SNOW DEPTH AS A LIKELY FACTOR CONTRIBUTING TO THE DECLINE OF A SHEEP POPULATION IN THE CENTRAL YUKON

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Abstract: A thinhorn sheep population was counted and classified in the Glenlyon Range of the Pelly Mountains in response to a decline in the average age of the sheep kill, and the outfitter's concerns that sheep had severely declined in the area. The population was found to have declined by about 40% of the estimated 1976 population, with the virtual absence of one-half-curl rams and large full-curl rams.

The winter of 1982-83 was a particularly severe one with deeper than average snow conditions during all but one month (p<0.5). The loss of the 1982 cohort and older-aged animals during this winter, compounded by the reproductive failure of the 1983 lamb crop, adequately explains the decline of the population and the average age of the kill. Relatively poor lamb production in 1981 and 1982 possibly contributed to the decline.

The concentrated distribution of sheep during the winter of 1976-77, in what was possibly an average winter, in comparison to the wide distribution observed in the relatively snow-free winter of 1986-87, further suggests that winter snow conditions may play a key role in the dynamics of sheep in the area.