

## Archaeological finds dated to 35,000 years

Jan Mayman

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Maitland Parker holds a 35,000 year old chert used for cutting.  
Photo: Tony McDonough

ANCIENT Aboriginal tools found on a Pilbara mine site in Western Australia have been dated at 35,000 years — among the oldest so far discovered in Australia.

Archaeologists believe the dig could yield material up to 40,000 years old, comparable with the internationally famous Lake Mungo Man discovery in NSW.

The prehistoric dwelling place is on

the multibillion-dollar Hope Downs iron ore mine, site about 160 kilometres from the outback town of Newman and 310 kilometres south of Port Hedland. It is jointly run by international mining giant Rio Tinto and Gina Rinehart's Hancock Prospecting.

Archaeologists hired by the Aboriginal traditional owners have released the results of radiocarbon tests indicating that it is one of the oldest-dated sites in Australia and internationally significant as a prehistoric record of humanity.

"We have always known this is an important part of our history, that our ancestors lived here," said a senior elder of the Martidja Banyjima people, Slim Parker.

"Our stories and songs tells us this. It is a good feeling to know archaeologists have proved what we say is true. It makes us feel strong. Now we want this place preserved. It is part of our heritage and our culture."

The discovery shows Mr Parker's ancestors lived in the area for more than 1000 generations.

The Banyjimas' consultant archaeologist Neale Draper said: "We are thrilled at the test results. This is a major scientific discovery. It contains a large number of stone tools and it is one of the most data-rich ancient sites in Australia, with an exceptional amount of information about climate change through the last ice age, the earliest occupation of the Pilbara and North-West Australia."

Discussions are now under way between the company and the traditional owners, who want the sensitive areas protected from mining.

Melbourne University's Professor Jim Bowler, who discovered bones on the shores of Lake Mungo in the late 1960s — later estimated to be 40,000 years old, making them the oldest human remains found in Australia — said: "This appears to be a very, very important find. It seems likely to write a new chapter in the history of Aboriginal Australia."

Another eminent scholar, Dr Ian Crawford, former curator of archaeology and anthropology at the West Australian Museum, said: "Further work on this site is most important."

Dr Crawford said the discovery of ancient tools was especially significant. Analysis of seed remains on the artefacts might be able to settle a long debate among archaeologists about the date that grinding implements were first used by Australia's indigenous people.

"It will be very interesting to see if this work can be related in any way to rock engravings in the area," he said.

So far, no human remains have been found near the the dig site, but the archaeologists and Aboriginal elders have found other caves in the area that appear to have been deliberately walled in, and could be burial places.

"Some of these niches are empty. They are being investigated with great care and respect," Dr Draper said.

The sheer antiquity and quality of the material was amazing, he said. "This is a forensic record of the history of indigenous Australia, especially in the Pilbara.

"The cave is a rock shelter measuring 10 by eight metres, with a roof 1.5 metres high. The 1.5-metre excavation pit goes down 2.2 metres to the bedrock below, and there is evidence of Aboriginal occupation down to two metres deep," he said.

Twelve other sites in the area have also yielded archaeological evidence such as stone tools, fireplaces and dateable charcoal as well as plant remains such as seeds and bark. Another 20 have still to be excavated.

Most of the stone tools are small cutting implements. Some were found beside a fireplace containing charcoal dated as 25,000 years old.

Traces of organic material on the tools could provide evidence of prehistoric food supplies and climate change when further testing is complete.

"The most significant artefacts we found are a core (piece of stone) and two flakes (from it) at the site layer dated to 35,000 years ago," Dr Draper said.

"The reason these are significant is because the flakes refit onto the core. This demonstrates the way early Aboriginal peoples manufactured stone artefacts."

Since these artefacts refitted together, it showed that the site had not been previously disturbed. "We now hope Rio will redesign the mine to protect this site, so that we can begin a major salvage operation," he said.

Dr Draper is managing director of Australian Cultural Heritage Management Ltd, a national consultancy. He said carbon dating of artefacts was done at the University of Waikato in New Zealand, which has state-of-the-art carbon dating equipment.

The dig was supervised by a leading US archaeologist W. Boone Law, who said it was the most significant project he had ever worked on.

"The oldest-dated stone artefacts are a core and associated flakes that have a radiocarbon age estimate of 35,000 years," he said.

"There are at least 12 stone artefacts buried up to 10 centimetres below the 35,000 year date, inferring the site is much older. We do not know the age of the earliest artefacts, but based on the rock shelter stratigraphy, it is likely around 40,000 years.

"When we were excavating, we recovered most of the artefacts below the charcoal we dated to 25,000 years BP — before present."

Mr Law said ancient campfires like the one in the cave shelter were identified by observing the outline of old hearths during digging.

"The outline of the campfires are defined by a dense concentration of ash, charcoal and burnt rock surrounded by unburnt soil," he said. "The soil surrounding the hearth will be a lighter colour. Often there is burned rock at the base of a campfire, demonstrating that the fire burned in place or in situ."

He said the site was of great international importance. "I know that the scientific value of this rock shelter will be emphasised across the wider academic community, but for me personally, my memories of excavating this site will always be tied to working with the Banyjima people," Mr Law said.

"A team of elders and young men worked alongside ACHM staff throughout this project, and their field observations added a new dimension to our research."

"Their perspectives on the archaeological record and natural enthusiasm for looking after country are forever linked to the history of this place."