

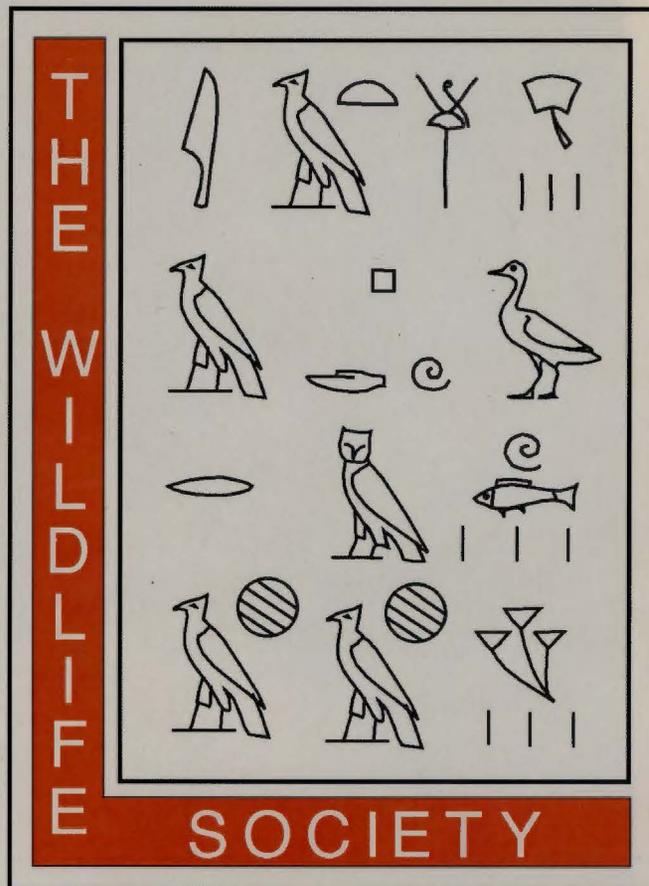
(14) NELCHINA CARIBOU HARVEST: PRODUCTIVITY VS. PREDATION

Kelleyhouse, Rebecca A. and Robert W. Tobey. Alaska Department of Fish and Game, PO Box 47, Glennallen, AK 99588

Abstract: Caribou (*Rangifer tarandus*) management in Alaska is largely herd dependent. The Nelchina Caribou Herd calves and summers in the foothills of the eastern Talkeetna Mountains in Game Management Unit 13 in Southcentral Alaska. Estimated near 30,000 in 2003, this is a moderately sized Alaskan caribou herd with a large annual home range. The harvest demand for this herd is high, however the herd has been below the objective range since 1998. Regardless, the annual harvest strategy mandate is maximum sustainable yield. As managers, we strive to make the best recommendations possible for harvest based on all available information. Spring calf production and annual recruitment are large components of this process. Production is largely a factor of conceptions rates, and is thus linked to the physical condition of cows and the number and distribution of large bulls during the rut. To this point, we have found no link between winter conditions and natality rates. Summer conditions however may play a larger role in Nelchina caribou natality. High June temperatures and July precipitation lead to increased physical condition in calves, and perhaps cows as well. Fall calf weights based on these factors, are positively correlated with calf production the following spring. In addition to natality, summer survival also affects recruitment. Survival is a factor of predator abundance, caribou movements, and distribution. Tight and extended post-calving congregations some years afford caribou high summer survival. The alternate possibility with caribou being widely distributed can lead to maximum prey availability and high predation losses. Productivity and survival must be assessed annually considering the importance of both factors in caribou management. Years of low calf production coupled with high predation, can reduce herd size dramatically, and unless harvest quotas are modified accordingly, the potential for over harvest is high. In contrast to years of poor recruitment, if a large number of calves are born, harvest is still possible even in the face of high predation.

PREDATOR-PREY 2004

JOINT CONFERENCE and ANNUAL MEETING
NORTHWEST SECTION AND ALASKA CHAPTER OF
THE WILDLIFE SOCIETY



Alyeska Prince Hotel
Girdwood, Alaska

MAY 1-3, 2004

Program & Abstracts
