

# STATE OF ALASKA

DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION

TONY KNOWLES, GOVERNOR

1300 College Road  
Fairbanks, AK 99701  
PHONE: (907) 459-7336  
FAX: (907) 452-6410

## MEMORANDUM

TO: Distribution

FROM: Stephen M. Arthur

DATE: 13 November 2001

SUBJECT: 2001 Porcupine Caribou Census Results

---

Results of the 2001 photographic census of the Porcupine Caribou Herd indicate that the herd currently numbers approximately 123,000. This estimate was derived by counting caribou on 414 aerial photographs taken on July 3, 2001 while the herd was congregated along the eastern border of the 1002 section of the Arctic National Wildlife Refuge. The total number of caribou counted on the photographs included 100,307 yearling or adult caribou, 18,303 calves, and 4,442 that were not classified by age, for a total count of 123,052. Of these, 64,283 were congregated in three large groups west of the Aichilik River in the 1002 section, while the remainder were in several smaller groups scattered between the Aichilik and Kongakut Rivers. One small group was located north of Arctic Village, on the south side of the Brooks Range. The current population estimate indicates a decline of approximately 4.7% from the last census in 1998, when the herd was estimated at 129,000. The herd has declined by 31% since its peak population of 178,000 was recorded in 1989, but still is considerably more numerous than during the 1970s, when it was estimated at 100,000 to 110,000 caribou.

The photo census was conducted by biologists from the Alaska Department of Fish and Game and the U.S. Fish and Wildlife Service. Biologists used two fixed-wing aircraft to locate groups of caribou, then directed the photographing airplane, a DeHavilland Beaver with a 9x9 inch aerial camera mounted in its belly, to the groups. The search was facilitated by the presence of approximately 85 radiocollared caribou in the herd. Caribou on the photographs were then counted by personnel from the Alaska Department of Fish and Game, U.S. Fish and Wildlife Service, Yukon Department of Renewable Resources, and Canadian Wildlife Service. The Porcupine Caribou Herd is managed under an international agreement among the governments of the United States, Canada, Alaska, Yukon, and the Northwest Territories. Photo censuses are conducted at intervals of two or three years to monitor the status of the herd. In addition, calf production and survival are measured during June of every year, and herd composition is determined during March.

The current decline apparently began during a series of hard winters from 1990-1993, which reduced calf production and survival. However, the herd continued to decline during the mid and late 1990s, when late-winter weather was less severe and calf production and survival were greater. More recently, persistent snow cover during May and June of 2000 and 2001 delayed the herd in reaching its preferred calving grounds on the coastal plain of the Arctic National Wildlife Refuge. This reduced survival of calves so that only 44-51% of cows were accompanied by calves at the end of June, the lowest rates recorded during more than 20 years of research on this herd. Thus, the herd was expected to continue declining. However, the 1.5% annual rate of decline since 1998 is less than the 3% average from 1989 through 1998, which suggests that survival of adults may have increased during recent years.

The next census of the Porcupine Herd is planned for summer 2003.