

Radiocarbon tests date tools from north-west WA as among oldest in Australia, confirming locals' songs and stories

Pilbara mine yields 35,000 year old tools



A thousand generations: Trevor Parker and Brian Tucker in a cave at the site which archaeologists have deemed 'data rich'.

**JAN MAYMAN
EXCLUSIVE**

Ancient Aboriginal tools found on a Pilbara minesite have been dated at 35,000 years old — 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 discovery in NSW.

The tools were found in a prehistoric dwelling place that is now part of the multi-billion dollar Hope Downs iron ore mine, about 50km from Newman. It is jointly owned by the international mining giant Rio Tinto and Gina Rinehart's Hancock Prospecting.

Archaeologists hired by the Aboriginal Traditional Owners, have just released the results of radiocarbon tests indicating that it is

one of the oldest dated sites in Australia, 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 senior elder Slim Parker, a leader of the Aboriginal Martidja Banyjima people. "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 tests show Aboriginal people lived in the area for a thousand generations.

The archaeological dig site is a 35,000-year record of history that is expected to reveal important new information about climate change, as well as the way Australia's first people adapted to their environment and developed tool technology to

hunt and collect their food supplies. They had a richly varied diet and cooked some of their food: traces of ancient campfires were found near the cave.

Archaeologists say they probably ate hundreds of different animal and plant foods according to season and availability, like the Aboriginal people encountered by the first European colonists.

Most of the stone tools discovered are sharp-edged, clearly designed to cut meat and plant materials for food, and also for wood-working — planning, boring, chiselling and cutting to make other tools and weapons.

Patterns of usage wear on tool edges will tell how the Pilbara Aboriginal people developed technology to survive their harsh environment. The type of stone material used will tell a story about their makers' mobility and travel.

No stone weapons or spearheads

were found: these are not common in Aboriginal Australia, except for some areas of the tropical north.

"We are thrilled at the test results," said the Banyjimas' consultant archaeologist Dr Neale Draper. "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.

The site was specially important because it contains such an ancient layer of environmental data as well as tools. Study of the dated sediments would tell scientists much about climate change as they studied variations in the colour, grain size and oxidation of the sediments by weathering and erosion.

"This appears to be a very, very important find," said Professor Jim Bowler of Melbourne University, the geologist who discovered and researched the celebrated Mungo site in 1968.

"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 WA Museum, said further work on this site was most important.

The discovery of ancient tools was especially significant, he said. So far, no human remains have been found near 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 tomb burial places like some found in the Northern Territory.

"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 10m by 8m, with a roof 1.5m high.

"The 1.5m excavation pit goes down 2.2m to the bedrock below, and there is evidence of Aboriginal occupation down to 2m deep."

Twelve other sites in the area had also yielded archaeological evidence, like stone tools, fireplaces, dateable charcoal as well as plant remains like seeds and bark.

Another 20 had yet 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 and two flakes at the site layer dated to 35,000 years ago," Dr Draper said.

"The reason these are significant is because the flakes refit on to the core rock.

"This demonstrates the way early Aboriginal peoples manufactured

stone artefacts."

Because 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 discussions were under way between the company, the Traditional Owners and their archaeologists, in an effort to preserve the site.

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

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

"There are at least 12 stone artefacts buried up to 10cm 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," he said.

"We recovered most of the artefacts below the charcoal we found and dated to 25,000 years BP, before present."

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 Boone Law said.



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