Centre for Archaeological Science

Key Research Project

A reliable absolute chronology for the Aboriginal rock art in the Kimberley, Western Australia

This 3-year Discovery Project (2011–2013) to Maxime Aubert has been funded by the Australian Research Council to produce the first large scale and robust chronology for the Aboriginal rock art sequence in the Kimberley region of Western Australia.

Rock art is one of the most intimate and potentially informative archives of the past and the Kimberley region of Western Australia has one of the greatest concentrations in the world. This archive is of international importance and of particular concern to local Aboriginal people. Given the number and variety of Kimberley rock art styles, the possible time-depth they represent, their potential association with occupation deposits and the amount of ethnographic information available, the region is an ideal place to apply new methods for studying rock art and to develop new techniques for determining its age.

In collaboration with local Aboriginal communities and two ARC Linkage Projects (LP0991845 awarded to Morwood et al. and LP100200415 awarded to O’Connor et al.), this ARC Discovery Project will employ uranium series (U-series) dating methods to date mineral coatings (calcite coatings and amorphous silica skins) that have naturally formed in direct association with rock art.

The aims of the project are to:

- Provide, for the first time, a robust chronology for a number of Australian rock art traditions
- Integrate the chronology of art traditions with existing regional archaeological and palaeoclimate information, including the arrival of the first humans, their settlement and subsistence patterns and climatic events such as sea level and faunal changes that have influenced human life-ways
- Provide a framework for sustainable management and conservation strategies.

Gwion Gwion (Guyon Guyon) rock paintings, Oomarri, Western Australia.
(image permission courtesy Ambrose Mungala Chalarimeri, photograph by Richard Downs)
Main collaborators
- Michael Morwood: Earth & Environmental Sciences, University of Wollongong
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- Kira Westaway: Physical Geography, Macquarie University
- Susan O’Connor: School of Culture, History & Language, Australian National University,
- Jane Balme: Archaeology, University of Western Australia

Key publications