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AERIAL COUNT OF MOOSE, ELK, AND DEER,

ELK ISLAND NATIONAL PARK,

DECEMBER 11 to 13, 1968

by

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CANADIAN WILDLIFE SERVICE

JAN 15 1969

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This report presents the results of an aerial count of moose, elk, and deer in Elk Island National Park on December 11, 12 and 13, 1968.

On December 10, about 6 inches of snow fell. There had been only patches of very light snow cover prior to that.

On December 11, McGillis flew a reconnaissance of the park in a Cessna 150 piloted by G. Frick of Gateway Aviation in order to appraise the adequacy of the snow cover as a contrasting background for observing large mammals. He also surveyed the transects in the Mud Lake enclosure, the condemned bison enclosure, and the C.W.S. study enclosure. As McGillis was the only observer on that flight each transect was travelled in both directions so as to count a one-eighth mile strip on each side of the flightline.

December 12, Flook and McGillis surveyed the park north of Highway 16

in a Cessna 172 piloted by L. Scholtz of Gateway Aviation. T. L. Ross, Park Superintendent, navigated. December 13, Flook and McGillis surveyed the Isolation Area in the same aircraft again piloted by Schultz. G. Babbidge, Park Warden, navigated.

Details of weather and snow conditions during the survey are given in Table 1. On all days the windows of the airplane tended to frost, but were kept cleared by frequent scraping. The frost did not seem to interfere with viewing appreciably. The snow cover remained fairly unbroken during the survey, and deer seemed more obvious than during previous surveys.

In Appendices 1 and 2, the results of the survey are tabulated by strip for the north and south areas respectively. Flightlines are numbered from north to south as in previous surveys.

In the survey made December 29 and 30, 1967, it was found difficult to recognize individual animals or groups of animals seen from two adjacent flightlines. In the 1968 survey this did not seem to be a problem. The Cessna 172 disturbed the animals less than the helicopter used in the previous

Table 1. Daily Conditions of Survey.

Date	Area	Time on Transects	Temp.	Sky	Snow Cover
Dec. 11	Mud L., Condemned, & CWS Enclosures	9:00 - 10:30 A.M.	-6°F	Light overcast	Fresh 6"
Dec. 12	North Park	9:00 - 11:00 A.M.	-10°F±	Light overcast	Fresh 6"
Dec. 13	Isolation Area	9:30 - 11:30 A.M.	-15°F	Clear	Fresh 6"

survey so that they were less prone to flush to the adjacent strip. Also, the pilot was able to follow the transects more precisely, presumably because he had a full-time navigator. In the 1967 survey, one observer had to double as a navigator.

The counts of the three small enclosures by McGillis on December 10 can be compared with the counts made within the same enclosures while flying the transects on December 11 and 12. That comparison (Table 2) provides an evaluation of the accuracy of the survey. The same numbers of elk and moose were observed in the Mad Lake enclosure and the condemned bison enclosure on December 11 as on December 10, suggesting that all animals were counted. On both those days the sky was overcast facilitating observation. This gives confidence in the results of the December 11 count of the north area. However, only 25 moose were counted in the C.W.S. study enclosure on December 12 as compared to 35 counted by McGillis on December 10. It is possible that the December 10 count included duplications but it seems probable that some moose were missed on December 12. The bright sun made observing difficult on

Table 2. Comparison of counts of moose and elk in three small enclosures on December 10 compared to those made during survey December 11 and 12.

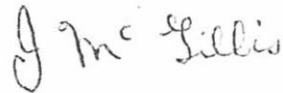
		Moose	Elk
Mud Lake Enclosure	Dec. 10	-	4 bulls
	Dec. 11	-	4 bulls
Condemned Bison Enclosure	Dec. 10	4	-
	Dec. 11	4	-
C.W.S. Study Enclosure	Dec. 10	35	3
	Dec. 11	25	3

that day. Another indication that the December 12 count of moose in the Isolation Area is an underestimate is that the herd of 26 wood bison ranging at large was over-looked.

The relationship of the current population estimates to those made one year ago are shown in Table 3. Data on the number of animals slaughtered in January 1968 and removals recommended for the north area in January 1969 are included in that table. Decisions as to the management of moose, deer, and elk in the Isolation Area should await Dr. Broughton's appraisal of the situation later this month. The primary considerations in their management may be related to disease control in the wood bison.



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January 3, 1969

Table 3. Counts 1967 and 1968, numbers harvested 1968, and numbers recommended harvested 1969, moose, elk, and deer - Elk Island National Park.

	Moose	Elk	Deer
North Park			
Count Dec. 29, 1967	627 to 723	452 to 528	59
<u>Slaughtered Jan. 1968</u>	<u>(131)</u>	<u>(1)</u>	<u>(0)</u>
Count Dec. 11, 1968	610	425	55
Previously recommended post -slaughter population	350	250	-
Recommended slaughter, January 1969	260	175	0
Isolation Area			
Count, Dec. 30, 1967	226 to 250	15	159
<u>Slaughtered, January 1968</u>	<u>(81)</u>	<u>(0)</u>	<u>(0)</u>
Count, Dec. 12, 1968	128	21	274
Previously recommended post - slaughter population	150	-	-
Recommended slaughter, January 1969	?	?	?

* Some deer were recognized as white-tailed deer. No mule deer were recognized.

APPENDIX 1. Numbers of large mammals counted on strips surveyed by air, Elk Island National Park, north of Highway 16 December 11, 1968.

Interval Between Flight Lines	Elk	Moose	Deer	Coyotes
1-2	2	17		
2-3	19	13	2	
3-4	19	25	10	
4-5	6	26	3	
5-6	5	14		
6-7	3	22	3	
7-8	1	12	2	
8-9		8	3	
9-10	4	9		
10-11	10	6		
11-12		11		
12-13	23			
13-14		13	1	
14-15		8	2	1
15-16	3	9		
16-17	6	18	2	
17-18		36		1
18-19	65	42	2	
19-20	129	14		2
20-21	53	8		
21-22	1	35		
22-23		17	3	
23-24		20	6	
24-25		9		
25-26		10		
26-27		21	2	
27-28	4	19		
28-29		14		
29-30		12		
30-31	29	9	1	
31-32	6	16	5	
32-33	11	15		
33-34	3	11		
34-35		19	3	
35-36	6	14		
36-37	5	19		
37-38	1	21	1	
38-39		3		
39-40	5	12	1	
40-41	6	3		
41-42			3	
42-43				1
TOTAL	425	610	55	5

APPENDIX 2. Number of large mammals counted on strips surveyed by air, Elk Island National Park, south of Highway 16, December 12, 1968.

Interval Between Flight Lines	Elk	Moose	Deer	Coyote
40-41				
41-42		8	4	
42-43	2	18	16	1
43-44		11	19	
44-45	12	7	36	
45-46			20	
46-47	4	10	18	
47-48		8	21	
48-49		6	18	
49-50		7	14	
50-51		10	21	
51-52		10	22	
52-53		8	30	
53-54	3	12	11	
54-55		8	4	4
55-56		5	6	
56-57			13	
57-fence			1	
TOTAL	21	128	274	5