

Spencer

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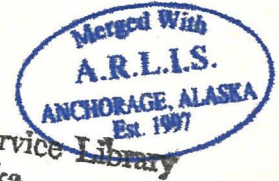
REFUGE NARRATIVE REPORT

September - December, 1954

KENAI NATIONAL MOOSE RANGE

Kenai

Alaska



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KENAI NATIONAL MOOSE RANGE

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Staff:

D. L. Spencer, Refuge Supervisor

J. D. Petersen, Refuge Manager

David C. Hooper, Refuge Manager

Rex Williams, Temp. Biological Aid

S. E. Robinson, part-time Clerk-Typist

FISH & WILDLIFE SERVICE--ALASKA



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U. S. DEPT. OF THE INTERIOR

Fish & Wildlife Service

Kenai, Alaska

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REFUGEE NARRATIVE REPORT

September - December, 1954

KENAI NATIONAL MOOSE RANGE

Kenai

Alaska

I GENERAL

A. Weather Conditions

Snowfall and minimum Temperatures as recorded at the Kenai CAA were as follows:

Snowfall (in inches)					Minimum Temperatures				
Nov.		Dec.		Jan.		Dec.		Jan.	
8-	.2"	6-	4.0"	1-	3.0"	22-	-33	1-	-17
19-	.3"	13-	.2"	2-	.6"	23-	-29	2-	-17
20-	.2"	15-	1.0"			24-	-23		
		16-	5.0"			25-	-27		
		17-	1.0"			26-	-32		
		18-	1.0"			27-	-34		
		19-	3.0"			28-	-35		
		20-	.4"			29-	-16		
		21-	.2"			30-	-18		
						31-	-14		

Total snowfall was 20.1 inches for the quarter and recorded depth on the ground is 11 inches at the CAA Station (snow depths recorded by CAA are made in an open windswept area). Snow depth in timber is a few inches deeper.

B. Water Conditions

Normal for the period.

C. Fires

As this is the rainy period no fires were reported during this quarter.

II WILDLIFE

Pg. 2

A. Migratory Birds

No report.

B. Upland Game Birds

No report.

C. Big Game

Alaska Game Regulations of the two previous years required hunters taking moose on the Kenai Peninsula to report their kill, however, the requirement was revised for the current year to include the area south of the Alaska Range and also the report of other Big Game animals taken.

Information received from hunters on these reports is summarized in this portion of the Narrative to cover the animals killed on the Kenai Peninsula or the Refuge area.

Moose

Report of Kill:

An extended season running from August 20 to September 31, 1954, resulted in an increased kill on the Kenai Peninsula. Reports by hunters totalled 436 compared with 377 reported last year for the twenty (20) day season. Residents of the Kenai Peninsula took 79% of these moose, Anchorage and the other Alaskan residents took 20% and non-residents took only 1%.

The following list shows the number of moose reported taken by hunter residence:

<u>Kenai Peninsula</u>		<u>Other Alaskans</u>	
Homer	94	Anchorage & Vicinity	79
Seward	82	Kodiak	3
Kenai	77	Palmer	3
Moose Pass	14	Chugiak	1
Anchor Point	13	Juneau	1
Kasilof	10	Portage	1
Naptowne	10	Whittier	1
Minilchik	10		
Seldevia	10		
Seldetna	6	<u>Non-Residents</u>	
Cohoe	5	California, Glendale	1
Cooper Landing	4	Colorado, Denver	1
Hope	4	North Dakota, Edgelen	1
Hunter	2		
Bartlett	1		
Clam Gulch	1		
Lawing	1		

Kills recorded by day show the same trend toward higher success at the first and last parts of the season as in the past years. Twenty-four percent (103 moose) were taken August 20 through 31; thirteen percent (55) September 1 through 10; nineteen percent (87) September 11 through 20 and forty-four percent (191) September 21 through 30.

Distribution of the reported moose kills plotted on a map showed 114 taken in the mountain area or eastern half of the Peninsula, a slight decrease from that of last year. On the western portion of the Kenai 191 animals were killed in the Moose Range and Settlement area and 130 south of range principally in the Caribou Hills and Anchor River drainage, making an increase of approximately 100 moose taken over last year in this area.

Composition Count:

Aerial moose composition counts were made on the Kenai by Spencer, Petersen, Hooper and France during the period November 10 -30. The area covered was west of the Kenai Mountains and from Caribou Lake to Turnagain Arm. Table No. 1 presents the results of this survey. For comparison with previous years, refer to Narrative Report September - December 1953.

The present bull-cow ratio is (84:100), the highest recorded in four years and indicates a light harvest in the area covered by the composition count. Reference to the kill map, indicates this has been the case except in the southern part of the Caribou Hills. Records of calf-cow ratios indicate this ratio has been running higher in the 1947 burn than in older ranges.

Moose Mortality During Period:

1 young cow	- dead approximately September (probably shot)
5 cows	- illegal kill during hunting season
1 calf	- " " " " " "
1 (1½ yr.) cow	- struck by car December 5, 1954, Soldotna

Mountain Goat

Two mountain goats were taken on the Refuge in the vicinity of Skilak Glacier. A total of fifty-two (52) were reported taken on the Kenai Peninsula.

Bear

Five brown bears were reported taken on the Refuge during the period. A total of nine (9) brown bear kills were recorded for the Kenai Peninsula.

MOOSE HERD COMPOSITION - 1954

Pg. 4

	<u>1947 Burn</u>	<u>Other Areas</u>	<u>All Areas</u>
1½-2½ yr. Males	57	57	114
Adult Males	256	449	705
Total Males	313	506	819
One Females	230	506	736
Females & 1 Calf	97	127	224
Females & 2 Calves	7	8	15
Total Females	334	641	975
Total Calves	111	143	254
Total Moose	758	1290	2048
Bull-Cow Ratio	93.7:100	76.9:100	84 :100
Calf-Cow Ratio	33.2:100	22.3:100	27.1:100
% Cows			47.6
% Calves	14.6	11.1	12.4
% Bulls			40.0
% Females & 1 Calf	29.0	19.8	24.
% Females & 2 Calves	2.0	1. 2	1.5
Ratio Single Calves to Twins	13.9:1	15.9 :1	14.9:1

Composition Ratios - 1953

Bull Cow	73.6:100	57.2:100
Calf-Cow	32.8:100	23.1:100

RATIOS - 1952

Bull-Cow	69.1:100	38.6:100
Calf-Cow	23.0:100	19.3:100

The early winter pattern of otter tracks in the north half of the Range was of unusual prominence and distribution. We view this as an indication of relative abundance of these animals.

Mink sign was abundant, coincident with an apparent high population of microtine rodents the past three (3) years.

Snowshoe hare sign appears lower in the 1947 burn.

III REFUGE DEVELOPMENT

A. Physical Development

Public Recreational Facilities:

Construction of an access road to Hidden Lake was completed together with gravelling of camp ground lanes at Skilak Camp Ground No. 2. Work was accomplished by the Alaska Road Commission with U.S. FWS funds.

R. Williams, temporarily employed in a maintenance capacity, repaired and organized equipment in preparation for winter storage.

Overhaul of Refuge Widgeon aircraft N-701 was completed and new Lycoming engines installed under contract in Portland.

IV ECONOMIC USE OF REFUGE

C. Fur Harvest

The season was closed on all fur during the period.

D. Timber Removal

The following timber permits were issued during the quarter:

Free Use:

20611	11/15/54	Melvin Tachick	10 cords fuel wood
-------	----------	----------------	--------------------

Commercial:

20609	9/30/54	Grilley Lbr. Co.	- 33,000 bd. ft.
20612	11/15/54	Grilley Lbr. Co.	- 33,000 bd. ft.
20614	11/16/54	Robert Tachick	- 2,000 lin. ft. logs
20615	12/ 4/54	J. R. Romine	- 25 Xmas Trees f/resale

E. Other Uses

The following permits were issued for other purposes:

20613	11/30/54	Robt. E. Jacobs	Maintenance of cabins for trapline use.
20610	Pending	James & Howarth	Access road for microwave relay station.

The permit for James and Howarth is for construction of an access road to a proposed microwave relay station to extend television reception to the Seward area.

V FIELD INVESTIGATIONS

A. Permanent Forage Plots

Permanent forage plots at Kasilof, Kenai and Skilak were measured October 13 - 14, 1954. The tagged portions of eleven plants now dead from overbrowsing of the two hundred and ten (210) plants tagged in the fall of 1952. These are made up of nine (9) willows, one (1) cottonwood and one (1) dwarf birch; all these plants but one are located in the heavily utilized Kasilof area.

It is worthwhile to note that these plants all exhibited similar symptoms before dying. Production and the number of leaders produced dropped from 50 to 75% and utilization was all over 80%. These figures are tentative as the sample is still small, see Table No. 2.

Production of a sample of seventy-two (72) willows for the period 1952 - 1954 is down 24% while utilization has averaged 83% for the same period. The tagged portion (in some cases) represents just a part of the whole plant. Therefore variability in forage produced below or away from the tag would be unrecorded.

There are only two (2) tagged cottonwood and five (5) of dwarf birch; this is too small a sample with which to determine the effects of browsing upon these species.

Kenai birch (31 samples) showed a 3% decline in production from 1952 - 1954 with an average utilization of 85%.

PRODUCTION AND UTILIZATION HISTORY OF ELEVEN OVERBROWSED PLANTS

No.		10/52		4/53		12/53			5/54		10/54
		NL*	P**	U***	%U	NL	P	%P****	U	%U	
54304	Willow	9	70	10	86	9	44	-38	8	82	Dead
54315	Willow	17	98	22	78	4	24	-76	0	100	Dead
54316	Willow	31	252	20	92	5	22	-84	0	100	Dead
54321	Willow	17	138	96	31	5	40	-72	44	109	Dead
54328	Willow	29	352	102	71	6	28	-92	6	79	Dead
54372	Willow	36	224	80	65	25	168	-25	46	73	Dead
54437	Willow	15	66	10	84	Browsed					Dead
54446	Willow	22	198	24	88	10	82	-31			Dead
54451	Willow	9	86	6	93	3	12	-86			Dead
54311	Cottonwood	51	238	86	64	13	76	-69	10	87	Dead
54436	Dwarf Birch	16	92	4	93	Dead					

- * Number of leaders
 ** Production of forage in inches.
 *** Utilization - amount of production left.
 **** Yearly percent change in production.

Table No. 2

VI PUBLIC RELATIONS

A. Recreational Use

This consisted of hunting and fishing as noted. One photographic party was afield in the Funny River area during the moose rutting season.

B. Refuge Visitors

<u>Name</u>	<u>Organization</u>	<u>Purpose</u>	<u>Time in Area</u>
J. Ball	FWS	Inspection	3 days
W. Elkins	FWS	Inspection	2 days
C. Rhode	FWS	Inspection	2 visits
R. Hines	FWS	Publicity	2 weeks
A. Burg		Photographic	2 days
R. Jones	FWS	Refuge Work	4 days
T. Wardleigh	FWS	Aircraft Repair	1 day
G. Grant	FWS	Aircraft Repair	1 day

VII OTHER ITEMS

A. Items of Interest

Elinor Eldridge, part time Clerk-Typist, terminated November 5, 1954.
S. Elizabeth Robinson entered on duty, as part time Clerk-Typist, December 6, 1954.

Rex Williams, Biological Aid, terminated on December 31, 1954.

Dave Hooper, Refuge Manager, returned from leave on November 22, 1954, and was reassigned to Headquarters at Kenai instead of Cold Bay.

Refuge Piper Cub, N-705, on skis, sustained wing, prop, and gear damage, on December 28, 1954, upon striking a drift during landing on Jean Lake. The plane was repaired the next day by T. Wardleigh and G. Grant, and taken to the Anchorage shop. It was back in service in a week.

Submitted by: _____

January 11, 1955

Approved by: _____

(1) Species	(2) Density	(3) Young Produced	(4) Removals				(5) Losses			(6) Introductions		(7) Estimated Total Refuge Population		(8) Sex Ratio
			Hunting	For Re- stocking	Sold	For Research	Predation	Disease	Winter Loss	Number	Source	At period of Greatest use	As of Dec. 31	
* Moose	1,400,000	350	197					51			2800	2800	84:100	
Brown Bear	1,400,000		5								100	} -Estimated		
Black Bear	1,400,000		3								500			
Dall Sheep	200,000	101	0								480			
Mountain Goat	100,000		2								41			

Remarks: * Estimate of 2800 total based on count of 2484 animals in Refuge area January 1954.

Young produced and sex ratios based on November 1954 composition counts.

Reported by _____

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) REMOVALS: 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 each species on the refuge at period of its greatest abundance and also as of Dec. 31.
- (8) SEX RATIO: Indicate the percentage of males and females of each species as determined from field observations or through removals.

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
<u>Swans:</u>										
Whistling										
Trumpeter										
<u>Geese:</u>										
Canada										
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
<u>Ducks:</u>										
Mallard										
Black										
Gadwall										
Baldpate										
Pintail										
Green-winged teal										
Blue-winged teal										
Cinnamon teal										
Shoveler										
Wood										
Redhead										
Ring-necked										
Canvasback										
Scaup										
Goldeneye										
Bufflehead										
Ruddy										
Other										
<u>Coot:</u>										

No report on waterfowl or other migratory birds.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Spruce Grouse	} - Medium Abundance									
Willow Ptarmigan										
White-tailed Ptarmigan										

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (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 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 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.

* Only columns applicable to the period covered should be used.

Permittee	Permit No.	Unit or Location	Acreage	No. of Units Expressed in B. F., ties, etc.	Rate of Charge	Total Income	Reservations and/or Diameter Limits	Species Cut
Sam Hester	19779	Soldotna		50,000 B.F. Saw	.0015	75.00		Spruce
Grilley Lbr. Co.	19780	Soldotna		33,333 B.F. Saw Timber	.0015	50.00		Spruce
Chester D. Moore	20601	1947 Burn		25 cords D&D	Free Use			Spruce
John C. Ingram	20602	1947 Burn		2,000 Lin. Ft. House Logs	Free Use			Spruce
Harry White	20603	Beaver Lake		Hunting & Fishing Camp	Free Use			
Alco Dolan	20604	1947 Burn		25 cords D&D	Free Use			Spruce
Mike S. Schut	20605	1947 Burn		25 cords D&D	Free Use			Spruce
Phil Wilson	20606	Shannon Riv.		Hunting & Fishing Camp	Free Use			
Lee Rafter	20607	Harvey Lake		Hunting Camp	Free Use			
Sherman Smith, Jr.	20608	Harvey Lake		Hunting Camp	Free Use			
Grilley Lbr. Co.	20609	Soldotna		33,000 B.F. Saw Timber	.0015	49.50		Spruce
Harvey & Howarth	20610	Ponding		10 cords D&D	Free Use			Spruce
Melvin Tachick	20611	Soldotna		33,333 B.F. Saw Timber	.0015	50.00		Spruce
Grilley Lbr. Co.	20612	Soldotna						
Robert E. Jacobs	20613	Swan Lake		Maintenance of Trapline Geh.	Free Use			Spruce
Robert Tachick	20614	Soldotna		2,000 Lin. Ft. House Logs	.01 L.F.	20.00		Spruce
James R. Romine	20615	Hidden Creek		25 Area Trees for posts	.05	1.25		Spruce

Total acreage cut over..... Total income \$215.75.....

No. of units removed B. F. 140,666..... Method of slash disposal Log and weather.....
 Cords 25.....
 Lin. ft. Poles & Logs Ties 2,000.....