Domestic and Religious Structures in the Emily Bay Settlement Site, Norfolk Island

ATHOLL ANDERSON¹ AND ROGER GREEN²

Department of Archaeology & Natural History, Research School of Pacific and Asian Studies, Australian National University, Canberra ACT 0200, Australia aja@coombs.anu.edu.au

² Department of Anthropology, University of Auckland, Private Bag 92019, Auckland, New Zealand pounamu@ihug.co.nz

ABSTRACT. At Emily Bay, domestic structures include earth ovens, scoop hearths and a possible rectangular house inferred from posts and postholes. An area of stone paving nearby is argued to be a religious structure, or *marae*. Made of naturally available stone, it lies slightly below the surface of the darker sand cultural layer. Obsidian flakes were found above it and postholes beneath. Several edging blocks of various shapes are noted. Radiocarbon dated to c. 700–600 B.P., this platform fits within the known parameters of other East Polynesian *marae* of similar age.

ANDERSON, ATHOLL, AND ROGER GREEN, 2001. Domestic and religious structures in the Emily Bay settlement site, Norfolk Island. In *The Prehistoric Archaeology of Norfolk Island, Southwest Pacific*, ed. Atholl Anderson and Peter White, pp. 43–51. *Records of the Australian Museum, Supplement* 27. Sydney: Australian Museum.

Some clues to the nature of domestic and social life in the Emily Bay settlement are afforded by structural remains, and the existence of a religious construction is of considerable significance for Polynesian prehistory more broadly. Most of the relevant remains consisted of infilled holes and hollows of shapes characteristic of particular structures, such as postholes and earth ovens. The identification of these, however, varied across the site and their recorded distribution may not describe all those which once existed within the stratigraphic contexts which we excavated. There has been significant post-depositional disturbance of the site. The upper surface of the cultural layer, observed everywhere as smooth and almost level, almost certainly represents a period of wind planation, and possibly water planation, following the cessation of site

occupancy and prior to the advent of the modern dunes over the site. In contrast, the lower margin of the cultural layer was very uneven, as might be expected from human activities in dune sand but, in addition, the burrowing of procellariids (petrels and shearwaters), which still nest on the margins of the site, has completely obliterated the internal structure of the cultural layer in some places and carried cultural material up to 0.8 m below the normal depth in a complex of hollows and lenses. Consequently, while the existence of stone paving protected a number of postholes in Trench EB97:24, it was often difficult in Trench EB97:23 to distinguish holes and hollows that might have been constructed deliberately from those representing casual impact or non-cultural activity.

Domestic structures

The most common domestic feature throughout the Emily Bay site is the heated stone earth oven or umu (PPN and PEP *gumu¹). Outside the main excavations examples occurred in Trenches EB95:06 and EB96:10, in each case comprising shallow scoops filled with broken, fired basalt cobbles mixed with charcoal and midden (see Anderson, Smith and White, this vol., fig. 16). In Trench EB97:23 there was a larger and deeper oven complex in squares A7– B7 (see Anderson, Smith and White, this vol., fig. 27). This seems to comprise at least three oven pits dug to differing depths and in slightly different positions. Across the remainder of Trench EB97:23 there are various small depressions, generally less than 1 m in diameter and 0.2 m to 0.6 m deep, which might have been oven scoops (see Anderson, Smith and White, this vol., fig. 24). However, these did not contain concentrations of ovenstone and charcoal and may simply be scoop fireplaces. Some of them contained richer deposits of midden than were apparent elsewhere and these might be rubbish holes (PPN and PEP *lua (Green and Pawley, 1998: 60)), as one depression in Trench EB96:10 also appears to be. Alternatively, they are simply collapsed mutton bird burrows in which domestic debris accumulated naturally. In Trench EB97:24 Square Z6 there is a large oven at the southern edge of the paving, which contained the bones of an elephant seal (Fig. 1).

Postholes occurred in both of the larger excavations. In Trench EB97:23 posthole D contained a large Norfolk pine post-butt, the remains of an unshaped branch (R. Wallace, pers. comm.) (Fig. 2). There were substantial charred wood remains (all Norfolk pine) immediately adjacent to features J, K, and L, although several of these are uncertain postholes, being difficult to discern clearly by colour changes in the sand. The postholes were perceived only from the top of the cultural layer and they pass through it into the yellow sand beneath in most cases, which indicates that the posts burnt down at the end of the occupation.

In Fig. 2, the more convincing postholes can be seen to form an approximately rectangular outline about 5.0×2.5 m in size. There is nothing else in the stratigraphy or contents of the site to indicate what this feature represents, but its size and shape and its proximity to a large and repeatedlyused oven suggests that it was a small house, and that Trench EB97:23 excavation has uncovered part of a typical Polynesian domestic unit. Rectangular houses exhibiting such posthole arrangements, frequently with the floor perimeters outlined in curbstones, and with exterior ovens adjacent, are features to be expected in East Polynesian settlements (Green, 1996: 220-221; Oakes, 1994; Walter, 1998: 32–33,36). The evidence here, except for the lack of stone curbing demarcating the perimeter of the structure, is therefore entirely comparable to the ordinary Polynesian domestic structure.

There were also postholes in Trench EB97:24. These are, if anything, even more enigmatic. Since they underlie what seems to be a religious feature, they may be associated with its construction and are discussed in that connection.

Religious structures

The excavation of EB97:24 uncovered an area of paving which is almost certainly a religious structure, or *marae* as these are known collectively in Polynesia. When first encountered, it was thought that the paving might represent an historical road surface, since it is known that in the midnineteenth century a road was constructed from the stone bridge, through the western swale of Emily Bay and running approximately north–south towards a limestone quarry to the east of Government House. However, this initial interpretation was shown to be invalid on several grounds.

First, the position of the historical road appears to be documented in another place. The steep face in Trench EB96:11 (Anderson, Smith and White, this vol., fig. 19) may be a road cutting and it is adjacent to what seem to be several formed surfaces immediately to the east of it, in the lowest part of the swale. In Auger hole 24 (Anderson, Smith and White, this vol., figs. 13, 15), there are two heavily compacted surfaces, one above the other, of brown clay packed with rock and large sandstone slabs, each 0.3–0.5 m deep—plausibly, successive road surfaces. This material could be penetrated only by smashing through it with a heavy crowbar. There is no sign of the prehistoric cultural horizon in this area, but by Auger hole 23, a further 6 m to the east, the standard stratigraphy resumes. Trench EB97:24 lies 8 m, approximately, to the east again where the dark cultural layer of Auger hole 23 appears to gradually lighten in colour towards the buff-coloured horizon in Auger hole 22 (Anderson, Smith and White, this vol., fig. 15), which was immediately east of Trench EB97:24 (Anderson, Smith and White, this vol., fig. 29).

Second, the stratigraphy of EB97:24 shows that the paving is enclosed within, and is not set upon, the distinctive grey-brown to black layer which is the prehistoric cultural horizon throughout Emily Bay. In addition, the cultural layer is darkest through charcoal enrichment towards the top, above the paving, and lighter underneath, a circumstance that could not have persisted if the paving had been set in its position after the cessation of prehistoric occupation. Above the cultural layer is the widespread layer of brown clay, separated from the cultural layer by a thin layer of yellow sand. The brown clay contains some lenses of yellow sand, however, and may have been disturbed in places because a fragment of clear bottle glass was found almost on the surface of the cultural layer in square Z3 (although it might have tumbled in from higher up during our fieldwork, since the walls of the trench were highest in this area and suffered occasional minor slumping as they dried out).

A third important indication of the prehistoric origin of the paving is the fact that 24 obsidian artefacts were scattered above it. The position of these within squares was not recorded, and is shown schematically in Fig. 1, but it was noted that artefacts occurred directly on top of the paving (Spit 1) and within interstices between slabs (Spit 2), but were never found beneath slabs. In other words, the distribution of obsidian is a post-paving event.

PPN stands for Proto Polynesian and PEP for Proto Eastern Polynesian. This is the widely distributed Polynesian word for the even older Proto-Oceanic *gumun or oven made with hot stones (Green and Pawley, 1998: 59)

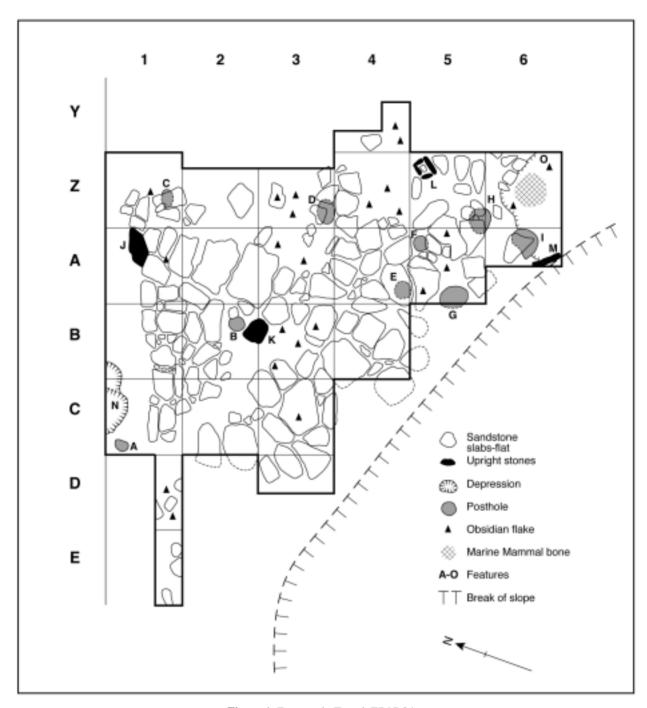


Figure 1. Features in Trench EB97:24.

Lastly, it was established that the paving is a discrete feature. Its extent along the southwest edge cannot be established because of the break of slope in that area, but strenuous efforts were made to test the possibility that paving continued in any other direction, both by extending the excavation boundaries up to the limit allowed by our excavation permit and, beyond that, by excavating a series of trenches around EB97:24, cleaning them down to the grey-brown surface and probing those surfaces to locate any stones or paving. Trenches, and cleaned-down surfaces around the perimeter of Trench EB97:24, were probed systematically at 0.10 m intervals, using a 0.33 m long metal probe, pushed in to 0.30 m in each case. This would have

located all of the slabs in the excavated area, indeed penetrated well below the cultural layer. When stones were encountered, the probing interval was shortened to determine their size and shape.

This exercise had the following results (location of trenches in Anderson, Smith and White, this vol.: fig. 20). The only paving stones located were those shown in Fig. 1. No paving stones were found in the area immediately surrounding Trench EB97:24, or in contiguous trenches. In Trench EB97:25 no stones were found. In Trench EB97:26, one stone was located in the southeast corner. In Trench EB97:27 there were no stones. The stratigraphy of Trench EB97:28 was disturbed—it is close to both the historical

road and the large area of apparent washout which reached the southwest edge of the paved area—and it contained several large stones and some rubble. Excavation of EB97:29 showed that the brown clay layer follows down the steep slope of the eroded area to flatten out about 1 m below the level of the paving, indicating that the washout or blowout area existed prior to the development of the modern dune system which overlies both the brown layer and the prehistoric stratigraphy which remains beneath it in other places.

The probing exercise showed, therefore, that while there was an occasional stone beyond the paved area, as there is throughout the Emily Bay site, there was definitely no additional or continued paving anywhere in the vicinity of the paved feature—nor is there any such paving indicated elsewhere in Emily Bay.

The paved feature. The paved feature (Figs. 3, 4), assumed to be a *marae* for reasons discussed below, is more complex than it appears at first sight. There are several events recorded in the stratigraphy. The feature was built on an almost level coarse-sand surface, which at the time must have appeared as a low sand ridge or knoll lying about 20 m east of the domestic structures in EB97:23 and approximately 1.0 m above the surface on which they lie. At least some postholes were dug into the surface before the paving was laid, assuming that it has not been shifted subsequently. Since none of them were noticed at the top of the cultural layer, unlike those in EB97:23, it seems probable that all of them pre-date the paving. The postholes in Squares Z 5–6 (Features H), A 6 (Feature I) and A 4–5 (Features E, F, G) appear to form a cluster of wooden poles which might have served some function later superseded by the paved site (Fig. 5, Table 1).

The cultural layer which was formed above the postholes is composed of the paving which is set in sand heavily-enriched with water-rolled, fine, gravel which also occurs between the paving and scattered thinly above it. The paving slabs are 3–8 cm thick, natural slabs of local sandstone. They are usually eroded around the edges, suggesting that they were gathered loose from the shoreline, for example in Slaughter Bay where they can still be found, rather than quarried.

The placing of the slabs forms no clear shape and there is nothing in the stratigraphy to suggest more than one phase of construction. However, their placement encourages some conjecture along that line. There is an area, half-round to triangular in shape, constructed from relatively small slabs which lies at the northern edge of the paving (Fig. 1), plus a block set on end reaching 0.24 m above the paving level (Feature K). The remainder of the paving, which contains larger slabs, appears as a northwest-southeast trending band with a northeast-southwest extension to the northern edge of the paving, where it terminates in an upright slab, protruding 0.10 m above the level of the paying (Feature J). At the southern end of the paving (Square A 6) is a slab set on its side, but hardly reaching above the paving level (Feature M), and on the eastern side of the paving a quadrangular group of small upright slabs (Feature L), which enclosed a basalt hammer stone.

Feature L is possibly related to the third event on the site, the flaking and distribution of obsidian, all of it of Raoul Island material and quite possibly from the same block, although they could not be re-fitted. The artefacts tend to occur in squares surrounding Z5, in which Feature L is located. There are also basalt flakes scattered on the paving and between the slabs, but these occur throughout the site and there is nothing apparently different in the

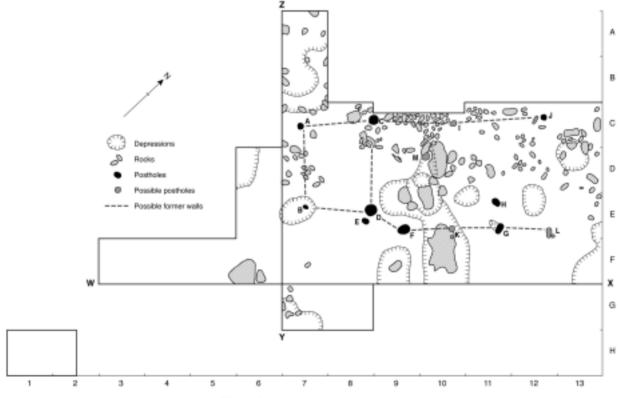


Figure 2. Features in Trench EB97:23.



Figure 3. Paved area in Trench EB97:24, taken from northwest.



Figure 4. Paved area in Trench EB97:24, looking southwest over EB97:23.

EB97:24 material. Following the obsidian flaking, the site was covered by grey to black sand, generally to a depth of 8–10 cm above the paving. The colour variation seems to be related to the construction of the shallow oven area in Square Z 6, which contained elephant seal bones. Charcoal, evidently from this feature, became distributed in the sand above the paving, staining it black in Squares Z 5, Z 6, A 6 and the southern half of A 5. Elsewhere the sand above the paving is grey to grey-brown. Since the black sand goes

down to the level of the paving, but not below it, or between the slabs, the oven is later than the paving and the obsidian flaking.

Age of marae construction. Charcoal samples were selected and processed as described by Anderson, Higham and Wallace (this vol.). The first set of results (ANU-11047: 590±110 B.P.; ANU-11050: 540±90 B.P.), both on broadleaf samples, came from beneath the half-round area of paving



Figure 5. Postholes E, F, G, H, I at northern end of the paved area in Trench EB97:24.

and posthole I respectively, suggesting that the structure dated to about 550 B.P. However, the next set of results (ANU-11051: 570±70 B.P.; Wk-6904: 740±55 B.P.; Wk-6905: 830±75 B.P.), also on broadleaf samples, all came from spit 2 (the same level as the slabs) and covered such a wide span that attempts were made to test whether this was related to the different phases of construction (above) or to variation in the samples. That involved dating some more samples from under the paving and in the covered postholes. Of necessity, these were charcoals from Norfolk pine which,

Table 1. Features and their dimensions in Trench EB97:24.

| postholes | top dimensions (cm) | depth (cm) |
|---------------|--------------------------|------------|
| A | 15 × 10 | 12 |
| В | 17×14 | 20 |
| C | 25×15 | 51 |
| D | 30×24 | 54 |
| E | 27×25 | 47 |
| F | 22×22 | 42 |
| G | 45×29 | 57 |
| Н | 30×25 | 80 |
| I | 28×22 | 75 |
| upright slabs | height above paving (cm) | |
| | | |
| J | 10 | |
| J K | 10 24 | |
| | | |
| K | 24 | |
| K L | 24 0 5 | |
| K L M | 24 0 5 | |

given the probability of significant inbuilt age could provide only a *terminus post quem*—that is, if the ages came back as similar to or younger than previously established determinations then they would confirm the general age estimate of construction, but older ages could not indicate an earlier phase of construction. These dates (ANU-11195: 700±60 B.P.; Wk-7821: 810±45 B.P.; ANU-11171: 970±60 B.P.) are predictably spread, but they run up to the range of other samples from under the paving.

When the dates are divided by sample group (Anderson, Higham and Wallace, this vol.), it can be seen that the preferred group A estimates (ANU-11047; 11050; 11051 and Wk-6904) indicate that the *marae* was constructed approximately 700–600 B.P.

The Emily Bay marae in Polynesian perspective

There are two components of a Polynesian perspective within which an interpretation of a 700 year old religious structure at Emily Bay on Norfolk Island can be addressed. One is what the initial form of ritual architecture and spaces were at the ancestral stage of Polynesian culture. The second is what forms to date have been seen as the foundation for the later and better known marae-ahu and heiau complexes of Eastern Polynesia, which took on a range of monumental shapes within the last 800 years or less in that region (Green, 1993: 10-11), but not in New Zealand (Davidson, 1984: 171) or in Western Polynesia. Consideration of the first component allows one to define the major architectural features which make up the religious structures in Polynesia and are reflected in the Norfolk Island evidence. This is followed by discussion of the second component, where the Norfolk Island marae is deemed to conform to the expected physical configuration predicted from earlier studies by Emory (1933, 1943, 1970), based on the 1925 Papeno'o Valley, Tahiti survey results. His view then was that he could identify the basic elements of Eastern

Polynesian *marae* (the courtyard, platform, and upright slabs) and had discovered a new tool for tracing Polynesian wanderings, the places where they had worshipped (Krauss, 1988: 140). So Emory had; it has just taken time to trace these developments more fully from the archaeological record.

The concept of a specially designed open space in a settlement, Proto Oceanic *m(a,e)laqi, has a 3000 year antiquity among the Austronesian speaking societies of the Pacific (Green and Pawley, 1998: 63–64). Its continuation in Polynesia as PPN *malaqe was interpreted by Biggs (1993) in his POLLEX linguistic reconstruction as referring to an open, cleared space used as a meeting place or ceremonial space.

Recently Kirch and Green (in press) have considered the probable ritual spaces of Ancestral Polynesian culture and its societies by drawing not only on linguistic, but also ethnographic and archaeological information. They point out that the essential components of ritual architecture present throughout all three main subregions of Polynesia (the Outliers, West Polynesia and central East Polynesia) are (1) an open space, variously elaborated into a formal courtyard, and almost everywhere designated by the term malae or marae; (2) some form of god house (fale or faleadjective) attached or adjacent to the court, sometimes associated with ancestral burials; (3) either posts or uprights stones (often under the term pou) serving as symbolic representations and/or manifestations of deities, situated either around the perimeter or at one end of the court, or at times within the god house itself; and (4) present only in central Eastern Polynesia, a raised platform or altar called the ahu situated at one end of the court.

On the basis of the ethnographic, archaeological, and lexical evidence Ancestral Polynesian ritual spaces are argued by Kirch and Green to have been architecturally simple affairs, consisting of an open, cleared space (PPN*malaqe) lying seaward of a sacred house (PPN*fale—[qatua]), the latter constructed upon a base foundation (PPN*qafu). Thus approached from the ancestral perspective, the Emily Bay structure possesses the elements of a formally defined courtyard space, in this case paved, and the associated upright stones. Whether there was a structure identifiable as a god house adjacent to the paved courtyard cannot be determined from the available evidence, while the absence in this case of any ahu platform, present in the later central Eastern Polynesian marae, and those of Easter Island, Pitcairn and Mangareva, is probably significant (see below).

Turning to the Eastern Polynesian literature, the Norfolk Island structure fits in well within the long predicted early or simple marae (or shrine) form. That form, based principally on later examples from Hawaii and Tahiti, but known in the Tuamotus as well (Emory, 1933, 1947, 1970, 1979: 205–207), has a rectangular court (often a stone pavement) frequently with three uprights at one end. In the development of religious structures in Hawaii, it is a descendant of that form which Kolb (1994: 423 and fig. 5) illustrates as the ancestral type dating to c. A.D. 1200 from which the increasingly more complex heiau forms in that island group evolved. Really solid dated archaeological evidence for his illustrated reconstruction, however, is weak. In the Marquesas, Suggs (1961: 63 and fig. 21) reported on some similar evidence (to that of the postulated ancestral type of East Polynesian shrine or the remains on Norfolk

Island) for the Ha'atuatua site on Nukuhiva. This consisted of a partial pavement and an associated stone upright over a burial, all interpreted as forming a temple feature. The evidence, initially attributed to a much earlier settlement period, would now be dated to c. A.D. 1300–1650 (Anderson *et al.*, 1994; Rolett and Conte, 1995; Rolett, 1998: 52–57; Sinoto, 1966: 303). Monumental forms of religious architecture in the Marquesas are argued by Rolett (1998: 255) to all date after A.D. 1300.

In the Society Islands, Wallin's recent study (1993) of marae structures indicates that Type 1 of his classification is the earliest form. Simple variants of Type 1 (the pavement and uprights at one end, sometimes with ahu platform), are judged to be the early and typical family marae, from which all later forms evolved (Wallin, 1993: 121 and fig. 84). Although the oldest actual archaeological date for a Society Island *marae* on his analysis of the current literature suggests approximately A.D. 1500, Wallin (1993: 78,127,130) is willing to consider the possibility of early forms in fact extending back to A.D. 1200. Sinoto (1996: 551 and fig. 6) too has the demarcated court and three uprights as his basic Windward Islands type from which later types evolved, and has a simple upright alone or with surrounding stones (as in the twelfth to thirteenth century Vaito'otia site) as the initial Leeward Islands form.

Easter Island *ahu* platform religious sites are extensively dealt with by Martinsson-Wallin (1994). Their earliest certain appearance in monumental form is c. A.D. 1100-1200 (Martinsson-Wallin, 1994: 77–82; see also Skiølsvold, 1996: 106), although A.D. 1000 remains a possible beginning date. In this case it is the *ahu* platform which is being dated, as most religious structures of the Mangarevan, Pitcairn, Rapanui type lack stone uprights, having raised ahu platforms fronting an open and sometimes partially paved courtyard. Later *ahu* platforms supported images in the Pitcairn and Rapanui cases, and they may well be a replacement for earlier forms with stone uprights (McCoy, 1976; Van Tilburg, 1994: 76, 83) at present unknown for this part of Eastern Polynesia. Certainly no images or uprights occur on the raised *ahu* platforms of Mangarevan marae. It is worth adding that in the Society Islands and Easter Island, small stone slab-outlined cists called avata occur in the courtyards of religious structures: Feature L on the paved court of the Norfolk Island marae may be a related feature of the same kind.

Currently we have no in-depth study of religious structures in the Cook Island group which outlines a possible sequence for their development, and little in the way of their dating. This is unfortunate. Certainly a marae form consisting of a step-terrace platform with uprights is present on Rarotonga (Bellwood, 1978), and Green has personally observed a *marae* type of shrine (in a modern garden setting) consisting of a flat stone pavement with uprights at one end preserved on that island. More interesting is the Mangaia Island case (Hiroa, 1934: 172–177; Bellwood, 1978), where these religious structures are relatively simple in their features, form a fairly homogeneous architectural set, and may be more recent but stylistically retentive examples of what was a little changing type. Thus they consist simply of rectangular courts paved with gravel and at times defined on their perimeters with stone edgings or curbings. Upright stones, representing deities, are often present at one end of a *marae* (Kirch and Green, in press).

The above review of the Eastern Polynesian literature is sufficient to contextualize the Emily Bay example. It becomes simply a well dated example of the ancestral central East Polynesian and Hawaiian marae type from which more complex monumental architectural shapes are deemed to have developed in the last 500 to 600 years. Some East Polynesian marae forms consisting of uprights on open cleared spaces, as in the Cook Islands, seem to have persisted as types throughout the sequence (Bellwood, 1978). Others, composed of simply defined and sometimes paved courts with uprights at one end, also had long typological and temporal runs, and vet others of much later periods developed elaborate stepped ahu and stone wall enclosed structures of monumental form as in the Tuamotus and Tahiti. Few of the later developments seemingly reached New Zealand. Davidson (1984: 171) neatly summarizes the situation there. Linguistically retained in Maori is the concept of tuahu or shrine. This is better documented ethnographically than archaeologically and, as in the Cook Islands, consists of the simplest form of a shrine—a sacred place marked by one or more uprights of stone or wood (Davidson, 1984: 171).

On the basis of the above evidence, it is usually argued that the architecturally more developed forms of the maraeahu complex spread through East Polynesia after the departure of the settlers for New Zealand, an event currently dated by most to no more than 850 years ago (Anderson, 1991; Spriggs and Anderson, 1993). The Norfolk Island marae evidence further suggests this inference may be a quite reasonable deduction both typologically and temporally. Thus, after the settlement of the southern zone (Kermadec, Norfolk, New Zealand including the Chathams, described as South Polynesia by Anderson, 2000), that part of Polynesia thereafter remained rather isolated from the kinds of on-going contact which continued to characterize central Polynesia, Hawaii, and southeastern Polynesia (Anderson, 2000). When this southern zone was settled, only the linguistic tuahu concept and the architectural form of the simple *marae* or shrine was brought to it from central Eastern Polynesia. Moreover the dating of a good example of this simple shrine form in Norfolk Island, consistent with twelfth to thirteenth century estimates for similar complexes from the rest of Eastern Polynesia, furnishes most helpful support of its probable widespread existence at that time. Therefore, a typological argument initially dependent largely on a wide later distribution of this simple shrine form in tropical Eastern Polynesia takes on a more robust shape through archaeological excavations of dated examples in the Marquesas and Norfolk Island.

What did not diffuse to the southern zone was the concept and construction of a raised *ahu* platform as the central feature of a *marae* complex, something which current evidence indicates first appears in southeastern tropical Polynesia at about the same time as the Norfolk Island *marae*. As Kirch and Green (in press) suggest, in PPN **qafu* referred to the foundation of an earthen house mound or possibly a stone platform which supported a shrine or god house. In central Eastern Polynesia, the god house became miniaturized or abandoned within temple architecture, but the PPN **qafu* foundation remained to become elaborated as an altar, the most sacred part of the temple. The focus of that early development on current evidence lies in the

southeastern part of Polynesia, but did not ever reach a southwestern zone of Polynesia below latitude 30°S.

The implications for mainland New Zealand archaeology are simple: archaeologists must re-examine early sites for signs of simple stone pavements or prepared gravel-surfaced courts associated with what once may have been stone or wooden uprights. In the South Island, the Heaphy River site (Wilkes and Scarlett, 1967) comes to mind as an example of what might be sought, as does the Dart Bridge site (Anderson and Ritchie, 1986). These two sites certainly have their problems of interpretation as they presently stand, but they are an indication of the kind of evidence upon which early religious structures in New Zealand might be identified. Additional excavations at several New Zealand sites, based on a large-scale areal approach to define the whole settlement, might also reveal such features of presumed ritual spaces.

Conclusions

The structural evidence from the Emily Bay site is consistent with a typical East Polynesian settlement of hamlet or village type. In EB97:23 there is one rectangular structure of about 5×2 m outlined by postholes. It is oriented northeast-southwest and may have had a porch facing to the sea. Adjacent to the seaward end of it is a large and repeatedly-used oven area. This looks like a typical East Polynesian type of domestic unit of house and cooking area. Smaller excavations elsewhere on the site uncovered more ovens and several postholes which possibly represent part of the same domestic complex.

In Trench EB97:24, about 15 m east of the probable house, and on higher ground, is situated a paved area which has been interpreted as a *marae*. This interesting feature, which dates to about 700–600 B.P., discloses the predictable elements of early East Polynesian *marae* and is a clear indication that, contrary to conventional wisdom, constructed *marae* of this type were introduced into the temperate southern zone of East Polynesia with the early settlers. The Emily Bay discovery raises questions for further research about why such *marae* forms are not more evident in New Zealand or the outlying archipelagoes to the north and east (Kermadecs, Chathams), or whether, in fact, we need to revisit some older evidence that they did exist there.

References

Anderson, A.J., 1991. The chronology of colonization in New Zealand. *Antiquity* 65: 767–795.

Anderson, A.J., 2000. Implications of prehistoric obsidian transfer in south Polynesia. Bulletin of the Indo-Pacific Prehistory Association 20: 117–123.

Anderson, A.J., and N.A. Ritchie, 1986. Pavements, pounamu and ti: the Dart Bridge site, western Otago. *New Zealand Journal of Archaeology* 8: 115–141.

Anderson, A.J., H.M. Leach, I.W.G. Smith and R. Walter, 1994. Reconsideration of the Marquesan sequence in East Polynesian prehistory, with particular reference to Hane (MUH1). *Archaeology in Oceania* 29: 29–54.

Bellwood, P.S., 1978. *Archaeological Research in the Cook Islands*. Pacific Anthropological Records No. 27. Honolulu: Bernice P. Bishop Museum.

- Biggs, B.G., 1993. POLLEX. Proto Polynesian Lexicon. Computer File. Department of Maori Studies, University of Auckland.
- Davidson, J.M., 1984. *The Prehistory of New Zealand*. Auckland: Longman Paul.
- Emory, K.P., 1933. Stone Remains in the Society Islands. Bernice P. Bishop Museum Bulletin 116. Honolulu: Bernice P. Bishop Museum
- Emory, K.P., 1943. Polynesian stone remains. *Papers of the Peabody Museum of American Archaeology and Ethnology* 20: 9–21.
- Emory, K.P., 1947. *Tuamotuan Religious Structures and Ceremonies*. Bernice P. Bishop Museum Bulletin 191. Honolulu: Bernice P. Bishop Museum.
- Emory, K.P., 1970. A re-examination of East Polynesian *marae*: many *marae* later. In *Studies in Oceanic Culture History*, ed. R.C. Green and M. Kelly, pp. 73–92. Pacific Anthropological Records 11. Honolulu: Bernice P. Bishop Museum.
- Emory, K.P., 1979. The societies. In *The Prehistory of Polynesia*, ed. J.N. Jennings, pp. 200–221. Cambridge: Harvard University Press.
- Green, R.C., 1993. Community-level organisation, power and elites in Polynesian settlement pattern studies. In *The Evolution and Organisation of Prehistoric Society in Polynesia*, ed. M.W. Graves and R.C. Green, pp. 9–12. New Zealand Archaeological Association Monograph 19. Auckland: New Zealand Archaeological Association.
- Green, R.C., 1996. Settlement patterns and complex society in the Windward Society Island. (Retrospective commentary from the 'Opunohu Valley, Mo'orea). In *Mémoire de Pierre, Mémoire d'Homme, Tradition et Archéologie en Océanie, Ouvrage Collectif en Hommage à J. Garanger*, ed. M. Julien, M. Orliac and C. Orliac, pp. 209–227. Paris: Publication de la Sorbonne.
- Green, R.C., and A.K. Pawley, 1998. Early Oceanic architectural forms and settlement patterns. In *The Lexicon of Proto Oceanic: The Culture and Environment of Ancestral Oceanic Society. I: Material Culture*, ed. M. Ross, A. Pawley and M. Osmond, pp. 37–65. Pacific Linguistics Series C-152. Canberra: Australian National University.
- Hiroa, Te R., 1934. *Mangaian Society*. Bernice P. Bishop Museum Bulletin 122. Honolulu: Bernice P. Bishop Museum.
- Kirch, P.V., and R.C. Green, in press. *Hawaiki: Ancestral Polynesia*. *An Essay in Historical Anthropology*. Cambridge: Cambridge University Press.
- Kolb, M.J., 1994. Ritual activity and chiefly economy at an upland religious site on Maui, Hawai'i. *Journal of Field Archaeology* 21: 417–436.
- Krauss, B., 1988. *Keneti: South Seas Adventures of Kenneth Emory*. Honolulu: University of Hawaii Press.

- Martinsson-Wallin, H., 1994. Ahu—The Ceremonial Stone Structures of Easter Island. Aun 19. Uppsala: Societas Archaeologica Upsaliensis.
- McCoy, P.C., 1976. Easter Island Settlement Patterns in the Late Prehistoric and Protohistoric Periods. Easter Island Committee Bulletin 5. New York: International Fund for Monuments.
- Oakes, N., 1994. The Late Prehistoric Maohi Fare Haupape—An Examination of Household Organization in Mo'orea, French Polynesia. Unpublished M.A. thesis, Simon Fraser University.
- Rolett, B.V., 1998. *Hanamiai: Prehistoric Colonization and Cultural Change in the Marquesas Islands (East Polynesia)*. Yale University Publications in Anthropology, no. 81.
- Rolett, B.V., and E. Conte, 1995. Renewed investigation of the Ha'atuatua Dune (Nukuhiva, Marquesas Islands): A key site in Polynesian prehistory. *Journal of the Polynesian Society* 104: 195–228.
- Sinoto, Y.H., 1966. A tentative prehistoric cultural sequence in the Northern Marquesas Islands, French Polynesia. *Journal of the Polynesian Society* 75: 287–303.
- Sinoto, Y.H., 1996. Mata'ire'a Hill, Huahine: a unique prehistoric settlement, and a hypothetical sequence of *marae* development in the Society Islands. In *Oceanic Culture History: Essays in Honour of Roger Green*, ed. J.M. Davidson, G. Irwin, B.F. Leach, A. Pawley and D. Brown, pp. 541–553. *New Zealand Journal of Archaeology Special Publication*. Dunedin: New Zealand Archaeological Association.
- Skjølsvold, A., 1996. Age of Easter Island Settlement. *Rapa Nui Journal* 10: 104–109.
- Spriggs, M., and A.J. Anderson, 1993. Late colonization of East Polynesia. *Antiquity* 67: 200–217.
- Suggs, R., 1961. The Archaeology of Nuku Hiva, Marquesas Islands, French Polynesia. New York: American Museum of Natural History.
- Van Tilburg, J., 1994. Easter Island: Archaeology, Ecology and Culture. London: British Museum Press.
- Wallin, P., 1993. Ceremonial Stone Structures: The Archaeology and Ethnohistory of the Marae Complex in the Society Islands, French Polynesia. Aun 18. Uppsala: Societas Archaeologica Upsaliensis.
- Walter, R.K., 1998. Anai'o: The Archaeology of a Fourteenth Century Polynesian Community in the Cook Islands. New Zealand Archaeological Association Monograph 22. Auckland: New Zealand Archaeological Association.
- Wilkes, O.R., and R.J. Scarlett, 1967. Excavation of a moa-hunter site at the mouth of the Heaphy River. *Records of the Canterbury Museum* 8: 177–208.

Full-text PDF of each one of the works in this volume are available at the following links:

Anderson and White, vol. eds, 2001, *Rec. Aust. Mus., Suppl.* 27: 1–143 http://dx.doi.org/10.3853/j.0812-7387.27.2001.1334

Anderson and White, 2001, *Rec. Aust. Mus., Suppl.* 27: 1–9 http://dx.doi.org/10.3853/j.0812-7387.27.2001.1335

Anderson et al., 2001, *Rec. Aust. Mus., Suppl.* 27: 11–32 http://dx.doi.org/10.3853/j.0812-7387.27.2001.1336

Anderson et al., 2001, *Rec. Aust. Mus., Suppl.* 27: 33–42 http://dx.doi.org/10.3853/j.0812-7387.27.2001.1337

Anderson and Green, 2001, *Rec. Aust. Mus., Suppl.* 27: 43–51 http://dx.doi.org/10.3853/j.0812-7387.27.2001.1338

Marianne et al., 2001, *Rec. Aust. Mus., Suppl.* 27: 53–66 http://dx.doi.org/10.3853/j.0812-7387.27.2001.1339

Schmidt et al., 2001, *Rec. Aust. Mus., Suppl.* 27: 67–74 http://dx.doi.org/10.3853/j.0812-7387.27.2001.1340

Smith et al., 2001, *Rec. Aust. Mus., Suppl.* 27: 75–79 http://dx.doi.org/10.3853/j.0812-7387.27.2001.1341

Matisoo-Smith et al., 2001, *Rec. Aust. Mus., Suppl.* 27: 81–84 http://dx.doi.org/10.3853/j.0812-7387.27.2001.1342

Holdaway and Anderson, 2001, *Rec. Aust. Mus., Suppl.* 27: 85–100 http://dx.doi.org/10.3853/j.0812-7387.27.2001.1343

Walter and Anderson, 2001, *Rec. Aust. Mus., Suppl.* 27: 101–108 http://dx.doi.org/10.3853/j.0812-7387.27.2001.1344

Campbell and Schmidt, 2001, *Rec. Aust. Mus., Suppl.* 27: 109–114 http://dx.doi.org/10.3853/j.0812-7387.27.2001.1345

Neuweger et al., 2001, *Rec. Aust. Mus., Suppl.* 27: 115–122 http://dx.doi.org/10.3853/j.0812-7387.27.2001.1346

Macphail et al., 2001, *Rec. Aust. Mus., Suppl.* 27: 123–134 http://dx.doi.org/10.3853/j.0812-7387.27.2001.1347

Anderson and White, 2001, *Rec. Aust. Mus., Suppl.* 27: 135–141 http://dx.doi.org/10.3853/j.0812-7387.27.2001.1348