

# Ice age camel bones found in Yukon redraw species' lineage

June 10 2015

---

Miners in northwestern Canada have discovered ice age camel bones whose DNA is forcing scientists to redraw the family tree of the now-extinct species.

Grant Zazula, a paleontologist with the Yukon's Department of Tourism and Culture, said three fossils recovered from a gold mine in the Klondike in 2008 are the first western camel bones found in the territory or Alaska in decades.

Scientists had believed western camels that once lived in North America were related to llamas and alpacas common to South America, but they now have genetic proof that the animals are more closely tied to the camels inhabiting Asia and Arabia.

"For us, the gold is the fossils because it's this incredible resource for understanding extinct and ancient animals of the [ice age](#)," Zazula said.

Zazula said scientists can now begin to understand why the camels went extinct 13,000 years ago, at the end of the ice age.

For the past century, paleontologists have studied camels based on comparative anatomy, dividing bones and fossils into two main branches of animals found in Arabia, Africa and Asia, and llamas and alpacas found in South America, said Zazula.

He said paleontologists believed western camels were like "giant llamas"

or "llamas on steroids."

That theory began to change in 2008 when miners uncovered bones, preserved in the permafrost, while hydraulically stripping the earth, he said. The bones were so well preserved they still held DNA, unlike other mineralized fossils.

Zazula said he sent small pieces of the bone to geneticists at the University of California Santa Cruz who were assisted by a statistician and a geologist.

The results have been published in the journal of *Molecular Biology and Evolution*.

A news release said the DNA indicates the western camels split off from the branch that includes modern camels about 10 million years ago. It notes most lived in southern areas of North America, but some made their way north during a relatively warm period of the last ice age about 100,000 years ago.

Zazula said the findings are going to make scientists re-examine other species, too.

"There's something pretty spectacular about holding on to a [bone](#) that's 100,000 years old that can tell us so much about the history of the past and the history of the land you live in," he said. "I think that's pretty spectacular."

© 2015 The Associated Press. All rights reserved.

Citation: Ice age camel bones found in Yukon redraw species' lineage (2015, June 10) retrieved 25 April 2024 from <https://phys.org/news/2015-06-ice-age-camel-bones-yukon.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.