The Radiocarbon Chronology of the Norfolk Island Archaeological Sites

ATHOLL ANDERSON1, TOM HIGHAM2 AND ROD WALLACE3

1 Department of Archaeology & Natural History, Research School of Pacific and Asian Studies, Australian National University, Canberra ACT 0200, Australia
aja@coombs.anu.edu.au

2 Waikato Radiocarbon Laboratory, University of Waikato, Hamilton, New Zealand. Current address: Oxford Radiocarbon Acceleration Unit, University of Oxford, United Kingdom
thomas.higham@archaeology-research.oxford.ac.uk

3 Department of Anthropology, University of Auckland, Private Bag 92019, Auckland, New Zealand
r.wallace@auckland.ac.nz

Abstract. Radiocarbon determinations were obtained for archaeological sites at Cemetery Bay and Emily Bay, Norfolk Island. Sample materials were rat bone gelatin, marine shell and wood charcoal. Ages on bone gelatin are contradictory and suggest a laboratory problem, while ages on marine shell appear to include an old-carbon offset of 500–600 years: dates on these samples are consistent with those on charcoal when appropriate corrections are made. Ages on charcoal were divided according to the expected inbuilt age of the sample taxa. The samples with lowest inbuilt age were subjected to Bayesian analysis which concluded that the main archaeological site, at Emily Bay, had been occupied from the early thirteenth to the early fifteenth centuries A.D. The Norfolk Island settlement occurs within the same age range as other Polynesian settlements of southern islands.


Charcoal identification

The first results from Norfolk Island (Rich et al., 1983: 17) were on unidentified charcoal (I-11019, I-11303, Table 6) from excavations at Cemetery Bay. Additional excavations there by Meredith (1985: 22) added two samples (Beta-6821, Beta-6822) comprising pieces from “small branches” (3–4 cm diameter) of gymnosperm, almost certainly Norfolk pine (Araucaria heterophylla). It is not clear how branchwood was identified (deduction from the curvature...