

GUNDJEIHMI

ABORIGINAL CORPORATION



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Kakadu site of Australia's earliest home

A team of archaeologists and dating specialists have new proof that Aboriginal people have been in Australia for at least 65,000 years — much longer than the 47,000 years believed by some archaeologists. The new findings have been published in *Nature* magazine this week.

The site where this new evidence has been found is Madjedbebe, located on the traditional lands of the Mirarr people surrounded by the World Heritage-listed Kakadu National Park. The site is located on Aboriginal land excluded from Kakadu National Park as a result of the Jabiluka uranium mining lease granted in 1982. The lease is now held by Energy Resources of Australia, which partnered with the Gundjeihmi Corporation to provide access to the site.

Madjedbebe rock shelter has been excavated four times since the 1970s, most recently in 2012 and 2015 by an international team led by Associate Professor Chris Clarkson — an Australian Research Council (ARC) Future Fellow at the University of Queensland — in partnership with the Mirarr Traditional Owners. A landmark agreement with the Gundjeihmi Aboriginal Corporation (GAC) made it possible for Professor Clarkson and colleagues to dig the site in 2012 and 2015.

Dating carried out by Professor Zenobia Jacobs, an ARC Future Fellow at the University of Wollongong, has revealed that Aboriginal people lived at Madjedbebe at the same time as now extinct species of giant animals were roaming around.

In addition to showing the deep antiquity of Aboriginal occupation, the dig also revealed new evidence of activities and lifestyle. “The site contains the oldest ground-edge stone axe technology in the world, the oldest known seed grinding tools in Australia and evidence of finely made stone points which may have served as spear tips”, said Professor Chris Clarkson, lead author of the *Nature* article.

“Most striking of all in a region known for its spectacular rock art are the huge quantities of ground ochre and evidence of ochre processing found at the site, from the older layer continuing through to the present,” Professor Clarkson concluded.

“This study confirms the sophistication of the Australian Aboriginal toolkit and underscores the universal importance of the Jabiluka area. These findings reinforce the need for the highest level of conservation and protection for this site,” said Justin O’Brien, CEO Gundjeihmi Aboriginal Corporation.

Comment available:

Associate Professor Chris Clarkson, University of Queensland

Professor Zenobia Jacobs, University of Wollongong

Justin O’Brien, CEO Gundjeihmi Aboriginal Corporation

Professor Peter Hiscock, archaeologist, University of Sydney

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Further background and detail of findings on following page.

- In a unique partnership with the Gundjeihmi Aboriginal Corporation, a team of Australian archaeologists led by Chris Clarkson, Ben Marwick, Richard Fullagar, Mike Smith and Lynley Wallis, together with dating specialist Zenobia Jacobs, has excavated and dated the site of Madjedbebe on the lands of the Mirarr clan in Kakadu National Park, revealing Australia was first colonised by Aboriginal people at least 65,000 years ago – several thousands of years earlier than previously thought.
- The partnership between Gundjeihmi and the University was formalised in a landmark agreement giving access to country for the research team and providing the Mirarr with unprecedented control over the operations of the excavation and its findings. A generic version of the research agreement is available for download for interested Aboriginal communities.
- Madjedbebe is situated within the boundary of the Jabiluka uranium mining lease, an area surrounded by the World Heritage listed Kakadu National Park. Two decades ago the Mirarr Traditional Owners led a huge domestic and international campaign against proposed uranium mining nearby. The uranium lease is held by Energy Resources of Australia Ltd which has since become a majority owned subsidiary of Rio Tinto. All mining work has been halted and the site has been rehabilitated.
- The site of this research has been at the centre of archaeological debate for decades over previous claims of great antiquity, with the archaeological community divided between those arguing for first occupation of Australia less than 50,000 years ago and those arguing for colonisation as early as 60,000 years ago.
- The excavations in 2012 and 2015 and subsequent detailed research have put this debate to rest, demonstrating occupation from 65,000 years ago, with rich evidence of early Aboriginal culture at the site.
- Extensive dating by radiocarbon and optically stimulated luminescence methods, along with detailed scientific analysis of artefacts and sediments, shows the site has a deeply buried, dense occupation layer dating to 65,000 years ago.
- First occupation happened at a time of much lower sea level (long before the formation of the nearby iconic Kakadu wetlands) when the crossing distance from Island Southeast Asia to Australia was shorter than today. Climatic conditions in the tropical north were also cooler and moister than today.
- The new dates for Madjedbebe fit well with genetic analyses indicating modern humans left Africa between 60,000 and 80,000 years ago.
- The excavations at Madjedbebe have not only extended the known duration of human occupation of Australia by several thousand years, but have also revealed startling new evidence of complex early behaviour.
- The site contains the oldest ground-edge stone axe technology in the world, the oldest known seed grinding tools in Australia (and some of the earliest in the world), and evidence of finely made stone points, which may have served as spear tips.
- Most striking of all in a region known for its spectacular rock art is the huge quantity of ground ochre and evidence of ochre processing found at the site, from the lowest layer continuing through to the present. Slabs of sandstone found at the base of the deposit were once attached to the rear wall of the rock shelter and are coated in ochre, some of which may be ancient rock art. Also, the earliest paints used at the site likely incorporated reflective exotic mica additives to create visually brilliant paintings.
- The site was heavily occupied at various times in the past, during periods in which the landscape and climate changed and sea levels rose and fell in concert with the advance and retreat of the last Ice Age.
- There is evidence of strong cultural continuity in many iconic elements of Aboriginal material culture spanning the entire length of human occupation of the site – such as the use of ground ochre, grinding stones, rock art and edge-ground axes. There is also evidence of frequent change in stone tool forms and the kinds of plant and animal foods eaten as the extensive Kakadu freshwater wetlands formed over the last 2000 years.
- The new findings reinforce the spectacular World Heritage values of Kakadu National Park, its rich and ancient Aboriginal history, and the deep-rooted connection to country of the Mirarr people.
- The Australian Research Council funded this study through Discovery Project grant DP110102864 to Chris Clarkson, Ben Marwick, Richard Fullagar, Mike Smith and Lynley Wallis, and through fellowships to Zenobia Jacobs, Ben Marwick, Richard Roberts and Lee Arnold.