



NEW ZEALAND
ARCHAEOLOGICAL
ASSOCIATION

**NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION MONOGRAPH 25:
Stuart Bedford, Christophe Sand and David Burley (eds), *Fifty Years in the
Field: Essays in Honour and Celebration of Richard Shutler Jr's
Archaeological Career***



This document is made available by The New Zealand
Archaeological Association under the Creative Commons Attribution-
NonCommercial-ShareAlike 4.0 International License.

To view a copy of this license, visit
<http://creativecommons.org/licenses/by-nc-sa/4.0/>



FIFTY YEARS IN THE FIELD. ESSAYS IN
HONOUR
AND CELEBRATION OF RICHARD SHUTLER JR'S
ARCHAEOLOGICAL CAREER

Edited by Stuart Bedford, Christophe Sand and David
Burley

25

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION
MONOGRAPH

WORKED SHELL ARTEFACTS – NEW DATA FROM EARLY LAPITA

Katherine Szabó and Glenn Summerhayes

INTRODUCTION

The Anir Island Group, composed of the two islands of Ambitle and Babase, is located 60km east of southern New Ireland (see Figure 1). Both islands are volcanic with sections of fringing reef (see Wallace *et al.* 1983 for a geological history). After an initial discovery of Lapita pottery by a local plantation owner, Graham Carson (White and Specht 1971), archaeological work was undertaken by Ambrose at the Malekolon site on Ambitle Island in 1970 and 1971. The Ambitle pottery finds were incorporated into Anson's scheme as an exemplar of the

Far Western Lapita style (Anson 1983, 1986), though little more regarding the site has appeared in print.

In 1995, Summerhayes initiated a new series of investigations on Ambitle and Babase which hoped to shed light on the nature of prehistoric exchange, and the implications for interaction and colonisation patterns. The Anir Group was considered to be in an important location for a number of reasons. Firstly, the known occurrence of Lapita pottery of the Early or "Far Western" style at Malekolon meant that the islands had the potential to add to the growing corpus of data on this style of pottery

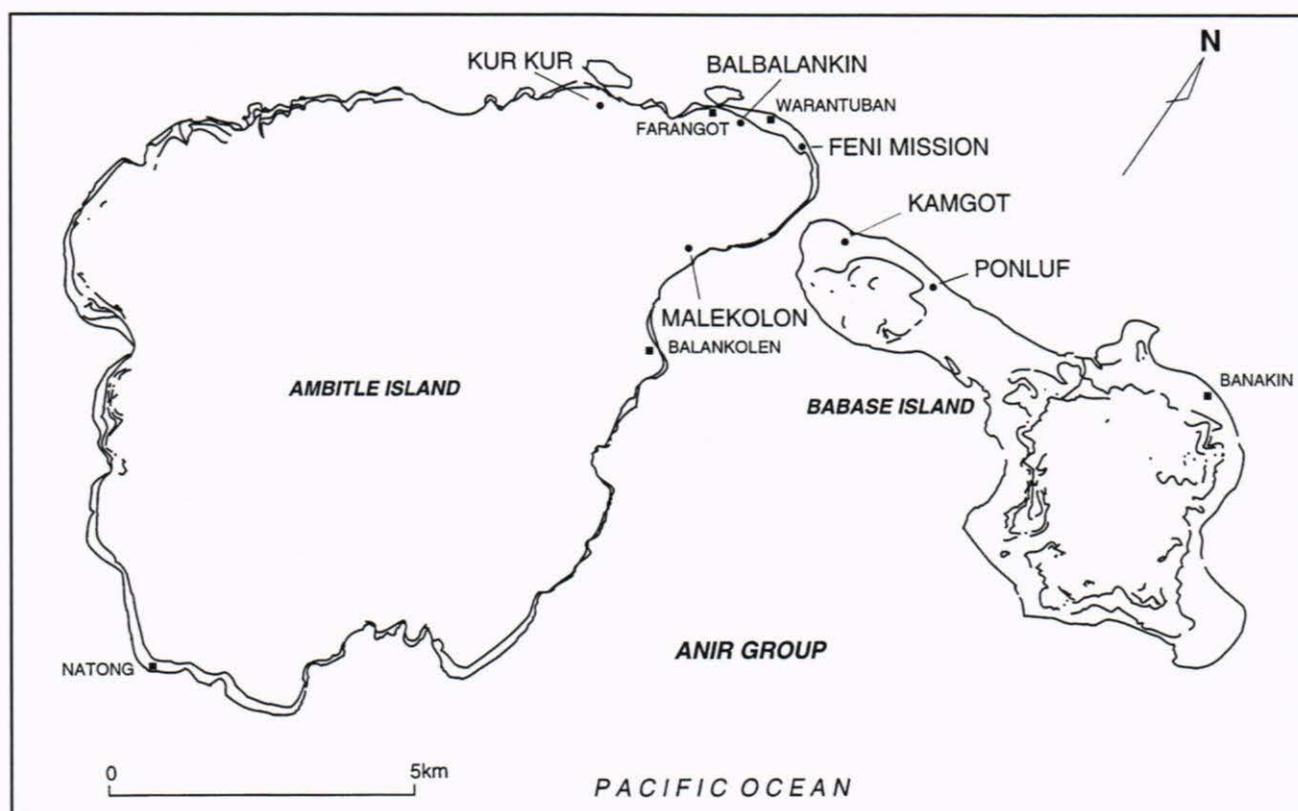


FIGURE 1. Map of Anir showing archaeological sites.

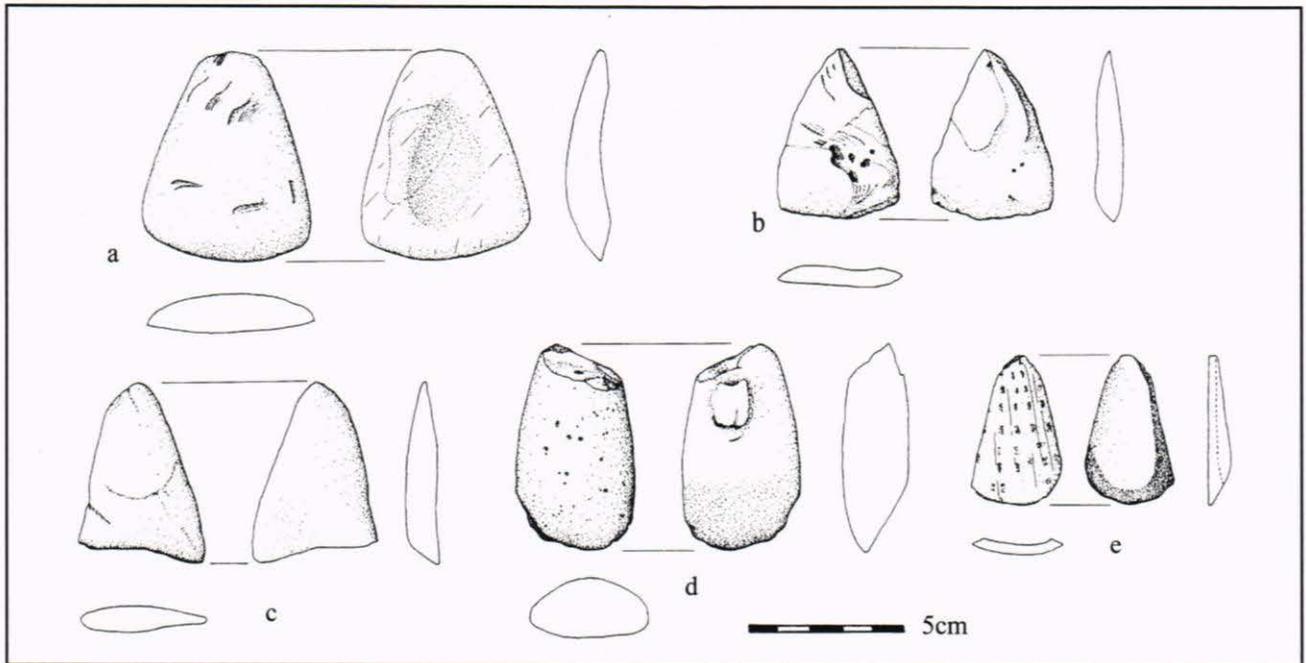


FIGURE 2. a *Tridacna* adze (Sq 22 unit 1 spit 1), b *Tridacna* adze (Sq 21 unit 1 spit 2), c *Tridacna* adze (Sq 15 unit 1 spit 1), d *Tridacna* adze (Area e, surface), e *Conus* adze (Sq 23 unit 2 spit 5).

associated with the Lapita Cultural Complex. Secondly, Anir is considered to be one of a group of potential “stepping stone islands” (Allen 2000:150; Terrell 1986) that link the Bismarck Archipelago to the neighbouring Solomon Islands. The importance of stepping stone islands generally, and Anir in particular with reference to the movement of trade goods between Buka and New Ireland, has been demonstrated historically (Kaplan 1976; Parkinson 1907[1999]:117-118), but remains to be proven in a prehistoric context.

Excavation has proceeded at the following open sites: Malekolon (EAQ), Balbalankin (ERC), Feni Mission (ERG) and Kamgot (ERA). Although all of these sites contain Lapita pottery, attention was focused on Kamgot. Kamgot is the earliest site so far found on Anir with dates centred on the late fourth millennium B.P. (see Summerhayes 2001a:33 for a full presentation of dates). The deposits have provided a rich array of items of Early Lapita material culture including artefacts in stone, bone, shell and echinoderm, as well as ceramics. In addition, much of the deposit is *in situ* and remarkably well preserved, allowing for a degree of stratigraphic control uncommon in Lapita sites generally. In the past, perhaps part of the site may have been under water, and this was considered to be a good indicator of a possible stilt-house habitation site, and indeed numerous postholes have been located.

To investigate the nature of possible trade and interaction on Anir in the past, physico-chemical analysis on pottery as well as the sourcing of obsidian is being done to help elucidate patterns in local production and the extent of posited regional exchange. Preliminary results (which include some of these data) from the first three seasons fieldwork have been published (Summerhayes 2000a). In addition to studies involving pottery and obsidian, shell artefacts and their modes of production have been cited as being a focus of study from the outset (Summerhayes 2000a:169), especially given their asserted prominence in Lapita exchange systems (Kirch 1988a, 1990, 1991). Initial results of this aspect of study are outlined here.

KAMGOT (ERA) WORKED SHELL

Presented below is a summary of the shell artefact forms found thus far at the site of Kamgot (Figures 2-7) and materials in which they were produced. These results are preliminary at present, though research is ongoing, and the formulation of reduction sequences for the major artefact classes present is to be incorporated within the doctoral research of Szabó. Unworked shell tools and expediently manufactured shell tools have not been included here as they add little to debate on shell valuable production and possible exchange systems.

Adzes: A number of shell adzes have been found at Kamgot in a range of morphological styles. There are both

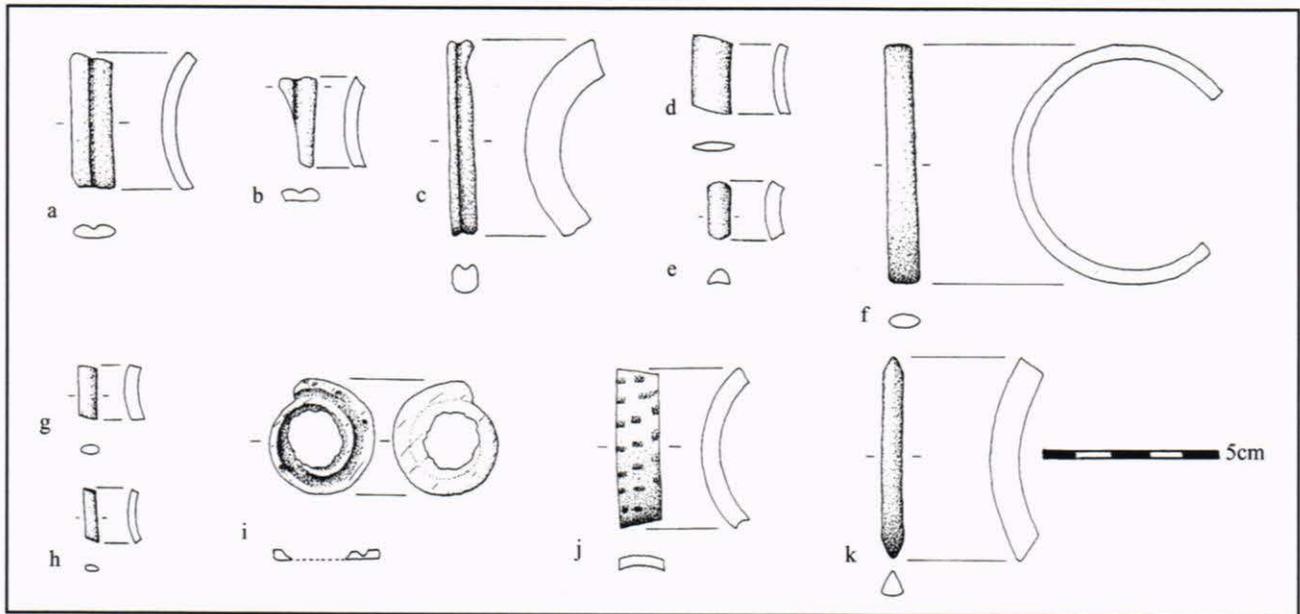


FIGURE 3. a *Conus* ring (Sq 23 unit 2 spit 2), b *Conus* ring (Sq 2b unit 2 spit 10), c *Tridacna* ring (Sq 10e unit 2 spit 2), d *Conus* ring (Sq 21b unit 3 spit 8), e *Conus* ring (Sq 17 unit 2 spit 7), f *Conus* ring (Sq 2a unit 3 spit 13), g *Conus* ring (Sq 17 unit 2 spit 7), h *Conus* ring (Sq 17 unit 2 spit 8), i *Conus* ring preform (Sq 23 unit 2 spit 5), j *Conus* ring (Sq 2 unit 2 spit 5), k *Conus* ring (surface).

adzes of *Conus* sp. and adzes of various *Tridacna* species – though primarily *Tridacna maxima*. Although *Conus* sp. adzes have been reported from other sites, regrettably few have been illustrated. Sand (2001a: Fig. 6c) illustrates one example of a *Conus* sp. adze from recent excavations in New Caledonia, however it does not coincide with Kamgot specimens with the bevel apparently on the outer rather than the inner surface of the shell. The New Caledonian example seems to closer approximate debitage from *Conus* sp. ring manufacture in this respect. There are a number of examples of formal *Conus* sp. adzes from Kamgot which replicate the standard form shown in Figure 2(e) and are comparable with an example from Niuaotupapu (Kirch 1988b: Fig. 123a). The presence of at least four of these adzes in the middle and lower units of Kamgot attests to their antiquity and to their presence in the Early Lapita shell tool suite.

There are a variety of *Tridacna* adzes present in the Kamgot assemblage with the majority being surface finds. Indeed, no *Tridacna* adzes at all were found below Spit 2 (at a depth of 20cm). Despite the fact that it is a surface find, the *Tridacna* adze illustrated in Figure 2(d) is morphologically associated with Lapita, being a fully-ground hinge-section adze of plano-convex cross section (see Green 1991:300-301). This general type has also been described by Kirch and Yen (1982:212) and has been associated with the earliest “Kiki Phase” on Tikopia.

Dorsal section adzes such as those illustrated in Figure 2(b) and (c) are the dominant type recovered at Kamgot. Although in use in the latter Lapita period, their use also extended into post-Lapita occupations (Anson 2000:104), thus making their association with Lapita unclear in this instance. This type is widespread in Lapita and post-Lapita assemblages throughout Melanesia and coincides with Kirch and Yen’s “Type 4” (1982:222). With regard to its appearance in Near Oceanian Lapita assemblages, a similar example was uncovered at Vunavaung (SDI) on Watom Island (Anson 2000:104).

Although the adze illustrated in Figure 2(a) is not manufactured from the hinge region, it is substantially more robust than the Type 4 dorsal section adzes. Rather than being manufactured from the lip, or close to the edge of the *Tridacna* valve, this adze is made from the body of the shell, and the adductor muscle scar can be clearly seen on the ventral face of the adze. Further separating it from the Type 4 adzes, this adze is fully ground with an elongate plano-convex cross section, and has a rounded rather than pointed butt. These attributes appear to equate most closely with Kirch and Yen’s (1982:222) Type 3.

Rings: *Conus* sp. rings and evidence for their manufacture are abundant at Kamgot in a wide variety of sizes, cross sections and widths. In addition, there are *Tridacna* sp. rings as well as two fragments of *Trochus*

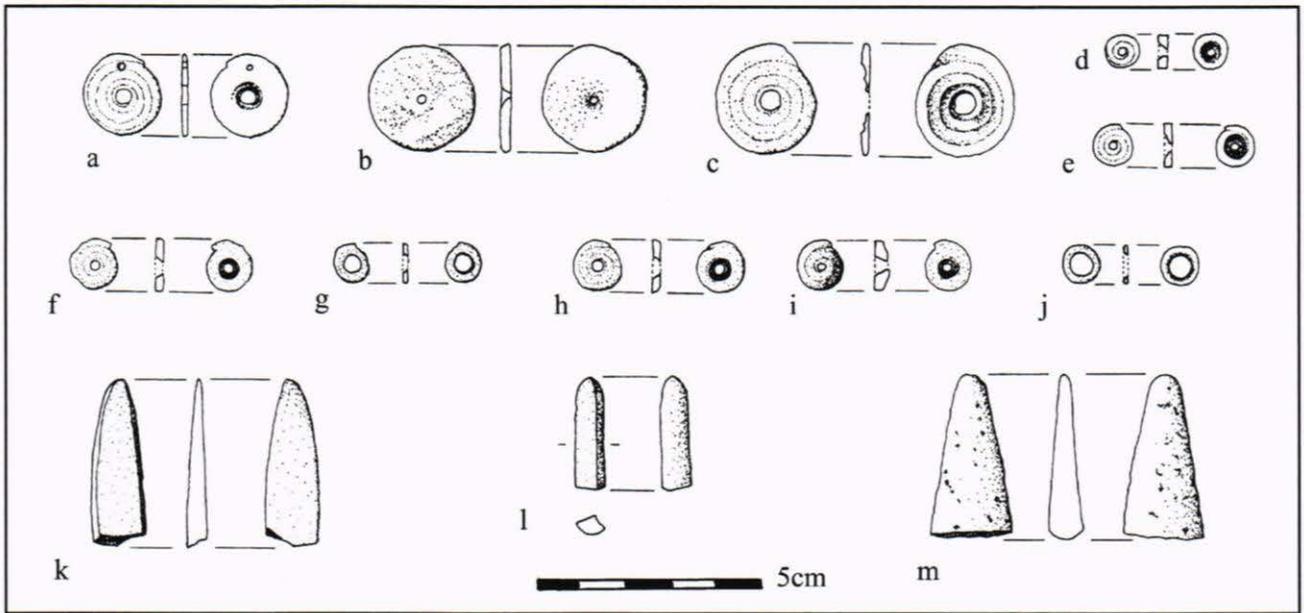


FIGURE 4. a *Conus* disc with double perforation (Sq 22 unit 2 spit 3), b *Spondylus* perforated disc (Sq 21b unit 2 spit 2), c *Conus* perforated disc (Sq 21b unit 2, spit unknown), d *Conus* bead (Sq 22 unit 2-3 spit 8), e *Conus* bead (Sq 21b unit 3 spit 8), f *Conus* bead (Sq 2b unit 3 spit 11), g *Conus* bead (Sq 2 unit 2 spit 7), h *Conus* bead (Sq 20a unit 2 spit 9), i *Conus* bead (Sq 23 unit 2 spit 3), j *Conus* bead (Sq 23 unit 2 spit 3), k echinoderm spine abraded (Sq 1 unit 2 spit 7), l echinoderm spine abraded (Sq 1 unit 2 spit 7), m stone file (Sq 1 unit 2 spit 3).

niloticus rings, which, although associated with Lapita deposits, are not as frequent as rings manufactured from *Conus* sp.. Amongst the *Conus* rings, there are two examples of grooved rings (Figure 3 a and b) as well as examples of rings with elliptical (Figure 3d, f, g and h), plano-convex (Figure 3e), quadrangular (Figure 3j) and triangular (Figure 3k) cross sections. Debris from the manufacture of *Conus* rings is copious, with one example being illustrated in Figure 3(i).

Tridacna rings are represented by a smaller number of finished and unfinished examples falling into three distinct types. There is one finished and broken example of the slender grooved *Tridacna* ring type (Figure 3c) which has also been uncovered from Lapita contexts in Mussau (Kirch 1988a:110 and Fig. 3b). There are also three examples of broken and unfinished broad rings (see Figure 6a and g). In all cases, the rings have been roughed out and perforated, and there is some evidence of grinding. This type has parallels from a number of Lapita and early post-Lapita deposits including sites in Tikopia (Kirch and Yen 1982: Fig. 99p), the Talepakemalai Lapita site in Mussau (Kirch 1997: Pl. 8.3) and New Caledonia (Sand 2001a:83). The third type (Figure 3k) is a surface find from near the site, however it shows strong affinities with a *Tridacna* sp. ring recovered by Poulsen from site To2 with both having a triangular “wedge-shaped” cross section (see Poulsen 1987: Pl. 69(11)).

Beads: Beads are omnipresent in the Kamgot deposits through all levels. Once again, they are clearly manufactured on site, as attested by the presence of pre-forms and unfinished examples (e.g. Figure 4i). The majority are small disc beads manufactured from the spires of small *Conus* sp. shells (Figure 4d-j) which are typical of Lapita assemblages. There are, however, some unique and rather idiosyncratic examples. The first is a very slender *Conus* sp. spire disc with a double perforation (Figure 4a). The second a large *Spondylus* sp. perforated disc (Figure 4b). Despite the fact that the *Spondylus* sp. bead bears close resemblance to ethnographic examples from locales in Papua New Guinea such as Milne Bay, this example was recovered from within an undisturbed Lapita cultural deposit (Unit 2).

Fishhooks: A number of fishhooks have been found at Kamgot, in two major forms and two major raw materials. Manufacture of fishhooks clearly occurred on-site as deduced by the presence of debitage, blanks (Figure 5f), and unfinished examples (Figure 5b, d, g, and h). The majority of fishhooks were produced from *Trochus niloticus* (e.g. Figure 5c-h), however there are also specimens worked in *Turbo marmoratus* (e.g. Figure 5a and b). Morphologically, the fishhooks fall into three categories: rotating hooks typically made from *Turbo marmoratus* (Figure 5a), classic jabbing hooks typically

made of *Trochus niloticus* (e.g. Figure 5e), and one unique example of what appears to be a jabbing hook produced from fully-ground *Trochus niloticus* with a circular cross section (Figure 5c). Only one form of line-attachment method is evident in the assemblage; a double notch on the inner surface of the shank (Figure 5e). All hooks lack barbs.

The one-piece rotating hooks in *Turbo marmoratus* have some parallels with examples found at Tikopia (Kirch and Yen 1982). Only one example however (Kirch and Yen 1982: Fig. 94a) closely equates to the Kamgot examples with a rather more rounded morphology than other fishhooks pictured. *Trochus* one-piece hooks, as stated by Green and Anson (2000:62), are now well-established as being part of the Lapita shell artefact repertoire, although never present in great quantities. A single example was found at Watom (Green and Anson 2000:62,63), and single examples are also found in southern Lapita sites. One example, with close parallels to examples illustrated in Figure 5 (particularly 5e) has been found at the eponymous site of Lapita in New Caledonia (Sand 2001a:84-85).

With regards to *Trochus* one-piece fishhooks, Sand (2001b:70) comments that “there are no particularly ‘Melanesian’ Lapita fishhooks in Eastern Lapita sites”. Although this at present appears to be the case, we must take into account that fishhooks are functional items and cannot be viewed from a stylistic angle only. There are numerous ways with which a fish can be caught, and if hooks (or particular styles of hooks) are not found in an area, we must look to both the faunal evidence and the local environment to discover why this may be the case. When fishing strategies are predominantly focused on the inshore area, as appears to be the case in Lapita sites (Green 1986), a range of techniques may be employed. As pointed out by Butler (1994) targeted taxa and methods employed in their capture are closely correlated, with only some taxa – invariably carnivorous – willing or capable of taking a hook. In turn, the targeted taxa will be reflective of local environments and feasibility of capture within those environments, as well as perhaps social factors such as gendered division of labour. Thus, absence of fishhooks in some areas need not be seen as surprising, but indeed expected. Although the analysis of bone material from Kamgot is ongoing, the variety and number of fishhooks present indicates a reasonable proportion of carnivorous taxa within the sample.

Tattooing chisel: This is an extremely important find on two counts; firstly, it is the earliest known tattooing chisel from the Pacific, and secondly, it is the only prehistoric example manufactured in shell. The chisel (Figure 6b) is unfinished, though well polished and shaped

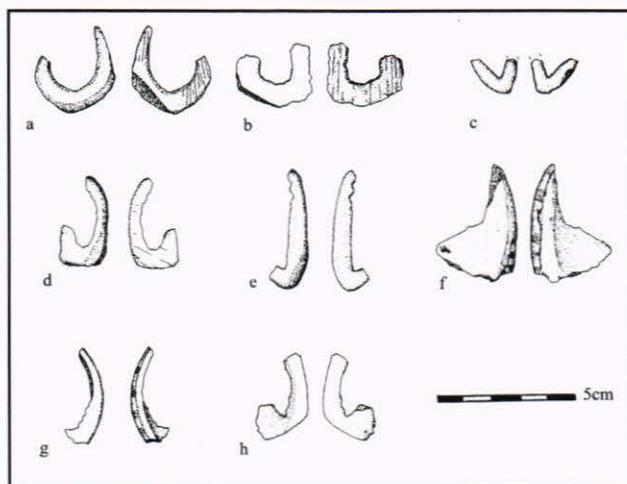


FIGURE 5. a *Turbo marmoratus* fishhook (Sq 2 unit 2 spit 5), b *Turbo marmoratus* fishhook rough-out (Sq 1 unit 2 spit 6), c *Trochus niloticus* fishhook (Sq 20a unit 2 spit 2), d *Trochus niloticus* fishhook (Sq 2 unit 2 spit 4), e *Trochus niloticus* fishhook (Sq 1 unit 2 spit 7), f *Trochus niloticus* fishhook blank (Sq 20a unit 2 spit 12), g *Trochus niloticus* fishhook (Sq 23 unit 2 spit 4), h *Trochus niloticus* fishhook (Sq 21 unit 2-3 spit 5).

in nacreous shell, probably *Trochus niloticus*. The only other known examples of tattooing chisels in Lapita deposits are from Poulsen’s excavations in Tonga, where three examples, all in bone, were found in early deposits at To.1 (Poulsen 1987:207, Pl. 68:14-16). This find established the presence of tattooing in Eastern Lapita (Kirch and Green 2001:189), and, although previously inferred as being present in Early/Far Western Lapita (e.g. Green 1979; Summerhayes 1998:100; Torrence and White 2001), it is now certain that tattooing was part of the Lapita Cultural Complex throughout.

In a recent linguistic consideration of the antiquity and form of Polynesian tattooing, Kirch and Green (2001:189) identify two forms of tattooing thought to be of some antiquity in the Pacific. The first refers to the use of a ‘miniature adze’ type chisel (**matau* in Proto Oceanic), and the second refers to a tattooing ‘needle’ (**hau* in Proto Polynesian). The example present at Kamgot certainly corresponds more closely with the former rather than the latter.

Other worked shell artefacts: A single rectangular *Conus* sp. unit has been found (Figure 6d). In the experience of KS, rather than being an independently manufactured artefact form, these units are reworked sections of either finished or unfinished broad *Conus* sp. bracelets (cf. Best 1984). This interpretation accords with the observations of Sand (2001a:83), in which he notes the

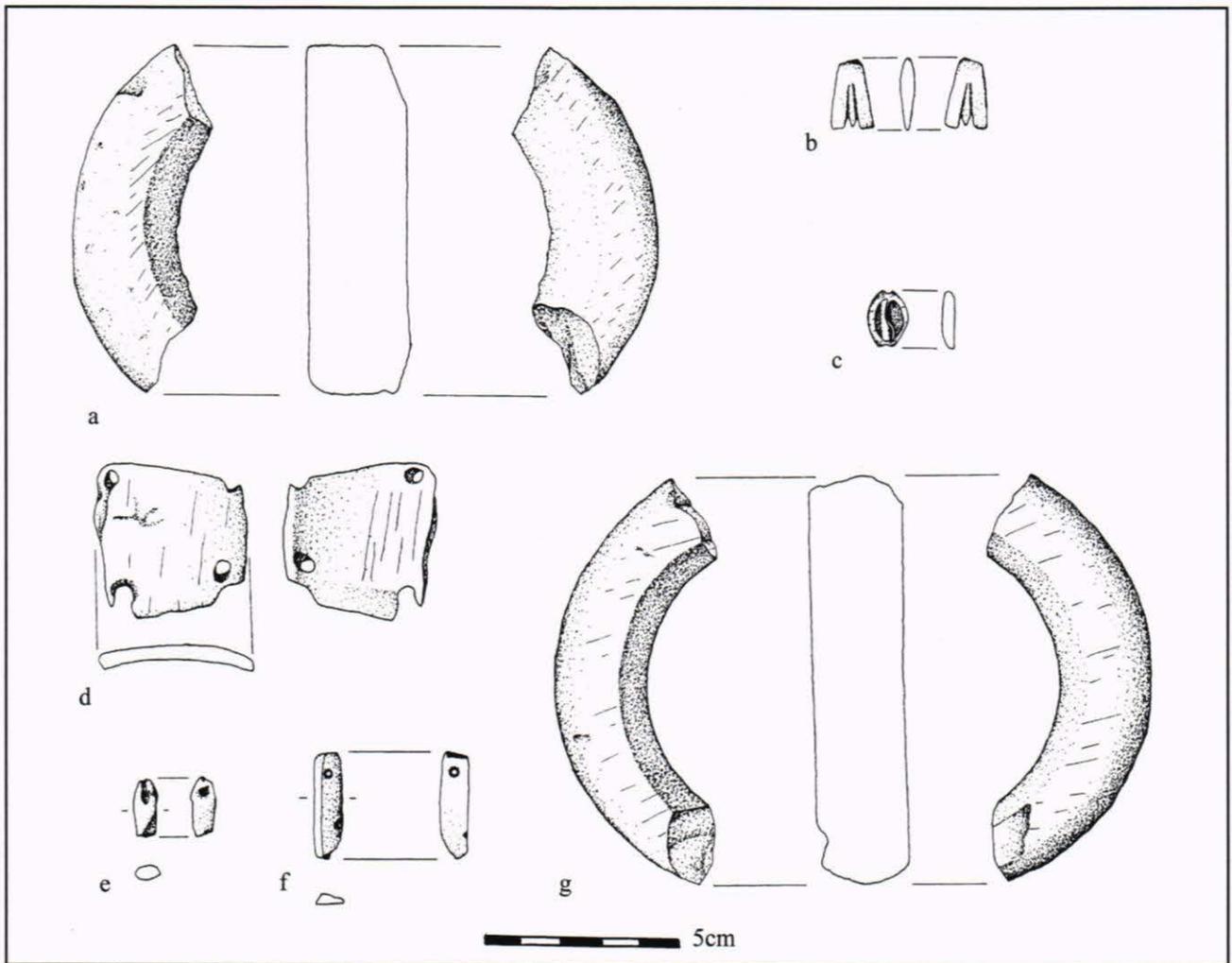


FIGURE 6. a *Tridacna* ring (Sq 1 unit 1 spit 2), b worked *Trochus niloticus* (Sq 20a unit 2 wall straightening), c ground *Cypraea annulus* (Sq 20a unit 2 spit 3), d *Conus* rectangular unit (Sq 23 unit 2 spit 4), e perforated echinoderm spine (Sq 1 unit 3 spit 10), f *Cassis cornuta* long unit/pendant (Sq 20a unit 2 wall straightening), g *Tridacna* ring (Sq 17 unit 2 spit 3).

presence of perforated sections of broad *Conus* sp. rings, some of which fall into the category of “rectangular unit”. Examples in Kirch (1997: Pl. 8.1) also show a substantial variation in size and form with some of the edges being clearly broken. Even if the “rectangular” or “broad” unit is not a primary Lapita shell artefact form, it is clear that there is a formal template associated with its manufacture rather than it just being a random outcome of breakage and subsequent reworking. In this sense, it can be regarded as a true Lapita shell artefact “form” – even if that form is highly variable and dependent on the breakage of another shell artefact type. Its consistent presence in assemblages from Early Lapita in the Bismarcks, such as at Kamgot, through to Tonga (examples in Poulsen 1987: Pl. 70(8-13)), indicates that this formal template was present and in use throughout the Lapita period.

Figure 6(f) illustrates either a broken long unit, or pendant that is manufactured from *Cassis cornuta*. A pendant manufactured from echinoid spine is illustrated in Figure 6(e). It is biconically perforated with clear wear-marks corresponding to a suspension cord. The only worked Cypraeid is a *Cypraea annulus* specimen with the dorsum ground completely down (Figure 6c). White and Downie (1980:202) record three such specimens from Lesu, although they are identified only as “small cowries”.

Last, but by no means least, is an exceptional worked shell disc with a large central perforation (Figure 7). The species of shell used is difficult to identify, though it is clearly a large bivalve with a porcelaneous texture and translucent lamellate microstructure. It has been tentatively identified as a large oyster, possibly *Hytissa*

hyotis. The disc has been hewn into shape with the lamellar edges being rounded through abrasion – either during production or wear. The central perforation has also been hewn, though the edges are more irregular, perhaps indicating that the rounding on the outer edges is due to wear. It is a unique piece within the Lapita suite of shell artefacts, and, if the identification is correct, is unusual for the choice of raw material.

Shell working tools: Although much of the stone, coral and echinoid has yet to be analysed, there are some clear examples of tools used for the manufacture of shell artefacts. These include coral branch files, echinoid spine abraders (Figure 4k,l), and stone files made from a locally occurring volcanic rock (Figure 4m).

KAMGOT SHELL ARTEFACTS AND THE EARLY/FAR WESTERN SUITE

The only published descriptions of Lapita period shell artefact assemblages from the Bismarcks to date are the as yet incompletely published Mussau assemblages (Kirch 1988a) and the material from Watom (Anson 2000; Green and Anson 2000). Spriggs (1997:120) states that “a comparable range of shell ornaments and fishhooks” to those found in the Lapita Mussau assemblages was found in the Arawe Lapita sites, however data are yet to appear in print. Given that Lapita shell artefacts in the Bismarcks are currently defined by the Mussau and Watom assemblages, the artefacts present at Kamgot can be seen as a new and welcome addition to our understanding of shell artefact production and distributions in this area.

It would appear from radiocarbon dates that occupation at Kainapirina (SAC) on Watom Island is somewhat later than at Kamgot, though the lack of a date from the base of the lower occupation (C2) makes the time difference difficult to estimate (Green and Anson 2000:38-39). Due to the acidic nature of the matrix of the upper occupation level, very little shell has survived, so all comparison must be with the lower occupation which is contained within a matrix of sand. The shell artefact assemblage from SAC is small, and as noted by Green and Anson (2000:62) there is no evidence for on-site production. Apart from a *Trochus* fishhook mentioned above, fragments of *Tridacna* sp. and *Conus* sp. rings were uncovered with one of the *Conus* ring fragments having a series of grooves engraved around the exterior (Green and Anson 2000:62 and Fig. 12). The Vunavaung site (SDI) on Watom Island revealed a similar suite of artefacts to that present in SAC with the addition of a *Tridacna* sp. adze referred to above (Green and Anson 2000:62).

When the material from Mussau (Kirch 1988a) and Kamgot are compared, there are distinct similarities in the range of forms, though one difference is especially

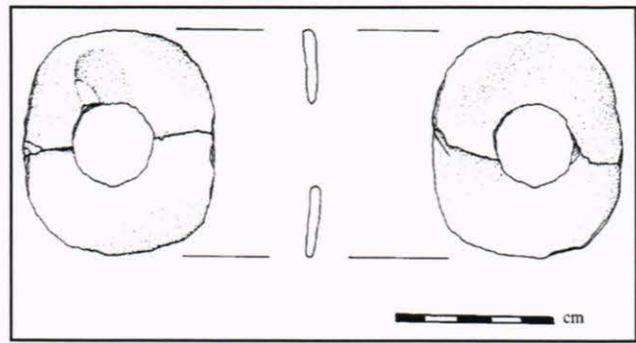


FIGURE 7. Shell disc (Sq 20 unit 2 spit 4).

noticeable. This relates to the raw materials employed. While the Mussau shell valuables are produced from four genera of molluscs only – *Tridacna*, *Spondylus*, *Conus* and *Trochus* (Kirch 1988a:108) – the range of raw materials at Kamgot also includes *Cassis cornuta*, *Nautilus pompilius*, and *Turbo marmoratus* (identified for fishhooks only at this stage). It is also conspicuous that *Spondylus* sp. is used considerably less at Kamgot as a raw material, with a unique perforated disc (Figure 4b) being the only example. There are a number of hypotheses that could account for this difference, with two being considered as most likely by the authors: the first is the distribution and availability of raw materials, the second is culturally based and surrounds the degree of stringency which binds artefact types conceptually to specific raw materials.

All species utilised at Kamgot and the Mussau sites are found intertidally, and in some instances also subtidally, in a coral reef environment. The notable exception is the cephalopod *Nautilus pompilius* which inhabits deeper water, although the empty shell is occasionally washed ashore. *Turbo marmoratus* is only locally common and thus occurs patchily across the Pacific as far as Fiji (Abbot and Dance 1982:46; Cernohorsky 1972:44-45), and it is feasible that it does not occur in the vicinity of the Mussau Lapita sites. Szabó (2001) has demonstrated for the Fijian site of Natunuku that, despite the range of taxa present in local environments, an effort was made to procure shells considered suitable for artefact manufacture from non-local environments. At Natunuku, the absence of an immediately accessible clean reef environment meant that *Trochus niloticus*, *Conus* sp., and *Tridacna* sp. were brought in from elsewhere to the site.

From a gloss of the literature it would appear that there is a certain range of taxa that were considered suitable for shell valuable manufacture in the Lapita period. The only taxon of this identified range not currently represented at the Mussau Lapita sites (based on literature published to date) and Kamgot is the pearl oyster

(both families Pteriidae and Isognomonidae). Within this set of taxa, however, it certainly seems unlikely that variation in the combinations of raw materials and artefact forms is attributable to differentiation in the availability of raw material alone. Based on the Natunuku study, if a raw material was required, it would have been procured. Why then is there a dearth of *Spondylus* sp. artefacts at Kamgot when there is such a focus on this taxon at the Mussau sites? Why is the range of taxa employed in shell valuable manufacture more restricted in the Mussau sites than at Kamgot?

While an argument based on the possible manufacture of particular items for trade (following the criteria outlined in Kirch 1988a) could be invoked, it is seen as unlikely in this case. On the whole, finished artefacts present and debitage representing these forms matches well – both in terms of debitage “types” within reduction sequences, and in the quantities present. This would appear to indicate that movement of local shell valuables out, and the movement of exotic ones in, is not taking place to any great extent.

It seems that at Kamgot, artefacts themselves are not moving. As argued for ceramics in Early Lapita sites in the Bismarcks (Summerhayes 2000a:30);

“Exchange or the movement of pottery to account for stylistic similarities **must be demonstrated**, rather than assumed. If local production is demonstrated, models other than exchange can be developed to account for stylistic similarity.” (emphasis in original)

Although in-depth studies of both the ceramic and worked shell components of Kamgot are yet to be completed, it seems to be the case at this juncture that both classes were locally produced (see Summerhayes 2001b:61 for preliminary ceramic analysis results).

KAMGOT SHELL ARTEFACTS AND THE “BIG PICTURE”

Summerhayes (2000a:30,232, 2000b:168) has argued that local production of ceramics united stylistically, both in terms of motif use and vessel form, across a broad geographic area is the social product of people and ideas moving. In this sense, stylistic ideas are seen as being “socially active” rather than passive. This certainly accords well with the worked shell present at Kamgot. When Lapita worked shell artefacts are viewed as a whole across their geographic range it is clear that there is a certain range of mollusc taxa considered suitable for use (listed above) and there is very little movement outside of these culturally prescribed boundaries. For example, there seems to be little reason ecologically or technologically

why *Conus* sp. should be favoured over *Trochus niloticus* for the production of armbands during the Lapita period, especially when we know that the technological process of making rings from *Trochus niloticus* was established prior to the Lapita period – this is cultural choice. The same is true of the artefact forms themselves. Despite some variation in representation of certain artefact types between sites, the occasional appearance of unique forms, and some evidence of local divergence (albeit slight) such as the engraving of *Conus* rings in New Caledonia (see Sand 2001a:83 and references therein), the picture is remarkably consistent.

Speaking in relation to ceramics, Sand (2001b:71) has recently argued that, rather than ideas moving through an “information exchange” network, consistencies may “have more to do with a widely shared set of simple designs”. In the face of shell artefact evidence as well as the case presented for ceramics, the authors see this as doubtful. If stylistic traits observed within articles of Lapita material culture are considered to be a passive set of simple designs, it is forwarded that we would expect to see a much greater level of divergence and following of independent trajectories than is currently apparent. Given several thousand kilometres and over 500 years, it seems improbable that the forms and styles reflected in both the ceramic and shell artefact component of the Lapita Cultural Complex should change so little if designs had no social currency.

CONCLUSION

The worked shell artefacts from Kamgot present a new sample that greatly extends present data available for the Early Lapita period in the Bismarck Archipelago. The sample is large, stratigraphically secure, and diverse, with evidence for on-site manufacture of major types. Given evidence for production, as well as a range of finished goods, the trade of shell valuables at Kamgot is viewed as unlikely. Upon comparison with worked shell material from the Mussau assemblages (Kirch 1988a), the major difference is found to be in the raw materials employed for the production of certain forms. We argue that there is a select range of shell species considered “suitable” for artefact manufacture that coincides in various combinations with a set of artefact forms that appear consistently through the range, both geographic and temporal, of the Lapita Cultural Complex. Furthermore, we suggest that, in the absence of evidence for goods themselves moving, ideas pertaining to raw material choices and suitable artefact forms are moving. These social/cultural ideas are considered to be “socially active” rather than passive design concepts – a feature indicated by the longevity and consistency of these artefact classes.

ACKNOWLEDGEMENTS

Special thanks to the communities on Anir, the New Ireland Provincial Administration, the National Research Institute of Papua New Guinea, and the National Museum and Art Gallery, for approval and support during fieldwork. This research was made possible by funding from the Australian Research Council (Large Grant), the Australia & Pacific Science Foundation, the Australian Institute of Nuclear Science and Engineering, and the Research School of Pacific and Asian Studies at the Australian National University. Thanks to the field crew who worked on Anir over many seasons: Stephanie Garling (Sydney University), Sarah Jane Marshall (Oxford), Vicky Barnecutt (Oxford), Esma Holden (Auckland University), Jennifer Porter (La Trobe University), David Winse (La Trobe University), Michael Therin (Sydney University), Matthew Leavesley (Australian National University), Baiva Ivuyo (National Museum), the late Robert Mondol (National Museum) and Herman Mandui (National Museum). From Anir special thanks to Francis Neantele, Jo Manil, Paul Nebil, Paul Vingilmat, Chris Phauso, Leo Faboksiaro, Charles Kirok, and Bruno Sianlon. Lastly, thanks to Wal Ambrose, Roger Green and Stuart Bedford for providing comments on this paper. Figures 2 to 7 were drawn by Katherine Szabó.

REFERENCES

- Abbot, R.T. and S.P. Dance, 1982. *Compendium of Seashells*. New York: E.P. Dutton Inc.
- Allen, J., 2000. From beach to beach: The development of maritime economies in prehistoric Melanesia. In S. O'Connor and P. Veth (eds), *East of Wallace's Line: Studies of Past and Present Maritime Cultures of the Indo-Pacific Region*, pp.139-176. Rotterdam: A.A. Balkema.
- Anson, D., 1983. Lapita pottery of the Bismarck Archipelago and its affinities. Unpublished PhD thesis. University of Sydney.
- Anson, D., 1986. Lapita Pottery of the Bismarck Archipelago and its Affinities. *Archaeology in Oceania*, 21:157-165.
- Anson, D., 2000. Excavations at Vunavaung (SDI), Rakival Village, Watom Island, Papua New Guinea. *New Zealand Journal of Archaeology*, 20(1998):95-118.
- Best, S., 1984. Lakeba: The Prehistory of a Fijian Island. Unpublished PhD thesis, University of Auckland.
- Butler, V.L., 1994. Fish feeding behaviour and fish capture: The case for variation in Lapita fishing strategies. *Archaeology in Oceania*, 29:81-90.
- Cernohorsky, W.O., 1972. *Marine Shells of the Pacific*. Volume 2. Sydney: Pacific Publications.
- Green, R.C., 1979. Early Lapita Art from Polynesia and Island Melanesia: Continuities in ceramic, barkcloth and tattoo decorations. In S.M. Mead (ed.), *Exploring the Visual Art of Oceania*, pp.13-31. Honolulu: University of Hawaii Press.
- Green, R.C., 1986. Lapita fishing: The evidence of site SE-RF-2 from the main Reef Islands, Santa Cruz Group, Solomons. In A. Anderson (ed.), *Traditional Fishing in the Pacific*, pp.119-135. Pacific Anthropological Records 37. Honolulu: Bishop Museum.
- Green, R.C., 1991. The Lapita Cultural Complex: Current evidence and proposed Models. *Bulletin of the Indo-Pacific Prehistory Association*, 11. Canberra. 11:295-305.
- Green, R.C. and D. Anson, 2000. Excavations at Kainapirina (SAC), Watom Island, Papua New Guinea. *New Zealand Journal of Archaeology*, 20(1998):29-94.
- Kaplan, S., 1976. Ethnological and biogeographical significance of pottery sherds from Nissan Island, Papua New Guinea. *Fieldiana Anthropology*, 66(3):35-89.
- Kirch, P.V., 1988a. Long-distance exchange and island colonization: The Lapita case. *Norwegian Archaeological Review*, 21(2):103-117.
- Kirch, P.V., 1988b. *Niuaotupapu: The Prehistory of a Polynesian Chiefdom*. Thomas Burke Memorial Washington State Museum Monograph No. 5. Seattle: Burke Museum.
- Kirch, P.V., 1990. Specialization and exchange in the Lapita complex of Oceania (1600-500 B.C.). *Asian Perspectives*, 29(2):117-133.
- Kirch, P.V., 1991. Prehistoric exchange in Western Melanesia. *Annual Review of Anthropology*, 20:141-165.
- Kirch, P.V., 1997. *The Lapita Peoples*. Oxford: Blackwell.
- Kirch, P.V. and R.C. Green, 2001. *Hawaiki, Ancestral Polynesia: An Essay in Historical Anthropology*. Cambridge: Cambridge University Press.
- Kirch, P.V. and D. Yen, 1982. *Tikopia: The Prehistory and Ecology of a Polynesian Outlier*. Bernice P. Bishop Museum Bulletin 238. Honolulu.
- Parkinson, R., 1907[1999]. *Thirty Years in the South Seas: Land and People, Customs and Traditions in the Bismarck Archipelago and on the German Solomon Islands*. J. Peter White (ed.), J. Dennison (trans.). Bathurst: Crawford House Publishing and Oceania Publications, University of Sydney.
- Poulsen, J., 1987. *Early Tongan Prehistory: The Lapita period on Tongatapu and its Relationships*. 2 vols. Terra Australis 12. Canberra: Department of Prehistory, Research School of Pacific Studies, Australian National University.

- Sand, C., 2001a. Changes in non-ceramic artefacts during the prehistory of New Caledonia. In G.R. Clark, A.J. Anderson and T. Vunidilo (eds), *The Archaeology of Lapita Dispersal in Oceania*, pp.75-92. Terra Australis 17. Canberra: Pandanus Books, Research School of Pacific and Asian Studies, Australian National University.
- Sand, C., 2001b. Evolutions in the Lapita Cultural Complex: A view from the Southern Lapita Province. *Archaeology in Oceania*, 36:65-76.
- Spriggs, M., 1997. *The Island Melanesians*. Oxford: Blackwell.
- Summerhayes, G.R., 1998. The Face of Lapita. *Archaeology in Oceania*, 33:100.
- Summerhayes, G.R., 2000a. *Lapita Interaction*. Terra Australis 15. Canberra: Department of Archaeology and Natural History and Centre for Archaeological Research, Australian National University.
- Summerhayes, G.R., 2000b. Recent archaeological investigations in the Bismarck Archipelago, Anir – New Ireland Province, Papua New Guinea. *Bulletin of the Indo-Pacific Prehistory Association*, 19:167-174.
- Summerhayes, G.R., 2001a. Defining the Chronology of Lapita in the Bismarck Archipelago. In G. R. Clark, A.J. Anderson and T. Vunidilo (eds), *The Archaeology of Lapita Dispersal in Oceania*, pp.25-38. Terra Australis 17. Canberra: Pandanus Books, Research School of Pacific and Asian Studies, Australian National University.
- Summerhayes, G.R., 2001b. Lapita in the Far West: Recent developments. *Archaeology in Oceania*, 36:53-63.
- Szabó, K., 2001. The reef, the beach and the rocks: an environmental analysis of mollusc remains from Natunuku, Viti Levu. In G.R. Clark, A.J. Anderson and T. Vunidilo (eds), *The Archaeology of Lapita Dispersal in Oceania*, pp.159-166. Terra Australis 17. Canberra: Pandanus Books, Research School of Pacific and Asian Studies, Australian National University.
- Terrell, J., 1986. *Prehistory of the Pacific Islands*. Cambridge: Cambridge University Press.
- Torrence, R. and J.P. White, 2001. Tattooed faces from Boduna Island, Papua New Guinea. In G.R. Clark, A.J. Anderson and T. Vunidilo (eds), *The Archaeology of Lapita Dispersal in Oceania*, pp.135-140. Terra Australis 17. Canberra: Pandanus Books, Research School of Pacific and Asian Studies, Australian National University.
- Wallace, D.A., R.W. Johnson, B.W. Chappell, R.J. Arculus, M.R. Perfit and I.H. Crick, 1983. Cainozoic Volcanism of the Tabar, Lihir, Tanga, and Feni Islands, Papua New Guinea: geology, whole-rock analyses, and rock-forming mineral compositions. *Bureau of Mineral Resources, Australia, Report 243*. BMR microform MF197.
- White, J.P. and J.E. Downie, 1980. Excavations at Lesu, New Ireland. *Asian Perspectives*, 23:193-220.
- White, J.P. and J. Specht, 1971. Prehistoric pottery from Ambitle Island, Bismarck Archipelago. *Asian Perspectives*, 14:88-94.