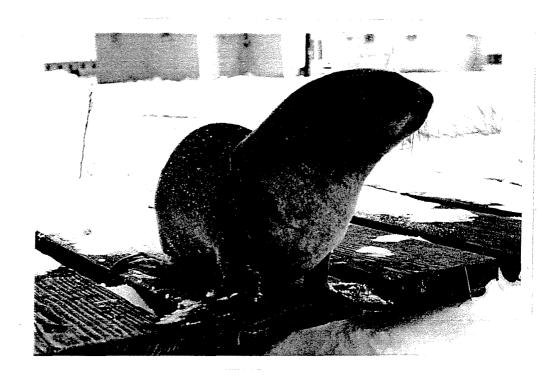


Assistant Refuge Manager, with young female fur seal found crossing overland from Izembek to Cold Bay.

Photos by Jack Nyholm



Fur Seals favorite chair in Refuge Office.



Fur Seal walking the board walks of Cold Bay.



Cold Bay trapper with mink caught on Frosty Creek.



One of the few mink taken around Cold Bay this season.



Refuge Managers quarters and office at Cold Bay. Photos by Vern Berns.



Quarters for Assistant Refuge Manager- One wing of the old Theater of Operations Building made into living quarters.



Proposed Site for new F.W.S. Headquarters buildings at Cold Bay, Alaska



A limit of Emperor geese taken by hunter in late November.