PART A

BACKGROUND PAPERS IN ARCHAEOLOGY, ANTHROPOLOGY AND ETHNOBIOLOGY

ROLE OF FISHING IN ABORIGINAL SOCIETY BEFORE EUROPEAN ARRIVAL IN AUSTRALIA

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The ultimate origins of indigenous Australian fishing technology presumablylie in south-eastern Asia, the normally assumed centre of origin 'for Aboriginal Australians. Whether the various indigenous methods for fishing were further developed in, Australia or influenced by outside developments remains to be determined. Certainly a fair range of Australian Aboriginal fishing technology has probably been developed locally, as it is clear from other lines of evidence that Australia remained comparatively isolated from the outside world throughout most of Aboriginal prehistory.

Further, traditional Aboriginal knowledge of the marine environment in general in northern Australia was presumably actively added to from generation to generation in the early millennia of Aboriginal.adaption to Australia, as many aspects of the environment would have been different in detail from south-eastern Asia, even if many of the broad patterns would have been familiar.

Additional knowledge accumulation would have occurred with further adaptions to changing coastal, littoral and off-shore environments associated with the major changes in sea-level which took place right up to between about 8,000 and 6,000 years ago. In more recent times still other Aboriginal adaptations and what I would term 'techno-ecological' developments occurred, which we' can pick up directly in the archaeological record, such as the development of elaborate tidal fish trap systems.

One can argue that the initial human colonisation of Australia took place before about 40,000 years ago, but it is not at all certain how many subsequent phases of colonisation there might. have been before the arrival of Europeans in Australia. Some would argue that there were perhaps three or more phases of colonisation. Certainly, it is also clear that some sort of contact must have occurred at around about 5,000 to 4,000 years ago when the dingo was apparently first introduced to Australia from south-eastern Asia, perhaps via New Guinea.

Precisely how long Torres Strait has been occupied, or rather the Torres Strait Islands, remains to be determined, but some contact between Aboriginal Australia and Melanesia certainly occurred there within at least the last 1,000 years. Direct evidence for

fishing (both fishing in the usual sense and gathering of shellfish) in Australia, on the other hand, goes back at least 35,000 years at Lake Mungo in New South Wales, for instance.

NORTHERN AUSTRALIA

The role of fishing in Aboriginal economies in the late Pleistocene (or late ice age) in northern Australia is still not fully clear. No truly coastal archaeological sites are known yet for this time period, and any that might still exist would now be many metres under water and in most cases would probably be extemely difficult and expensive to find and excavate.

One promising area to look could be ancient caves or cave entrances at, say, 20 to 30 metres below present sea level in the Great Barrier Reef which itself is a massive limestone formation honeycombed with cave systems. What we do know about fishing in the late Pleistocene in northern Australia comes from inland cave sites which would have been even further inland at the time they were first used.

Two such sites in North Queensland are Colless Creek near Lawn Hill and Walkunder Arch Cave near Chillagoe. At both these ancient cave sites people camped under the rock overhangs and consumed freshwater mussels and fish which they had collected or fished in neighbouring creeks and waterholes about 18,000 to 12,000 years ago, incidentally at a time when much of inland Australia was much drier than it is now. In other words, we do know that people were definitely exploiting aquatic resources, and that they had the appropriate knowledge and technology to exploit littoral resources. In fact a number of southern Australian inland sites actually have marine shellfish remains which must have been carried quite some distance inland.

In the Holocene, or the last 10,000 years, we have an ever increasing number of archaeological sites in northern Australia with clear evidence for the exploitation of marine resources, especially as we come closer to the present. This is perhaps partly a result of the fact that the younger archaeological sites are often the better preserved and partly a result of the fact that sea levels reached their present level about 8,000 years ago and have been fairly stable since about 6,000 years ago.

Most of these archaeological sites with marine evidence are shell middens and mounds. Many of these have been found at, or very close to, the present littoral zone, but some have been found slightly further inland in areas where there has been a fair degree of progradation. These sites include evidence for exploitation of a wide range of fish and shellfish, as well as dugongs, turtles, crustaceans and the like.

The main areas which have been studied so far are in north-western Western Australia, parts of Arnhem Land, the western side of Cape York Peninsula especially around Weipa, the eastern side of Cape York Peninsuia especially round Princess Charlotte Bay, parts of the mainland coast near Innisfail and Ayr, and Hinchinbrook and Magnetic Islands. The northern tip of Cape York

Peninsula and some of the islands, of Torres Strait are now being properly investigated as well. In a brief review of this sort it is not possible to go into great detail on what is now known about all of these various parts of northern Australia. Instead I will concentrate on Princess Charlotte Bay and Hinchinbrook Island, both of which have now been radiocarbon dated.

PRINCESS CHARLOTTE BAY

Shell middens and mounds, occupied rockshelters with shell debris on their floors and dugong burials are all known from Princess Charlotte Bay. The first dated use of the area starts at close to 5,000 years ago and carries onvirtually to the present., Marine. resources there apparently varied in their abundance over time, and this may have helped to determine to one extent or another the size of local Aboriginal populations. Whether Aboriginal use of the area intensified during the last 1,000 years or so is a matter for some debate.

HINCHINBROOK ISLAND

Shell middens and mounds and elaborate stone-built tidal fish-trapsystems are known from Hinchinbrook Island. The first dated use of the area starts at about 2,000 years ago, though as with Princess Charlotte Bay, this age limit will probably be extended as more research is carried out. The fish traps. on 'Hinchinbrook were clearly very productive, and in fact some of these still operate virtually automatically, trapping fish and encouraging development on the spot of shell fish, and edible mangroves. It has been argued that they should be referred to as 'automatic-seafood retrieval systems'. At the time of initial contact with Europeans, Hinchinbrook Island apparently supported an entire Aboriginal tribe and had a number of semi-permanent villages. The case for intensified use of marine resources is perhaps even stronger on Hinchinbrook.

WORKSHOP DISCUSSION

The discussion covered the following points:

The fishtraps located on Hinchinbrook Island still work to some extent. Trapped fish survive from one tide to another.

It is possible that the traps were used all year (rather than broken at the end of the season), as they serviced a permanent population. The funnel traps were probably worked with baskets.