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NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION NEWSLETTER



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THE CANTERBURY MUSEUM EXPEDITION TO RAROTONGA

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Before recording a brief summary of the Canterbury Museum Expeditions of December 5, 1962 to January, 1963 and June 9 to November 29, 1964, to Rarotonga (and Aitutaki) in the Southern Cook Islands, it is appropriate to state the theoretical background against which the archaeological endeavour was mounted.

The Cook Islands proper, consisting of the volcanic islands of Rarotonga, Mangaia, Atiu, Mitiaro, and Aitutaki, with the small coral atoll of Manuae, lie southwest of the Society Islands on the theoretical sea route to New Zealand, over 1500 miles distant.

Evidence of ancestral connection between the Cook Islands and N.Z. is strongest in the cultural trait which remains least affected by contrast in environment ... language. In his pioneer application of shared basic vocabulary to Polynesia, Elbert (1953) found that N.Z. and Rarotonga shared an 85% agreement, as contrasted with the 75% agreement Rarotonga shared with Tahiti. If vocabularies had also been available for other islands of the Southern or Northern Cooks the percentage agreement between these and N.Z. might be as high or higher.

Rarotonga, which was selected as the main theatre of the operation, was chosen because of the advantages of easy access and as the administrative centre. Rarotonga is also the Group's largest example of a high volcanic island, representing the summit of a single large volcano emerging 2000 ft above sea level, with a reef bound circumference of 20 miles, broken by three main reef passages. The massed central peaks occupy most of the island which is fringed by a narrow and fertile coastal margin, 200 to 300 yards wide.

In accordance with Percy Smith's interpretation of tradition Rarotonga ancestors came alternatively from a Western Polynesian 'Avaiki', distinguished as 'Avaiki Raro' with raro meaning 'down' or 'west', or a Society Islands 'Avaiki' distinguished as 'Avaiki Runga' with runga meaning 'up' or 'east'.

First discovery and settlement are ascribed to Tonga'iti, an ancestor so ancient that he has become a god. In this we recognize the Samoan Tongafiti and a Western Polynesian origin in the Tonga-Fiji area might be assumed. There is strong circumstantial evidence that the prestige ancestor Tangi'ia came from the Society Islands introducing the present division of Rarotonga into three tribal areas (*waka tangata*) with the further subdivision of the *waka tangata* into *tapere*. From Au-Ki-Tonga the three Makea titles are derived from Tangi'ia's contemporary Karika. References from place names suggest that this ancestor may have come from Manu'a in the Samoa group. The Tangi'ia-Karika migrations can be tentatively placed in the thirteenth century, and may be regarded as a later rather than an earlier migration to Rarotonga. Traditions claim that Tangi'ia followed the course of Rarotonga's greatest archaeological monument (the Ara-nui-o-Toi,

the "great road of Toi" or "the parent road" Ara-Metua) in establishing the marae chain, and Toi might be identified with the ancestor of New Zealand fame, there assigned in Genealogies, to circa 1150 A.D.

Despite the free interpretation of Percy Smith (1899) Rarotonga traditions implying knowledge of New Zealand are remarkably few, beyond the name of Toi, whose placing in Rarotongan genealogies is obscure, and the common name Takitumu for the canoe ascribed to Tangi'ia and that associated in N.Z. with the "traditional Fleet". Other N.Z. "Fleet" canoe names common in Rarotongan traditions of today may be regarded as a post-European innovation.

In terms of the age and significance of the division of Polynesian into Western and Eastern sub-cultures, traditions serve to support what is inherent in the geographical situation of the Cook Group, a location well placed to receive influences from the Samoan area of Western Polynesia and the Society area of Eastern Polynesia. The more obscure documentation of traditions implying a Western origin suggests that these might have been earlier. The distribution and nature of surface artifacts and field monuments strongly support the thesis of the progressive importance of the Society Islands in influencing Cook Islands' culture either directly or through the Australs. At the European contact period the Southern Cooks and the neighbouring Austral Islands of Rimatara, Rurutu in particular probably shared more cultural traits than either area did with the Society Islands.

From the point of view of the distribution of cultural traits, both ethnological and archaeological, the Southern Cooks represent a significant boundary vis-a-vis Western Polynesia on one hand and N.Z. on the other. For ethnological categories current in the European Contact Phase, this group marks the western boundary within tropical Polynesia, of assemblages regarded as distinctive of Eastern Polynesia. That this line of demarcation is of some age is indicated by the coincidence of the Southern Cooks, within tropical Polynesia, with the western limit of the adze with tanged butt, which in the quadrangular (IA) and reversed triangular (4A) forms, runs through the Southern Cooks to a terminal in temperate N.Z. For archaeological categories of presumed later but still early diffusion the Southern Cooks represent the south-west boundary, within Polynesia as a whole, of adzes of pestle type and structures of the Eastern Polynesian marae complex.

Field monuments comprised the great road itself (the Ara metua or Ara-nui o Toi), ceremonial stone platforms of the marae, koutu Ariki and T-shaped paepae types generally closely aligned on the Ara metua, together with house platforms proper, Paepae 'are. From our failure to locate evidence of beach, cave or rock shelter middens, or any early artifact bearing level, attention was concentrated on plotting and surveying the surviving monuments, a useful operation from the point of view that the more perfect ones were concealed in second growth forest, whose clearing involved a combination of hard physical labour and Polynesian protocol, justifying an accurate record when the structure was at last exposed to view, while the urgency for those in a less perfect state was their progressive destruction from farming operations.

Reporting on a two weeks' survey of the Ara metua, Mr R. H. Parker noted that despite a general post-European destruction of the road surface, it could be assumed that large sections were originally paved with natural basalt slab laid between parallel kerb rows of natural river boulders at a consistent distance of 10 feet 6 inches. While certain gaps exist in the present road-line an original complete circuit could be assumed, aligned on the inland boundary of the coastal plain and closely adjoining the rocky outcrops of the lower mountain spurs. The hypothesis from Pokata that the inland alignment was due to the location of the beach strand at first settlement was not supported from C 14 analysis of charcoal from an umu cut into clean beach sand at this point (No. 400; less than 200 years!). In the circumstances ready access to stone outcrop seems an alternative explanation. In all the Ara metua seemed to have served a primary ceremonial purpose, arising from the progressive linking of concentrations of ceremonial stone structures at strategic mountain valley exits such as Avaná, Turangi, Matavera, Tupapa, Takuva'ine, Avatiu and Murivai. Along these road links the chiefs and people proceeded in ceremonial procession at regular seasonal ceremonies, with boundary stones and stone backed seats marking challenge or reception points by title holders of other districts. The water from occasional stone lined wells probably served a ceremonial use also. Like the associated structures themselves particular road sections were doubtless reconstructed from time to time, and at one point at Tupapa Mr O. R. Wilkes found the kerb stones of the road to have been laid contemporaneously with the last reconstruction surface of an adjacent structure, probably laid in the late eighteenth century. Further research may confirm the traditional claim that the road was inspired by the pre-Tang'ia ancestor Toi. Its construction implies a well developed economy and a cohesive political system.

No marae adjoining the Polynesian road was found intact enough to establish a clear picture of the typical layout, beyond the impression of a large rectangular enclosure bounded by stone kerbing, surfaced with immense quantities of coral gravel carried from the sea beach, and with a salient of stone kerbing presumably associated with the altar platform (AHU), although no coherent platform was found. The building which formerly stood on marae could not be traced. Carbon samples contemporary with the structures were generally late (within the last 200 years). At marae Manuka however, traditionally associated with Tangi'ia and his "chiefly count" Arai te Gona, charcoal 4 feet under the present surface and representing the first clearing and burning of the area registered $611 + 39$ years before 1950 (1300 - 1378 A.D.).

No sufficient carbon sample was recovered from Arai Te Tonga itself, distinguished by tradition as a koutu Ariki (assembly court where an ariki was anointed). This differed from the marae proper chiefly from the existence of a raised stone platform ta'ua, adjoined by a massive basalt upright, standing seven feet above ground level and serving as an investiture pillar. Associated stone seats aligned on the seaward margin of the Ara metua, appeared to represent a twentieth century addition!

The single best preserved lowland ceremonial structure was the T-shaped paepae of Tara'are at Tupapa (see plate). This comprised a platform neatly paved with basalt boulders, 50 feet by 18 feet, intersected at right angles by a long approach path of similar construction, 76 feet by 8 feet. The platform carried 4 inward facing stone seats on its inland margin and 7 on its outer. From the present title-holder detailed information concerning the seating precedence and other features of the structure was obtained. From his information and the inference of similar structures elsewhere we assume that a pole and thatch house stood behind the platform, which represented an evolution from the original stone house platform proper, in which the latter moves forward to become a patio with space for two inward facing seat rows with a ceremonial approach path. This well preserved example was assumed to be late eighteenth or early nineteenth century (see plate). From the inland Maungaroa valley at Arorangi a transitional phase of this evolution was represented by still functional house platforms, on which the house structure itself was set, with short approach paths of laid boulders.

At Tupapa and Pokata our attention was drawn to unusually long and narrow house platforms claimed to have been community houses for young men ('Are Kariei). The Tupapa structure was seen to share features recorded for Mangarevan community houses, notably an open front, bordered by a low stone wall, covered in back and ends, and internal subdivision.

Excavation of a typical house foundation adjoining the Ara metua at Vaiakura disclosed a confused succession of structures of which the earliest appeared to represent a round ended post structure set into soil, followed by three successive rectangular houses with part stone foundation. The latest was interpreted as a building 40 by 10 feet, with walls set 3 feet in from the platform margin. The platform comprised a mound of closely packed earth fill, held by an L shaped retaining wall of basalt on the lower western and southern sides of the terrace on which it was set, with boulders set intermittently in the fill to maintain a general level, and surfaced with coral gravel. This last house was assigned to the late eighteenth century. Two adzes (Type 4A and 1B) recovered from a context believed to have preceded the earliest stone platform, may be ascribed to an early phase of the Classic adze sequence.

Although carbon samples from lowland ceremonial structures adjoining the Ara metua, from Tupapa and Pokata, gave results, generally of the order of 200 years, this does not invalidate the hypothesis that the marae complex originated much earlier. We were naturally faced with the surface remains of structures which had been under continuous reconstruction and enlargement. Where, as at marae Manuka, we hit a pre-structure level the period represented was the fourteenth century, a period generally concordant with traditions of the role of the Tahitian ancestor Tangi'ia in establishing the complex. As the Ara metua in turn probably originated from short linkages of adjacent lowland ceremonial sites the tradition assigning this road to the still earlier ancestor Toi must be treated with reserve.

Stone structures in inland valleys might be tentatively assigned to inter tribal warfare arising from population pressure within the span of the Classic Phase (1400 - circa 1800 A.D.) when whole communities moved into inland refuges. The most impressive evidence of such habitation was the extensive complex of well preserved stone structures discovered in the Vaiakura tapere of Arorangi, extending as far inland as the lower slopes of Maungaroa, 2 miles inland and 1500 feet above sea level. These, which ranged from terraced marae, with terrace edges retained by massive basalt boulders and paved with basalt slab, to stone house platforms clustered in hamlets, will be the subject of a detailed report from Mr R. H. Parker who at first inclined to assign them to a Toi or Maungaroa phase, preceding the writer's Classic (15th century onwards). Carbon samples from ovens representing the commencement and abandonment of the hamlet (Maungaroa No. 3A) indicated the construction of the hamlet at a mean date of 1553 and its abandonment at 1750 A.D.

Attempts to propose a local phase succession in terms of evidence from the field survey are probably at the moment premature. From careful examination of the adze collections available from Rarotonga and the Southern Cooks it has been possible, despite the general absence of any stratigraphical context, to classify these in terms of an assumed technological succession. These categories can be equated with a certainly highly speculative phase reconstruction applying to tropical East Polynesia as a whole.

Phase 1 (proto-East Polynesian; 0-500 A.D.)

Cache of 5 tangleless hogbacks of Type 4, E from Tutakimoa, Rarotonga, identical with Samoan examples, but from presence of bruised grip on sixth rounded variant found in association, reflecting an East Polynesian influence.

Phase 2 (Early East Polynesian); 500-1100 A.D.)

First recognizable phase of East Polynesian proper marked by appearance of adzes of types 1A and 4A with well marked grip, but shaped by flaking and grinding only, without bruising; cache from Marae-o-Rongo, Mangaia, represented in early New Zealand assemblage.

Phase 2 (Early East-Polynesian; 500-1100 A.D.)

Single example of Type 1A, with bruised butt and poll lugs, from Ngati-Maoate, Rarotonga; identical with early N.Z. version.

Phase 3 (Expansion; 1100-1400 A.D.)

Two examples of Type 1A, with horned butt (turret type lugs set in from poll corners); marked expansion at blade shoulder and section verging towards triangular; finished by grinding over complete bruising.

Phase 4 (Classic; 1400-1800 A.D.)

Type 3A, with full triangular section, continued expansion at blade shoulder, tapering rounded butt, and occasional turret type butt lugs; after initial crude flaking shaped by an alternation of bruising and grinding. The majority of Southern

Cook adzes conform with this type.

Type 4A. A descendant of the earlier version of the tanged adze of reversed triangular section; but distinguished by shallower section, broader cutting edge, absence of bevel chin, and a technique of manufacture based on bruising and grinding. Adzes of this type represent a minority group in contemporary use with the dominant 3A during the Classic.

Outer island reconnaissance was restricted to brief visits to Mangaia by George Boraman and to Aitutaki by Robin and Ian Duff. From Aitutaki Robin Duff reports the existence of numerous disrupted marae structures, while the existence of seven large and better preserved examples in the southern part had apparently not been disclosed even to Te Rangihiroa, author of "Material Culture of Aitutaki". Although shrouded under vegetation these better preserved southern marae impressed with their size, Te Tapere including a basalt upright 4 feet in diameter and 9 feet high. At Paengariki four parallel rows of massive 5 feet uprights spaced 10 feet apart formed great avenues over one hundred feet in length. No similarity could be seen with the ceremonial structures of Rarotonga. The only common feature was the difficulty of establishing the existence of altar platforms of Ahu type.

In addition to the major grant through the Bishop Museum and a small contribution from the Canterbury Museum the varied field programme could not have been carried out without the specialist guidance of Field Supervisors: R. H. Parker, Dec. 5 1962 - Jan. 25, 1963, and Sept. 11 - Nov. 29, 1964 and O. R. Wilkes, June 3 - Aug. 19, 1964. All other members were volunteers from the Canterbury Museum Archaeological Society, working without pay and in some cases contributing to fares, notably Robin and Ian Duff (Dec. 5 1962 - Jan. 25, 1963 and June 3 - Nov. 29, 1964) Mr and Mrs B. N. Norris (Dec. 5, 1962 - Jan. 25, 1963), G. Boraman (June 7 - Nov. 29, 1964), Mrs M. J. Duff (June 3 - July 17, 1964) and Mrs J. Wilkes (June 3 - Aug. 19, 1964), Mr A. Bowman (July 10 - 25, 1964). Invaluable local assistance was provided by a N.Z.A.A. member, Mr Ken Mills, Cook Islands Government Architect. Maori assistance, largely inspired by the nature of the approach and the ability of the leader to speak Maori, exceeded all expectation, and it was not necessary to call on hired labour until the last four months of 1964, when Muri Te Aurere, Abela Tutapu and Riu Te Okota'i rendered faithful service.

See Plate IV