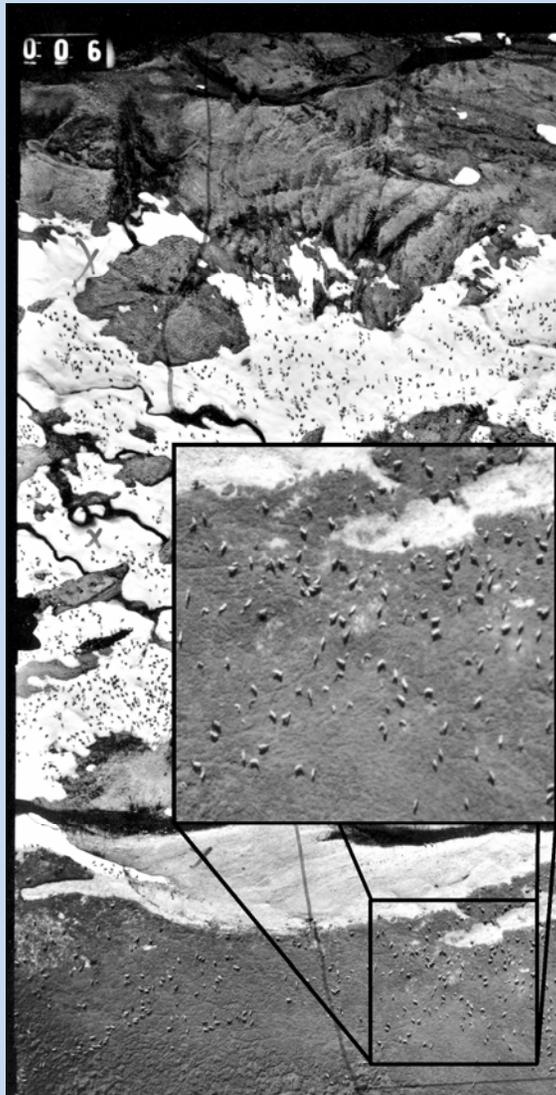




Photocensus plane at work.

Photo from the 2010 PCH photocensus



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## Counting the Caribou



## Why count the caribou?

An estimate of population size is a basic piece of information that is required to ensure wildlife populations are sustained over the long term. While researchers do various other measurements on the Porcupine Caribou Herd each year, which give an idea of herd size, actual periodic counts of the herd are the most accurate. The Porcupine Caribou Management Plan recommends that the herd be counted every two or three years.

## How do we count them?

Biologists use an aerial method to estimate the total number of animals in the Porcupine Caribou Herd.

In late June or early July, warm weather triggers the insects to come out in droves. Once the insects come out, the caribou gather into very large, tight groups known as aggregations for a short period of time. Some of these groups can consist of up to tens of thousands of caribou. This is the best time to do a census since the majority of the caribou are in a relatively small area allowing the biologists to conduct a cost-efficient and quick census.

Usually, the caribou aggregate in the Arctic National Wildlife Refuge; however, in some years large groups have formed in northern Yukon. The Alaska Dept. of Fish and Game and the U.S. Fish and Wildlife Service lead the census fieldwork.

The radio collars on the herd help determine where the caribou are so that the census can be timed properly. As the weather warms, all radio-collared animals are located repeatedly from fixed-wing aircraft until it looks like the caribou are about to aggregate. Because it is important that the census be completed as quickly as possible, up to three or four planes are called in to radio track the collared animals and to search for groups of caribou with no radio-collared animals in them.

All aircraft fly several thousand feet above ground level while looking for caribou and listening for the radio collars.

A 9x9-inch aerial camera has been mounted on the belly of a DeHavilland Beaver plane owned by the Alaska Department of Fish and Game. Once large groups of caribou are located by the smaller planes, this plane flies transects over the groups and takes photos at regular intervals. Smaller groups of caribou are either counted or photographed from the other search planes.

The actual census usually takes one to three days. Often, waiting for the caribou to group up takes the longest time. Since the groups can form very suddenly and break up just as quickly, the crew needs to be ready to go on short notice.

The photos are developed during the summer, and a number of agencies help count the caribou in the photos. The number of caribou counted in the photos added to the number of caribou found by the search planes but not photographed equals the estimated population. Biologists round that number to the nearest thousand caribou.

This technique, one of the most accurate and reliable methods to count large barren-ground caribou herds, has been used to count the Porcupine Caribou Herd since 1972.



Laying out the photos



Counting the photos

## What have we found?

The herd grew at a slow and steady rate through the 1980s and peaked around 1989 when 178,000 caribou were estimated. The herd started to decline after that, again at a fairly slow and steady rate. In the 2001 census, biologists estimated the herd at 123,000 caribou, or about 55,000 fewer caribou than when it peaked 12 years earlier.

Biologists tried to conduct a photo census in 2003 and every year since but poor weather and forest fire smoke foiled biologists' efforts for seven years in a row.

In July 2010, a census was finally possible. Biologists estimated 169,000 caribou in the herd. This large herd size was a great relief to all partners since people were worried that if the decline had continued at the same rate, the herd could have numbered as low as 90,000 or 100,000 caribou.

Until biologists are able to conduct another census, the current trend of the herd is still not known. The next census attempt will be in the summer of 2012.

