

## MEDIA RELEASE

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### **ANSTO's nuclear research techniques provide evidence of earliest Aboriginal occupation of Australia**

**New findings published today have shown evidence of the earliest occupation of the Australian coast from Barrow Island, Northwest Australia.**

**Researchers from the Australian Nuclear Science and Technology Organisation (ANSTO) were part of a multi-disciplined, international team of experts who contributed to the research, led by Prof Peter Veth of the University of Western Australia.**

The excavation and dating of artefacts, and sea and land fauna from sites on Barrow Island in Northwest Australia provide evidence of the Aboriginal occupation of Australia dating back to a period between 46,200 and 51,100 thousand years, much earlier than first thought.

Barrow Island was connected to the mainland by a land bridge until 6,800 years ago, and the Aboriginal occupation of the island was abandoned when sea level rose.

One of the largest excavation sites with stratified deposits on the island was the 100m long Boodie Cave, where over 10,000 artefacts were recovered.

**ANSTO's Centre for Accelerator Science was one of four independent facilities that dated a range of specimens retrieved from deposits, which included charcoal and shell.**

**Dr Vladimir Levchenko, who supervised radiocarbon dating on the Antares accelerator, said that the combined results of radiocarbon and optical luminescent dating provided largely consistent chronologies.**

"Prof Veth's group, who carried out field a survey over three years, has helped to clarify our understanding of the behaviour of modern peoples who dispersed from Africa and reached Australia," said Dr Levchenko.

"This research strongly supports the theory that Aboriginal people, although living inland, were relying on the resources of the coast.

"We were happy that our excellent facilities for accelerator mass spectrometry at ANSTO could contribute to this significant research."

“Our quality control, which includes the use of a large pool of process blanks that are updated continuously, enhance the accuracy and reliability of our measurements,” said Levchenko.

**“Although the coastal areas where the first inhabitants of our continent lived now lie under water, the team located a site on a continental island that has proved to be remarkably rich,” said Levchenko.**

The research provides significant new evidence that humans in the Late Pleistocene also adapted to the desert landscapes of the northwest by using maritime resources for subsistence.

The findings were published *Quaternary Science Reviews* and other participating institutions included the University of Queensland, James Cook University, University of Waikato, University of Adelaide, California State University, Sacramento State, Curtin University, University of Oxford, and the Western Australia Department of Parks and Wildlife.

The research had the participation and support of the Buurabalayji Thalanyji Aboriginal Corporation and Kuruma Marthudunera Aboriginal Corporation and was funded by the Australian Research Council as a Discovery Project.

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