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DENTATE-STAMPED LAPITA REAPPEARS ON EFATE, CENTRAL VANUATU: A FOUR DECADE-LONG DROUGHT IS BROKEN.

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Introduction

The identification of Lapita sites in Vanuatu (Figure 1) has proven to be somewhat more of a challenge than for many other archipelagoes in the Western Pacific (Anderson *et al*. 2001). This has been principally due to the complex geomorphology of the archipelago, of which many researchers in the past have not been fully cognisant. On many of the islands of Vanuatu Lapita sites have been deeply buried either by volcanic ash or alluvial slopewash, and in some cases they can now be found several hundred metres inland from their original coastal location due to tectonic uplift. Initial discovery of Lapita sherds was restricted to only two islands where they were found on the ground surface.

It is almost 40 years since Bernard Hébert reported the first dentate-stamped Lapita sherds in Vanuatu (then the New Hebrides/Nouvelles Hébrides), on the island of Efate, found on the surface at the site of Erueti (Hébert 1965). Some years after Hébert's discovery Lapita was also found further north, again through surface survey, on the island of Malo at a number of locations (Hedrick and Shutler 1969). More than a decade later a single sherd was found, amongst an assemblage of other non-Lapita decorated sherds, when Matthew Spriggs test excavated a mound feature at the site of Ifo, south east Erromango (Spriggs 1984). Later excavation (1996) identified the full extent of the Lapita occupation at the site (Bedford 2000). Two dentate-stamped sherds, amongst thousands of post-Lapita sherds, were also recovered during excavations at the Ponamla site (1995) on the north coast of Erromango (Bedford 2000). It is only very recently that the number of recorded Lapita sites in Vanuatu has been increasing steadily through a program of specifically targeted research. Lapita sites have now been

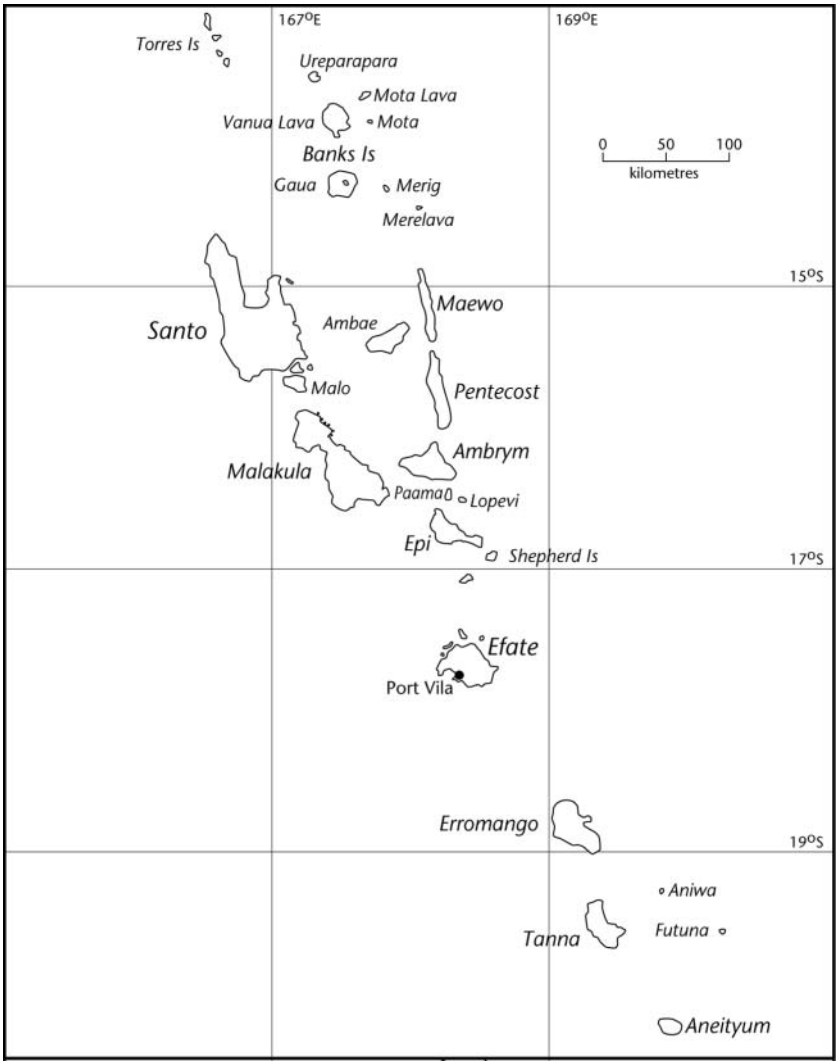

Figure 1. Vanuatu

located on Aore and Tutuba (adjacent to Malo) and on four of the small islands off northeast Malekula (see Bedford 2003 for a detailed review). This paper focuses on Lapita on the island of Efate (Figure 2), which until several months ago really only consisted of the Erueti site.

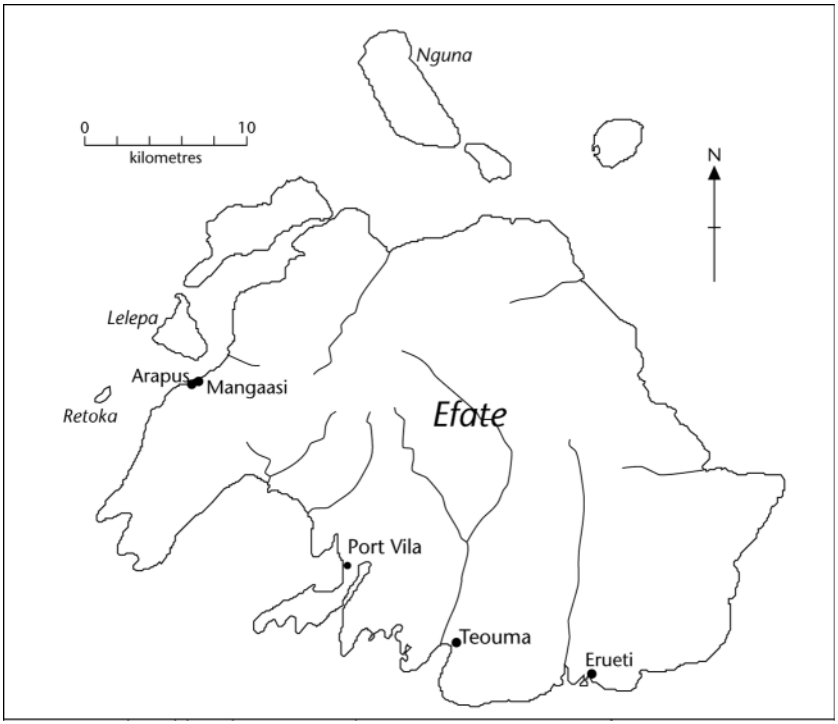

Figure 2. Efate

Lapita on Efate

Erueti is located on the south coast of Efate (Figure 2). The site was excavated by José Garanger (1972) in 1967 but was found to be heavily mixed, with sherds that spanned, it has been subsequently ascertained, a 1500 year period (Bedford 2000). Garanger excavated one single area measuring a total of 35 m^2, to a depth of around 800 mm. A total of 10 dentate-stamped sherds were found on the ground surface at the site by various people, and another six throughout the excavated layers. A whole range of other ceramic styles (Erueti and Mangaasi) were represented throughout the stratigraphy and the single often quoted date of 2300 BP (Garanger 1972: 30) can now be comfortably rejected as being unrelated to the Lapita dentate-stamped phase of the settlement. Much more recent extensive research at the sites of Mangaasi and Arapus on the west coast of Efate (Bedford and Spriggs 2000) now enables us to accurately situate chronologically the ceramics at the Erueti site. It has now been firmly established

that the distinctive Erueti-style ceramics, which were found in abundance at the site, begin to appear at around 2800 BP, and in fact post-date Lapita dentate-stamped ceramics. Mangaasi-style ceramics were also present at the site (both in the lowest levels and on the surface) and these have now been dated to between 2200 and 1200 BP. In summary, the ceramic elements present at the Erueti site demonstrate that occupation occurred at or near the site for at least the full period represented by ceramic production on Efate (3000–1200 BP).

The only other site on Efate which has more recently been suggested as being associated with Lapita settlement is the Mangaasi/Arapus site, a site at which a total of seven field seasons have now been completed (Bedford *et al*. 1999, Bedford and Spriggs 2000, Spriggs and Bedford 2001). The final season of the collaborative Australian National University–Vanuatu National Museum Project was in 2003. Not a single dentate-stamped sherd has been recovered from the site but it has been argued that this site represented initial settlement on this part of Efate (extinct fauna and dates of ca. 2900 BP) and was occupied over some 1500 years. Settlement at the site focused on beach ridges above and parallel to the foreshore (some 500 metres in length), which tended to slowly shift over time as the island uplifted. The ceramics from the earliest phase of the settlement are completely dominated by plain, globular, outcurving rimmed vessels. Midway through the project Bedford and Spriggs (2000: 124) hypothesised that these ceramics represented the domestic component of a Lapita assemblage, and that the ceremonial, dentate-stamped pottery would be found in another part of the site.

Further fine dating of the site and detailed publication is forthcoming but the accumulated evidence now suggests that while the Arapus site is indeed associated with first settlement on that part of Efate it may in fact post-date initial settlement of the island by at least some decades if not longer. A recent discovery in another area of the south coast of Efate further strengthens this argument.

Lapita at Teouma

The decades long "drought" of Lapita sites, with a component of dentate-stamped ceramics, on the island of Efate was spectacularly broken in December 2003 when the Vanuatu Cultural Centre was presented with the largest Lapita sherd yet found in Vanuatu (Figures 3 and 4). It had been delivered by Salkon Yona, a Vanuatu Cultural Centre fieldworker from the island of Epi,who had participated in the training program at Arapus in 2003. He had subsequently relayed information to other Epi islanders living in Port Vila. Charlie Napi, a fellow Epi islander, mentioned that he had picked up a large sherd some time in October when he had been driving a bulldozer during the construction of a prawn

Figure 3. Carinated, outcurving rim dentate-stamped Lapita sherd.

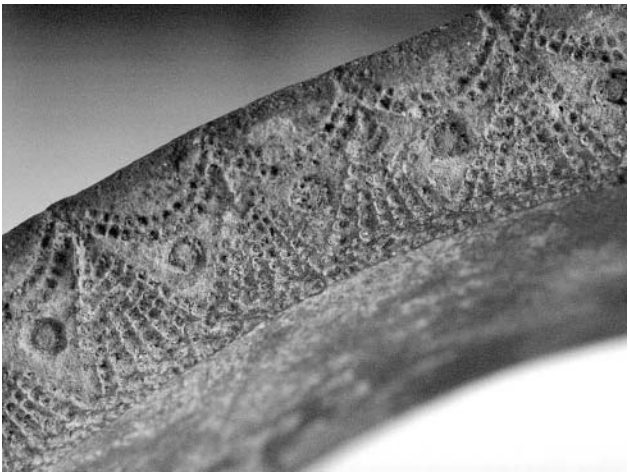

Figure 4. Rim/lip decoration of large sherd in Figure 3.

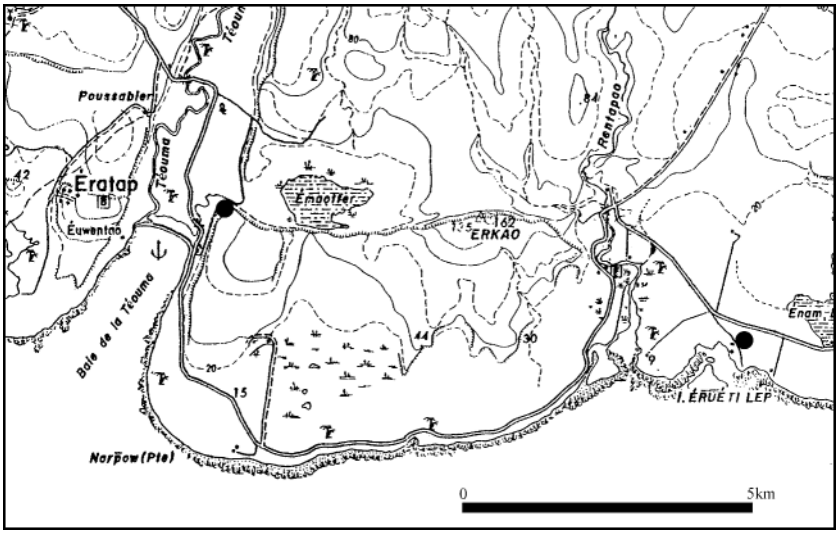

Figure 5. South Efate; black dots mark the location of the Lapita sites.

farm on the east side of Teouma Bay (*Baie de Teouma*) (Figure 5). The site itself was formerly identified in January 2004.

The site is located a kilometre or so from the sea on the edge of an upraised former beach terrace about 8 m above current sea level. It is on the north eastern side of Teouma Bay, adjacent to a tributary of the Teouma River (Figure 5). At the time of Lapita settlement the site would have been near the sea, but subsequent uplift and massive infilling of the shallow end of the bay with alluvial deposits transported down the Teouma River, account for the site's current inland location. The site is sandwiched between an 800 mm black tephra-rich soil lying above it and the former rolled-coral beach (Figure 6). While very effective in shifting substantial amounts of earth, bulldozer survey has its limitations. The site was being mined specifically for the black soil located there and several hundred square metres of the site have been affected. But despite this disturbance, much of the site remains untouched and even in those areas that have been modified by machines there appears to have been limited mixing of the deposits that remain. Discrete activity areas are apparent as is chronological variation across the site. The site slopes down toward the adjacent tributary and at this lower part of the site the later Erueti-style pottery only was identified.

Figure 6. Teouma stratigraphy being pointed out by Richard Shing and Martha Kaltal.

Teouma Lapita

The large sherd and the dozen or so other dentate-stamped sherds recovered during the site visit give us some hints as to the antiquity of the site and what it might represent. The large sherd showed no sign of recent breakage indicating that the site has until very recently been relatively undisturbed. The pot form is clearly that of a carinated, outcurving rim vessel with a rim diameter of 280 mm. Distinctive black glassy inclusions can be seen across the surface and in the section of the sherd, which is characteristic of Efate temper (Bedford 2000 (Vol.2): 37, Garanger 1972: 110–112). The sherd's form and motif composition is very similar to a number of Lapita vessels from New Caledonia and the Reef Santa Cruz (Donovan 1973: 95 [M13(2).5]), although there is of course the standard variation in motif combination. Utilising software that he has developed over the last few years to specifically analyse Lapita motif associations (LapitaDraw) Arnaud Noury compared the motifs from the large sherd with motifs from Lapita sites in New Caledonia and Vanuatu. Comparing 5314 sherds from twenty sites Noury (personal communication) reported that

the closest association in New Caledonia was with the earliest layers of Nessadiou and Vatcha, two sites associated with initial settlement of the Grand Terre (Sand 1997). In Vanuatu, close association was found with the sites of Makue on Aore Island and Atanoasao on Malo Island. These sites are associated with initial Lapita settlement in Vanuatu. Galipaud (personal communication) has reported that substantial quantities of obsidian from an island New Guinea source have been recovered from Makue. Given these affiliations, Noury further suggests that the Teouma site might well date to ca. 3100 BP or even earlier.

The other sherds recovered from the newly exposed surface give further indications of vessel form, the antiquity of the site and its affiliations. Two very distinctive forms of rim/lip decoration (Figures 7 and 8) on flat bottomed dishes have affinities with a number of sites further west. These include Mussau (Kirch 1987: Figure 4b), the Arawes (Summerhayes 2000) and the Reef Santa Cruz (SZ-8) (Roger Green personal communication). In New Caledonia decoration of this type is extremely rare, with only one or two examples having been recovered from the almost 40 sites recorded (Sand 2000). Further west in Fiji, while flat bottomed dishes are certainly found, it appears that this form of rim decoration has not yet been identified (Simon Best personal communication). The attributes of the small sample of recovered ceramics from Teouma clearly places the site in between the postulated Western and Southern Provinces (Kirch 1997, Sand 2000).

Discussion

If the Lapita sherds collected from the Teouma site are any indication further investigation at the site is likely to provide us with a detailed picture of the earliest phase of human settlement on Efate. This period is currently a crucial missing gap in Central and Southern Vanuatu. If a substantial component of the site remains undisturbed we might expect to recover and establish the following from the site: obsidian from the west; extinct faunal remains; detailed information on the range of vessel forms and decoration; along with fine chronological definition of the site and the ceramics. This will provide a robust set of data which can be compared to the much more complete Lapita picture found in the Reef Santa Cruz and New Caledonia.

If the Teouma site does date to 3100 BP or earlier it has important implications for the chronology of initial human settlement both in Vanuatu and further afield. It would indicate that the Arapus site on the west coast of Efate post-dates initial human arrival on the island by at least several generations. It would also, in combination with more recent evidence from Northern Vanuatu (Bedford 2003), increase the time span associated with dentate-stamped pottery production in Vanuatu. Previously it has been argued it was short-lived (Bedford

Figure 7. Punctate and dentate-stamped rim from possible flat bottomed dish.

Figure 8. Excised and dentate-stamped rim from a flat bottomed dish.

2000), in the order of only 200–300 years. Certainly on current evidence Lapita dentate-stamping is over in the Central and Southern islands of Vanuatu by 2800 BP (Bedford 2000), which, not surprisingly, is very similar to Sand's estimates for New Caledonia (Sand 1997). But if Lapita colonisation parallels the Reef Santa Cruz and appears in Vanuatu at 3200 BP then we are looking at a period of 400 years in the Centre and the South and up to 500–600 in the North. Earlier dates for Lapita in Vanuatu also have significant implications for the wider region. It would provide further support for dates of 3200 BP for Lapita settlement of the Reef Santa Cruz and would also lend weight to arguments of earlier Lapita settlement of Fiji (Clark and Anderson 2000).

The Teouma site joins an illustrious list of other Lapita sites which have come to light through construction and development activity. The discovery emphasises the importance of predictive modelling when any interpretation of a wider landscape is being undertaken (Green 1978, 2002, Spriggs 1984). Further research of this nature is essential on Efate if we are to beat the bulldozers. Some decades ago Green (1978) outlined a predicted voyaging pattern between known and unknown Lapita centres across the Western Pacific. Malo in Vanuatu was seen as a nodal centre and Erueti was another. The Teouma site, located only 9 km along the coast from Erueti further strengthens Green's original model, although the nodal centre can now be more accurately defined as Southern Efate.

Acknowledgments

Bedford travelled to Vanuatu in January for a wedding but was somewhat distracted when shown the "Teouma sherd" at the Vanuatu Cultural Centre. The authors of this paper subsequently visited the area and located the site. We would particularly like to thank Salkon Yona, the Vanuatu Cultural Centre Fieldworker from Epi, who recognised the significance of the sherd and rescued it from obscurity. Robert Monvoisin, the leaseholder of the land on which the site is situated is supportive of further investigations there. Valuable comment on the recovered sherds was freely given by Simon Best, Jean-Christophe Galipaud, Roger Green, Arnaud Noury, Christophe Sand and Glenn Summerhayes.

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