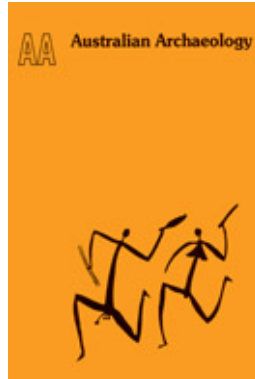


## Australian Archaeology



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A RADIOCARBON DATE FOR THE FINAL PREHISTORIC OCCUPATION  
OF GLENNIE ISLAND CAVE, BASS STRAIT

Rhys Jones and Jim Allen

In the last issue of Australian Archaeology (no.9), we described the discovery of a small cave on Great Glennie Island some 7km west of Wilson's Promontory, Bass Strait, Victoria (Jones and Allen 1979). A shell midden in this granite cave consisted mostly of limpets (Cellana solida).

In order to obtain a date for final occupation of the site, we submitted a sample of limpet shell to the ANU Radiocarbon Research Laboratory, hoping that it would at least indicate a date beyond that of the arrival of European sailors into Bass Strait at the very end of the 18th century and thus prove that the midden was genuinely of Aboriginal origin.

Through the courtesy of Mr John Head, we have now received the results from the ANU Laboratory. Sample no. GIC/1968:ANU-2296 1440±100BP (Libby half life of 5568 years) on limpet shell Cellana solida.

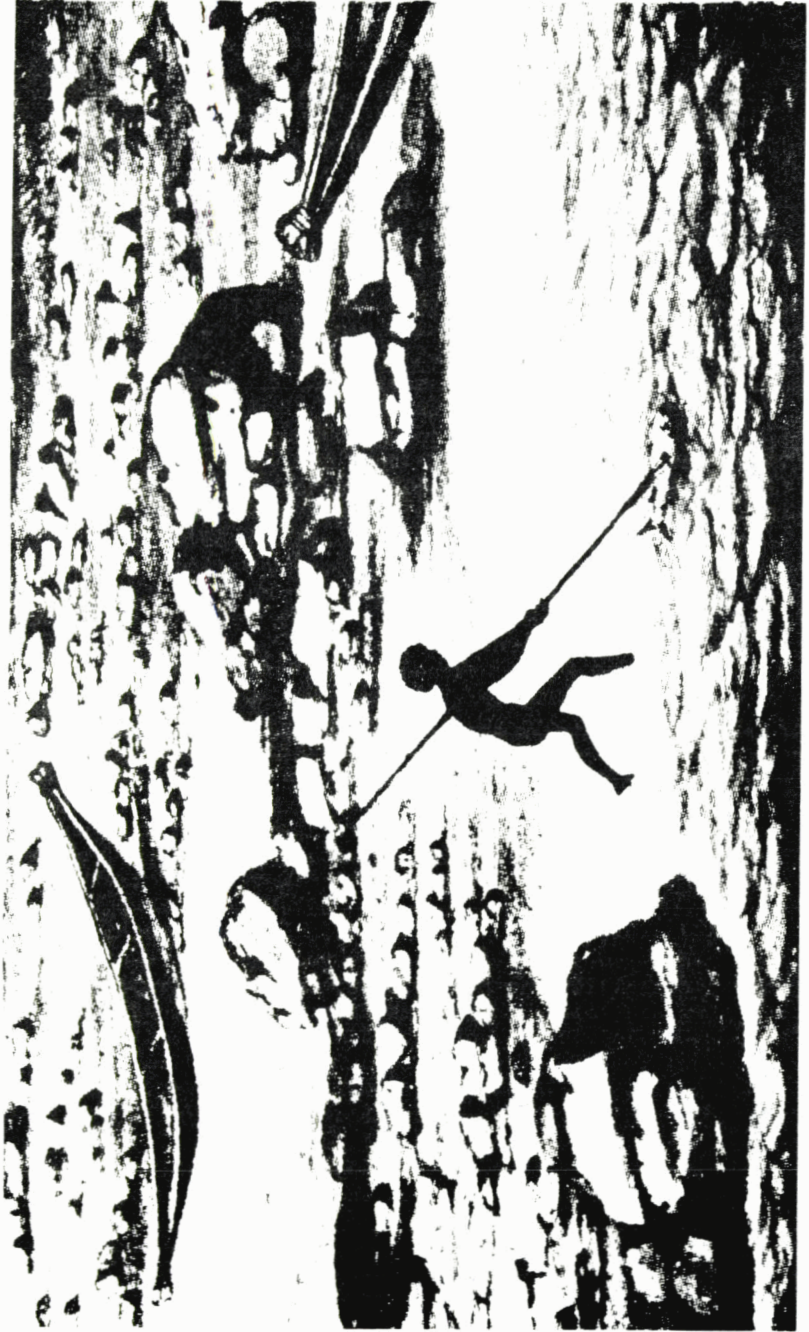
To compare this date with those obtained from charcoal samples, a figure of some 450±35 years must be deducted from the above result due to the 'sea water reservoir effect', whereby some of the carbonates in sea shells have remained in solution in the sea for some centuries before being absorbed into the shells themselves. Detailed experiments calibrating pairs of charcoal against sea shell samples from a variety of archaeological and geomorphological sites along the coasts of southeastern Australia have shown that there is a consistent relationship between the two; the figure of 450±35 is the current best estimate of the mean age of surface ocean water around Australia, and thus the 'apparent' age of live marine shells (Gillespie and Polach, in press; John Head pers. comm.; see also Stuiver and Polach 1977:357). Thus we may say that occupation of the Glennie Island Cave ceased about one thousand radiocarbon years ago. The date of initial occupation of this site is not known, but we suspect a midden depth of at least 30cm, and a significantly greater depth is possible to judge from the spillage of midden down the slope outside the cave.

As discussed previously, watercraft were observed ethnographically only on the sheltered waters on the eastern side of Wilson's Promontory close to the mainland and on the coastal lagoons of Gippsland to the east (Coutts 1970:128). To the west, along the coast of South Australia, the Coorong and the mouth of the Murray, watercraft were again restricted to coastal lagoons and to rivers (Lampert 1979:205-15). This prehistoric date from the Glennie Island Cave does therefore support the ethnographic evidence suggesting that watercraft capable of negotiating exposed oceanic conditions, albeit probably only in calm weather, were not used on the Victorian coast in the early 19th century, a situation which may also have pertained for the previous thousand years.

A corollary of this is that ethnographic evidence may not be a totally reliable guide to prehistoric usage of offshore islands in this part of the Australian coast, the prime problem being whether or not Kangaroo Island was within the occasional maritime reach of mainland Aborigines during the period from 10,000 to c.2000/4000 years ago when there is evidence of some human occupation of the island (Jones 1977:349-55; Lampert 1979:202-3). To the west of the mouth of the Murray, it seems that no watercraft of any kind was used ethnographically, though people on the west coast of Yorke Peninsula were able to swim out to Wardang Island, crossing about 4km of water at low tide (Hill and Hill 1975:38-9). Conversely, along the central coast of New South Wales and around Sydney Harbour, it appears that bark-sheet watercraft were capable of riding quite rough water, observers seeing them in the open sea (Brough Smyth 1878:417) and travelling, for example the 3-4km journey to the Tollgate Islands off the Clyde River Headlands (Lampert 1975). Such canoes, as illustrated by Joseph Lycett (Plate 1), may be contrasted with the simple craft illustrated by Howitt (1904:424, reproduced in Jones and Allen 1979) and Edwards (1978:85) from the Gippsland coast near Wilson's Promontory. The Sydney craft had their walls straightened and lifted higher by tying wooden withes onto their edges which were also held in roughly parallel positions by stick-like cross thwarts; the ends of the bark hull being tied to form a slightly upturned stem and stern (see diagram by C.A. Lesueur in Edwards 1978:86 and R. Cleveley in Smith 1960:pl.90). Thus relatively small differences in design of these sheet-bark watercraft meant considerable differences in their capacities for handling rough water. The ethnographic data show that along the coast of southeastern Australia in the early 19th century there was considerable regional variety in the types of watercraft used and in their ability to cross water. The archaeological evidence from the Glennie Island Cave suggests that in any one region we may have to consider the possibility of there having been differences also through time in Aboriginal watercrossing capacities.

This date also corresponds with the time period at which major changes have been observed in the prehistoric record of coastal Victoria, and in neighbouring South Australia and southern New South Wales. For the previous two or three thousand years, the stone industries in this region as in the rest of the southern half of the continent were dominated by backed microliths, made on excellent raw materials obtained by trade of some sort from special quarries. Then about fifteen hundred to a thousand years ago, these typologically distinctive tools were abandoned and replaced by nondescript flakes, often consisting merely of chips of locally obtained quartz struck from bipolar pièces écaillées. 'For a "stone age" people' as John Mulvaney put it, 'the recent Victorian aborigines were singularly loathe to fashion stone implements' (1961:97). This post-Bondaian phase, Mulvaney saw as being characterised by the use of local raw materials particularly organic ones such as bone, and associated with an extractive economy which intensively exploited localised food resources, key sites of this phase being the Glen Aire and Durras rockshelters. Mulvaney initially saw this as documenting the final attainment of 'an optimum adjustment to local conditions', but later hedged his bets more in line with Lampert's bland 'regional emphasis within a general ecological continuum' (Mulvaney 1975:244; Lampert 1971:69-70). It may however be worth keeping in mind the

Plate 1: Enlarged illustration of New South Wales Aboriginal canoes (c. 1820) from postcard reproduction, purchased at the Australian Government Printer, Canberra. Original water-colour attributed to Joseph Lycett held in National Library of Australia (NL37014)



possibility that the economic system during Bondaian times was indeed cast in a more regional mould than afterwards, as has been suggested for the coast of southeastern South Australia by Luebbers (1978), and that there was some degree of collapse of coherence of this system into a series of local sub-units.

Whether or not systematic seasonal occupation of the cave on Great Glennie Island corresponded in time with the flourishing of the Bondaian industry on the adjacent mainland (Coutts 1970) is a question worth asking. Alternatively, of course, it may be that prehistoric visits to Glennie Island have always been extremely rare and sporadic affairs and that the last visit just over a thousand years ago was merely a random opportunistic event unrelated to any patterns of regional prehistory or specialised seasonal activity. Excavations to take the discussion further are being planned for March-April this year.

#### ACKNOWLEDGEMENTS

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