



**Figure 1** Mound-and-ditch taro garden, Morehead District (probably lower Bensbach River area, ca. 1930). Photograph 93b, F.E. Williams Collection, National Archives and Public Records Services of Papua New Guinea, Port Moresby.

The evidence to date clearly demonstrates that in the lower Bensbach River area, relict mound-and-ditch field systems are not exclusively prehistoric. Mound-and-ditch fields were constructed up until the 1930s, when as a result of dynamic vegetational and hydrological changes the Waratha ceased making them. Investigations are continuing into the precise nature, timing and ramifications of these environmental developments and shifts in agricultural practice.

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## The Gooreng Gooreng Cultural Heritage Project: First radiocarbon determinations

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We report radiocarbon determinations from 1995 test excavations in two shell midden complexes on the central Queensland coast. The work was conducted as part of the Aboriginal cultural heritage study being undertaken in collaboration with the Gurang Land Council that we have described elsewhere

(Lilley and Ulm 1995). The dates are the first to be reported from the 350 km stretch of coast between the Keppel Islands in the north (Rowland 1981, 1982, 1983, 1985, 1992) and Booral in the south (Frankland 1990).

Eurimbula Site 1 is a large stratified midden complex exposed for some 2 km in a steep erosion face on the northern bank of Round Hill Creek in Eurimbula National Park (Lilley and Ulm 1995: Fig. 1). The site has been briefly described by Godwin (1990) and Burke (1993). Nine 50 cm x 50 cm test pits were excavated along three transects placed at right angles to the erosion face, yielding a cultural assemblage dominated by *Anadara trapezia* and incorporating small quantities of stone artefacts, fish bone and charcoal. Densities of cultural material decrease markedly with distance from the creek.

The second site is on the southeastern side of Rodds Peninsula, about 32 km north-northwest of Eurimbula Site 1 (Lilley and Ulm 1995: Fig. 1), and is also mentioned by Burke (1993). It is on a sandy point beside a creek and incorporates chenier ridges as well as stratified midden deposits. Three 50 cm x 50 cm test pits at The Granites, White Patch and A7 localities, as well as a comprehensive augering program, determined that the midden is dominated by *A. trapezia*, with minor components of stone and possibly shell artefacts, fish bone and charcoal.

Ten samples of marine shell and one of charcoal were submitted to the University of Waikato Radiocarbon Dating Laboratory. All shell samples were *A. trapezia*, except Wk-3940 (The Granites XU11C) which is on mixed shell, and all were analysed using X-ray diffraction. Two were rejected owing to probable contamination with recrystallised carbonate. The rejected samples are from midden deposit at The Granites (XU5 and XU6), indicating an active chemical environment within the site. Their rejection means that the upper part of the midden in that part of the site cannot be dated at present.

It should be noted that Wk-3940 (The Granites XU11C) dates the top of a buried chenier ridge and Wk-3941 (The Granites XU11M) dates excavated midden material lying directly on top of the chenier. The shells were separated on the basis of colour staining of the shell, the chenier material being tinged red, and, more importantly, on the basis of the colour and texture of the matrix adhering to the shells, the

midden being in fine, dark, organic sediment and the chenier in clean yellow sand. Clearly the chenier was deposited several centuries before midden building commenced. Both White Patch determinations (Wk-3942 and Wk-3943) date a chenier which is seaward of The Granites and which formed while the midden there was being deposited.

The cultural status of the material from A7 remains uncertain. Several criteria indicate that it is of cultural origin, including the presence of what appears to be a shell artefact and the absence of foraminifera which are present in the undoubted chenier material nearby (Lilley and Brian 1995). Other characteristics of the deposit, such as the size range and species diversity of the shell and appearance of the matrix, suggest a natural origin (cf. Attenbrow 1992). The A7 dates (Wk-3937 and Wk-3938) are inverted but are only separated by 10 cm of deposit and overlap at two sigma in the calibrated age range.

These results confirm Aboriginal occupation of the coast in this region before 3000 BP and conform with other dates obtained for the Queensland coast (Ulm et al. 1995; cf. Nicholson and Cane 1994). Further studies at the sites and at others in their vicinity will aim in part to explicate local sequences of chenier, sandy beach ridge and midden formation and to determine whether the antiquity of coastal occupation in the study area extends back to the time of sea level stabilisation 6000-7000 years ago.

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Site	XU	Depth	Lab. No.	Sample	$^{13}\text{C}$	$^{14}\text{C}$ Age	Calibrated Age
Rodds Peninsula							
A7	6	25cm	Wk-3937	Shell	0.1±0.2	2930±60	2826(2718)2494
A7	9	35cm	Wk-3938	Shell	0.1±0.2	2720±60	2681(2370)2283
The Granites	11M	50cm	Wk-3941	Shell	-0.2±0.2	2680±60	2598(2339)2188
The Granites	11C	50cm	Wk-3940	Shell	0.7±0.2	3260±70	3304(3075)2856
White Patch	4	15cm	Wk-3942	Shell	0.6±0.2	2440±80	2307(2071)1861
White Patch	10	45cm	Wk-3943	Shell	-0.5±0.2	2570±60	2358(2273)2057
Eurimbula Site 1							
Test Pit 1	10	35cm	Wk-3944	Shell	-0.8±0.2	2390±60	2170(1997)1842
Test Pit 2	9	50cm	Wk-3945	Charcoal	-26.5±0.2	3020±70	3352(3200,3197, 3154)2943
Test Pit 7	Surface	0cm	Wk-3946	Shell	0.0±0.2	560±60	301(234)0

**Table 1** Radiocarbon dates from Rodds Peninsula and Eurimbula Site 1. Conventional radiocarbon ages are corrected for  $^{13}\text{C}$  and were calibrated using the CALIB (Version 3.03) computer program (Stuiver and Reimer 1993). The date on the charcoal sample (Wk-3945) was calibrated using the bi-decal atmospheric calibration curve with no laboratory error multiplier. Forty years were subtracted to correct for  $^{14}\text{C}$  variations between northern and southern hemispheres. Dates on shell samples were calibrated using the marine calibration model with a  $\Delta\text{R}$  correction value of  $-5\pm35$  (Stuiver and Braziunas 1993). The calibrated ages reported span the  $2\sigma$  calibrated age range.

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## An Aboriginal burial with grave goods near Cooma, New South Wales

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An Aboriginal site, accidentally exposed during a creek flooding episode in 1991, contained the skeletons of two individuals dated to ca. 7000 years BP, together with a suite of rare grave goods. Although highly disturbed, the site is highly significant, both as the oldest recorded burial on the New South Wales southern tablelands and for the rarity of the grave goods. The pierced kangaroo teeth found with the burials and presumably once part of a necklace are the first of their kind to be found in Australia. Similar items recorded previously include a necklace of pierced *Sarcophilous* teeth discovered at Lake Nitchie in western New South Wales (Macintosh et al. 1970) and a headband of grooved macropod teeth at Roonka Flat on the Murray River (Pretty 1977).

Detailed analysis of the grave goods and the skeletal remains was carried out with the concurrence of the Merrimans Local Aboriginal Land Council (LALC), whose area of responsibility includes part of the Monaro plains. The skeletal remains were reburied close to the grave site, in an emotional ceremony presided over by Aboriginal Elder 'Gubboo' Ted Thomas, with the cooperation and support of the local landowner. Following discussion with Land Council members, the grave goods were not reburied but were held by NSW National Parks and Wildlife Service (NPWS) while the National Museum of Australia constructed a showcase. The items are to be housed in a secure location at the Umburra Cultural Centre near the Wallaga Lake Aboriginal settlement on the NSW far south coast.

The events, including discovery and reburial, attracted national and international media attention. Because of the significance of the find, NPWS and the LALC agreed that it should be widely publicised. NPWS Media Officer Stuart Cohen organised the media coverage, and briefed journalists on the sensitivity of the events and the need to report them in an appropriate manner.

A number of individuals have been involved in the project. A paper with details of the burial and analysis of the associated material is being prepared for publication but it may be some time before this appears in print as its authors are now scattered across the continent: Sue Feary in Nowra, Colin Pardoe in Adelaide, Angela Davis in Perth and Graham Taylor in Canberra. Since the site and its contents are of such significance and presently the only published reference is the *GEO* article (Cohen 1993), this brief report is written to provide researchers with published details for reference.

### Site context

The grave occurs in late Holocene alluvial deposits immediately adjacent to the present creek channel, in Rock Flat Creek valley at Bunyan about 10 km north of Cooma on the NSW southern tablelands. Quaternary alluvial fan and stream sediments have filled the valley with well-bedded gravels and sands, supporting deep red earths and podzolic soils. The stream deposits comprise an older unit which occurs as a high terrace above the grave and a highly calcareous younger grey unit. The ochre-lined grave was dug into this younger unit which was probably deposited during wetter conditions in the early Holocene when the creek consisted of a series of semi connected pools in a wide swampy meadow. The highly calcareous nature of the grey unit is probably due to the proximity of the limestone. The uppermost layer of dark brown loamy material is believed to be post-European.

### Skeletal remains

The incomplete remains of two individuals are present; a young male and an older female, although their genetic relationship is unknown. Although the burial was completely disturbed, initially by creek flooding and then by police examination, the distribution of the skeletal elements suggests that both individuals were buried side by side, at the same time, with heads extending towards the creek. Most of the upper components of both skeletons were washed away during the flooding episode.

The female is estimated to have been of middle age, based on the degree of attrition on the four anterior teeth, with a