

## **Caribou and North Slope Alaska oil fields: information relevant to ANWR**

Matthew A. Cronin, Ph.D.  
University of Alaska Fairbanks  
Palmer Research Center  
[ffmac1@uaf.edu](mailto:ffmac1@uaf.edu)

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The information below reflects my experience and opinions about issues with caribou and Alaska North Slope oil fields. I can back the statements up with scientific papers and data. I included a list of publications below and enclose reprints for your information.

I anticipate critical responses from government biologists, environmental groups, and anti-development politicians. This is what happened in 2001 when Secretary of the Interior Gale Norton was accused of twisting science to support President Bush's pro-development agenda when she used similar information about caribou and oilfields that I provided her. This was on the front pages of the Washington Post, L.A. Times, and Anchorage Daily News. Anonymous U.S. Fish and Wildlife Service biologists were quoted in the papers accusing the Secretary (their boss) of misusing science. The basis of the criticism was that the information I supplied was from oil industry sponsored studies and publications (even though much of the information was government data). I believe this is an example of a virtual monopoly that government agency biologists hold over the science that gets used by policymakers and given to the public on such issues.

### **Information on North Slope Alaska caribou and oil fields**

1. The range of the Central Arctic caribou herd includes the areas that are occupied by the North Slope Alaska oilfields that have already produced billions of barrels of oil and contain trillions of cubic feet of natural gas.
2. The caribou herd increased from about 5,000 animals in 1975 to about 67,000 animals in 2008 when the last census was done (see the table and graph below). The herd increased by about 62,000 animals during the period in which the Prudhoe Bay, Kuparuk, and other oilfields were built and operated. Much of this increase could be due to recruitment of new calves as well as immigration from other Arctic caribou herds, as described in some of my publications.
3. Clearly, the Central Arctic caribou herd has fared well. Of course there may be local impacts, such as caribou staying away from roads when they are calving for a few weeks in June each year (although there are also data showing this is not the case). Changes in habitat use may also occur in response to development. However, during the summer, the caribou frequently use habitats in the oil fields, and will go up on the gravel pads along with drilling equipment, compressors, etc where there are fewer mosquitoes and parasitic flies. The tundra is too wet to build on directly, so gravel is laid to support the structures. There are fewer

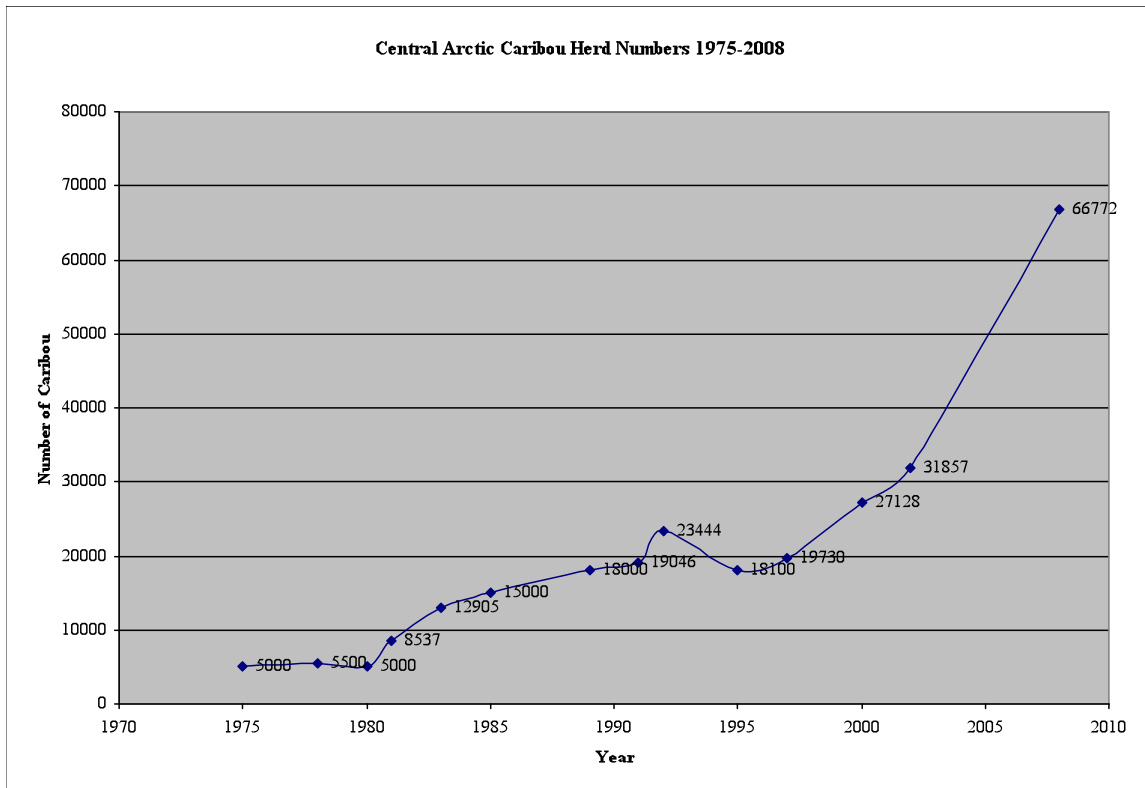
insects on the bare gravel than in the tundra vegetation. The caribou also will often congregate in the shade of buildings and pipelines where it is cooler and there are fewer flies. Just as you see back in the eastern states with deer, they probably lose their fear of people and facilities over time. Remember, there is no hunting of caribou in the oilfield areas so they have to adjust to a fairly benign situation compared to many other areas.

4. I think our policy makers, government biologists, and the public should recognize Alaska's North Slope oilfields as a great example of successful multiple-use management, in which both oil production and wildlife management have been achieved.
5. During debates over oil development in ANWR, government biologists and environmental groups have selectively presented information and speculations claiming that the herd has been harmed by the oil fields. Maybe it has, but the herd numbers and documentation of caribou using the oil field areas indicates the impacts have not prevented the herd from growing dramatically.
6. For example, in the graph below you see a decrease in the herd numbers between 1992 and 1995, followed by continued growth. It was concluded by the National Research Council in 2003 that this decline in the herd was due in part to oil field impacts, despite the overall growth of the herd. However, the neighboring Teshekpuk Lake caribou herd also declined at about the same time (see the table and graph below). The Teshekpuk Lake herd has no oil fields in its range so it seems some common ecological factor, not the oil fields affected both herds at the same time. The NRC didn't note the similar dynamics in this adjacent caribou herd. Regardless, many factors affect caribou herds, and inference about causes of changes to herd numbers is usually speculative.
7. I think it's important for the science to be thoroughly presented on these issues and science should not be censored for political purposes. It is also important to clearly separate science from the policy. We use the science to help us make policy and management decisions, but the science doesn't dictate what we do or don't do. That's what we elect people for in our representative republic.
8. With regard to ANWR (and other areas like northeast NPRA), I think we can manage new oil fields with success similar to that at Prudhoe Bay. With new directional drilling technology, we can situate the drilling and processing equipment to avoid certain areas, and limit particularly loud or distracting activity to times other than the calving season. Ice roads are built to operate in the winter and few caribou are on the coastal plain of ANWR in the winter.
9. I think the ANWR debate is really over keeping the area as "pristine" wilderness and stopping development, and not about impacts on wildlife. We have shown we can manage wildlife impacts. Let's have an honest debate on these issues, and not manipulate the media and public with speculation about possible harm to

charismatic animals, when the real agenda is wilderness and stopping resource development. I hope the public and Congress get properly informed on these issues. There's a lot of scientific literature on these issues, that is required reading if one is to report on it accurately. See the references below for a partial compilation.

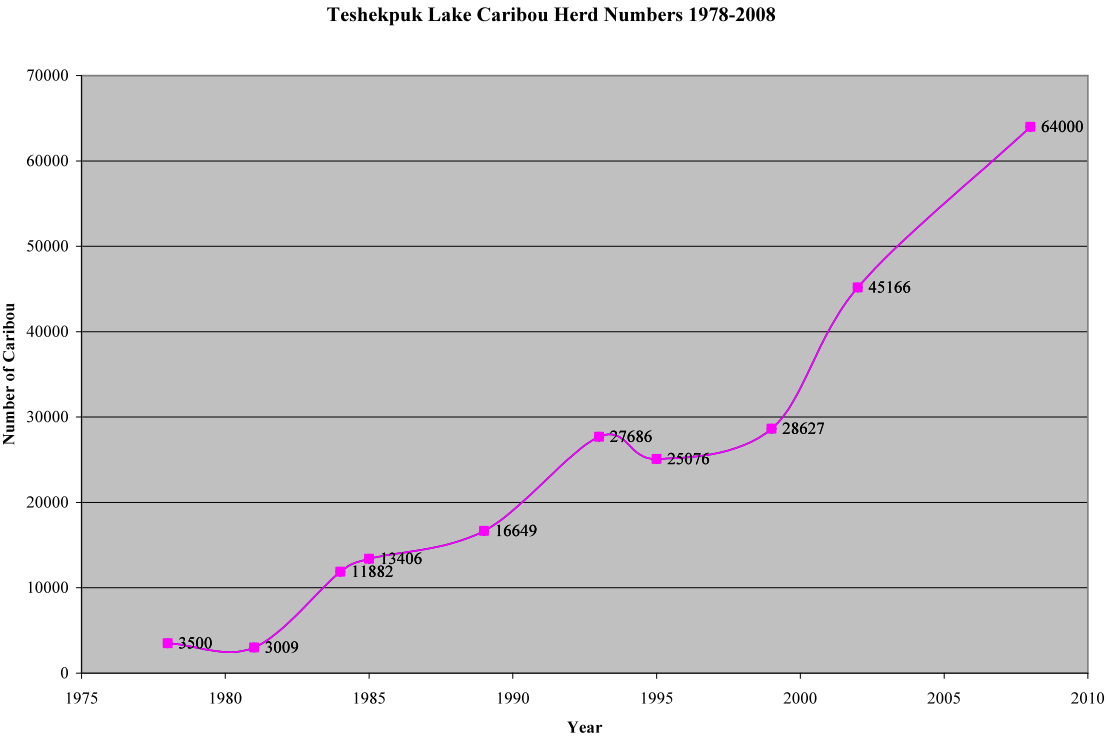
#### Central Arctic Herd numbers since beginning oil field development

Census Year	Number of caribou in herd
1975	5000
1978	5500
1980	5000
1981	8537
1983	12900
1985	15000
1989	18000
1991	19046
1992	23444
1995	18093
1997	19730
2000	27128
2002	31857
2008	66772



Teshkepuk Lake Caribou Herd numbers 1978-2008

Year	Number of caribou in herd
1978	3500
1981	3009
1984	11882
1985	13406
1989	16649
1993	27686
1995	25076
1999	28627
2002	45166
2008	64000



Matthew A. Cronin, Ph.D  
Research Associate Professor of Animal Genetics  
University of Alaska Fairbanks  
Palmer Research Center

**Partial list of publications on North Slope Alaska caribou, wildlife, and oil fields**

**Caribou**

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- Pollard, R.H., W.B. Ballard, L.E. Noel, and M.A. Cronin. 1996. Summer distribution of caribou in the area of the Prudhoe Bay oil field, Alaska, 1990-1994. *Canadian Field-Naturalist*. 110:659-674.
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