

# Chapter 8.

## Tanamu 1:

### Conclusions and Future Directions

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#### Introduction

Tanamu 1 presents a cross-section of some of the major time periods represented in the Caution Bay archaeological landscape, and as such provides a useful starting point for the detailed publication of the results of excavations by which to eventually bridge the space between site-specific and landscape-scale patterns and trends. Across three broad phases of occupation, the site provides a window onto the extent and shape of pre-ceramic occupation in the c. 1700 years leading up to the emergence of the Lapita cultural complex in the Bismarck Archipelago c. 3300 cal BP (e.g., Denham *et al.* 2012), the nature of the terminal Lapita period which ends at 2600–2550 cal BP at Caution Bay (David *et al.* 2019), and the past 2750 years leading into the ethnographic present. In this volume we have presented detailed data and analyses of the ceramics, stone and shell artefacts, and vertebrate and invertebrate animal remains, and all have yielded their own particular insights. While conclusions about the long-range cultural history of both Tanamu 1 and Caution Bay can be drawn from the data presented here, we also see this as an opportunity to isolate and frame research issues to be pursued in subsequent volumes of the Caution Bay archaeological project.

#### Insights and questions generated by the Tanamu 1 data

##### Occupation

The Tanamu 1 archaeological sequence has revealed three dense cultural horizons—c. 5000–4050 cal BP pre-ceramic, 2800–2750 cal BP Lapita, c. 700–100 cal BP post-Lapita—each separated by periods of much sparser occupation. While the density of cultural materials fluctuates across the major occupational stratigraphic units (SUs), and the types of dominant materials shift through the sequence, the three major horizons all clearly represent sustained cultural presence at Tanamu 1. The array of remains, including large faunal and material culture assemblages, in an open setting suggests successive villages through time, however no structural evidence of dwellings, such as post-holes, has been archaeologically documented for any horizon

at this site. On the present-day ground surface, Tanamu 1 appears as a discrete part of the larger landscape of Caution Bay. However, both the dense pre-ceramic (SU5) and Lapita (SU3) horizons are contemporaneous with similarly dense, temporally overlapping horizons at other sites nearby, suggesting that Tanamu 1 is but one part of a larger, spatially shifting settlement during those times. The stratified Bogi 1 site is only 140m away on the same ancient spit, for example, just as numerous other archaeological sites across Caution Bay also interdigitate with and supplement the Tanamu 1 sequence. As we add further data to the Caution Bay picture in forthcoming monographs with the results from other sites, we will continue to explore the nature of settlements and their connections between Caution Bay locales through time.

##### Ceramics

The trends observable in the Tanamu 1 ceramics sometimes map on to contemporaneous assemblages elsewhere, and sometimes provide new or augmented narratives. The well-preserved albeit often highly fragmented nature of the ceramic sherds allows for detailed observations about surface decoration and treatment, including assessment of the proportion of red-slipped wares, various forms of decoration, and the identification of makers' marks.

The Tanamu 1 Lapita ceramics (2800–2750 cal BP) reveal no evidence of red slip at all; a pattern of scarcity of red-slipping reproduced across the other Lapita sites of Caution Bay generally (BD, unpublished observations). Whether the later increased frequency of red-slipping is also seen in other Caution Bay ceramic assemblages will be assessed as further analyses are presented in forthcoming volumes. At Tanamu 1, decorative incised lines also become the principle kind of body decoration after c. 200 cal BP (albeit plainwares predominate then), although there is a paucity of cultural horizons between Late Lapita and recent times at this site, so it is not possible to determine the precise nature of ceramic assemblages in between—the presentation of results from other Caution Bay sites will fill this gap. While incised lines are present on occasion within the Tanamu 1 Lapita ceramic assemblage, these are

consistently zone markers; single lines which serve to delineate decorative fields around vessels, especially to separate rows of comb dentate impressions or impressed continuous lines.

The range of Lapita decorative design conventions at Tanamu 1 is limited, and is fairly represented as a subset of the broader range found in contemporary Lapita sites elsewhere in the southwestern Pacific (see e.g., Summerhayes 2000), keeping in mind nonetheless that most so-called ‘Late Lapita’ sites elsewhere are disturbed and of poor chronostratigraphic resolution (see also Garling 2007). Through until 2750 cal BP, the end of the Tanamu 1 Lapita assemblage, the techniques are largely limited to comb dentate-impressions with straight and curvilinear tools, and continuous-edged tools. Finger grooves below the lip and *Tegillarca granosa* shell-edge impressions do not feature at all in Lapita assemblages, and are a much later, post-Lapita convention dating closer to 2150 cal BP, about 400 years after the end of Lapita at Caution Bay (see David *et al.* 2012). The key repeated design conventions noted for the Tanamu 1 Lapita pottery sherds are double and triple parallel arcs aligned in rows, and more rarely as off-set patterns, and made with coarse-tined combs or comb-like tools, or with thin continuous-edged tools. Whether the design repertoire recorded for Tanamu 1 is expanded by the inclusion of results from other Caution Bay sites will be explored in subsequent volumes, although already we can tell that while a few additional designs can be added, the main designs are retained in these other sites (BD, unpublished observations).

Carinations were noted for Tanamu 1 Lapita vessels, which sometimes also have collars. Neither feature is recorded for any of the post-Lapita pottery from the site. Where body decoration occurs on carinated vessels, it is only ever above the carination. Vessels devoid of body decoration are present during Lapita times, however most, if not all, appear to have had lip decoration in the form of stick or finger impressions to make closely-spaced, shallow impressed notches along the lip.

Maker’s marks only occur in the uppermost ceramic horizon at Tanamu 1. In the late 1800s to mid-1900s, such maker’s marks were put on pots by female potters who would then give the pots to male seafarers during long-distance maritime exchanges with villagers up to c. 400 km west of Caution Bay, especially during *hiri* trade expeditions (see below). Ethnographically, the *hiri* trade pots were highly standardised in form, and almost entirely plainwares (see Skelly and David 2017). At Tanamu 1, the plainware everted pots with necks most typical of ethnographic *hiri* trade wares (called *uro* by 19th to 21st-century Motu and Koita peoples of the Port Moresby region including Caution Bay), only

occur after c. 200 cal BP (for a description of the range of ethnographic *hiri* pot types, see Skelly and David 2017: 26–32).

The presence at Tanamu 1 of both Lapita and known ethnohistorical wares allows us to explore distinctions and what these might mean. The highly standardised plainware *uro* pots with maker’s marks, which occur only in contexts dating to the past c. 200 years, can be contextualised *via* ethnohistorical information (see Skelly and David 2017). The social organisation which mobilised ethnographic Caution Bay pottery across hundreds of kilometres of coastline required the trade pots to be identified to their particular makers: men would carry the pottery of female kin for trade in an arrangement known by the Motu of Caution Bay as *siaisiai* (Groves 1960: 19; see Skelly and David 2017: 32–34). In contrast, the Lapita pottery lacks maker’s marks which would serve to individualise pots, and the decoration of the pots is a strikingly-notable feature of a generally less-standardised ware despite the limited range of Lapita design conventions at Caution Bay. The prominence of decoration in the Lapita pottery gives high visibility to the symbolic dimension of vessels, a feature of Lapita decoration well noted by previous Lapita researchers (e.g., Chiu 2019; Kirch 1997). During Lapita times the objective does not appear to have been identifying the individual maker. Rather, the emphasis in Tanamu 1’s Lapita wares appears to have been more on group/community-scale symbolism (such as lineage or ‘house’ designs [*sensu* Chiu 2019]) of highly visible decorations of a narrow range of motifs and styles, in contrast to standardised functional forms with trademarks discretely inside the pot and trade with personal exchange partners of ethnographic wares.

### **Faunal Remains**

The Tanamu 1 sequence is rich in both molluscan and non-molluscan faunal remains, with clear patterning through time providing insights into both cultural relationships with animals and the dynamic nature of the Caution Bay environment.

The pre-ceramic SU7–SU5 deposits are strongly marine-focussed, and indeed the most marine-focussed of all time-periods evidenced at Tanamu 1. Dugong remains are restricted to SU5, and this SU also has the strongest representation of marine turtle in the Tanamu 1 sequence. Fish remains are also most strongly represented in the pre-ceramic SUs, with Lapita and post-Lapita layers containing fewer fish remains in proportional terms as well as reduced diversities. Fish taxa are dominantly reef-associated, with the exceptions being rays/skates, scombrids and serranids which are all restricted to pre-Lapita levels. Non-molluscan invertebrates are also most common in pre-

Lapita deposits, with crab remains peaking in SU5. This is of great interest given that Lapita peoples have long been characterised for their association with the sea, implicitly in contrast with earlier communities whose maritime associations have remained more ambiguous (largely due to a paucity or absence of pre-Lapita to Lapita sequences across the Lapita domain). At Caution Bay it is apparent that pre-Lapita occupation was at least as much oriented towards the sea as during Lapita times, at least for those periods represented by Tanamu 1. More will be said on this following the publication of other excavated sequences across the Caution Bay landscape.

In counterpoint to the strong marine focus of the pre-ceramic faunal assemblages, terrestrial components come to dominate in the upper SUs, with macropods becoming the most prevalent category of vertebrate remain. The increasing numbers of Agile Wallaby, Short-nosed Bandicoot and *Rattus gestri* further indicate that the proliferation is not just in terrestrial fauna, but specifically those characteristic of savannah habitats. As Aplin notes in Chapter 6, however, in cultural terms the shift from marine to terrestrial/savannah resources is not simply based on changing resource availability. He demonstrates the presence of a mosaic of terrestrial environments through the time period covered by SU7–SU5 and observe that, despite evidence for the presence of forested patches via ground-dwelling fauna, there is no evidence that pre-ceramic occupants of Tanamu 1 captured and consumed arboreal fauna such as cuscus and Striped Possum, although such animals were presumably present in the local environment.

The notion of ‘fishing for wallabies’, developed by Allen (1977b) specifically for the island of Motupore and its nearby shores 35 km to the southeast of Caution Bay as the crow flies (and 40–50 km following the coast), also leads us to ask whether the hunting of wallabies as a specialised trade strategy emerged from recognisable earlier historical antecedents (see also McNiven *et al.* 2012b: 145–148). While Tanamu 1 does not permit us to answer this question, it is worth noting that wallaby remains are abundant at the site from the SU5 pre-ceramic horizon, and the savannah-dwelling Agile Wallaby (*Macropus agilis*) even more so from SU4 onwards. Thus it would appear that communal hunting of wallabies for consumption at Caution Bay can be tracked back to at least 4350–4050 cal BP. Such a long-standing focus on wallaby hunting, presumably for local consumption given the prevalence of wallaby habitats across Caution Bay, suggests that wallaby hunting was, initially at least, not about trade (and by definition, certainly not about trade for pots as wallaby hunting began in pre-ceramic times). The Tanamu 1 data further suggest that the preference for wallaby in this region, where the open savannah grasslands provide

an expansive wallaby habitat, predates the occupation of the off-shore islands like Motupore. Wallaby, as an item of consumption at Tanamu 1, pre-dates the introduction of trade specialisation as described by Irwin (1991) for pots. However, with the later specialised production and trade in pottery on Motupore, on this offshore island wallaby ceases to be acquired through direct procurement and becomes a commodity of trade. Our Tanamu 1 evidence does not speak on the topic of whether wallaby hunting itself becomes a specialised occupation of those on the mainland who are not involved in pot production, but forthcoming comparisons of inland versus coastal Caution Bay sites might. How the role of wallaby hunting developed through time across the Caution Bay landscape (largely for local subsistence, or for trade as in ‘fishing for wallabies’ or ‘trading for pots’) remains an intriguing question for future study as more Caution Bay sites are published.

The data from the dense shell layers are complementary to the narrative provided by the non-molluscan faunal remains. The greatest diversity and balance in terms of originating habitats is seen in the pre-ceramic levels, with an array of hard and soft shore habitats drawn upon to source molluscan resources. This is again consistent with the maritime focus of Tanamu 1’s pre-Lapita occupation. Through the Tanamu 1 sequence there is an increasing reliance on a narrowing range of soft-shore taxa. Indirectly, the subsistence shell data would seem to support Aplin’s (Chapter 6) view of the diminishing availability of larger marine prey items through time: the increase of seagrass and silty sand-associated mollusc remains through the sequence (e.g., *Conomurex luhuanus*) is not matched by the continued availability and use of dugong and turtle. Additionally, the pivot towards increasing incorporation of terrestrial resources, which is visible in the non-molluscan faunal record, is matched in the molluscan remains sequence by an overall contraction in assemblage size through time.

An enduring question in the archaeology of New Guinea is the timing of the arrival of the domesticated pig (*Sus scrofa*), dog (*Canis familiaris*) and chicken (*Gallus gallus*), and the excellent chronostratigraphic integrity and large faunal assemblages of Tanamu 1 allow us to investigate this. Pig is categorically not present in the pre-ceramic levels of Tanamu 1, making its first appearance in low numbers in the upper part of the SU2–SU4 assemblage, as Lapita sediments interface with early post-Lapita layers. It is uncertain whether their presence here is due to *in situ* deposition of pig remains (by whatever means), or later intrusions from pig-rummaging. Pig is only common, however, in the past few hundred years, and this in turn suggests that the earliest pig at Tanamu 1 derives from the hunting of

feral pig rather than pig husbandry. There is no trace of dog at all in the Tanamu 1 faunal assemblages, although they are generally much less common in New Guinea deposits and sample sizes for the ceramic-associated levels could be a factor in their absence. Evidence that dogs were present from 2702–2573 cal BP comes from the nearby Moiapu 1 site (Manne *et al.* 2020) and at c. 2500 cal BP from Edubu 1 (McNiven *et al.* 2012b). Chicken is entirely absent from the Tanamu 1 sequence and close attention will be paid to whether it occurs, and if so when, at other Caution Bay sites. *Rattus exulans*, the Polynesian or Pacific Rat, is also absent at Tanamu 1.

### **Stone and Shell Artefacts**

The interplay between stone and shell artefacts at Tanamu 1 is an interesting one. Tracking broadly alongside absolute abundances of food-shell remains, worked shell artefacts are most common and diverse in the pre-ceramic phase of the sequence and tail off through time. Indeed, no worked shell at all was identified within the culturally rich SU1 deposits. In contrast, stone artefacts are sparser in the pre-ceramic deposits and increase in density through the sequence to their largest representation in the most recent sediments (SU1). These conclusions regarding the frequency of stone artefacts, however, are balanced by observations about the frequency of burning and thermal alteration. Evidence of these processes increases during Lapita times, which to at least some degree contributes to fragmentation and higher overall totals of stone artefacts. Concomitantly, it is entirely possible that the increasing use of fire could have obscured evidence of Lapita and post-Lapita shell-working through causing taphonomic deterioration and fragmentation of shell structures, surfaces and edges, although the very large shell assemblages suggest that this is unlikely to be a sufficient explanation.

Despite differences in sample sizes between phases of occupation, and differential exposure to fire in the stone artefact sample, Mialanes *et al.* (Chapter 4) observe that no major technological changes are seen through the course of the Tanamu 1 sequence. Similar assessments cannot be made for shell-working, as only a single shell artefact was identified from ceramic-associated phases. The lack of worked shell associated with Late Lapita ceramics is perhaps not surprising (see Chapter 7),

however Mialanes *et al.* (Chapter 4) note that the Lapita stone artefact assemblage does not align with Lapita flaked stone artefact assemblages described from other locales. Whether these patterns hold as further results from across the Caution Bay archaeological landscape are published will be of interest.

### **Conclusion**

The discovery of a stratified site containing deposits associated with the Lapita cultural complex, a rich pre-ceramic assemblage dating back to 5000 cal BP, from c. 1700 years before the appearance of Lapita sites elsewhere, and post-Lapita deposits stretching through to the ethnohistoric period would be an important find in itself, but to find this on the south coast of Papua New Guinea far removed from known Lapita sites, and as part of an interlocking archaeological landscape, is remarkable.

The sequence of rich faunal and artefactual assemblages, anchored via a robust and clear chronostratigraphy, allows for clear assessments of change and continuity across phases to build up a nuanced local picture. It also further facilitates comparative analysis with more distant sites and landscapes.

The results from Tanamu 1 presented in this volume have given a picture of sequential occupations which have drawn upon—sometimes selectively—a landscape which was demonstrably dynamic over the course of 5000 years. The presence of Lapita pottery and the window on to linkages provided by the worked shell component speak of connections with other places and peoples, but this is in contrast with the single piece of obsidian and reliance on local sources of chert revealed by the stone artefacts. Some archaeological materials signal distant connections, others local activities, and the patterns between them shift through time.

With the forthcoming publications of results from the excavation of so many sites across the Caution Bay landscape, we have no wish to be too hasty or categorical about patterns and interpretations here. Rather, we see Tanamu 1 as a starting point which lays the foundations for the exploration of pre-ceramic, Lapita, and post-Lapita lifeways at Caution Bay.