

An Ancient Moose

Racking Up New Insights Into Very Ancient Heritage

- Dr. Leigh Syms,
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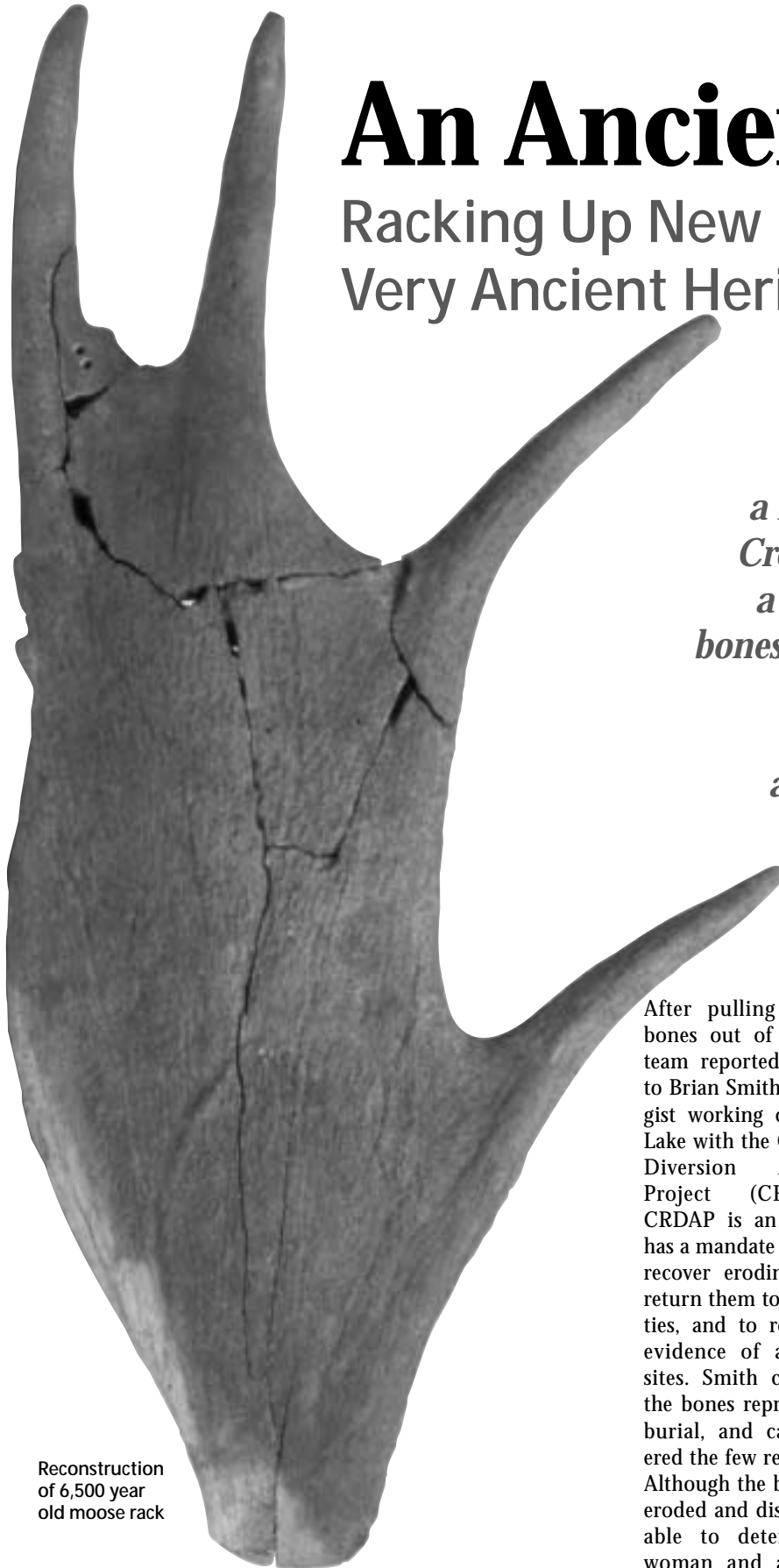
“In the summer of 2001, a member of Nisichawayasihk Cree Nation (Nelson House) & a geologist discovered eroding bones on the shore of Wuskwatim Lake in northern Manitoba, west of Thompson. Found along with the bones was the rack of a moose that lived about 6,500 years ago.”

After pulling most of the bones out of the bank, the team reported the discovery to Brian Smith, an archaeologist working on Wuskwatim Lake with the Churchill River Diversion Archaeological Project (CRDAP). The CRDAP is an initiative that has a mandate to look for and recover eroding burials and return them to the communities, and to recover eroding evidence of ancient campsites. Smith confirmed that the bones represented an old burial, and carefully recovered the few remaining items. Although the burial had been eroded and disturbed, he was able to determine that a woman and an infant had

been buried there, and that the moose rack had covered the infant. A moose leg bone flesher was also recovered from the shoreline and was presumed to be part of the burial.

The burial was transported to the University of Winnipeg where Physical Anthropologist Dr. Chris Meiklejohn is currently documenting the individuals. The associated burial items were brought to The Manitoba Museum where they are being analyzed as part of the CRDAP. This portion of the project has brought together Kevin Brownlee, an Archaeologist and the Aboriginal Liaison Officer with Historic

Reconstruction
of 6,500 year
old moose rack



Lab Number	Sample	¹³ C/ ¹² C Ratio	¹⁵ N/ ¹⁴ N Ratio	Conventional Radiocarbon Date (BP)	Calibrated Date (BP)	Date Range 2 Standard Deviation
Beta-163690	Moose Rack	-21.9	+0.8	5590+40	6390	6440-6300
Beta-163689	Bone	-19.9	+12.8	5950+40	6750	6870-6670
Beta-163691	Flesher	-28.2	+1.4	110+40	250-0	280-170 150-0

13C/12C Ratio of carbon 13 to carbon 12
15/14N Ratio of nitrogen 15 to nitrogen 14
Calibrated dates are corrected for atmospheric fluctuations
2 Standard Deviation means that there is a 95% likelihood that the date falls in this time range
BP Before Present (before 1950)

Resources Branch; Dr. Vince Crichton, Senior Scientist and renowned international moose specialist with the Wildlife and Ecosystem Protection Branch, Government of Manitoba Conservation Department and myself.

Among the many questions raised were the age and context of the burial and the artifacts. How old was this burial? And did all the items represent a single event? In order to answer these questions, three samples were submitted for AMS (accelerated mass spectrometry) dating, a dating technique that measures the ratios of two different forms of carbon. This costly technique, which removes only a tiny sample about the size of a pencil eraser, is used on fragile artifacts and other items where it is important

not to damage them. Although the dating of these three samples cost \$3,300, the results were astounding! The dates on the moose rack and individual were approximately 6,400 and 6,750 years B.P. (before present, actually before 1950. Dating labs use 1950 as the 'present' or zero date so that the results do not have to be constantly corrected through the years). This is the oldest dated burial from Manitoba and the second oldest dated moose from the province! The oldest moose is dated to 7,848 C¹⁴ years B.P. and was found at the approximate intersection of Manitoba, Ontario and Minnesota.

There is a small difference between the dates on the moose antler and the human bone, with the human bone being about 400 years older.

This is consistent with other recent dates, and we think that this is due to the woman having a high fish diet that seems to effect the date.

The impact of a marine diet on modifying dating results, known as the reservoir effect, is becoming well-known in the archaeological field. However, our work in discovering and describing the impact of a freshwater fish diet – the freshwater reservoir effect – is revolutionary and ground breaking. The discovery of this new effect will require all archaeologists working in areas where there has been a fish diet to rethink what they date and how they interpret their results.

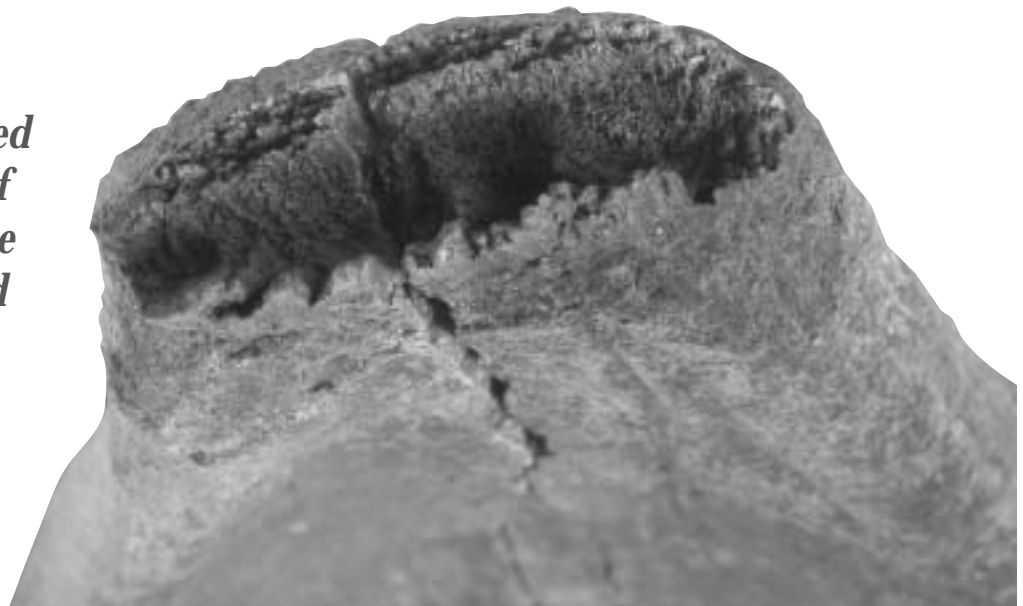
The moose rack, from the species *Alces alces andersoni*, is long and narrow and the inte-

rior of the antler is somewhat porous. It has now been carefully cleaned and reconstructed, and was found to be stained with small patches of red ochre, a substance frequently associated with burials and other sacred items. Efforts are being made to have a DNA sample analyzed at Brandon University that will provide important information on moose evolution. The date on the leg bone flesher is another story. It is very recent and clearly not associated with the burial. Had the effort not been undertaken to date the three items, this hide scraper would have been erroneously assumed to be of an equally great age.

From this valuable data, we can reconstruct some of the events. About 6,400 years ago, there was a First Nations

“The moose rack... was found to be stained with small patches of red ochre, a substance frequently associated with burials and other sacred items.”

Close-up of the moose rack showing the chopping marks





camp on the shore of Wuskwatim Lake. The hunters killed a moose that would have been butchered and skinned, and the hide made into clothing and/or containers. A mother and infant died. One or more men chopped the rack off the skull; this was a very difficult task because antler is extremely difficult to cut. The moose rack was then sprinkled with red ochre during the burial ceremony and laid over the infant. The reason for the moose rack cover is unknown; was it a symbol of power, of a relationship with a moose spirit, a recognition of belonging to the moose clan, or some other reason?

The ravages of shoreline erosion exposed and eroded these individuals, known in the Aboriginal community as 'old ones'. The elders tell us that this was not a random, accidental discovery, rather that the old ones are allowing us to discover them. In this case, we learned of a unique and very old burial event. It is our task to report this knowledge, particularly for the young Cree of today so that they can learn from the old ones about the rich heritage of the past and develop pride in whom they are. And, of course, this heritage enriches knowledge and awareness for all of us.

The individuals and the moose rack will be returned to the councillors of Nisichawayasihk Cree Nation who will arrange for the local elders to conduct a traditional burial. The knowledge will be returned to the community as a series of reports, and eventually will be incorporated

Moose leg bone flesher from the site but not associated with the burial

into the historical and heritage knowledge of the local Northern communities. It will also become part of the broader heritage of Manitoba and the archaeological record in general.

What is the Churchill River Diversion Project?

The CRDAP developed out of the Northern Flood Agreement as a result of hydroelectric developments in the North beginning in the late 1960s. It has four main partners: Manitoba Hydro which funds the mitigation as part of its commitment through the Northern Flood Agreement; the Archaeology Section of Manitoba's Historic Resources Branch which conducts the

fieldwork, looks after the burials, and administers the project; the Archaeology Department of The Manitoba Museum which processes and documents collections, arranges for various scientific analyses, and returns the knowledge through reports, exhibits, publications and school programming; and several First Nations communities that provide guidance and experienced field crews. Depending upon the scientific questions to be answered, a variety of scientific researchers are available to provide expertise.

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