2007 Anaktuvuk River Fire and Caribou: A brief summary

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- The Anaktuvuk River tundra fire occurred between Anaktuvuk River and Itkillik River. It began with a lightning strike July 16 during an unusually warm, dry summer. There was only a trace of rainfall in June and July in the Barrow region (Appendix 1).
- About 240,000 acres in size. Largest tundra fire in recorded history on the North Slope. (Figure 1).
- According to the Satellite maps there were very few collared Western Arctic Herd (WAH) Caribou north of AKP in July and August. (Figure 2). The caribou were farther west.
- The guide camp north of the village reported that they were seeing very few caribou there in mid-August. They said it was the fewest caribou they had seen in the area in 30 years.
- The fire and smoke probably pushed most caribou that were in the vicinity out of the area.
- As of October there are no collared WAH caribou in the area north of AKP. There are still some collared caribou north of the mountains, but they are farther west. (Figure 3)
- Most of the Teshekpuk Caribou Herd (TCH) is near the Colville River, which is far to the east side of their normal range. Some of the herd is currently moving south. There are many TCH caribou around Umiat now. If they continue to move south there might be a good number of them around AKP like they were last winter (Figure 3 and Figure 4).
- Past studies have indicated that fires are bad for wintering areas because the lichen, that caribou prefer in the winter, are burnt. It takes a long time for the lichen to regenerate, more than 20 years in most cases. Many Teshekpuk caribou wintered in the area of the Anaktuvuk River fire last year.
- On the other hand, fire is <u>not</u> as damaging to summer range because the grasses, sedges, and willows grow back much more quickly. In some cases fire can be beneficial to summer range because it may result in accelerated re-growth.
- We strongly encourage a good long-term scientific study be conducted regarding the recovery of the range following the fire. This should include at the very least: soil and vegetation studies, small & large mammal surveys, and fish and water quality studies.
- In summary: It is unlikely that there will be many WAH caribou migrating south through AKP this fall. However, there is a reasonable chance that, despite the burn, some TCH caribou will continue to move south and will be available at AKP later this fall and/or winter. Fire damages lichens and caribou will probably avoid the burn area in the winter. Hopefully, the burn area will recover fairly quickly and provide good summer range.

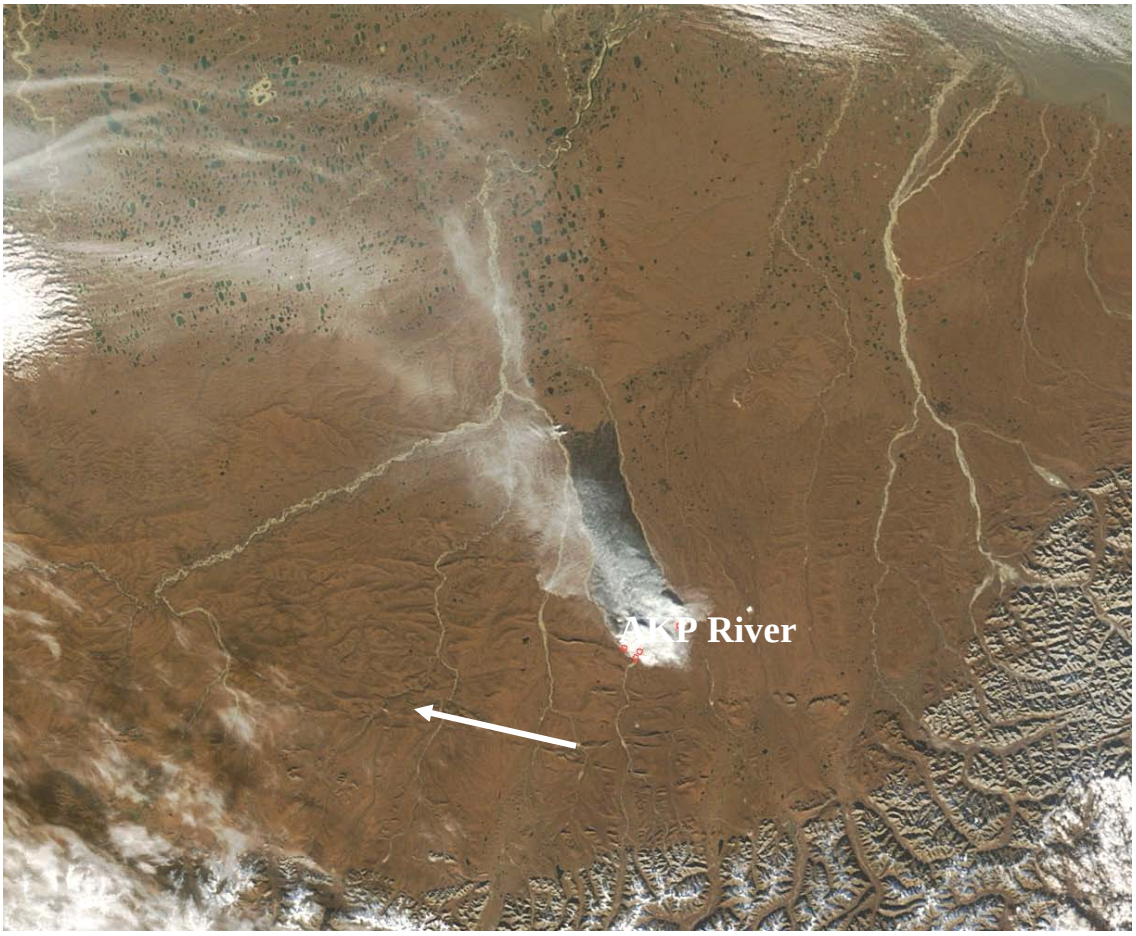

Figure 1. Satellite image showing fire location between the Anaktuvuk River and Itkillik River around 25 September.

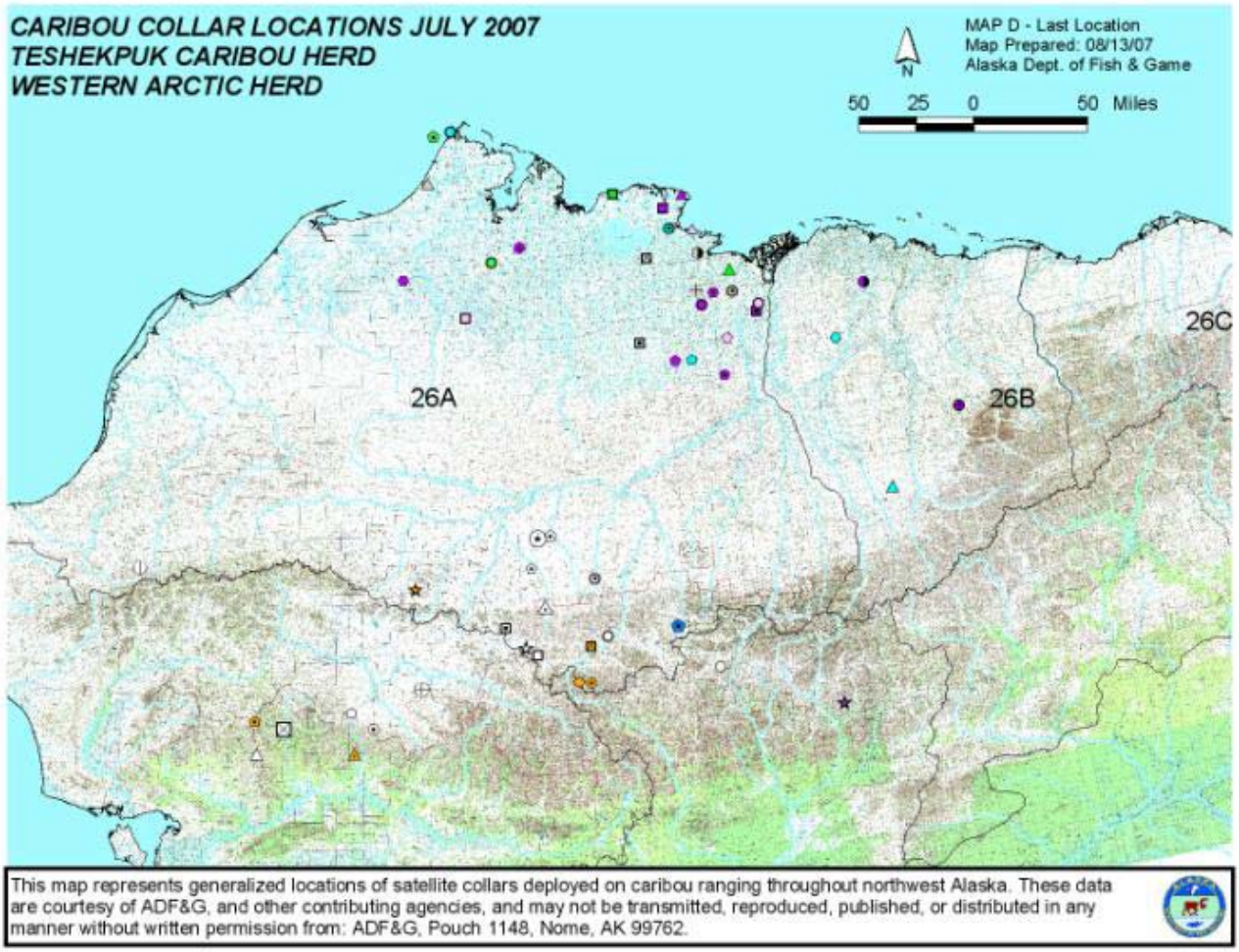

Figure 2. Map of caribou locations 13 August 2007. There were very few caribou in the area north of AKP in July and August. The caribou north and west of the Colville River are Teshekpuk Herd caribou (TCH). The caribou west of AKP are Western Arctic Herd (WAH) caribou. The star shaped dot south of AKP represents a dead animal.

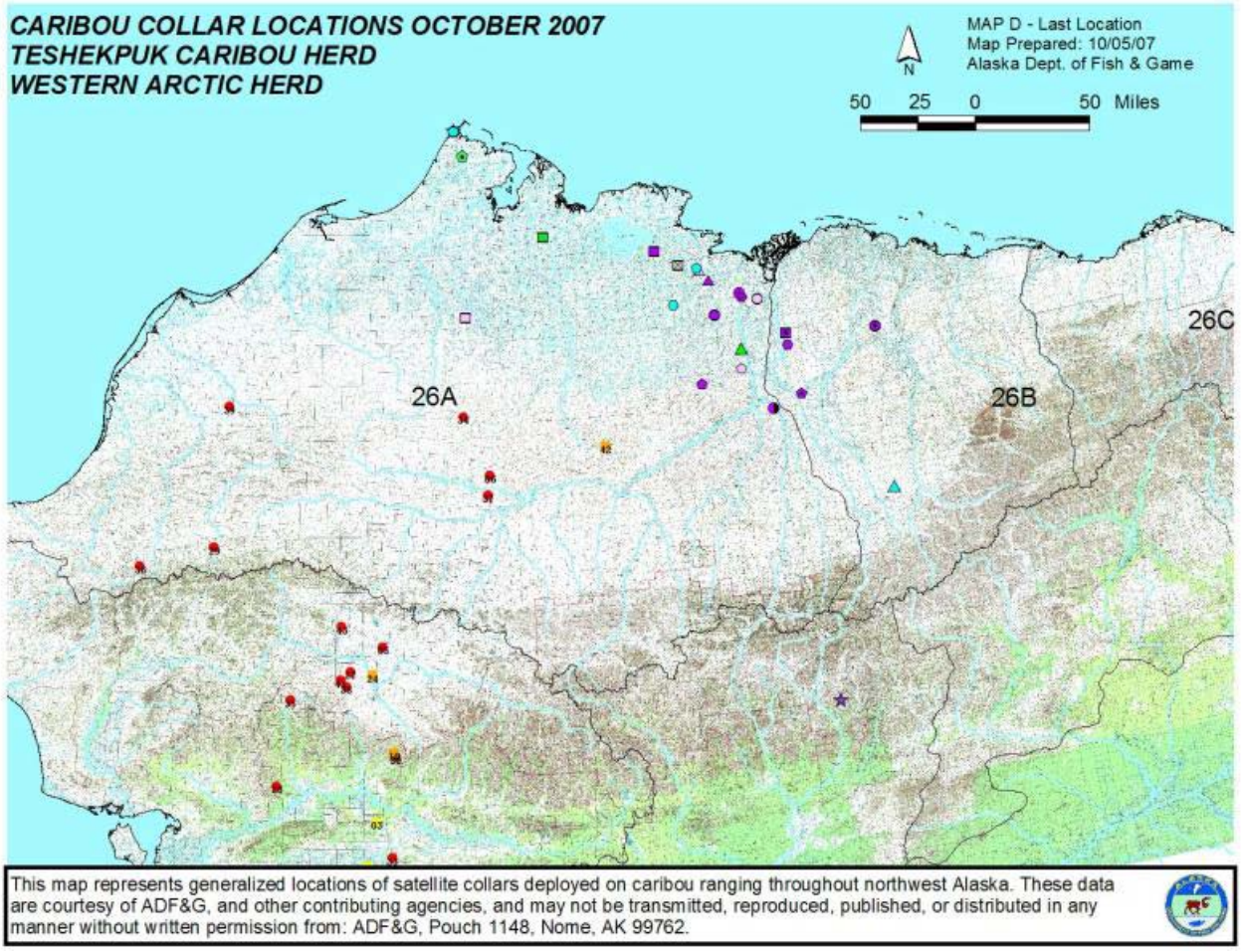

Figure 3. Map of caribou locations on 5 October. The red and yellow dots are the WAH caribou. The other dots are Teshekpuk Caribou.

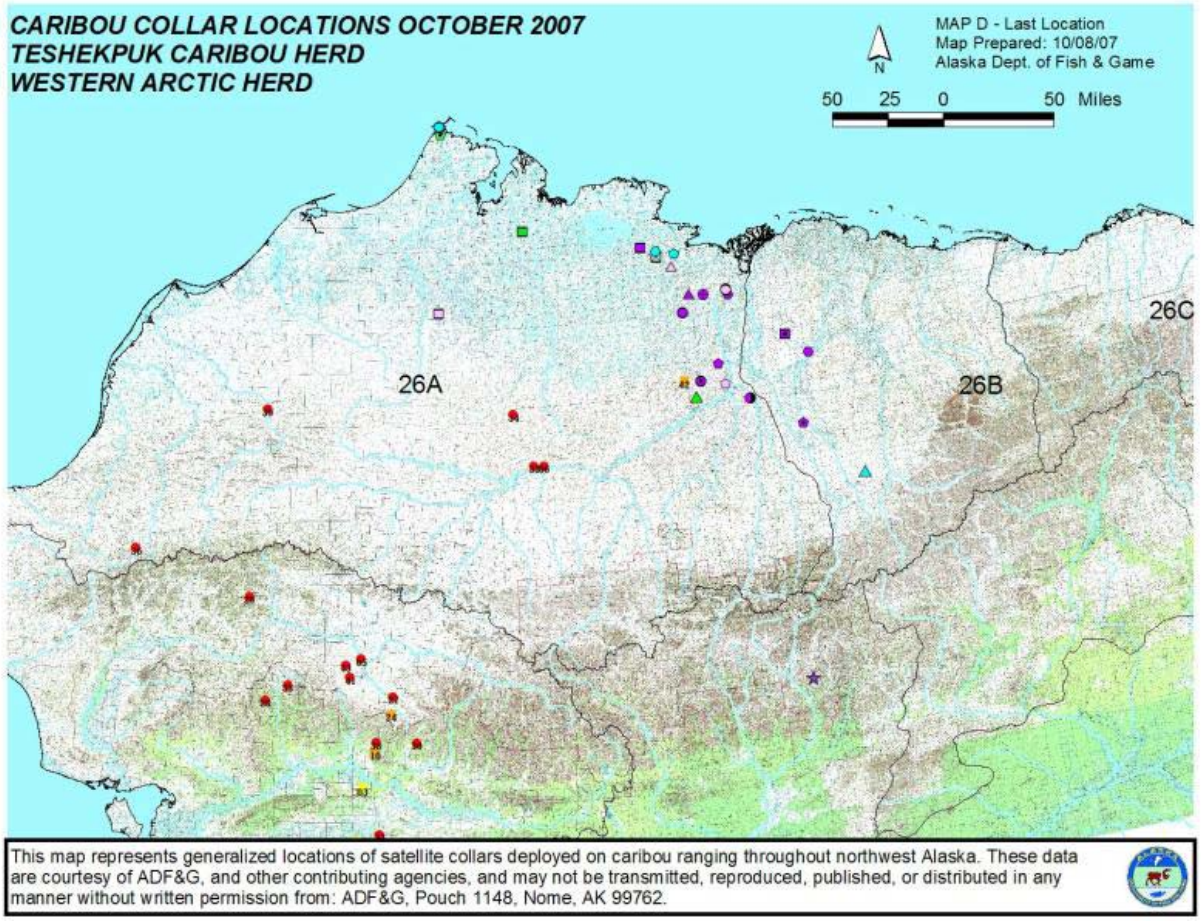

Figure 4. Map of caribou locations on 8 October. Note that some Teshekpuk caribou are moving south to the area around Umiat. The red and yellow dots are WAH. The other dots are Teshekpuk Caribou.

Appendix 1. Newspaper Article

Wildfire still burning North Slope tundra
The Associated Press

FAIRBANKS, Alaska — Alaska's largest wildfire of the year is now also the biggest tundra fire ever recorded on the North Slope.

The blaze has covered more than 220,000 acres could continue to burn for several more weeks, fire authorities said.

The Anaktuvuk River Fire began with a lightning strike July 16 during an unusually warm, dry summer that has nurtured the flames.

"We've seen periods of rapid growth interspersed with periods of the fire doing almost nothing," said Mike Butteri, a field specialist with Alaska Fire Service.

The nearest population center is Anaktuvuk Pass, population 300, about 50 miles south of the fire. There is little risk of the fire coming toward the village, but it was inundated by smoke when the wind changed direction several weeks ago.

The wind shift also resulted in "choking smoke" making its way toward researchers working at the University of Alaska-Fairbanks' Toolik Field Station, according to station director Brian Barnes.

"It's a tremendous fire," he said. "It's visible from 50 miles away by its plumes, and it obscured a third of the northern sky."

The fire continues to show significant activity at its northern and southern perimeters, but authorities believe the blaze will go out by itself in the next few weeks as winter approaches.

"Fuel-wise, sure, there's plenty more tundra to burn," Butteri said. "Weather-wise, as we're getting closer to snowfall and colder weather, I don't see it lasting much longer."

It is possible for a tundra fire to sustain itself on peat beneath snow, but that's an unlikely scenario for this fire, Butteri said.

Since the area is mostly home to low, quick growing vegetation, there is little concern about major long-term changes to the environment, Butteri said. One exception is reindeer lichen, a key food source for caribou that can take decades to grow back.

The lack of lichen could drive caribou away from the area, said Perry Barboza, an associate professor of biology at UAF's Institute of Arctic Biology and a caribou expert.

"Either they'll shift to something else or they'll have to go somewhere less benign and more exposed," he said.