

FOR RELEASE  
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## **Yukon fossil key to uncovering bison's North American invasion**

*Joint news release*

The DNA from a steppe bison fossil discovered in the Ch'ijee Bluff on Vuntut Gwitchin Settlement Land has played a central role in determining when the large ice age mammal first arrived in North America and its subsequent evolution on the continent.

The 130,000 year old fossil was found in 2006 and is the oldest reliably dated bison in North America. Prior to this discovery, scientists had little reliable information on when bison first migrated eastward across Beringia to North America.

When it was first discovered, DNA could not be extracted from the fossil. Advances in science have meant that DNA can now be taken and compared with genomes from other bison fossils from Siberia and North America. Using these comparisons, researchers constructed an age-calibrated genealogy that sheds new light on the bison's North American invasion and evolution.

The bison fossil is part of the Vuntut Gwitchin First Nation collection and is housed in the Arctic Research Facility in Old Crow.

### **Quotes**

"Old Crow has a rich and fascinating ice age heritage and the fossils found in the area continue to bring new insights into the territory's ancient past. Yukon government is pleased to work with the Vuntut Gwitchin First Nation to discover and preserve these unique and invaluable traces of a long-ago world."

*-Minister of Tourism and Culture Jeanie Dendys*

"Vuntut Gwitchin have ancient stories about co-existing with giant animals in the Old Crow area for millennia. This significant steppe bison research is the result of our positive long-term working relationship with researchers and community members."

*-Vuntut Gwitchin First Nation Chief Bruce Charlie*

### **Quick facts**

- The bluffs and banks along the Old Crow River are the richest sources of ice age fossils in North America.
- Scientists estimate that over 80 per cent of the ice age mammal fossils in Yukon belong to steppe bison. This species survived through the major extinction event at the end of the ice age and small populations persisted in Yukon until as recently as 400 years ago.
- The new findings are the subject of an article entitled *New fossil and genomic evidence constrains the timing of bison arrival in North America* which was recently published in *Proceedings of the National Academy of Sciences*, a prominent science journal. The authors are University of Alberta's Duane Froese and others, including Yukon government palaeontologists.

### **Learn more:**

Ice Age Old Crow  
Proceedings of the National Academy of Natural Sciences

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