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**SOME WOODEN ARTEFACTS FROM
THE NORTH COAST OF NSW:
NEW ARCHAEOLOGICAL AND ETHNOGRAPHIC DATA**

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SUMMARY

This paper describes some wooden artefacts recovered from sites on the North Coast of New South Wales, and discusses their radio carbon age and significance. The specimens were recently donated to the Museum's Collection.

INTRODUCTION

This paper records and discusses the cultural context of three dated items from the North Coast of New South Wales. All were recovered by chance from waterlogged deposits during dredging or farming activities not found during systematic archaeological investigations. They include one boomerang from the Clarence River at Grafton, and a boomerang and one point from a multi-pronged fishing spear found in swamp deposits at Collombatti on the Lower Macleay north of Kempsey.

Aboriginal technologies as recorded in the immediate contact period depended to a considerable extent on organic raw materials. Many major items in the 'extractive tool kit' of hunting weapons as well as basic tools and utensils were made of wood and bark fibres, and so are unlikely to survive in archaeological deposits, even of relatively recent age. Unfortunately, the material culture of east coast Aborigines was not fully described at the period of European settlement, while it is only recently that anthropologists and prehistorians have revived interest in Aboriginal technology. Their attempts to reconstruct the material culture have been based on the evidence of ethnohistorical sources and museum collections, often themselves neither comprehensive nor even adequately documented. A great opportunity to record the material adaptation to the rich environments of the temperate and the sub-tropical east coast regions was lost in the late nineteenth century; we are now forced to attempt piecemeal reconstruction from fragmentary literary and artefactual evidence.

Many of our museum collections represent items made decades after settlement, when traditional methods of artefact preparation and the use of traditional materials were being modified by culture contact. Pre-settlement artefacts, or those collected early in the contact period, are therefore of considerable interest for studies of material culture. Dated wooden artefacts from geological or archaeological contexts, of course, have particular significance, especially as they give further evidence on the antiquity of certain items in the total assemblage, and on the tool kit as a whole.

1. BOOMERANG FROM THE CLARENCE RIVER (E66715)

DISCOVERY: This artefact was recovered by Grafton geologist Reginald Oxenford during dredging operations in the Clarence River between Seelands and Grafton, at a location half a mile downstream of the Southampton Ferry. It lay below twelve feet of

Records of the Australian Museum, 1977, Vol. 31 No. 16, 660-671 Figures 1-5.

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gravel and shingle in the river bed, seventy five yards out from the eastern bank. Such a context immediately aroused exciting speculation on the possible age of the find. However, studies of the geological setting by Dr. Gutsche of the Geology Department at the University of New England suggest that this need not imply any great antiquity. There are uncertainties involved in assessing rates of sedimentation in a stream bed such as that of the Clarence, while frequent flooding and alteration of the river course creates movement and re-deposition of material from, and within the stream bed. The boomerang's depth in the gravel beds need not, therefore indicate considerable age. In fact re-deposition and later incorporation in the gravel beds is implied by the differential preservation of the two ends of the artefact (See Fig. 1). One is badly warped and broken, suggesting that the boomerang lay for some time in shallow mud with this end exposed above the surface, while the other was covered and protected, before becoming incorporated totally in deeper waterlogged deposits.

DESCRIPTION: The boomerang is a plain, undecorated type, with no twist in the body, and a lenticular cross section. It has a very shallow curve, and the one undamaged end has been shaped to a slight point (Figs 1 and 2). This form, and the lack of decoration, is consistent with other known boomerangs from the Clarence Valley. No tooling marks could be discerned, but in view of the condition of the wood this need not indicate that they were originally absent. The wood had been subjected to fungal attack and there was also some degradation (H.D. Ingle pers. comm.). The boomerang was made of wood from a tree of the genus *Planchonella*, one of the Sapotaceae (probably *P. australis* — H.D. Ingle pers. comm.). This is a rain forest species producing dense, fine textured wood that is close grained and tough, so very suitable for making a throwing artefact.

DIMENSIONS: Assuming the arms of the boomerang to have been equal, length across the chord would have been 47 cm. The width at the centre is 5.6 cm.

DATE: Early in 1967 a wood sample taken from the broken end of the specimen was submitted to Professor Kigoshi of Gakushuin University, Tokyo for dating. The radio-carbon date for this sample (GaK 1299) was 140 ± 70 B.P. a modern result which Professor Kigoshi considered could represent a true age of some 300 years or more; it is best interpreted as indicating an age of less than four hundred years. So we can consider this boomerang as belonging to the period of the immediate pre-contact centuries, as it is unlikely to have been made from old, dead wood.

COMPARISON WITH ETHNOGRAPHIC DATA: This artefact, in form and size (See Figs. 1 and 2) closely parallels other Clarence Valley examples in the collections of the Australian Museum (for example E8113 from Copmanhurst). However, it seems to be smaller in length (though not in width) than examples from the Richmond River district to the north. Of twelve specimens from this area which I have recorded the mean length is 57.4 cm; mean width 5.6 cm. The difference in length may be due to underestimation of this measurement (which was based on judging the original curve), or to some distortion of the wood itself. The smallest of the Richmond River collection studied had a length across the chord of 54.9 cm. Interestingly *Planchonella* is not recorded in the local historical sources as used by the Aborigines to make wooden artefacts. However, it would have been available in the rain forest stands of the lower Clarence, so this need not imply that the item is of non-local manufacture. Maiden and the local historical sources all state that in this region the wood of the tulip tree (*Lagunaria patersoni*) was used for boomerangs (J. H. Maiden 1898: 380-381, 560; Cf. McFarlane, 1935). Dawson mentions use of mangrove wood as well (*Avicenna officinalis*), (R. L. Dawson 1935: 13 and 22). McFarlane gives the following description of boomerang manufacture on the Clarence:—

It is hewn from the spur of a tree, generally one of the tulip species, retaining the natural curve of the root buttress, and, as the timber of the tree named is

open-grained, is easily polished and worked by the simple tools the abo possesses in his laboratory. It is about four inches in width at the curve centre, tapering to two and a half inches at the ends which are slightly twisted, propeller fashion, to cause the weapon to perform a devious course on its aerial passage from the hand of the thrower.

The boomerang is only about a third of an inch in thickness at its stoutest part, and, like the spear, is hardened and blackened by the application of fire (McFarlane 1935).

2. WOODEN ARTEFACTS FROM TRIAL BAY CREEK, COLLOMBATTI (E67211, E67212).

DISCOVERY: Mr. J. B. McIver of Warrell Creek uncovered the boomerang and spear point about thirty years ago when excavating a trench to retain water in the bed of Trial Bay Creek, then dry during a period of severe drought. This creek bears various names as it finds its way from the ranges near Taylors Arm to the old Macleay channel and so into Trial Bay. For most of its length it once crossed extensive swampy tracts to the west of Clybucca, now greatly restricted by drainage undertaken some fifty years ago. The original discoveries made by Mr. McIver included one boomerang in very fragile condition, and one spear point (both described here), together with fragments of a second boomerang and two other spear points. These were apparently found at a depth of eight feet in deposits consisting of four feet of clay underlying about four feet of 'peaty material'. The points when uncovered were clustered in vertical position, suggesting that they were part of the one artefact, presumably a multi-pronged spear. Mr. McIver considered that the shaft of the spear could well also have been in the deposit but dragged away by the scoop of the earth-moving machine before it was recognised as part of a wooden artefact. The two boomerangs were at the same depth but about four to five feet distant. Mr. McIver also noticed some shells in the clay (of the ocean beach species *Plebidonax deltoides*); however, these did not form a consistent layer of shells. The second boomerang was in poor condition when found, and did not survive removal from its waterlogged context, nor did the other two spear points, which Mr. McIver describes as identical to the surviving example.

DESCRIPTION: The boomerang is a plain, undecorated example, as far as may be ascertained from its present condition (see Fig. 3), with a gentle curve and slightly pointed end. Measurements of this example would hardly be useful in view of the fragmentation and distortion of its original form. Its dimensions are best appreciated from the photograph (Fig. 3). However, its maximum width is approximately 5.0 cm, its thickness 0.7 cm. It is lenticular in cross section.

The remaining spear point, in spite of some degradation of the wood, has retained its form relatively well (See Fig. 3). It was originally of fire-hardened wood, the surface now badly eroded. The shaft tapers to both ends, but more sharply to one than the other, which allows one to distinguish the tip end from that which was attached to the shaft of the spear. The difference may be appreciated if one compares the widths at 10 cm from each end; one is 0.9 cm, the other 1.3 cm, equivalent to the maximum width of the point at its centre. The point is 66 cm long, and circular in cross section with a diameter of 1.3 cm at the centre.

DATE: These artefacts are of interest as their location suggested some antiquity. So, in spite of the long elapse of time since their original discovery, and the handling they had received in the interim, it seemed worth while submitting samples for radio carbon dating. However, only the boomerang could be considered for providing a sample since the point could not supply sufficient material for a valid date without destroying its form.

It was in too fragile a condition, and the outer surface of the wood too eroded, to allow coring to obtain wood for dating. As examples of multi-pronged fishing spears from New South Wales are rare, this specimen has additional importance both as an item of material culture and as a museum specimen. As the boomerang lay in the same clay deposit as the point, separated by only four to five feet and at the same depth, it seems a reasonable assumption that they both belong to approximately the same period, and to the same phase of human activity around the creek or swamp. However, this is an assumption, and uncertainties of deposition and movement of material within the discrete layers of swampy deposits, especially near stream channels, must be kept in mind when one applies the date for the boomerang to the spear point.

The radio carbon age of the boomerang (assuming that it was made from living wood) lies between 410-550 years (480 ± 70 B.P.), so we may definitely regard it as a pre-contact example (ANU 1628).

COMPARISON WITH ETHNOGRAPHIC DATA: The boomerang, in its present state of preservation shows no features inconsistent with those characteristic of plain, undecorated boomerangs from the North Coast, of which we have extant examples (Cf. Figs 3 and 4). The spear point, however, is of some considerable interest as it appears to have been part of a multi-pronged spear, of three prongs (Cf. Figs 4 and 5). The multi-pronged fishing spear is a piece of coastal New South Wales equipment well known from the ethnographic and historical sources. It is recorded for areas from the South Coast, the Sydney district, and as far north as the Hastings, Macleay and Bellinger Rivers. Curiously it is not reported from the coast further north, from the Clarence or Richmond districts. This present discovery lies within the area of known distribution on the evidence of the ethnographic literature. Though well known from the literature, this particular spear type is very poorly represented in museum collection from New South Wales, especially those of Australian museums. There are the three examples from Botany Bay collected by Cook and Banks in April 1770, housed in the Cambridge University Museum of Archaeology and Ethnology (Megaw 1969, McBryde 1970), and two examples in the collections of the British Museum (one a very early item from Port Jackson). I know of only one other example, at Geneva. McCarthy has described one specimen in a private collection, a spear with three bone-barbed prongs from Wallaga Lake, and a series of prongs recovered from a cave near Lake Wonboyn (McCarthy 1940:315-6, Plate XXXIII). Even a fragmentary part of one of these spears acquires considerable value as material documentation of an important item of Aboriginal fishing gear, a value which is enhanced if the age of the specimen may be determined.

The description of the spear in the ethnographic literature suggests a consistent range of features: the spear shaft consisted of two elements, joined by gum and cords of bark fibre, to which were attached the prongs (three or four in number) themselves usually barbed with small bone points. The whole spear attained a length of twelve to fifteen feet, but this could be adjusted according to the needs of the occasion by manipulating the two elements in the main shaft. The spear was used by men when fishing, either in the shallows or from canoes (Fig. 5). It was not used by women, who, in the areas in which this spear was used, fished with hook and line. The distributions of these two items of fishing gear seem to coincide for coastal New South Wales; there is no record of line fishing from the Far North Coast where the multi-pronged spear was not used.

Collins gives us a description of this spear for the Sydney district:—

. . . . The fiz-gig is made of the wattle; has a joint in it fastened by gum; it is from fifteen to twenty feet in length, and armed with four barbed prongs; the barb being a piece of bone secured by gum. To each of these prongs they give a particular name, but I never could discover any sensible reason for the distinction.

(Collins 1804 Appendix IV: 556-557 Cf. Barrington 1802:16; Hunter 1793: 62-63; White 1790: 189; Flanagan 1882:81-82; *Endeavour Journal of Joseph Banks*, April, 28 1770.)

John Henderson, who took up land on the Macleay in the early stages of the valley's settlement, gives supplementary local details:—

At other times, they spear fish from a canoe, or from the bank, in which case they use commonly a *mutach*, or smaller spear, having four or five points, and discharged from the hand. On the coast I have seen these, barbed with kangaroo teeth, and used in the bays and shallows . . .

(Henderson 1851: II, 37 Cf II, 145; Cf Fig. 5).

The descriptions in the literary evidence may be matched by the known ethnographic specimens, two in the British Museum and three at Cambridge. Of the two examples in the British Museum (944 and 1926 3-13.35) one (944) has a sure provenance as a Port Jackson item, and so must have been collected early in the settlement period. It came to the British Museum from the Arley Castle collection, and is registered as 'Fiz-gig, used by the natives to spear fish'. The spear has four prongs and a two-piece shaft, the joins being effected by bands of bark fibre cord cemented with gum, each join measuring 5.5 cm. The two pieces of the shaft measure 85 and 64 cm and the prongs 75 cm, so the total length of the artefact is 235 cm. The other example in the British Museum is also a four pronged spear, but the prongs are not barbed. The shaft is made up of two elements, measuring 80.5 and 61 cm, joined by a band of bark fibre cord covered with gum 4.5 cm long. The prongs of this spear are 61 cm long, and its total length is 213.3 cm.

In the Cambridge University Museum of Archaeology and Ethnology are three multi-pronged spears and one plain spear (1914: 1-4), part of a collection made by Cook and Banks at Botany Bay in April 1770, which came to the museum in 1914 from Trinity College. The multi-pronged spears in this group consist now of the heads and part of the shaft only, this having been cut either to facilitate storage or because of damage to the shaft. So total measurements are not possible, nor can one ascertain whether these also had two-piece shafts. The three prongs are inserted into the shaft, and secured by a binding of bark fibres and gum; they are barbed with small bone points (See Mulvaney 1975: Plate 36). The measurements are given here for one example (1914:1). It has three prongs 52.5 cm to 54.5 in length and c. 1 cm in diameter, each barbed with a bone tip about two cm long bound to the point with fibre cord and gum. The remaining length of shaft is 136.7 cm with a diameter of 1.7 cm.

The ethnographic literature, and the five surviving specimens of this spear type in British Museums document its role in the material culture of coastal New South Wales in the late eighteenth and early nineteenth centuries. It would be of interest to know the antiquity of this item of fishing gear. Certainly the dated example from the Macleay would extend our knowledge of its chronology by some three centuries.

Archaeological sites located within the area of the distribution of this spear type have yielded assemblages which include a high proportion of small bone points. These assemblages date to the last millennium, succeeding the backed blade dominated assemblages, and are associated with the first evidence for the use of shell fish hooks. If we associate the bone points with fishing spears then the cultural change seems to represent a change in coastal fishing techniques. Evidence from such sites as Bass Point and Durras North would suggest that this change took place on the South Coast six hundred to four hundred years ago (Bowdler 1970; Lampert 1966) while for the Sydney district it can be dated to about 900 years ago. If we take the dated spear point from Collombatti as a fifteenth century example, then this particular item of fishing

equipment, (which seems so characteristic of the material culture of coastal New South Wales south of the Bellinger in its latest period of prehistory) was established at the northern extreme of its distribution area by the same period as it appears in the south.

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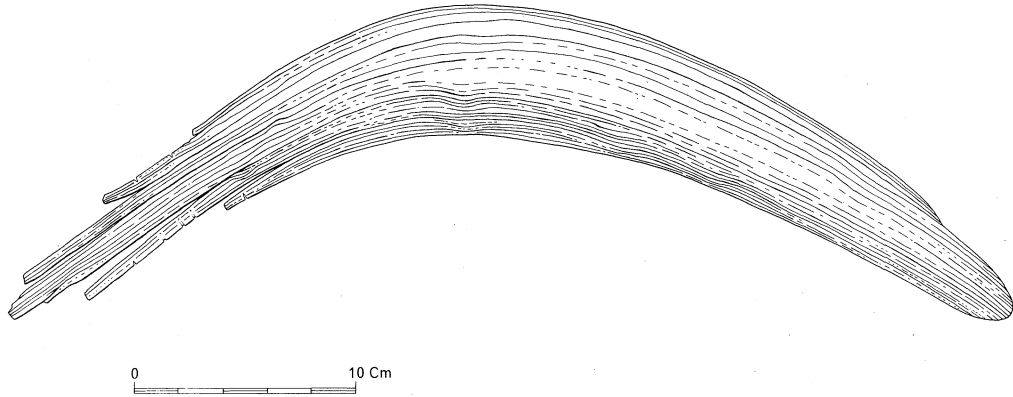


Fig. 1. Boomerang from the Clarence River near Grafton before removal of the damaged end for radio-carbon dating. Australian Museum Reg. No. E66715.

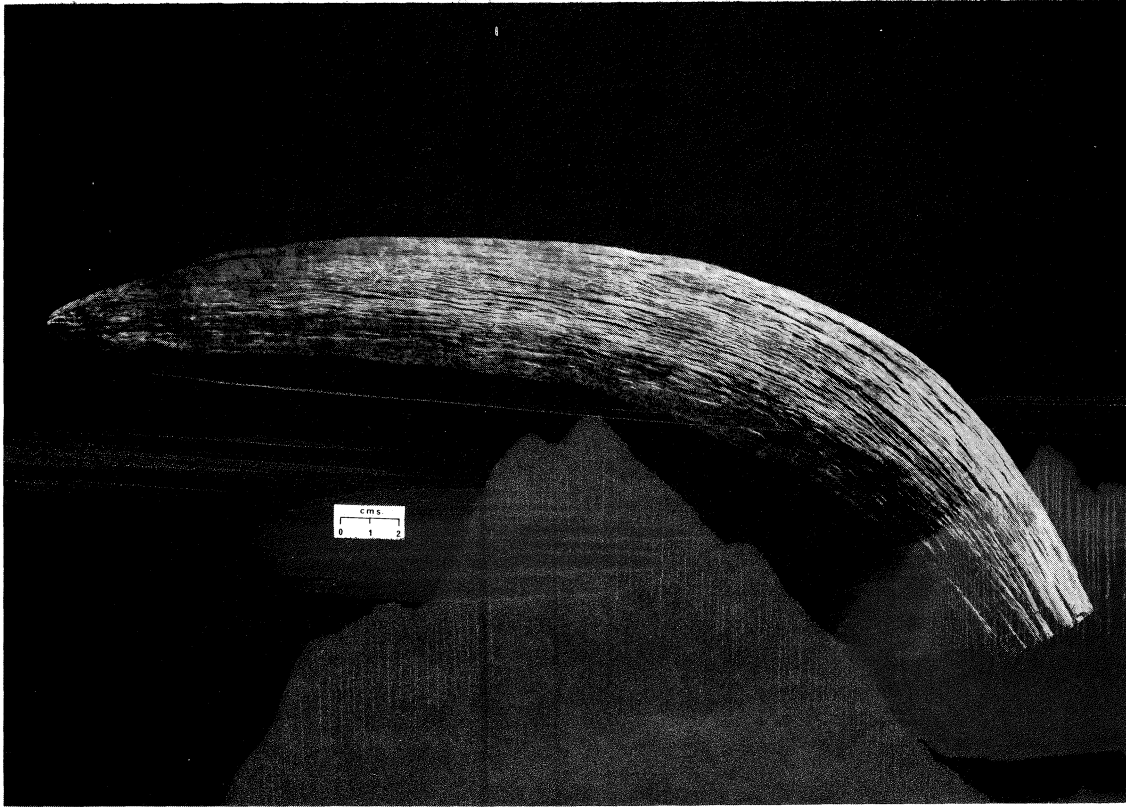


Fig. 2. Boomerang from the Clarence River after removal of the damaged section to provide the dating sample. Australian Museum Reg. No. E66715.

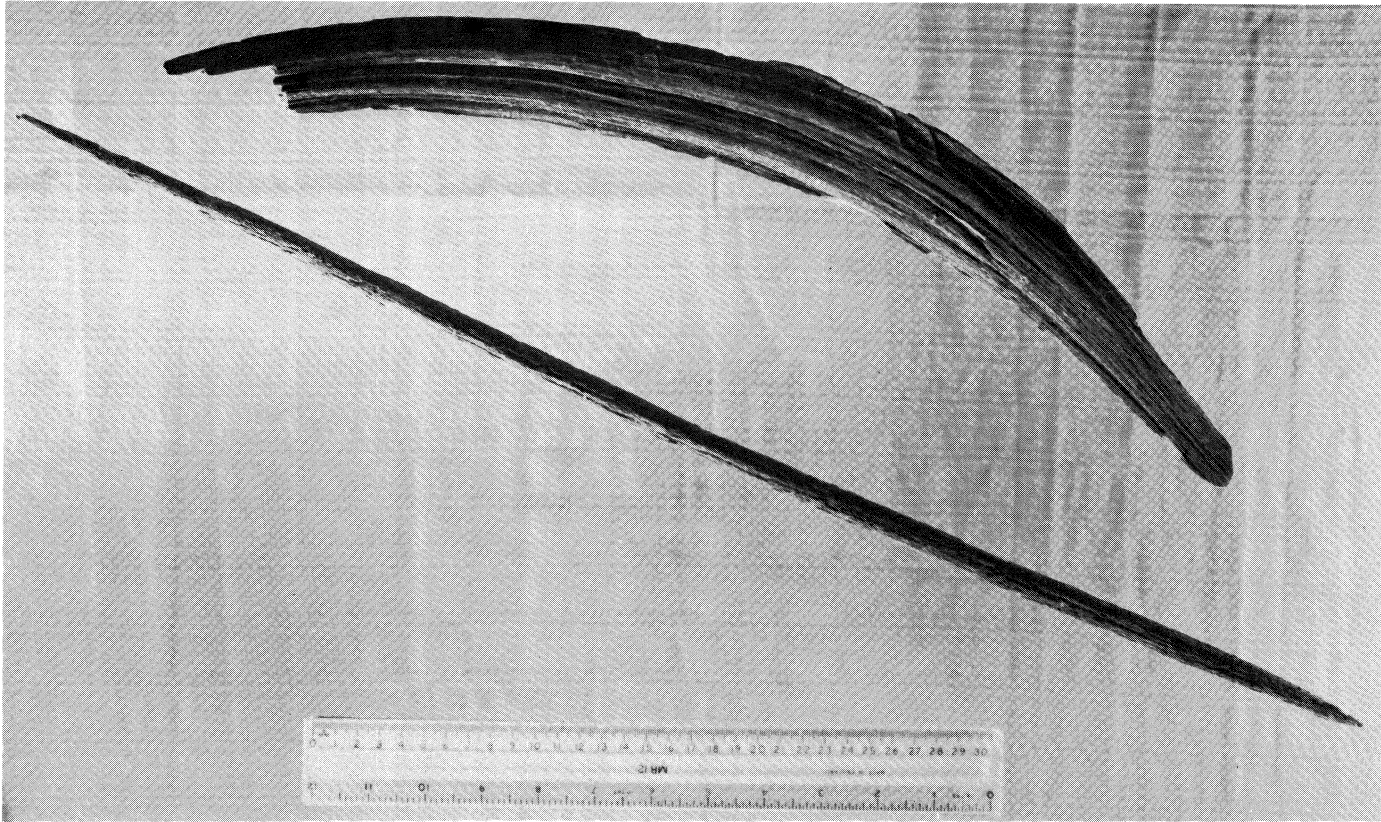


Fig. 3. Boomerang and spear point from Trial Bay Creek, Collombatti, Macleay River district. Australian Museum. Reg. Nos. E67211, E67212.



Fig. 4. Aboriginal man collecting oysters in a tidal creek of the Hastings River estuary photographed by Thomas Dick early this century. Note his boomerang and his two multi-pronged fishing spears. These seem to have one-piece shafts (as distinct from the 'fiz-gigs' of the Sydney district in the contact period) and three unbarbed points.



Fig. 5. Multi-pronged fishing spears in use in the Hastings River district, another historic photograph of rare interest taken by Thomas Dick.