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ARTICLES**

Summary of historical data of caribou  
movements around Prudhoe Bay

by  
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Historical data of caribou movements in the study area

Detailed observations of caribou within the study area were very infrequent prior to about 1969. It was generally considered that the area between the Colville and Canning Rivers (which includes the study area) was a region of overlap between the large Western Arctic and Porcupine caribou herds (Hemming 1971; Gavin 1970, 1972; White et al. 1975).

Skoog (1968) thought that a central Brooks Range herd occupied the general region of the study area during most of the first half of this century. By the early 1950's, however, this herd ceased to exist as a separate entity, and it was probably assimilated by the Western Arctic herd.

White et al. (1975) thought that a small herd of about 300 animals was resident year round in the Prudhoe Bay area during 1972-73. Child (1973) reported that the Central Arctic (basically our current study area) served as calving, summering, and wintering range for about 3000 caribou.

In 1969, when more or less continuous surveillance of caribou around the pipeline corridor began, large numbers of caribou (25-30,000) entered the present study area from the south during the spring. This happened again in 1970 (Gavin 1970). In 1971, only about half as many caribou entered the region during spring migration, and by 1972 the number seen in the area during spring, summer, and fall had dwindled to only about 2500 (Gavin 1971, 1972).

While numbers of caribou using the study area declined from 1969 to the present, overall summer movement patterns did not change much (Gavin 1970, 1971, 1972; White et al. 1975; Child 1973). There has been each year a movement northeastward from the Brooks Range and foothills to the coastal plain between the Canning and Sagavanirktok deltas, followed by a westward trend along the coast, and finally a swing south back toward the foothills (Gavin 1972; Child 1973). Gavin (1971, 1972) pointed out that cold temperatures, wind, and late melting snow could delay the northward movement in the spring and early summer. White et al. (1975) and Child (1973) demonstrated changes in insect harassment levels superimposed an oscillatory movement between low lying coastal locations and slightly elevated inland areas upon the general east to west trending movement of midsummer.

Gavin (1971, 1972) thought that the adverse weather conditions which delayed movement to the coast in 1971 and 1972 also accounted for

the recent large declines in the number of animals using the central arctic area. With heavy snow covering the foothills and coastal plains during spring migration, many animals turned west along the relatively snowfree north side of the Brooks Range. Certainly the number of caribou reaching the study area from the south did decline drastically from 1970 to 1972. Gavin (1972) reported that some caribou had wintered north of the Brooks Range every winter from 1969 to 1972. White et al. (1975) and Child (1973) also reported overwintering of caribou on the slope. Prior to the present study, midwinter surveys have been lacking north of the Brooks Range, and the amount of overwintering on the study area had not been established.

Collins (1937, in Skoog 1968) reported large overwintering concentrations of caribou on the North Slope between the Kuparuk and Colville Rivers in 1936-37. Olson (1958) reported large numbers of caribou wintering on the slope all the way from Point Barrow to Barter Island. The latter situation, at least, was coupled with few animals wintering on the south side of the Brooks Range.