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CARIBOU

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 21D, 22A, 22B, 23, 24, and 26A

HERD: Western Arctic

PERIOD COVERED: 1 July 1986-30 June 1987

Season and Bag Limit

See Hunting Regulations No. 27.

Population Status and Trend

A photocensus of the Western Arctic Herd (WAH) was completed on 15 July 1986 resulting in an estimate of 229,433 animals (James and Larsen 1986). This number should be considered as a minimum estimate of population size because less area was searched in 1986 compared with previous photocensus efforts. The 1986 estimate is 34% higher than the 1982 estimate of 171,699 reflecting an average annual rate of increase of 8%. The average annual rate of increase was 15% from 1978-80 and 11% from 1980-82. Apparently, the growth rate of the WAH is decreasing as herd size increases.

Population Composition

Spring composition surveys were conducted during March and April 1987 (Table 1). We classified as short-yearlings 21% of 10,131 caribou. This percentage has not changed significantly in recent years suggesting that the recruitment rate is adequate for continued growth of the WAH.

Distribution and Migration

The July postcalving migration followed the same pattern observed annually during the past 10 years or more. Likewise, the fall migration pattern during August-October occurred in typical fashion. Although a few caribou were reported to have migrated through the middle Koyukuk drainage during fall 1986, this movement apparently was of lesser magnitude than reported for fall 1985. The continued growth of the WAH, however, increases the probability of large-scale migrations again occurring in the Koyukuk River area.

During winter 1986-87, only 3 radio-collared caribou were located north of the Brooks Range and 30 collared animals were located south of the Brooks Range divide. This supports the conclusion drawn from numerous other observations that the majority of the WAH wintered in or south of the Brooks Range. The pattern of southward winter range extensions observed in recent years apparently did not reoccur as no movement of caribou south of the Unalakleet River was observed. The

northward, spring migration occurred during March through May. The peak of the calving period was not well documented but it took place in early June. Interestingly, a few groups of up to 200 caribou with newborn calves were seen in the Selawik River drainage in late May. Also, 2 female caribou collared with satellite radio collars spent the calving period in the vicinity of Feniak Lake. It was unlikely that deep snow or other unusual environmental conditions retarded the spring migration of caribou to the calving grounds. Perhaps increased sightings of parturient females outside the normal calving area is a function of the increasing size of the herd.

Caribou were essentially absent from the Pt. Hope area during the entire reporting period. This resulted in considerable stress on the local subsistence economy.

Radio collars were attached to 26 female caribou live-captured while swimming across the Kobuk River during late August and early September. These collars increased the number of functioning collars in the WAH to approximately 50. This will enhance our ability to conduct all phases of the survey/inventory program during the coming year.

Mortality

Reported harvest from the WAH during 1986-87 was 3,398 caribou (Table 2). Although the harvest is substantially less than reported last year (4,018), the 1987 results are not yet complete because the 3rd, final reminder letter has not yet been sent to hunters who failed to return their harvest reports. The 1986-87 harvest results are comparable to the 1985-86 results tabulated prior to the mailing of the 3rd reminder letter. The final harvest figure will appear in the next annual survey/inventory progress report. As reported in previous years, local residents accounted for most of the harvest (Table 3).

We believe that the reported harvest is only a fraction of the actual harvest because reporting rates are poor in many rural communities. We estimate that the actual harvest is approximately 6,000-15,000 caribou.

Management Summary and Recommendations

Results of the photocensus and other demographic indices indicate that the WAH is currently a growing, or at least stable population. The growth rate since 1982 has averaged 8% annually and is apparently decreasing as herd size increases. Radiotelemetry data and reports from the public indicate that the fall migration pattern to winter ranges was similar to previous years although they did not move south of the

Unalakleet River in significant numbers as they did in 1985-86. The northward spring migration to calving areas was not well documented but appeared to be typical and calving occurred in early June.

No changes in seasons or bag limits are recommended at this time.

National Park Service funds were used to purchase 38 conventional radio-collars and 3 satellite radio-collars in spring 1987. Forty collars were installed on caribou crossing the Kobuk River in late August-early September 1987. One conventional collar was dropped in the River and not retrieved.

Acknowledgements

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Literature Cited

James, D. and D. N. Larsen. 1986. Western Arctic Caribou Herd Photocensus, 1986. Unpubl. Report. Alaska Dept. Fish and Game. Kotzebue, Alaska. 25pp.

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Table 1. Proportion of short-yearling (approximately 10 months old) caribou in the Western Arctic Herd, March and April, 1987.

Location	Adults	Short-yearlings	Total caribou	Percent short-yearlings
Omalik R. & Ikpikpuk R.	943	103	1,046	10
Mulgrave Hills	1,950	855	2,085	41
Eli, Agashashok, and Squirrel Rivers	2,110	442	2,552	17
Upper Kobuk R.	1,962	446	2,408	19
Upper Selawik R.	1,016	304	1,320	23
Totals	7,981	2,150	10,131	21

Table 2. Reported harvest of caribou from the Western Arctic Herd according to 3 non-overlapping report systems, 1986-87[a].

GMU	WAH harvest report	Arctic harvest report	Statewide harvest report	Total harvest
21D	36	0	0	36
22	725	0	5	730
23	2,150	37	98	2,285
24	0	0	4	4
26A	319	9	15	343
Totals	3,230	46	122	3,398

Table 3. Summary of Western Arctic Caribou harvest report system by hunter residency, 1986-87[a].

Residency	Reports issued	Reports returned	Harvest
Alaska	1,105	790	3,196
Local[b]	997	710	3,101
Non-resident	48	31	34
Total	1,153	821	3,230

[a] Report period incomplete; i.e., only 2 of 3 reminder letters sent to hunters who had not returned harvest reports.

[b] Resides within WAH range (GMU 21D, 22, 23, 24, 26A).