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EXCAVATIONS - of a habitation site and marae structures in Maeva, Huahine, Society Islands, French Polynesia 2003y

by Paul Wallin,
Eric Komori,
and Reidar Solsvik

The Kon-Tiki Museum
Thor Heyerdahl's Research Foundation

EXCAVATIONS
OF A HABITATION SITE AND MARAE STRUCTURES
ON LAND FAREROI, TE ANA, TEHU'A, TEARANU'U, AND TETUATIARE,
IN MAEVA, HUAHINE, SOCIETY ISLANDS, FRENCH POLYNESIA 2003.

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1. Introduction

The excavations reported below are a continuation of research initiated in the spring of 2002 to study the settlements and *marae* structures in the area around Maeva village, on the Northeast coast of Huahine, in the Leeward group of the Society Islands.

Research in Maeva District at the north end of Huahine Island has identified numerous archaeological resources important to the prehistory of the area (Sinoto, *1996*, Sinoto & Komori, 1988, Komori & Sinoto, 2002). These include religious structures such as *marae*, residential areas, agricultural features, and specialized structures that include historically described chief's meeting platforms called *Tahua Umu Pua`a* (Emory, 1932 Sinoto, *et al* 1980). Excavations show that many of the inland sites contain intact cultural deposits that represent prehistoric and early historic occupation of the area from about AD 1000 to AD 1800. In the literature of the early historic period for this region, Maeva is noted as an important center for the chiefly lineages of Huahine (Henry, 1934).

1.1. The history of the current project

In 2001, Dr. Yosihiko H. Sinoto, of the B. P. Bishop Museum on Hawai'i, invited Dr. Paul Wallin of the Kon-Tiki Museum, Oslo, Norway, to participate in his work in Maeva on the Northeast tip of Huahine. Participation in two field seasons, during fall 2001 and spring 2002, resulted in an expressed interest in initiating excavation of *marae* structures in this part of Huahine. During this same period, it was decided to combine the research resources in a joint project were Dr. Sinoto's associates continued the investigation of the coastal area of the Te Ana land division, which they have initiated on the request of the Ministry of Culture, Government of French Polynesia (Komori and Sinoto 2002:1) in 2001. Dr. Paul Wallin, and the Institute for Pacific Archaeology and Cultural History at the Kon-Tiki Museum was going to initiate test-excavations of *marae* structures.
Since 1979, Dr. Sinoto and his associates Eric Komori and Elaine Rogers-Jourdane, and later Toru Hyashi, have conducted a survey program of the Mata'ire'a Hill and adjacent areas, recording *marae* structures, terraces, house foundations, and other features (Sinoto and Rogers-Jourdane 1980; Sinoto, Komori et al. 1981; Sinoto, Komori et al. 1983). They have also completed a program of test-excavations of house sites in the upper part of the Te Ana land division (Zone 1) (Sinoto and Komori 1988; Komori and Sinoto 2002).
Dr. Sinoto's first interest in the area stemmed from an extensive program of *marae* restoration, which he initiated in collaboration with the Tahitian Tourist authorities in the early 1960s (i.e. Sinoto 1969). Based on this work, and the above mentioned survey of the Mata'ire'a Hill, Dr. Sinoto and his associates have developed morphological classifications (Sinoto, Komori et al. 1981:7-9) of the Huahine *marae*, and Dr. Sinoto have also established typologies and chronologies for the Tahitian *marae* complex in general (i.e. Sinoto 1996). However, these classifications and typologies have not been tested through archaeological excavation, and a program of test-excavation of *marae* structures was important to complement the survey and test-excavations of settlement sites.
From this, Dr. Sinoto and Dr. Wallin worked out five main research objectives for the joint research program to be initiated in the fall of 2002.

Research Objectives

- To date the initial construction, through non-destructive test-excavation, of the *marae* structures of the Te Ana land division, and to document their morphological and typological developments. This work was begun in August 2002 (Solsvik 2003).
- To investigate the cultural chronology and use of the extensive, water lodged settlement area at the coastal end of the Te Ana land division, Zone III, which extends to the northeast. These house sites are thought to be contemporaneous with the *marae* structures located along the Fauna Nui lagoon lake. This is a continuation of work initiated in 2001 (Komori and Sinoto 2002).
- To investigate the changes in landscape and ecological conditions of the costal part of the Te Ana land division. Also, a continuation of work initiated in 2001.
- To date the initial construction and investigate structural developments of various *marae* structures on the Mata'ire'a Hill and along the coast, to complement data from the Te Ana land division.
- To re-survey *marae* structures of Huahine, in particular around Maeva village, with a special reference to the landscape these structures are situated in. In this way, a historical record of these structures might be constructed, and social analysis of *marae* structures can be undertaken. This work have been completed for the main structures located around Maeva village (Wallin and Solsvik 2002).

Before the 2003 field season, Dr. Paul Wallin became the Principal investigator of the project, which is financed jointly by the B. P. Bishop Museum, Hawai'i, and the Kon-Tiki Museum, Oslo.

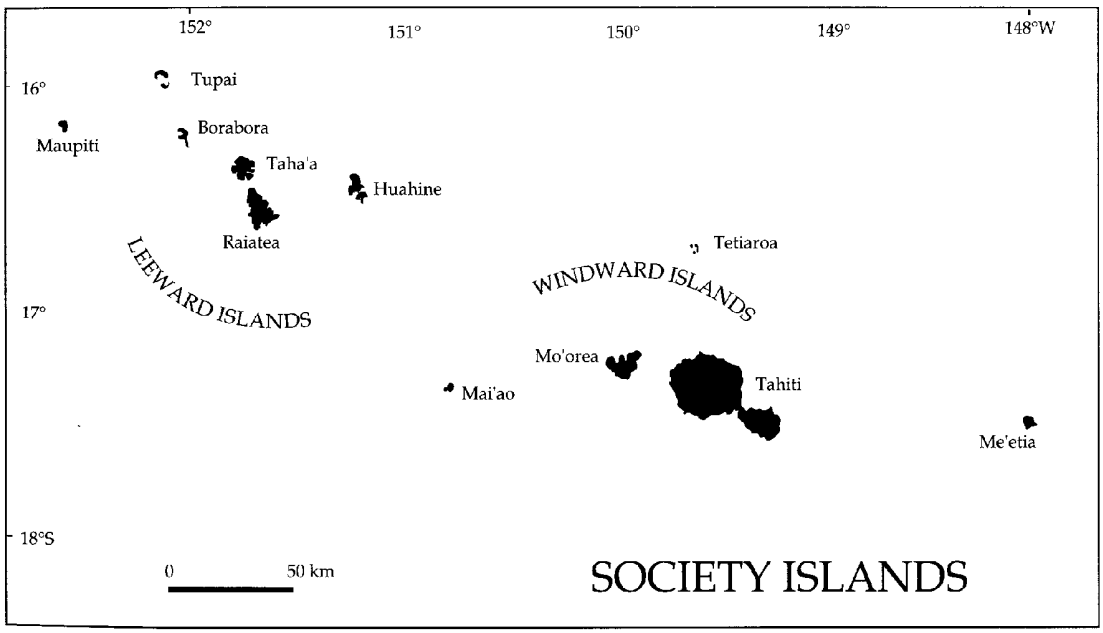

Fig. Map of Society Islands. showing location of Huahine.

1.2. Site location

Huahine is part of the Leeward group of the Society Islands, and situated at 16° 5´ south latitude and 151° 2´ west longitude, about 160 km northwest of the island of Tahiti, and consists of two main volcanic islands with about 112 square km of dry land. Huahine Iti, the smallest, is located to the south-southeast of the slightly larger Huahine Nui.

The district of Maeva comprises the north and north-eastern part of Huahine Nui that surrounds the ‘sacred’ mountain Moua Tapu. The area with the most important archaeological remains is really a headland stretching out towards the northeast, where Mata’ire’a Hill figuratively forms the ‘seat’ and Moua Tapu is the ‘backrest’. The western boundary is made up of a ridge of Moua Tapu coming down to the coast at this point.

Maeva village is located on a strip of land, 100 to 200 m wide along the eastern end of the extensive lagoon lake Fauna Nui, with the steep northern slope of the c. 60 m high Mata’ire’a Hill to the South.

The current project investigates structures and settlements at the western end of the village at the base of Mata’ire’a Hill and on Mata’ire’a Hill itself. The field seasons of 2003 (April-May and August-October) focused on the Te Ana Site Complex and the Tehu’a land division on the Mata’ire’a Hill and one coastal site on the motu Ovarei at Maeva.

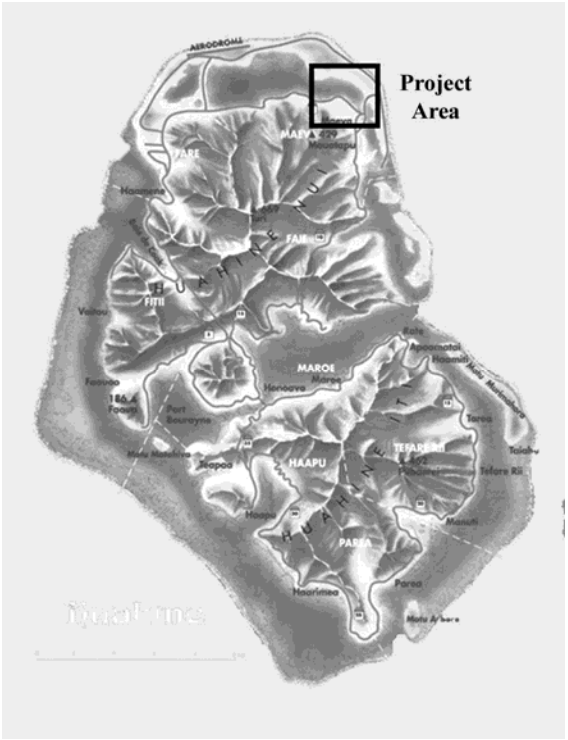

Fig. The Island of Huahine, with project area at Maeva Village located.

Mata'ire'a Hill – Te Ana and Tehu'a

The Te Ana Site Complex is located on lands just West of the Maeva village, extending from the coast and uphill along the western part of Mata'ire'a Hill. A small gully makes the eastern boundary of this land division. Dr. Sinoto have defined this area in archaeological terms (Sinoto 1996; Komori and Sinoto 2002:3) and divided it into three zones. Zone 1 and 2 are made up of a c. 200 m long strip of low lying, occasionally flooded, coastal land that contains submerged cultural deposits. Zone 3 is a small slope going up towards the South, with a high density of *marae* structures and house terraces, which have been acquired by the Government of French Polynesia for a cultural park.

Centrally located on top of Mata'ire'a Hill, just above Maeva village, is Tehu'a a piece of land sloping from W to E. Here we find the national temple of Huahine, *marae* Mata'ire'a Rahi, once dedicated to the god Tane.

Fig. Photo of Huahine from NNE with site areas located.

Motu Ovarei

Motu Ovarei is one part of a low coral islet that have formed a fringing reef on the whole of the North end of Huahine Nui, from the district of Fare to the end of Maeva district. The part of this islet that we have worked on is just opposite of Maeva village.

1.3. Documentation and Methods employed

The investigation of a stone construction and its architecture, as observed in the Tahitian *marae,* are quite different from the areal excavations of water-logged habitation sites. Consequently, diverse methods are required and we describe them separately, under their respectively sections.

All artefacts are deposited with the Service de la Culture et du Patrimoine in Punaauia, Tahiti. The midden materials, charcoal, selected wood and plant samples from the excavation of site ScH-2-55-2 are on loan to the Bishop Museum for analysis. All bone and charcoal samples, including an iron piece and glass bead from ScH-2-18, as well as

from the excavations of sites ScH-2-18, ScH-2-19, ScH-2-62-1, ScH-2-62-3, ScH-2-65-1, and ScH-2-66-1 are on loan to the Kon-Tiki Museum for analysis.

Digital photographs of all materials selected for analysis are included in CD-ROMs deposited with the Service de la Culture et du Patrimoine in Punaauia, Tahiti. Original plan and section drawings, field notes, photographs, artefact lists etc. are deposited at the B.P. Bishop Museum (site ScH-2-55-2) and the Kon-Tiki Museum (sites ScH-2-18, Sch-2-19, ScH-2-62-1, ScH-2-62-3, ScH-2-65-1, ScH-2-66-1).

1.4. Itinerary

During the year 2003 the project "Local Developments and Regional Interactions" carried out three separate excavation campaigns. Two focused on test-excavations of *marae* structures, and the third focused on areal excavation of a waterlogged habitation site.

First campaign: From April 28 to May 23. The fieldwork concentrated on test-excavations of *marae* structures ScH-2-62-1, ScH-2-62-3, ScH-2-65-1, and ScH-2-66-1 in the Te Ana land division just West of Maeva village.

Second campaign: From August 25 to September 17. The fieldwork concentrated on test-excavations of *marae* Manunu, ScH-2-18, on land divisions Tearanu'u and Tetuatiare, located on Motu Ovarei; and *marae* Mata'ire'a Rahi, ScH-2-19, on land division Tehu'a, located on the Mata'ire'a Hill.

Third campaign: From September 29 to October 17. The fieldwork concentrated on areal excavations of ScH-2-55-2, a waterlogged habitation site, in the coastal part of the Te Ana Site Complex, Zone 1, area 2 (Sinoto 1996), land Fareroi.

1.5. Acknowledgement

Financial support for this project was provided by funds from the Bishop Museum, coordinated by Dr. Yosihiko H. Sinoto, Senior Anthropologist; by The Kon-Tiki Museum; and by the Norwegian Research Council.

Coordination of the research was provided by the Service de la Culture et du Patrimoine, Government of French Polynesia, represented by Priscille Tea Frogier and Henry Marchesi. Mrs. Louise Peltzer, Minister of Culture, Government of French Polynesia and the Haut-Commissariat de la Republique en Polynesie Francaise kindly supplied the research permits necessary for doing this research.

Our gratitude goes to the people of Huahine, represented by Mayor Marcelin Lisan who provided encouragement and material support for the project. We would also like to thank Marieta Mare.

Permission to work in the Te Ana area was kindly given by the Service de la Culture et du Patrimoine and Maurice LaBaste, who owns part of this land; permission to work on

land Tehu'a and Tetuatiare was kindly given by Iosepha Mare, representing the family; permission to work on land Tearanu'u was given by Lucile Teavae and Martel Teavae, who represented the family owning this land; and permission to work on land Fareroi, site ScH-2-55-2 was kindly given by Mr. Laurent Paa who represented the family that owns the land where the site is located.

A special thanks to Peni and Sophie Teururai who have supported the work in so many ways over many years.

We would like to thank Dorothy Levy, Mark Eddowes, Marty and Moe Temahahe for information, help, and support, as well as Pu'ai Tinirau who is a most excellent foreman and friend in the field. Thanks to him and Maurice LaBaste for help with the Tahitian language and for lots of fun.

The following people participated in the fieldwork and their energy, enthusiasm and perseverance contributed greatly to the research effort. The volunteer archaeologists from Hawaii and Japan generously gave of their own personal time and funds to travel a long way in support of the project.

Principal Investigator:	*Ph.D. Paul Wallin*, Institute of Pacific Archaeology and Cultural History, The Kon-Tiki Museum, Norway.
Field directors:	Eric Komori (BA), Research Associate, B.P. Bishop Museum, Hawaii. Reidar Solsvik (MA), UKM-Ethnographic Museum, University of Oslo, Norway.
Crew:	Elaine Rogers-Jourdane (BA), SHPD-Department of Land and Natural Resources, State of Hawaii, Hawaii, U.S.A. Toru Hayashi (BA), International Christian University, Tokyo, Japan. Helen Leideman (BA), B.P. Bishop Museum, Hawaii. Susan Lebo (Ph.D.), B.P. Bishop Museum, Hawaii. Windy Keala McElroy (MA), T. Dye and Associates, Hawaii. Juanita A. Beck (BA), SCI, Hawaii. Sabrina Cowan, B.P. Bishop Museum, Hawaii. Lauren Morawski (BA), Scientific Consultant Services Inc., Hawaii.
Foreman:	Pu'ai Tinirau.
Local Workers:	Taui LaBaste. Martel Teavae. Olivier Mare. Patrick Faatauira.

Nelli Paraurahi.
Mariana Paraurahi.

2. Introduction to the excavations of a waterlogged habitation site, ScH-2-55-2

The present research is located in the Te Ana land division of Maeva District. The concentration of archaeological sites that are in the area is called the Te Ana Complex and is divided into three Zones as shown in figure 1:

Zone I boundary:
- Coastal road to the north.
- Land ownership boundary to the east.
- Base of Mata`ire`a Hill to the south.
- Foot of mount Moua Tapu to the west.

Zone II boundary:
- Base of Mata`ire`a Hill to the north.
- Prehistoric fortification wall to the east.
- Prehistoric fortification wall to the south.
- Prehistoric fortification wall to the west

Zone III boundary:
- Sites above the prehistoric fortification wall.

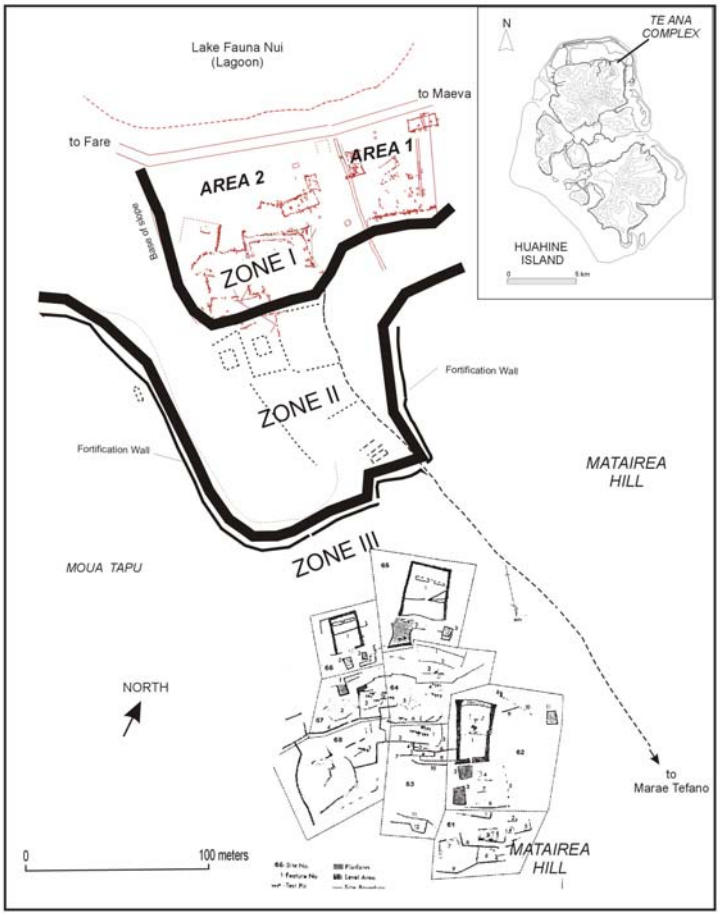

Figure 1. Te Ana Complex

Zone I is further divided into Area 1 and Area 2. Many well-preserved surface structures are present, and the surface sites in Area 2 include the following:

ScH2-28-1	Historic Fortification Wall
ScH2-28-2	Possible Religious Site (*Marae*)
ScH2-53	Well
ScH2-54-1	Probable Chief's Meeting Platform (*Tahua Umu Puaa*)
ScH2-54-2	Enclosure
ScH2-55-1	Round-ended House (*Fare Potee*)
ScH2-55-2	Stone Foundation
ScH2-55-3	House Enclosure
ScH2-56	Terrace System
ScH2-70	Chiefly Meeting Platform (*Tahua Umu Pua`a*)

These site numbers are from the Bishop Museum archaeological site catalog. In this site system, the designation ScH2-28-1 is read as follows:

Sc = Society Islands H = Huahine Island

2 = NW quadrant of Huahine

28 = Site Number 1 = Site Subdivision

Relatively few archaeological excavations have been conducted in the low-lying, coastal areas of the Society Islands. In most areas, archaeological sites have been extensively disturbed by both natural forces and by man. Particularly troublesome is the extensive tunneling by large land crabs called *tupa* (*Cardisoma carnifex*). Very few near-shore areas, including the present project area, have been spared from this disruption.

The result has been a scarcity of archaeological data about the coastal zone in the Society Islands as researchers focused efforts on well preserved inland areas. This has created a gap in our understanding of the prehistory of the Polynesian mariners who first settled this region. As the pace of modern development quickens, it becomes increasing urgent that archaeological research strategies be developed to study the coastal areas

Recently, excavations have recovered a wide range of archaeological materials including well-preserved wood objects including *in situ* house posts (Komori, 2001, Komori & Sinoto, 2002). A buried pavement that may be part of a traditional religious site was also found during the earlier work. Although the sediments in the area have been extensively disturbed by land crabs, larger artifacts and subsurface features in the area are relatively undisturbed and appear to be *in situ*.

Wooden artifacts were recovered from the lowest, inundated, levels of the excavations. Radiocarbon age estimates from this area indicate that the area was occupied beginning about A.D. 1500. A piece of wood that was recovered from the deepest part of the excavations produced an age estimate of about 2000 years, but is not directly associated with intact cultural deposits.

3. Test Excavations of ScH2-55-2

This site consists of a trapezoidal stone foundation that measures about 28.2 m x 13.4 m, with its long axis oriented east to west. The sides of the foundation are defined by large, flat stone slabs and uprights (up to 1.2 m long) that are aligned in slightly concave arcs that curve towards the center of the structure (Fig. 2). An alignment of large boulders leads from the northwest corner of the site to the southwest, ending at the foot of a trail, and a recently bulldozed path. These stones are roughly placed into a row and are probably the result of recent activity in the area.

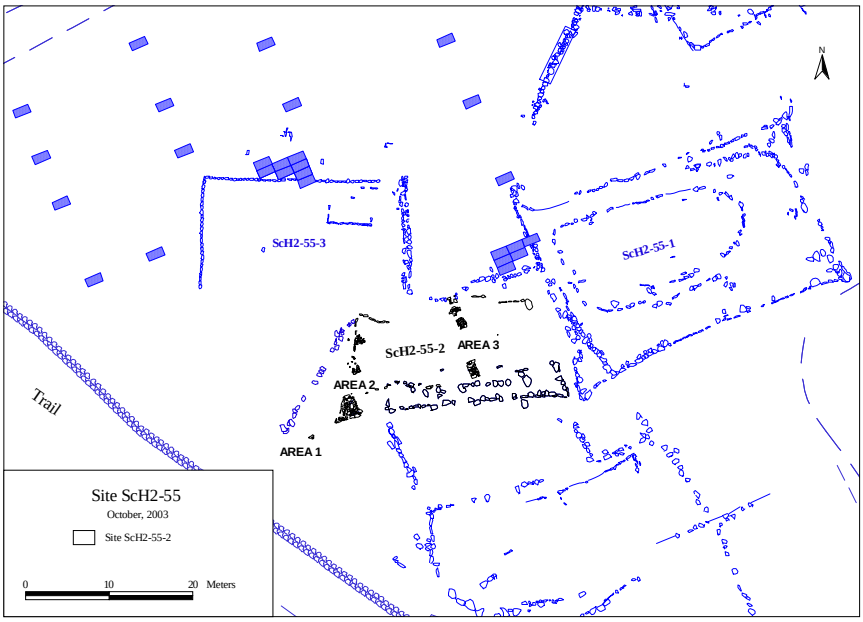

Figure 2. Site ScH2-55-2, Areas 1, 2, and 3.

Excavations were conducted in 3 areas of the site. Area 1 is located immediately outside and upslope of the west end of the structure. This area is slightly higher in elevation (ca. 20 cm) than ScH2-55-3, with significantly less disturbance by land crabs.

Area 2 is along the western boundary of the site, and Area 3 is located in the middle of the structure.

The grid system that was established for this area during previous research is extended to include ScH2-55-2. Each grid measures 2 meters on each side, and has alphabetic designations “HH” through “LL” along the north to south axis and “106” through “117” along the east to west axis (Fig. 3).

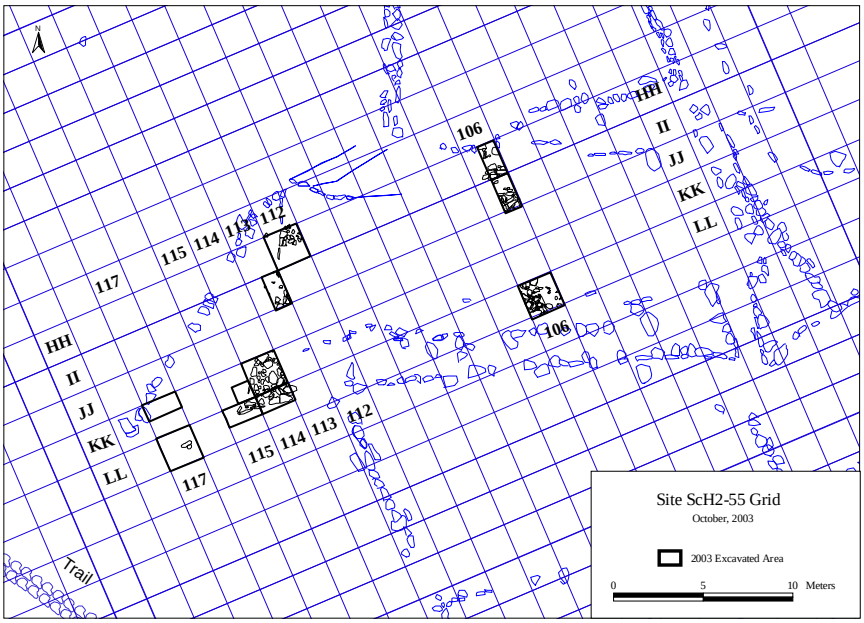

Figure 3. Map of Site ScH2-55-2 showing grid system and excavated area.

Area 1

Two grids were excavated in this area, KK117 and LL117.

Grid KK117 is located along the edge of the roughly stacked stone boulder alignment. The north half of the square was excavated to a depth of 40 cm. The large boulders found at this level prevented further excavation. A basalt adze flake was recovered from the upper 10 centimeters of this pit.

The north half of Grid LL117 was excavated to a depth of 130 cm below surface, following a "stepped" excavation of the southern half to prevent the water-soaked layers from collapsing. The water table in this area is at a depth of 58 cm. Three sediment layers were identified during excavation (Fig. 4).

Sediment Layer	Depth (cm below surface)	Description (Munsell Soil Color Chart)
I	0-30	5 YR 2.5/1 black; silty clay; coral sand and marine shell present; few basalt cobble stones.
II	30-91	10 YR 3/2 very dark grayish brown; silty clay; abundant cobble stones; marine shell.

III	91-130	10 YR 5/2 greyish brown; coral sand.

A large paving stone was found at a depth of 47 cm, within layer II, which also contained a large number of 5-10 cm cobble stones. Eight artifacts, including hammerstones, adz fragments, and coral files were recovered from this layer.

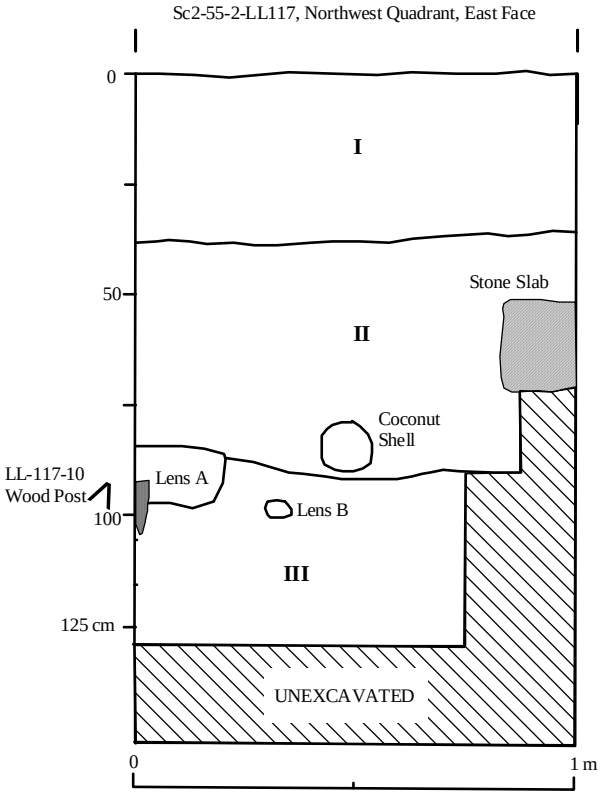

Figure 4. Grid LL117 North Quadrant, East Face.

At a depth of about 81 cm to the base of excavation at 130 cm, large quantities of well-preserved organic materials, including coconut fibers and shell, wood, and pandanus fruit were found (Fig. 5).

Figure 5. Water-logged plant material in Grid LL117, 1.0 m below surface.

A house post was found in an upright position at a depth of about 93 cm below surface. The top of the post is in a lens (Lens A) near the boundary between Layer II and III, and embedded in Layer III (Fig. 4).

Area 2

Six grids were excavated along the western boundary of the site to uncover the southwest boundary of the structure (Fig. 6).

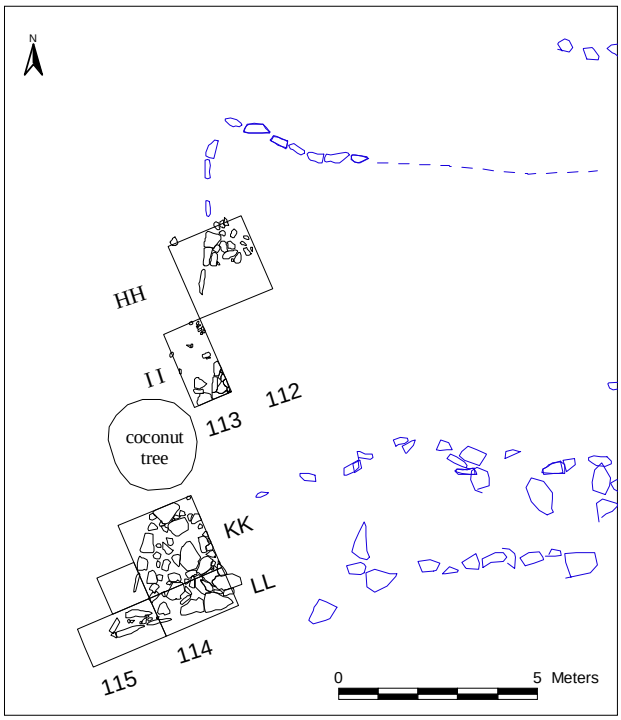

Figure 6. Excavated areas along west boundary of site ScH2-55-2.

Two upright basalt slabs measuring 0.75 and 0.4 m long and about 0.15 m wide were found at the convergence of the south and west limits of the structure, in Grids KK114, 115 and LL114, 115 (Fig. 7). Both extend from the near the surface to the base of excavation at 45 cm. Two smaller angular basalt stones, located at the base of the two slabs, and another between the slabs appear to have been used to stabilize the corner (Fig. 7, 8).

The interior of this corner is paved with large, flat stones interspersed with smaller cobble, forming a relatively even surface. Two polished basalt flakes and an adz fragment were recovered from this area.

Figure 7. Stone uprights and slabs in Grids KK114, 115 and LL114, 115 (10-20 cm below surface).

Figure 8. Site ScH2-55-2, Grid LL115 (view to grid east), intersection of 2 curved alignments of uprights.

Grids HH112 and II113 were excavated near the northeast end of the structure. Three upright slabs were uncovered and found to be aligned with uprights that are exposed on the surface. At the northeast corner of the site upright slabs on the surface form an intersection that is similar in form to that of the southwest corner.

Paving stones were also present along the interior (east side) of the slabs. No artifacts were recovered from this area of the site.

Area 3

This area is near the middle of the site and extends across the site in a north-south direction. Three grids were excavated in this area, grids HH106 and II106 near the north (seaward) limit of the site, and LL106 near the south (inland) limit of the site (Fig. 9).

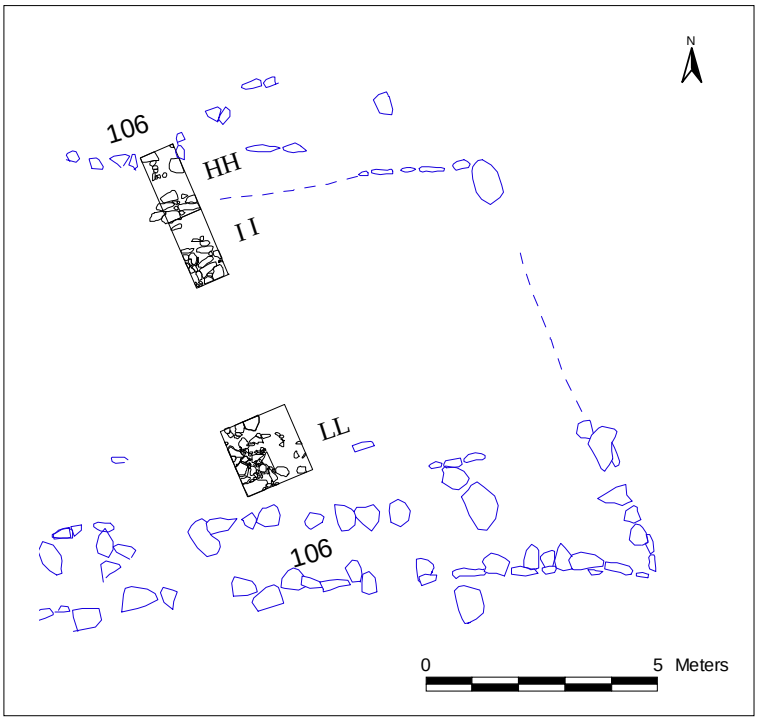

Figure 9. Area 3, Grids HH106, II106 and LL106.

Two alignments of 2 upright stones were found in grids HH106 and II106 (Fig. 10), and a pavement of flat stones (grid II106) were found at a depth of less than 10 cm below surface (Fig.11). The uprights are oriented east to west and appear to be part of the northern boundary of the site. Two basalt flakes were recovered from HH106.

Figure 10. Two pairs of upright slabs in grids HH106 (right) and II106 (left). View to west.

Figure 11. Grid II106 (view to West), paving stones and uprights.

Excavation of these grids ended at a depth of about 30 cm below surface, and did not extend below the cultural deposit. The sediment layers consist of a single layer of silty loam (Munsell color 10YR 3/2 very dark grayish brown (Fig.12).

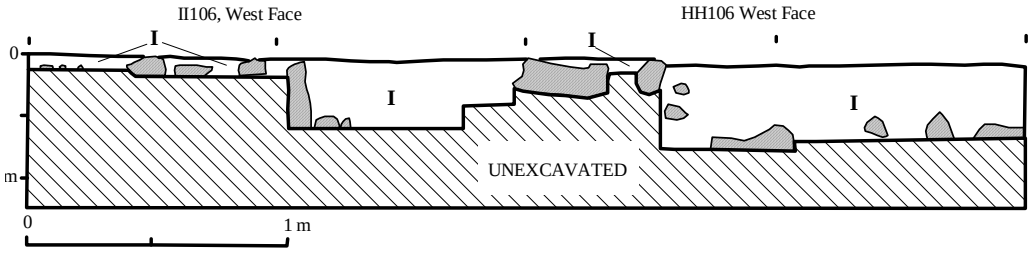

Figure 12. Grids HH106 and II106, West Face.

Grid LL106 was excavated to a depth of 35 cm below surface. Large boulders were found throughout the pit and in many areas, were present a few centimeters below the surface. A post hole and a fire pit were found at a depth of 12-18 cm below surface (Fig. 13). Charcoal samples were recovered from the fire pit for radiocarbon analysis.

The artifacts recovered from this pit include 5 polished flakes, 2 adz fragments, 1 coral abrader, 1 coral ball and a basalt flake.

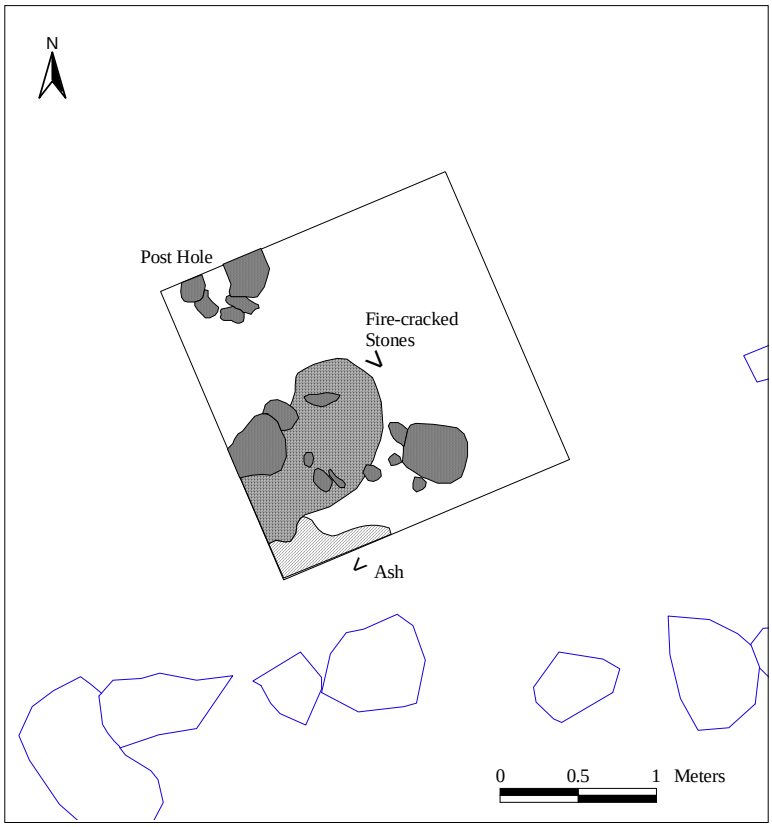

Figure 13. Grid LL106, with Post Hole and Fire Pit features.

Figure 14. Grid LL106, southwest quadrant of fire pit excavation (view to Southeast).

Two sediment layers were found in this grid (Fig. 15):

Sediment Layer	Depth (cm below surface)	Description (Munsell Soil Color Chart)
I	0-20	10 YR 3/2 very dark grayish brown; silty clay; abundant cobble stones; marine shell and charcoal fragments.
II	20-33 (base of exc.)	10 YR 2/2 very dark brown, clay, very compact, few charcoal fragments and shell.

The fire pit feature and post hole features were found in Layer I, and was intrusive into Layer II.

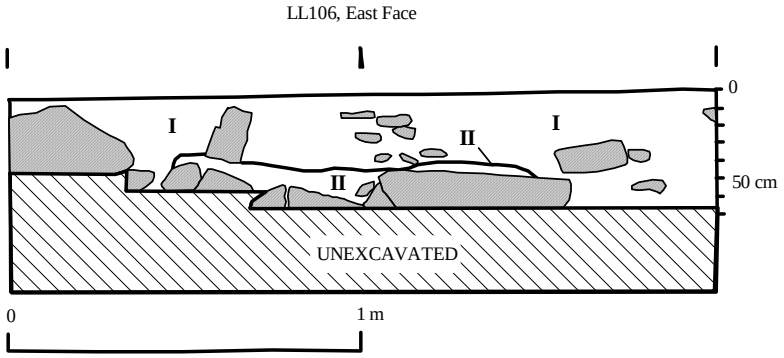

Figure 15. Grid LL106, East Face

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4. Artifacts from ScH-2-55-2

There are 58 artifacts listed in Table 1 (Appendix). The majority of the artifacts (33) were found on the surface of the site and in nearby areas of Zone 1 (Fig. 16). All artifacts are stored at the Service de la Culture et du Patrimoine, Punaauia, Tahiti.

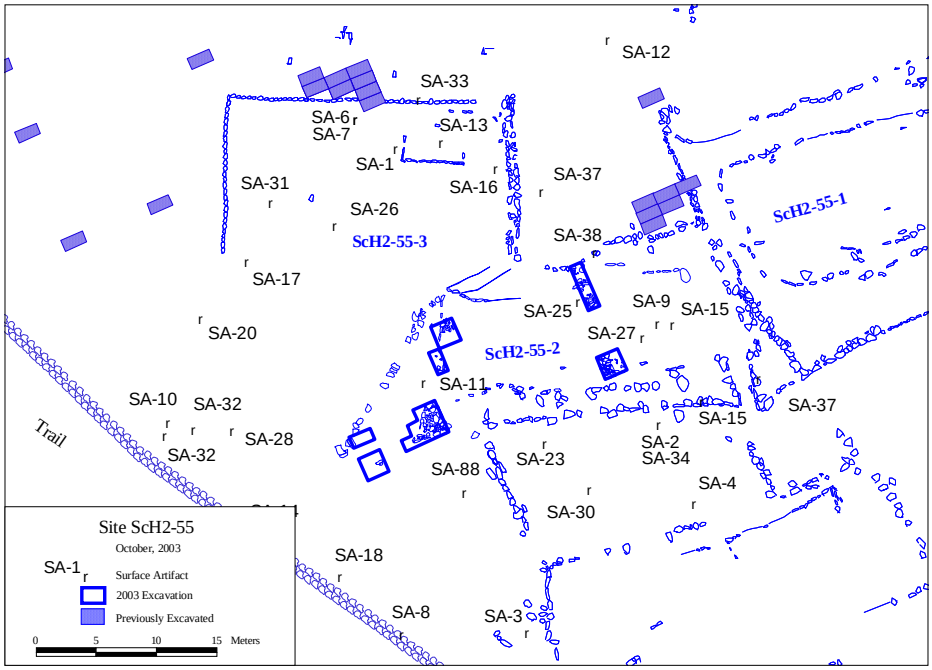


Figure 16. Surface artifacts found in the general area (Sept./Oct. 2003).

Lithic Artifacts

The 49 lithic artifacts consist of 5 adz fragments, 2 adz performs, 13 basalt flakes, 25 basalt flakes with polished surfaces, 2 hammerstones, 1 whetstone, and a possibly worked piece of stone.

Two of the adz fragments, LL117-4 and LL117-6, are probably from “reverse triangular” adzes while the other adz fragments are too small to determine their general form. The 2 adz performs are relatively small and are 4.3 and 3.4 cm wide (Fig.17).

Figure 17. Adz Preform, artifact number ScH2-55-2-2003SA-37.

Coral and Shell Artifacts

Two coral abraders, 1 coral file, 1 pearl shell fishhook, 1 pearl shell fishing lure, and 3 coral balls were found. The fishhook is a one-piece hook with a broken head and point (Fig. 18). The fishing lure has a broken distal end and is similar in form to bonito lures in museum collections. Coral balls have been recovered from other archaeological sites in Huahine and many have been found in the Te Ana Site Complex. They may have been used as sling stones.

Figure 18. Pearl shell fishhook, artifact number ScH2-55-2-2003SA-35.

Wood Artifacts

A wood post (ScH2-55-2-LL117-10) was found in an upright, standing position in grid LL117 (Fig. 18). The post is in very good condition and local informants identified the wood as *hibiscus tileaceous*.

Figure 18. Wood Post, artifact number ScH2-55-2-LL117-10.

5. Midden from ScH-2-55-2

All bone midden was collected during the excavations, and representative samples of marine shell, coral, and stone were recovered. Table 2 in the appendix lists all the midden material. These materials are undergoing identification and analysis at the Bishop Museum in Hawai`i.

6. Plant, Wood and Charcoal Samples from ScH-2-55-2

Well-preserved plant and wood samples, including pandanus fruit keys, and coconut shell were found in the deeper deposits of grid LL117. Twenty-five samples were recovered for identification of species and analysis of radiocarbon, and are listed in Table 4 (appendix).

Four charcoal samples, 2 from grid LL106, 1 from LL115 and 1 from LL117 were recovered and are listed in Table 3 (appendix).

These materials are undergoing identification and analysis at the Bishop Museum in Hawai`i.

7. Discussion of site ScH-2-55-2

The materials and data recovered from research in Zone I of the Te Ana Complex are presently under analysis. The preliminary results of the present test excavations show that the two principal sedimentary divisions identified during previous work in the area are present further inland and appear to be more intact (Komori & Sinoto, 2002).

The disturbance of the upper volcanic sediment layers by land crabs that was observed in adjacent areas of Zone I that are closer to the lagoon (and less than 20 cm lower in elevation), is much less pronounced. Features such as the fire pit, ash lens, and post hole in grid LL106 were found in relatively undisturbed sediment deposits less than 40 cm below surface.

Coral sand layers that were found under the upper volcanic layers in earlier excavations, were found to extend to the base of the talus slopes of mount Moua Tapu, at the west edge of the site area. The presence of the upright wood post, found embedded in coral sands at a depth of about 93 cm below surface in grid LL117, indicates that the undisturbed, inundated layers are extensive and may be present throughout the coastal apron in this area.

8. Introduction to excavation of Marae Structures

Four *marae* structures, ScH-2-62-1[1], ScH-2-62-3, ScH-2-65-1, and ScH-2-66-1, located in the Te Ana land division of the Mata'ire'a hill were test-excavated during the first excavation campaign, April to May 2003.

The Te Ana area contains a number of *marae* structures, as well as house sites and other platforms. They are all restored and well documented, and today they are a part of the Cultural Park in Maeva. Dr. Sinoto and Eric Komori has carried out a program of test-excavation of habitation sites / terraces in this complex (Sinoto 1996), dating the use of the area to two phases: the first spanning A.D. 700 – 1000 and the second A.D. 1300 – 1700. This makes Te Ana a particular interesting area, in which we are interested in dating the ceremonial complexes more extensively. It was therefore decided to test all five *marae* in this particular area. Work begun in August 2002, when ScH-2-62-3 and ScH-2-65-2 were tested (Solsvik 2003). This year the remaining three large structures were test-excavated in addition to extended work on ScH-2-62-3.

In the second campaign of September 2003, we test-excavated ScH-2-18 and ScH-2-19, which are both large and important *marae* complexes. ScH-2-18, or *marae* Manunu is located on Motu Ovarei and is the national ceremonial complex of Huahine-nui. It is a typical coastal *marae* complex probably from late pre-historic times, built with large coral slabs in two steps. ScH-2-19, or *marae* Mata'ire'a Rahi, is the most important and allegedly the most ancient *marae* on Huahine. It has also been referred to as the national ceremonial complex for the whole island. Mata'ire'a Rahi is located just above the village of Maeva, and in addition to the *marae* proper, it also includes two larger terraces said to be the site for the house of the god Tane, who was the most important god of the island.

These excavations of these structures will be described site by site. Descriptions of stratigraphical layers are found on the section drawings.

Methods employed investigating *marae* sites

In preparation for excavation a plan drawing of each structure was made, using a plane table, alidade, and measuring tape, in scale 1:50 or 1:100. Any units or trenches were located on these plans. Where feasible sections through the long axis of the structure and through the long axis of the *ahu* was also drawn in scale 1:50 or 1:100.

Prior to excavation, trenches were mapped in scale 1:20. The trenches were usually placed perpendicular to constructional elements of the *marae*, such as trenches cutting through the *ahu* or units excavated along a terrace or wall of the *marae*. At site ScH-2-18, a free-floating co-ordinate system was established and test-units of 1 by 1 m were located within this system.

[1] The B.P. Bishop Museum site numbering is used in this report, because the system represents, as of yet, the only complete survey of this area (Cf. Emory and Sinoto 1965; Sinoto and Rogers-Jourdane 1980; Sinoto et.al. 1981, 1983).

Excavation proceeded in 10 cm spits, with a few exceptions, and then all soil was dry-screened through 1/4-inch mesh screens. Excavations by layers were employed when this was deemed necessary.

When excavating a religious site as a *marae* one is almost bound to encounter human bones. Due to the local attitudes towards bones encountered on *marae* sites in Polynesia in general, and the risk of encountering bones buried in these sites relatively recently, possibly with descendants of these people owning the structure, it was decided to re-bury human bones encountered during excavation when we re-filled the unit or trench. Teeth and bone fragments were examined in the field by an osteological trained archaeologist and then re-deposited. A few places, excavations were discontinued due to the frequency of human skulls, and their deteriorated state, which made it impossible to retrieve them without damage or meticulous and time-consuming excavations. A few human teeth and bone fragments have been kept when they were found in a context that was not clearly associated with burials or sacrificial activity.

To expand the basis for dating the initial construction and use phases of these *marae* structures, samples of shells and coral was taken from structures outside excavated context. In particular, two cases of this practice must be mentioned. First, shells found in cavities of huge coral/limestone slabs in some *marae* was sampled in order to test whether these shells might date the time they were quarried or if they have been trapped within the limestone / coral since formation of the stone / coral. Second, pieces of coral that was found as part of the fill, of slab-enclosure *ahu*, was sampled to be dated based on the logic that these enclosures were filled with fresh corals from the sea during construction.

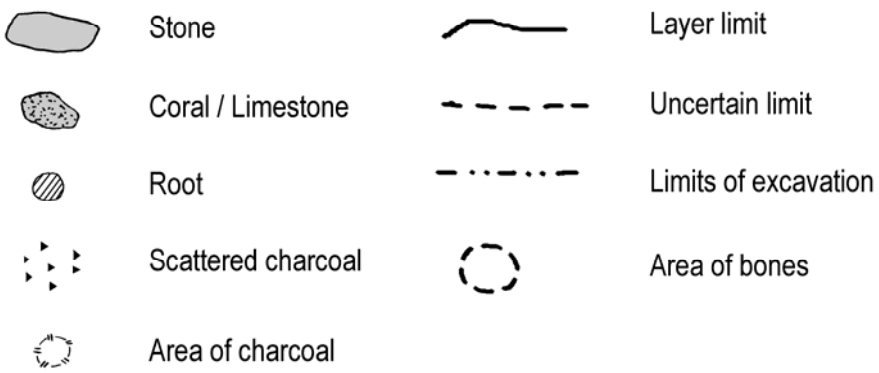


Fig. Legend of symbols used in the plan and section drawings.

9. Excavation of marae ScH-2-62-1, Te Ana

Marae ScH-2-62-1 is c. 26 m long and 17 m wide, and the courtyard is enclosed by a c. 1.5 to 2 m wide wall of irregular basalt stones. The courtyard is roughly paved and at the centre divided by a terrace, which is only distinct on its W side. The *marae* is situated on a slope slanting from S to N. The *ahu* is located on the upper S inland end of the courtyard.

The *ahu* is c. 6 m long and 2,3 m wide. The front wall of the *ahu* is built of 10 slabs 0,4-0,65 m high, the NE corner stone is a 0.9 m long and 0.65 high basalt slab. These are overlaid by two to three layers of flat basalt stones. The NW corner is fallen out, but was originally faced by a basalt slab. The W end is built of 3 coral slabs, of which one is broken in several pieces, and the *ahu* is about 0,3 m high in this rear corner. The rear wall of the *ahu* is constructed of two layers of basalt stones one on top of the other. The E end is built of 4 basalt slabs/boulders overlaid by 1-2 layers of flat basalt stones. One upright stone (c. 50 cm high) can be seen in a central position on the court about 50 cm from the *ahu*. Just in front of the slabs in the front wall, flat basalt stones are laid on the ground, almost like a small step. This was particular evident along the E part of the *ahu*.

A terrace dividing the courtyard is about 80 cm high. It is attached to the enclosing wall at the W side of the *marae* and covers 2/3 of the width of the courtyard. Here, an entrance is found leading up onto the terrace. The terrace is not quite as distinct to the E of this entrance.

The enclosing wall is, on the rear side of the *marae*, built in a stepped manner that makes it high on the inside, but on ground level on the outside. All along the S end of the enclosing wall, behind the *ahu*, there are areas with scattered small stones. This might have been part of a semi-circular feature (Cf. the description of ScH-2-65-1 and ScH-2-66-1).

There are two c. 80 cm wide entrances to this *marae*. One is located at the front end of the *marae* terrace/enclosing wall. A stair must have been attached from the outside to be able to use this entrance, since the wall is c 2 m high on this side. The other entrance is situated on the W side of the wall enclosure, and leads directly in to the upper terraced area of the courtyard. At the outside of the front wall enclosure to the N is another small semi-circular attachment located, and attached to the NE end is structure 2-62-2, a burial ground, shrine, or simple *marae*.

Excavation of the structure

Two trenches were excavated inside the courtyard. Trench I, 6 by 2 m, was placed perpendicular to the *ahu* on its W end, which in this spot was partly destroyed since the basalt front slab was fallen forward and some of the inside stone fill had come out. Trench II, 1 by 1 m, was placed perpendicular to the base of the terrace dividing the courtyard. In addition, three 0.5 by 0.5 m test-units were excavated outside the *marae* terrace. Trench III and IV were placed at the base of the front wall of the *marae* terrace, and trench V was placed close to the E long side of the *marae* on a terraced area.

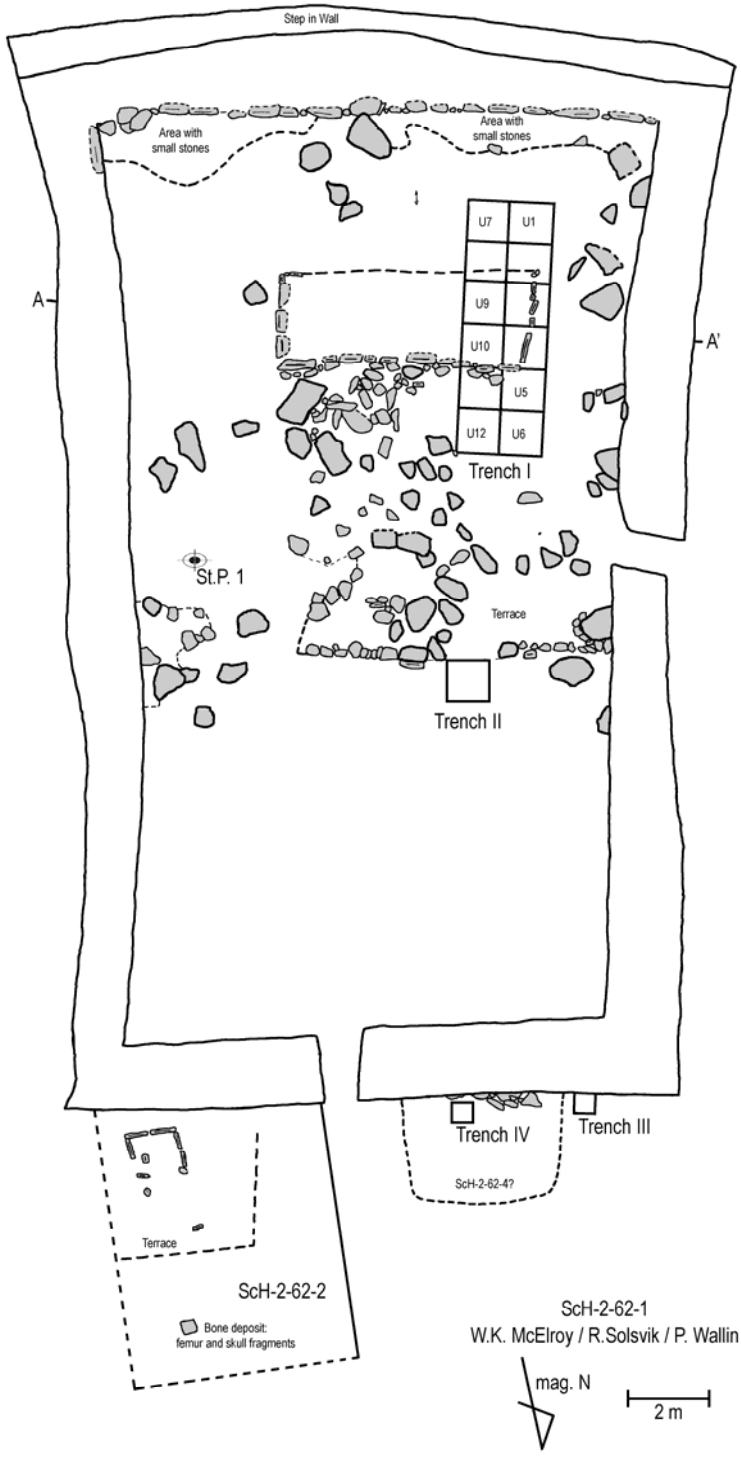


Fig. Plan drawing of marae ScH-2-62-1, Te Ana, Huahine, Society Islands. With the locations of trenches I - V.

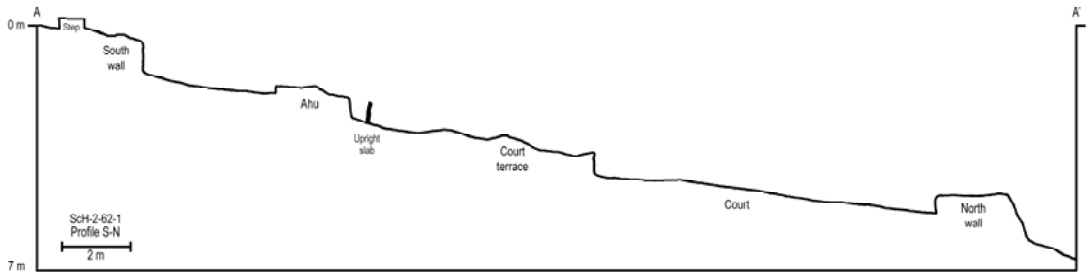


Fig. Marae ScH-2-62-1 S-N Transect drawing though the centre of the marae.

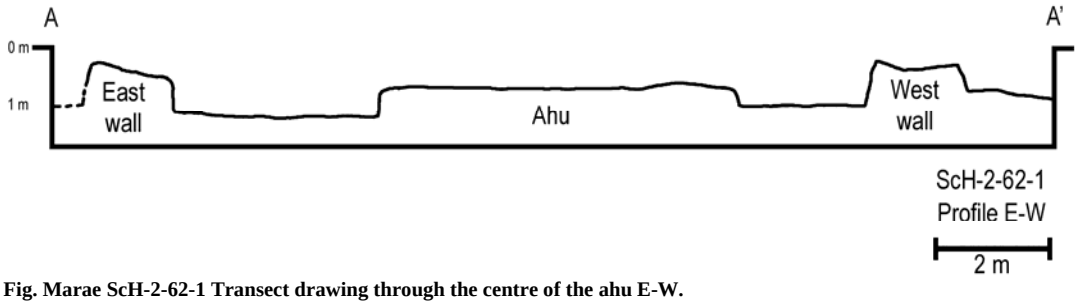


Fig. Marae ScH-2-62-1 Transect drawing through the centre of the ahu E-W.

Trench I

Trench I was six-meter-long and two meter wide. It was divided into 12 units, each 1x1m in size, with unit 1 in the SW corner of the trench, and square 12 in the SE corner. The orientation was approximately N/S, but it was placed perpendicular to the long-axis of the *ahu*.

ScH-2-62-1, Trench I (Stratigraphical summary)	
Unit 7	Unit 1
Not excavated.	Level 1, 0-10cm: This layer consisted of dark brown vegetative soft soil. It contained scattered charcoal, a basalt flake, nut fragments, and some shell fragments.
Not excavated.	Level 2, 10-20 cm: This layer continued with the same dark brown soil and scattered charcoal.
Not excavated.	Level 3, 20-30 cm: The soil consistence changed at about 20 cm depth to a red-brown clayey soil, including rocks of c. 5-10 cm diameter (some larger). In this layer we also found two rounded areas 5-7 cm in ø, which contained soft brown soil (these possible features were labelled "Posthole 1" and "Posthole 2", and their content were collected as earth samples. Scattered charcoal was furthermore found.
Not excavated.	Level 4, 30-40 cm: This layer contained entirely of red-brown clayey soil, a sample of scattered charcoal was however collected, but the soil seemed to be quite sterile towards the bottom.
Not excavated.	Level 5, 40-70 cm: To secure that there were no underlying cultural layers this unit was excavated further down with a spade. The clayey sterile soil continued, mixed with larger

	stones, and the volcanic rock bottom was found at c. 70 cm.
Unit 8 Only the southern part of this unit was excavated (behind the *ahu*). It could be observed that the *ahu* stones continues down about 10 cm under the present surface.	**Unit 2** This unit was excavated down to a depth of 30 cm. The SW corner of the *ahu* is located in the NE part of the unit. This part was not excavated. However it was observed that the *ahu* continued down to a depth of c. 15-20 cm under the present surface.
Level 1, 0-10 cm: The soil was dark brown vegetative soil. It contained scattered charcoal, coral pieces and shell fragments.	Level 1, 0-10 cm: This layer consisted of dark brown vegetative soft soil. It contained some pieces of coral, six pieces were collected as a sample for dating purposes.
Level 2, 10-20 cm: This layer consists of dark brown vegetative soil, and contained scattered charcoal and corals.	Level 2, 10-20 cm: This layer continued with the same dark brown soil and contained scattered charcoal, one sample was found just under rear wall of *ahu*.
Level 3, 20-30 cm: The red brown clayey soil could be observed at a depth of c. 20-25 cm. Scattered charcoal was found and collected.	Level 3, 20-30 cm: The red-brown clayey soil mixed with some rocks became visible in this layer. Some scattered charcoal was found. No further excavation was undertaken in this unit.
Not excavated.	Not excavated.
Not excavated.	Not excavated.
Unit 9	**Unit 3** Only the E half of the unit was excavated, since the W part is occupied by the *ahu*. Furthermore, only one level was excavated to not risk the *ahu* to collapse on the side.
Not excavated.	Level 1, 0-10 cm, E part of the unit: The soil consisted of the dark brown vegetative soil. It contained scattered charcoal, as well as shells and corals. Samples of these were collected. Several small stones were observed at the base of the side slabs. It is not clear if they are original or if they have been placed there during an earlier stabilisation of the *ahu*. A possible basalt upright can also be observed at this side of the *ahu*.
Not excavated.	Not excavated.
Not excavated.	Not excavated.
Not excavated.	Not excavated.
Not excavated.	Not excavated.
Unit 10	**Unit 4** Only level one was excavated in this unit, since the side slabs of the *ahu* is placed in the centre of the unit. This was done to not risk a collapse of the *ahu* side. In this unit the inside of the *ahu* was excavated to make it possible to restore this corner of the *ahu*.
Not excavated.	Level 1, 0-10 cm, outside *ahu*: This layer consisted of dark brown vegetative soil. It contained scattered charcoal, and samples of shells and corals were also collected.
Not excavated.	Not excavated.
Not excavated.	Not excavated.
Not excavated.	Not excavated.
Not excavated.	Not excavated.
Unit 11	**Unit 5** This unit was covered by *ahu* slabs and out-fall of *ahu* stones. These stones were removed before it could be excavated.
Level 1, 0-10 cm: The level consisted of dark brown soil. This level also contained a lot of coral fragments, scattered charcoal, shells, and some pieces of bones, both human and pig bones (one pig tooth was identified).	Level 1, 0-10 cm: This level consisted of dark brown vegetative soil. Scattered charcoal and a lot of coral pieces were found in this layer. The corals are probably the result of a fragmented coral slab. A sample of these was collected.
Level 2, 10-20 cm: The level consisted of dark brown soil and finds of scattered charcoal, shells, corals and bones (human and pig) were recovered. The red brown clayey soil came at the bottom of this layer. Level 3 was not excavated, since we would not risk a collapse of the front *ahu* wall. Big basalt stones was found in the unit.	Level 2, 10-20 cm: This level also consisted of dark brown soil. Scattered charcoal and a sample of coral pieces were collected.
Not excavated.	Level 3, 20-30 cm: The red-brown clayey soil was recovered at a depth of c. 20-25 cm. Scattered charcoal and a sample of coral pieces was collected. There were also some big basalt boulders in the unit at this level.
Not excavated.	Not excavated.
Not excavated.	Not excavated.
Unit 12	**Unit 6**
Level 1, 0-10 cm: The level contained dark brown vegetative soil, with scattered charcoal and coral pieces.	Level 1, 0-10 cm: The level contained dark brown vegetative soil, with scattered charcoal and coral pieces.
Level 2, 10-20 cm: This layer consisted of dark brown soil with scattered charcoal.	Level 2, 10-20 cm: This layer consisted of dark brown soil with scattered charcoal.
Level 3, 20-30 cm: The layer consisted of mixed dark red clayey soil. Scattered charcoal was found and corals were collected as a sample.	Level 3, 20-30 cm: The layer consisted of mixed dark red clayey soil. A charcoal concentration was found at a depth of -26 cm. Corals were collected as a sample.
Not excavated.	Not excavated.
Not excavated.	Not excavated.

The main objective of trench I was to obtain datable material from inside the *ahu*, which would reflect the use period of the structure, and secondly to get datable material from

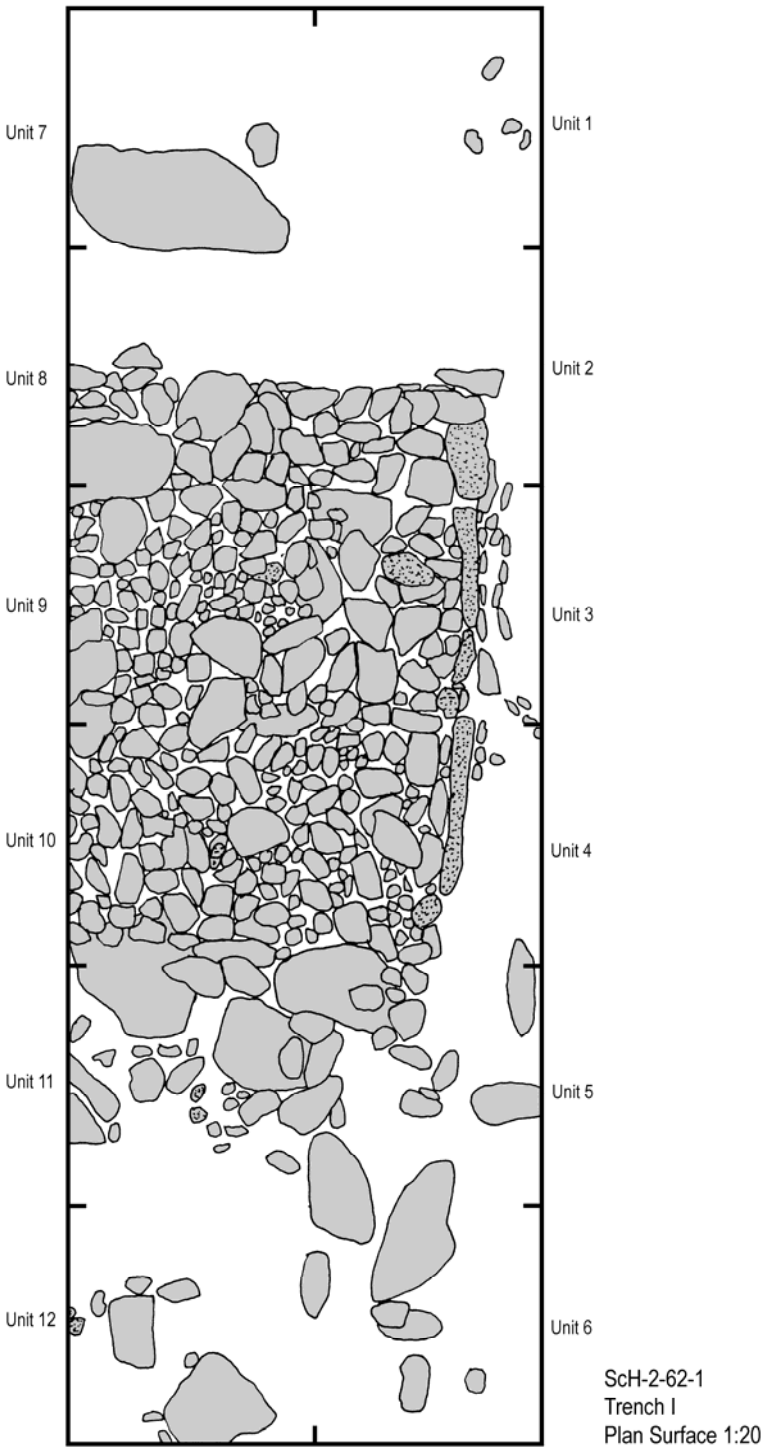


Fig. Marae ScH-2-62-1, Trench I, Plan drawing Surface.

under the foundation layer of the *ahu*, which would pre-date the construction of the *marae*. Although trench I covers a large part of the W part of the *ahu*, we decided to only excavate down into the *ahu* in parts of the trench, mainly unit 8, where a fallen slab necessitated some restoration of the front wall.

Material from the fill inside the *ahu* was ascribed to one of two areas, as it came up during the process of removing the stones of the fill. Several samples of charcoal shells and corals were collected, as well as two soil samples. A human ulna and radius (left), both broken were found among the stones inside the *ahu*. These were left inside the *ahu*. No inside constructions or earlier *ahu* could be detected from this excavation.

The general stratigraphy of this trench consisted of a c. 20-25 cm thick layer of dark brown soil. It contained mainly scattered charcoal, some shell fragments and scattered pieces of corals, which probably came from fragmented coral slabs. The squares in and in front of *ahu* also contained some bone materials (both human and pig bones). The next level consisted of red brown clayey soil with mixed volcanic stones, c. 5-10 cm diameter, from c. 25-30 cm depth down to the yellow brown volcanic rock bottom that in unit 1 was found at c 70-80 cm depth.

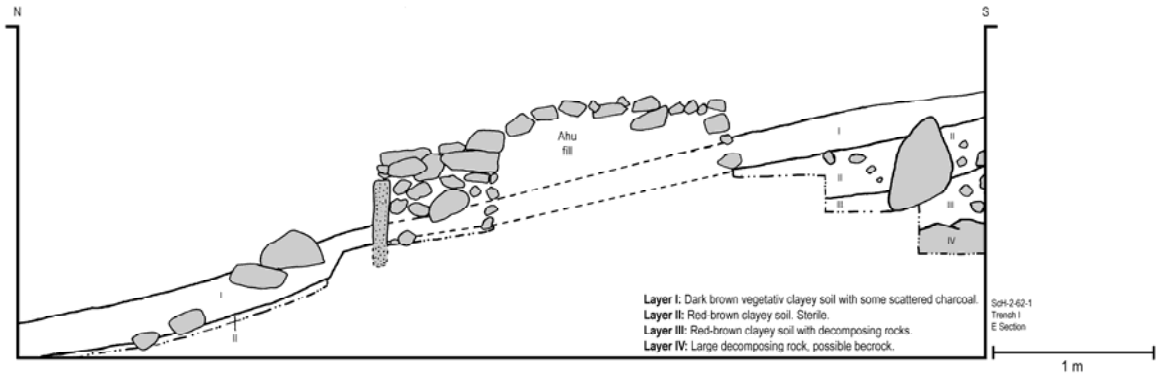
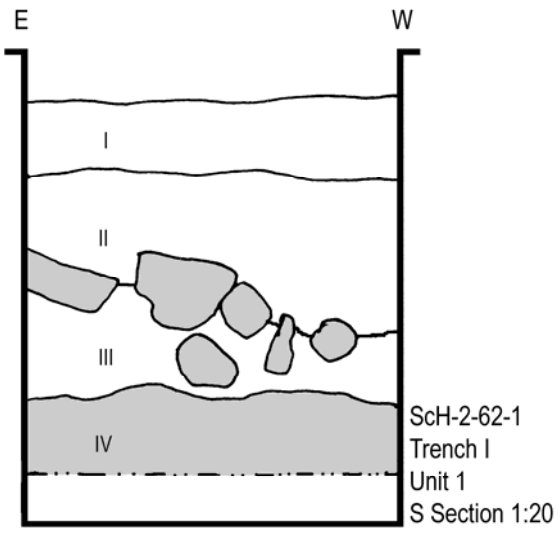
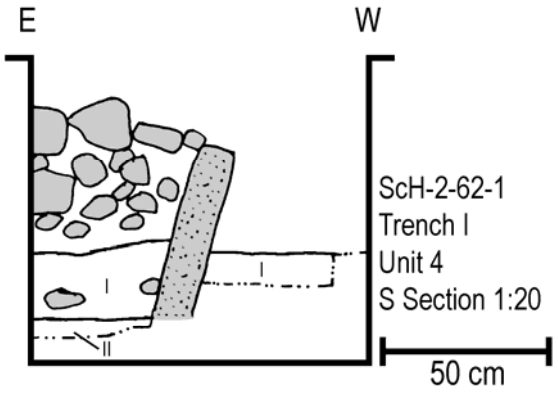


Fig. Marae ScH-2-62-1, Trench I, E section drawing.



Layer I: Dark-brown vegetative clayey soil with some scattered charcoal.
Layer II: Red-brown clayey soil. Sterile.
Layer III: Red-brown clayey soil with decomposing rocks. Sterile.
Layer IV: Large decomposing rock, possible bedrock.

Fig. Marae ScH-2-62-1, Trench I, Unit 1, S section drawing.



Layer I: Dark-brown vegetative clayey soil with some scattered charcoal.
Layer II: Red-brown clayey soil. Sterile.

Fig. Marae ScH-2-62-1, Trench I, Unit 4, S section drawing.

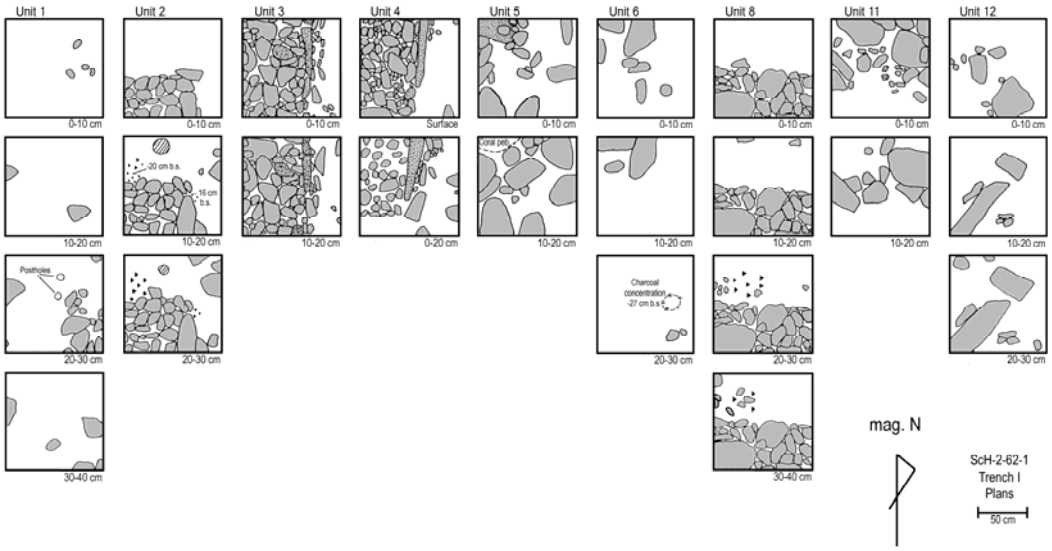


Fig. Marae ScH-2-62-1, Trench I, Plan drawings.

Trench II

Trench II was located at the base of the terrace that divides the courtyard. One small posthole, F3, with sides of stones and charcoal in the fill was found in the section just under the terrace stones. Another feature (F2) found in level - 0-10 b.s., which was an area of dark-brown soil with scattered charcoal was also seen in this section.

In the NE corner of trench II an *umu* (F3) was found in level - 20-38 cm b.s. with a clear lens of burned soil underneath. It cannot be related directly to the construction of the terrace, but it must predate it because it was sealed with a layer that went under the terrace. This might be a ceremonial *umu* / fire, used in a ceremony before the establishment of the *marae*.

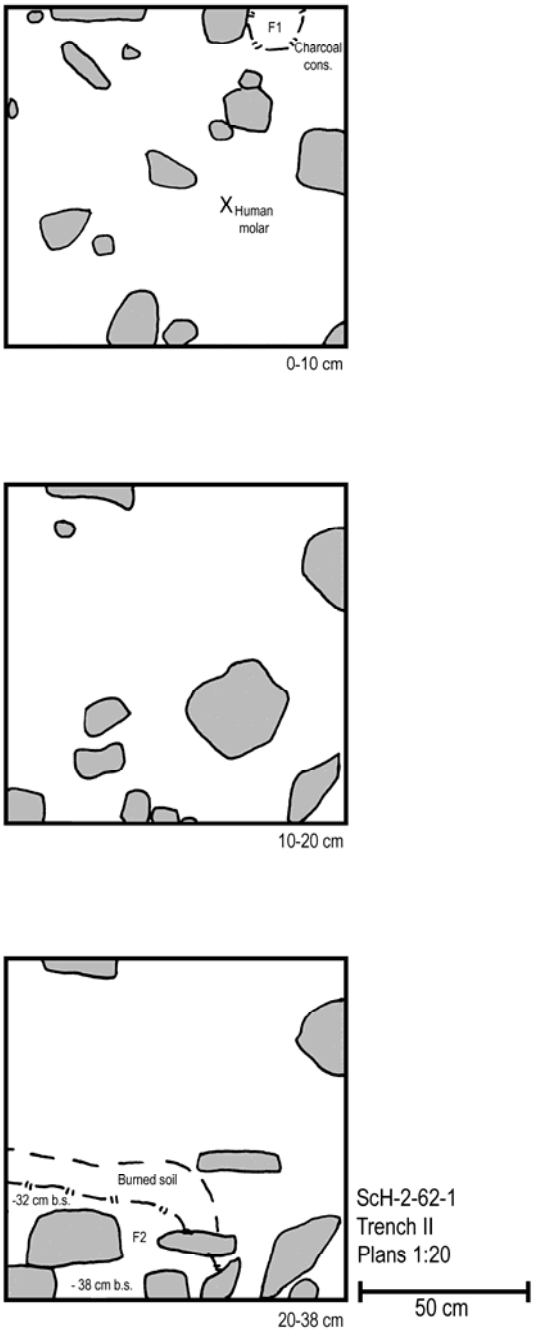


Fig. Marae ScH-2-62-1, Trench II, Plan drawings.

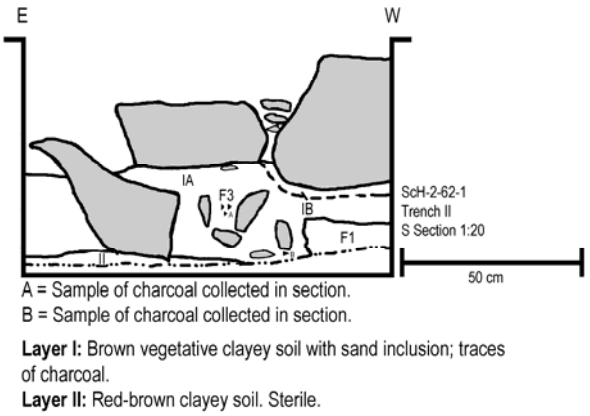


Fig. Marae ScH-2-62-1, Trench II, S section drawing.

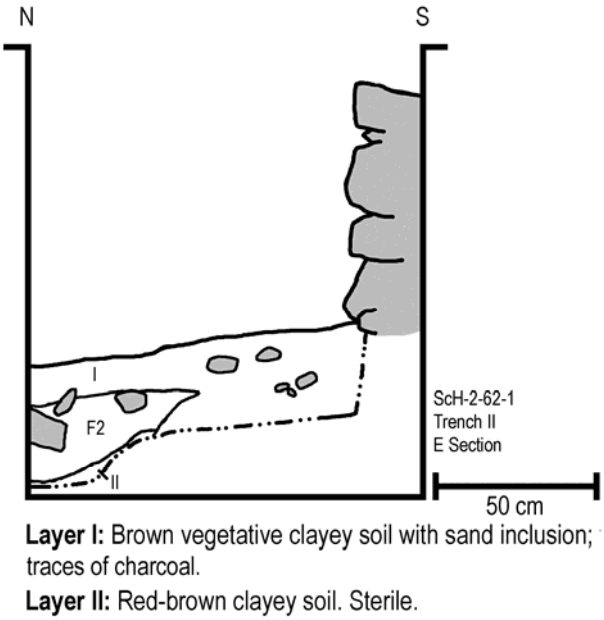
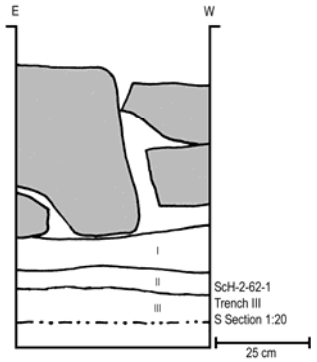


Fig. Marae ScH-2-62-1, Trench II, E section drawing.

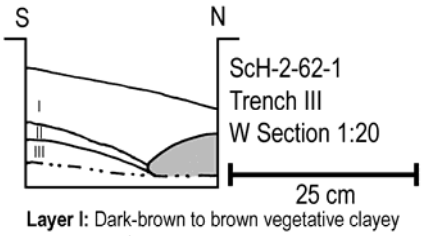
Trench III and IV

Two small, 0.5 by 0.5 m, test-units were excavated at the base of the down-slope end of the *marae* terrace. They produced only a few fragments of shell and a fragment of what possible is human bone. The thick layer of topsoil indicates also that the layer with scattered charcoal found under the *ahu*, might be found under the whole length of the *marae*.



Layer I: Dark-brown to brown vegetative clayey soil; traces of charcoal.
Layer II: Red-brown clayey soil with inclusions from the brown vegetative soil above.
Layer III: Red-brown clayey soil. Sterile.

Fig. Marae ScH-2-62-1, Trench III, S section drawing.



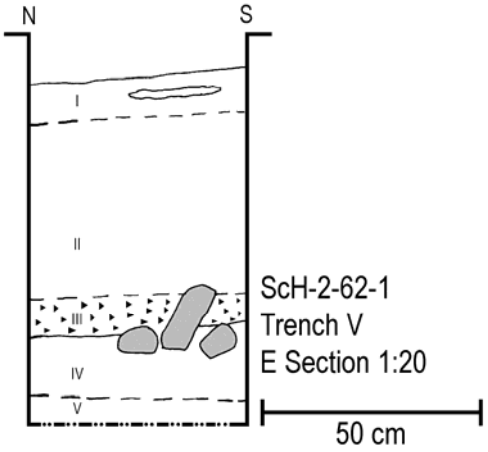
Layer I: Dark-brown to brown vegetative clayey soil; traces of charcoal.
Layer II: Red-brown clayey soil with inclusions from the brown vegetative soil above.
Layer III: Red-brown clayey soil. Sterile.

Fig. Marae ScH-2-62-1, Tench III, W section drawing.

Trench V

One small, 0.5 by 0.5 m test-trench, was excavated to the E of the *marae*, located on a possible habitation terrace (ScH-2-63-6) attached to the *marae*. It was excavated down to a depth of c. 70 cm, when the small size of the trench made it impossible to excavate further, but sterile soil was probably reached at this depth.

The first 0-50 cm consisted of very dark brown soil mixed with smaller stones (c. 5 cm large). This layer contained bone fragments of pig, fish and human. At c. – 50 cm b.s. concentrations of charcoal mixed with black soil was encountered. This might be a *umu* rake-out, but because of the small size of the trench interpretations are difficult. No layer of burned soil was found underneath. At c. - 60 cm b.s. larger stones about 10-20 cm in diameter became visible. The colour of the soil shifted some at this depth, and was mixed with brown soil. Under the stones and down to c. 70 cm, the soil was clayey and brown, and it contained no more charcoal or bones. Sterile soil was probably found at this depth.



Layer I: Dark-brown vegetative clayey soil; traces of charcoal.
Layer II: Dark-brown soil; traces of charcoal.
Layer III: Compact layer of charcoal and dark-brown soil.
Layer IV: Brown soil; traces of charcoal.
Layer V: Red-brown clayey soil. Sterile.

Fig. Marae ScH-2-62-1, Trench V, E section drawing.

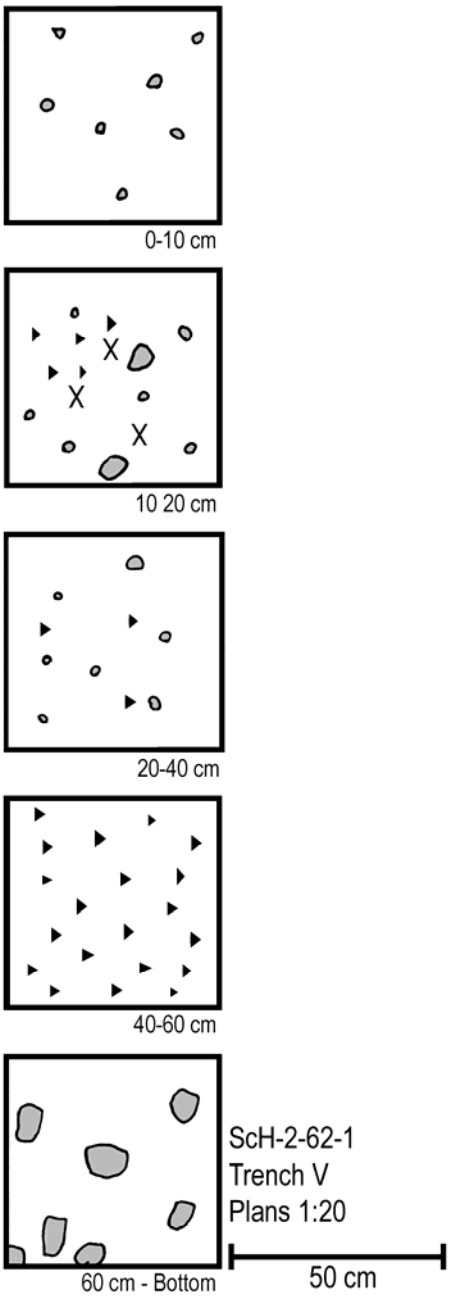


Fig. Marae ScH-2-62-1, Trench V, Plan drawings.

10. Excavation of marae ScH-2-62-3, Te Ana

ScH-2-62-3 is a platform *marae* situated in the lowest portion of Zone 1, on a N to S slanting slope, in the Te Ana Complex. The platform is constructed of 3 – 8 layers of basalt stones, and is c. 8 m long and 6 m wide. It is about 20 cm high at the rear side and c. 1,8 m high on the N front side.

The *ahu* is a rectangular enclosure partly filled with basalt stones, c. 4.5 m long and 0.8 m wide and 0.6 m high, entirely built of basalt slabs, 5 in the front wall, 4 in the back wall, and one on each end. There are terraces, probably habitation terraces, in front of the *marae* and on the W side. A possible fallen upright can also be observed inside the NE side of the *ahu*. Two flat coral pieces is to be seen just in front of the *ahu*, somewhat off centre.

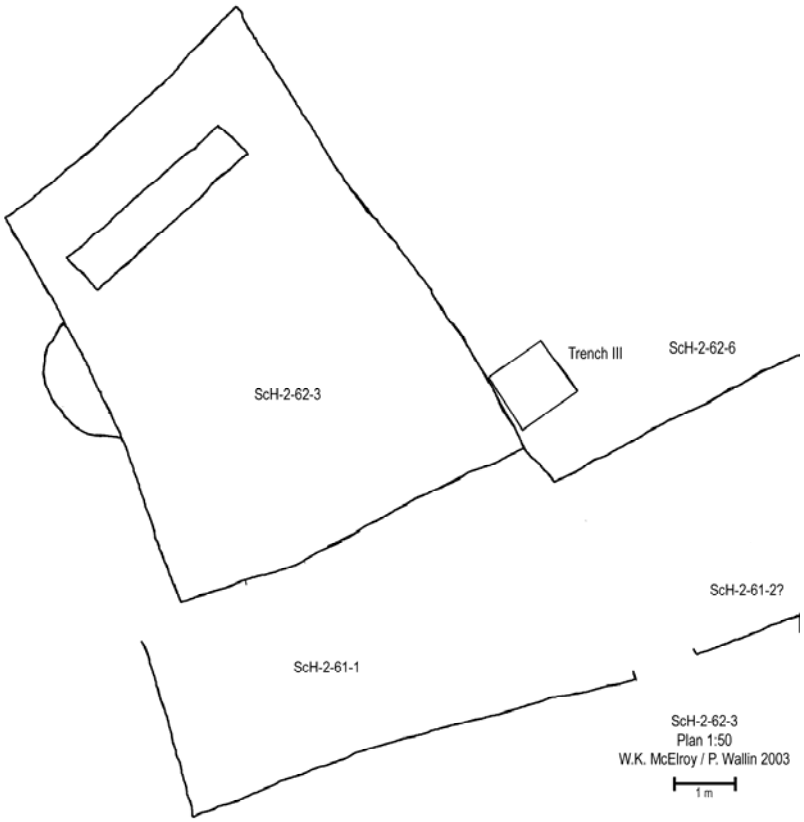


Fig. Plan drawing of marae ScH-2-62-3, Te Ana, Huahine, Society Islands. With the location of trench III.

Attached to the upper part of the E side there is a c. 1.5 m long semi-circular enclosure with a 0.35 m high pointed upright stone inside.

Excavation of the structure

Two test trenches (Trench I and II) were excavated at this *marae* by Solsvik in August 2002 (Solsvik 2003). One 14C sample from this excavation came out at 500+-60 BP (Beta-177605), or Cal. A.D. 1320-1340 and 1390-1500 at 2 sigma.

Trench III

Trench III is a 1 by 1 m unit located at the NW corner of the *marae* platform. During fieldwork in August 2002 (Solsvik 2003: 5-7) two trenches were excavated, trench I just in front of the North end of the platform and trench II by the East side of the platform. In trench I, what was interpreted as a midden refuse layer with charcoal and shell (mostly *Gafrarium spp.*, or *tuai* as they are known locally) was found just underneath the level of the platform foundation stones. We were inclined to believe that the refuse layer was earlier than construction of the *marae*, and that a date for the layer would give a *terminus-ante-quem* date for the construction of the *marae*. However, the *marae* is built on a slope, with trench I being on the down-slope end of the platform, and the structure have been restored at least once in historical times. So, it could be that foundation stones of the *marae* have slid down slope and that the refuse layer was contemporary, or even later than the construction of the *marae*. Trench ScH-2-62-3/III was therefore placed on the Northwest corner of the structure in order to see if any refuse layer actually went under the *marae*.

At c. 20 cm depth a midden refuse layer of charcoal and shells were found in between hand sized stones, some of which was fire cracked. During excavations, it seemed that there were two concentrations of shell midden. However, it may be that in those two areas, the shells were deposited deeper between the stones, and that they all belonged to the same event. We found only smaller specks of red-burned soil, and hence we interpret the shell midden as an *umu* rake-out. In the lower part of the trench, larger stones (head size) were encountered, which indicates a second habitation platform situated underneath the reconstructed habitation platform on the surface. The shell-midden / *umu* rake-out was found on top of this second habitation platform and in between the stones used to construct it.

The layer with shell midden and charcoal clearly goes in underneath the *marae* platform, and must therefore predate the construction of the *marae*. One 14-C dating (Wk-13176) on a sample from this layer yielded a date of 244+-38 b.p.

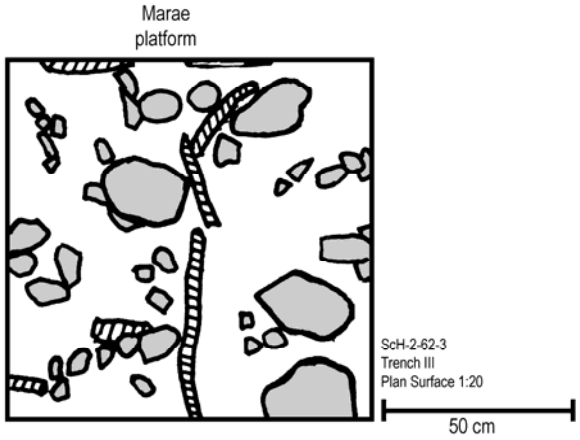


Fig. Marae ScH-2-62-3, Trench III, Plan drawing Surface.

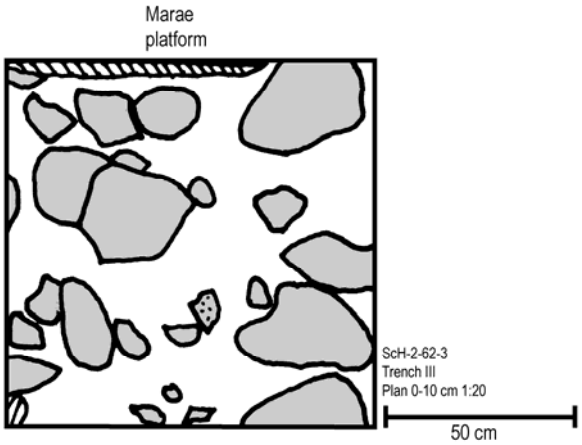


Fig. Marae ScH-2-62-3, Trench III, Plan drawing 0-10 cm.

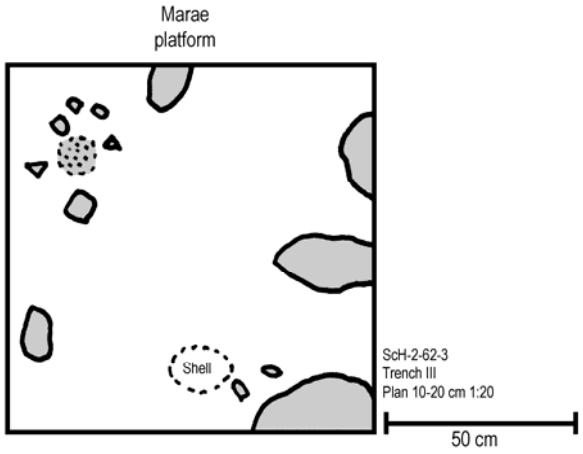


Fig. Marae ScH-2-62-3, Trench III, Plan drawing 10-20 cm.

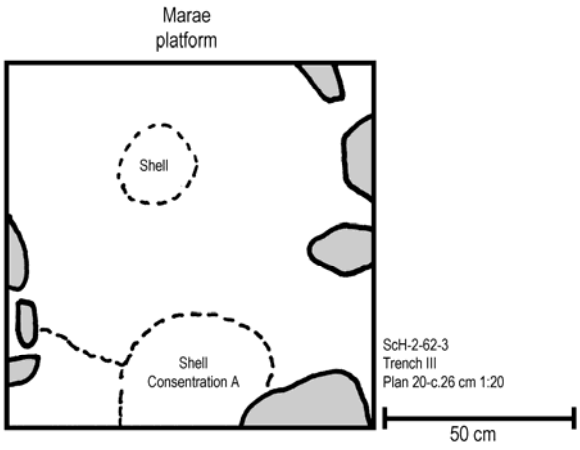


Fig. Marae ScH-2-62-3, Trench III, Plan drawing 20-25 cm.

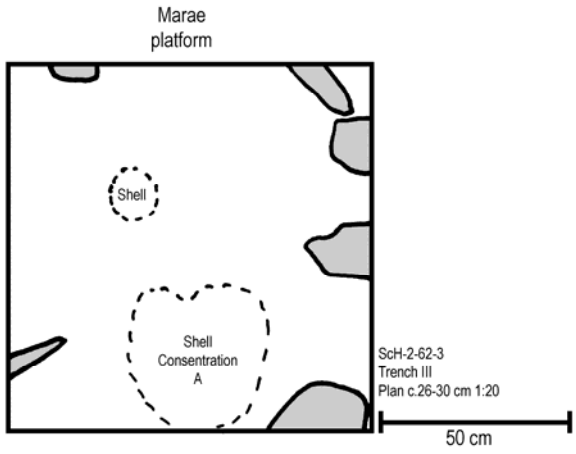


Fig. Marae ScH-2-62-3, Trench III, Plan drawing 25-30 cm.

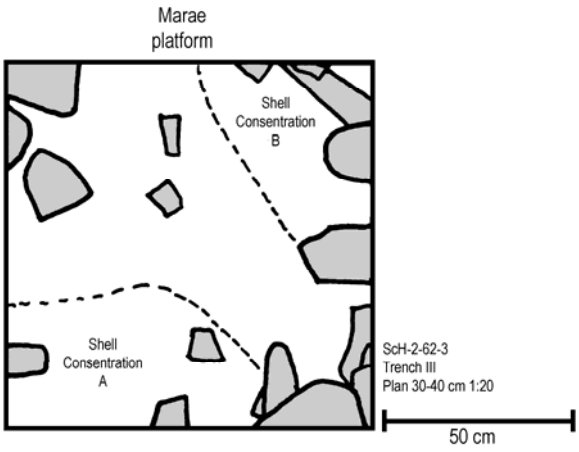


Fig. Marae ScH-2-62-3, Trench III, Plan drawing 30-40 cm.

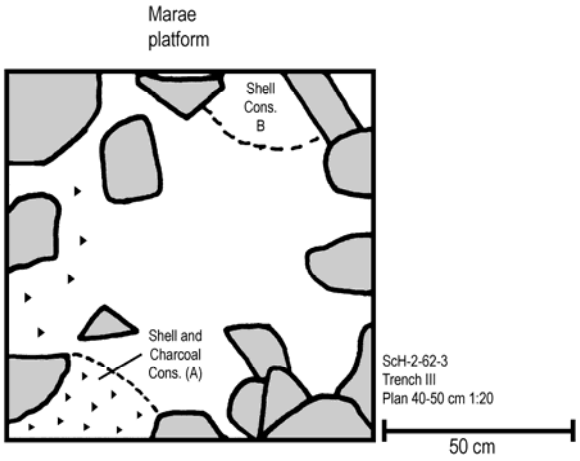


Fig. Marae ScH-2-62-3, Trench III, Plan drawing 40-50 cm.

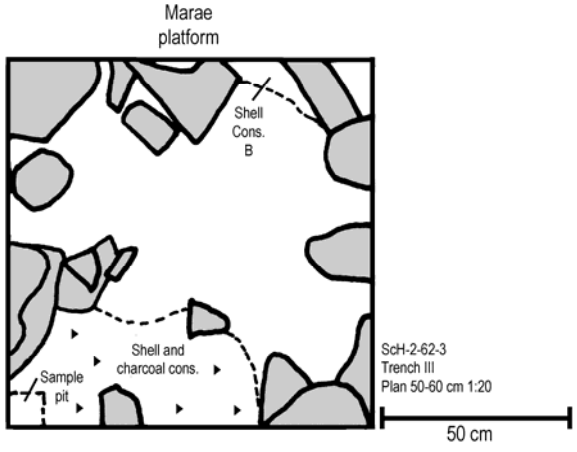


Fig. Marae ScH-2-62-3, Trench III, Plan drawing 50-60 cm.

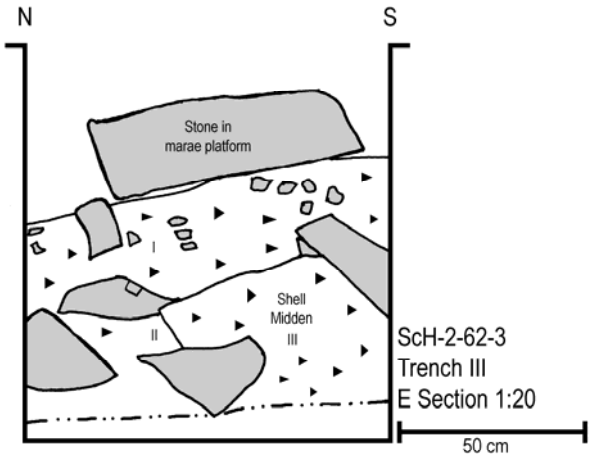


Fig. Marae ScH-2-62-3, Trench III, E section drawing.

11. Excavation of marae ScH-2-65-1, Te Ana

Marae ScH-2-65-1 is located on a slope that slants from N to S, it is c. 22 to 26 m long and c. 19 m wide, and is enclosed by a 0.8 to 2 m wide stone wall on three sides. Two *ahu* are located on the S upslope part of the courtyard.

The W *ahu* is c. 4.5 m long and 1.5 m wide and from 30 to 50 cm high. Three coral/limestone slabs in the front wall have fallen, the rest being of basalt. On top of these slabs, basalt stones are stacked vertically. The *ahu* is somewhat poorly defined on its W and E ends, and the rear wall is disturbed. One upright basalt stone, 50 cm high, is found in the centre of the rear wall of the *ahu*. The E *ahu* is c. 6.4 m long and 2.2 m wide, have five coral slabs in the front wall, c. 50 cm high, and the E end is somewhat poorly defined. The *ahu* is filled with basalt stones and boulders. The rear wall of both *ahu* is about at ground wall. Between the two *ahu* there is one coral slab in line with the rear walls, and scattered around are flat basalt stones. This probably has been a terrace, possibly an *ava'a*. Just in front of these stones, there is another small terrace, clearly defined, but some offset from the long-axis of the two *ahu*.

What probably is the remains of a terrace, with an entrance in the middle, is found at 1/3 of the length of the *marae*, from the down slope end. Just upslope from this, on the E side of the *marae*, a huge basalt stone is located. To the E of this stone, is an area paved with basalt flag stones. Whether this is remnants of a more extensive paving of the courtyard, or it has once been special purpose platform could not be determined. Behind the two *ahu* there is a semi-circular area fenced with large basalt boulders. In the middle of this area and attached to the inside of the back wall of the *marae*, there is a smaller semi-circular feature of basalt stones capped with a huge flat basalt slab. Due to its location behind the two *ahu* we are inclined to interpret this as a burial, but the area was not tested to determine whether or not this was the right interpretation.

Excavation of the structure

Three trenches were excavated on *marae* ScH-2-65-1. Trench I, 3 by 1 m, was cut through the *ahu*, perpendicular to the long-axis of the *ahu*. Trench II, 1 by 1 m, was placed at the base of the terrace dividing the courtyard, just to the W of the entrance. Trench III, a 0.75 by 0.5 m test unit, was located at the base of the front wall of the *marae* terrace.

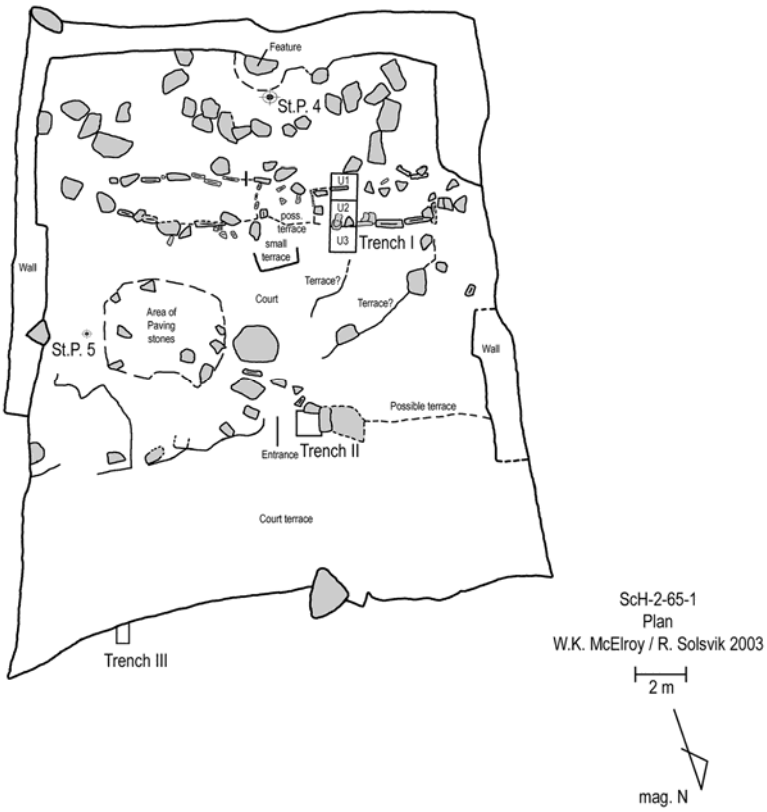


Fig. Plan drawing of marae ScH-2-65-1, Te Ana, Huahine, Society Islands. With the location of trenches I - III.

Trench I

A 3 m long and 1 m wide trench was placed through the E part of the W *ahu*, perpendicular to its long-axis, with unit 1 in the S-end of the trench. Only unit 1 and unit 3 were excavated, and unit 3 was unproductive due to a big burned tree root that appeared in the square.

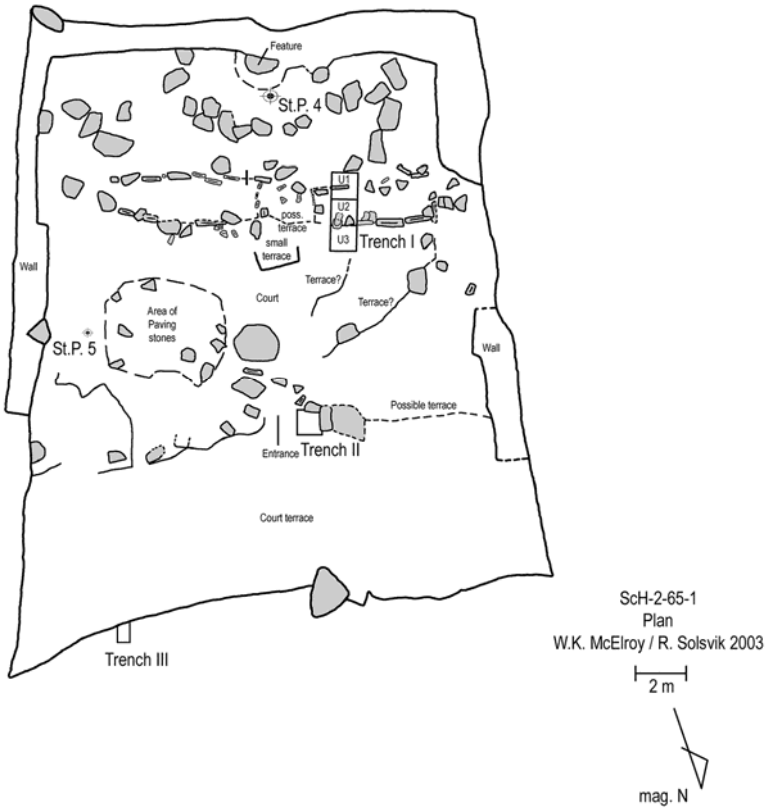


Fig. Marae ScH-2-65-1, Trench I, Plan drawings.

Unit 1 was divided into two sections: One, *Outside Ahu*, to the S of a coral slab in the rear wall of the *ahu*; and the second, *Inside Ahu*, to the N of the same coral slab. Another basalt slab was found at a depth of 10 to 20 cm b.s. slanting inwards, on the inside of the coral slab. This may be part of a double walled *ahu*. Human bone fragments were *Outside Ahu*, and *Inside Ahu* fragments of three human skulls were found, two of them between the two slabs. In both parts were found charcoal and some pig bone fragments. Excavations were discontinued when human skulls were encountered, because of their fragile state.

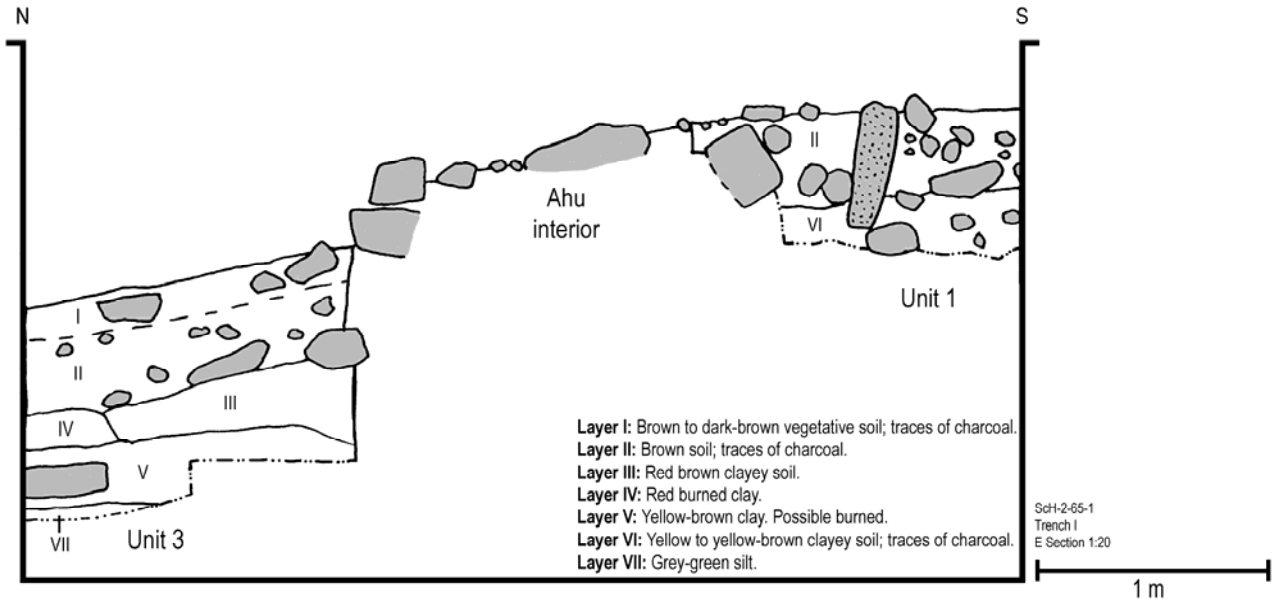


Fig. Marae ScH-2-65-1, Trench I, E section drawing.

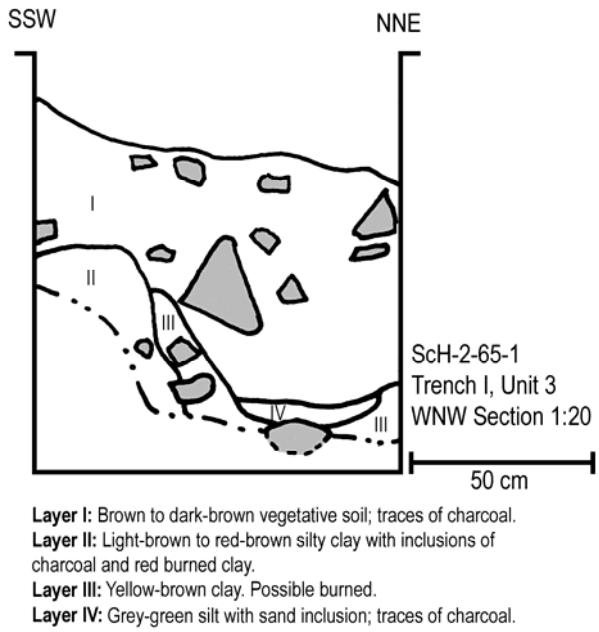


Fig. Marae ScH-2-65-1, Trench I, Unit 3, NW Section drawing.

Trench II

Trench II was located at the base of the terrace dividing the courtyard, just W of the entrance. Due to bad weather and an abundance of coconut trees, which made it dangerous to excavate, trench II was one of few areas that could be excavated. The trench was, however, filled with large boulders and coconut tree roots. It was only excavated down to -10 cm b.s., and produced nothing except some scattered charcoal. Sterile soil was not reached. No section was drawn, only photos taken.

Trench III

Trench III was a 0.75 by 0.5 m test trench excavated at the base of the front wall of the *marae* terrace. Only a shallow layer of topsoil (c. 5 cm) was found before the sterile red-brown clayey soil appeared. This indicates that no activities had taken place at the downward side of the *marae* platform before construction. No section was drawn, only photos taken.

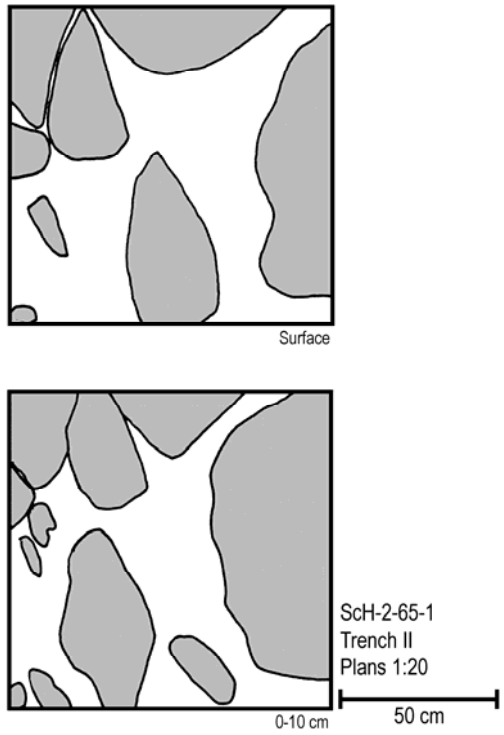


Fig. Marae ScH-2-65-1, Trench II, Plan drawings.

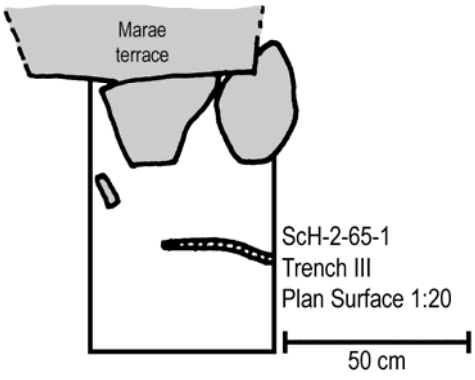


Fig. Marae ScH-2-65-1, Trench III, Plan drawing Surface.

12. Excavation of marae ScH-2-66-1, Te Ana

Marae ScH-2-66-1 is located on a N to S slanting slope, and is c. 19.5 m long and 15 m wide. The courtyard is enclosed by a stone wall from 1 to 2.1 m wide, on three sides and open on the N end. The *marae* has two *ahu* on its S upslope end.

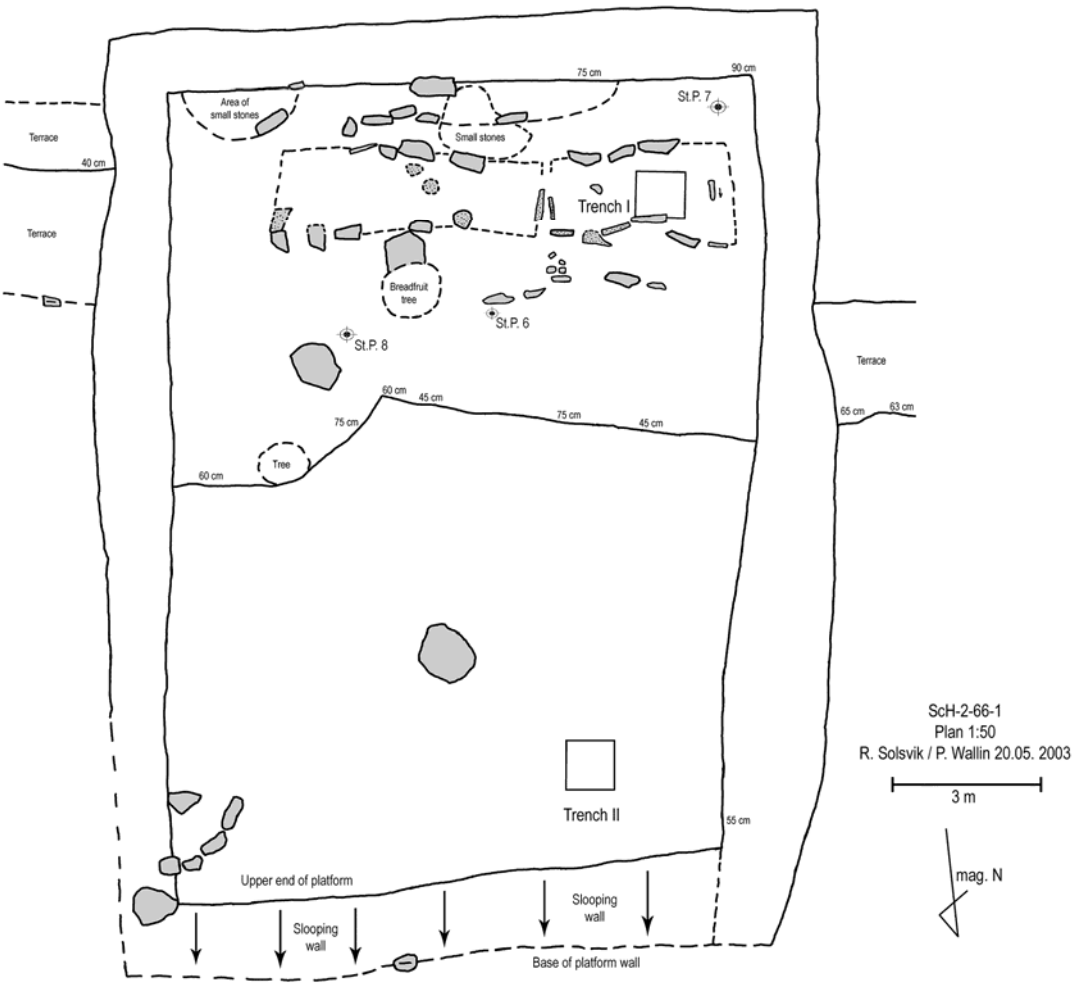


Fig. Plan drawing of marae ScH-2-66-1, Te Ana, Huahine, Society Islands. With the location of trenches I and II.

The W *ahu* is c. 3.7 m long and 1.7 to 2.1 m wide, but it is only well defined through the front and back walls. The front wall consists of 2 large basalt slabs and 2 large coral slabs

and is c. 50 cm high, and a coral slab defines the E end. The rear wall of the *ahu* is today made up of three basalt stones. The E *ahu* is c. 5.5 m long and 1.8 m wide, but is poorly defined. The two ends of the *ahu* are only seen through one slab at each end.

A basalt stone terrace, 45 to 75 cm high, divides the courtyard in two. A semi-circular feature outlined by large basalt boulders, is attached to the inside of the rear wall of the *marae* terrace. In the centre of this feature, attached to the rear wall of the *marae* terrace, is place one large flat basalt boulder. There might also be a similar, but smaller feature to the E of the first semi-circular feature. Two terraces is attached to the outside of the *marae* terrace at the S end, the upper terrace is c. 40 cm high. A third terrace, c. 65 cm high, is attached to outside of the *marae* terrace on its W side, almost at the centre of this side. In the centre of the lowermost courtyard there is a huge basalt boulder.

Two trenches, both 1 by 1 m, was excavated at this *marae*. Trench I was placed inside the W *ahu*, and trench II in the NW part of the lowermost courtyard.

Trench I

Trench I was a 1 by 1 m unit inside the W *ahu* excavated down to sterile red-brown clayey soil and volcanic stones at between 45 to 55 cm. The findings in trench II may be divided into two general levels:

Level 1 and 2 (0-20 cm): The upper 5 cm was a vegetative layer with much roots and humus. A lot of coral pieces c. 5 cm in diameter was found in the layers. They probably came from a fragmented coral slab. The soil consisted of dark brown soil and some stones c. 5-20 cm in diameter. In these layers, it was also found scattered charcoal shells and human bones. The remains of human cranial bones and a mandible of a c. 5 years old child were found. These bones were placed between two stones in the S part of the trench.

Level 3,4 and 5 (30-50 cm): Layer 3 and 4 consisted of red brown clayey soil, which contained some scattered charcoal, shells, coral pieces and bones (fish bones). The volcanic rock bottom was visible at a depth of 45-55 cm. It contained some charcoal, shell and coral pieces.

The lower levels probably predate the construction of the *marae* or may be contemporaneous with the construction of the *marae*. One 14-C sample from c. 40 to 50 cm b.s. was dated to 552+-100 BP (Wk-13178).

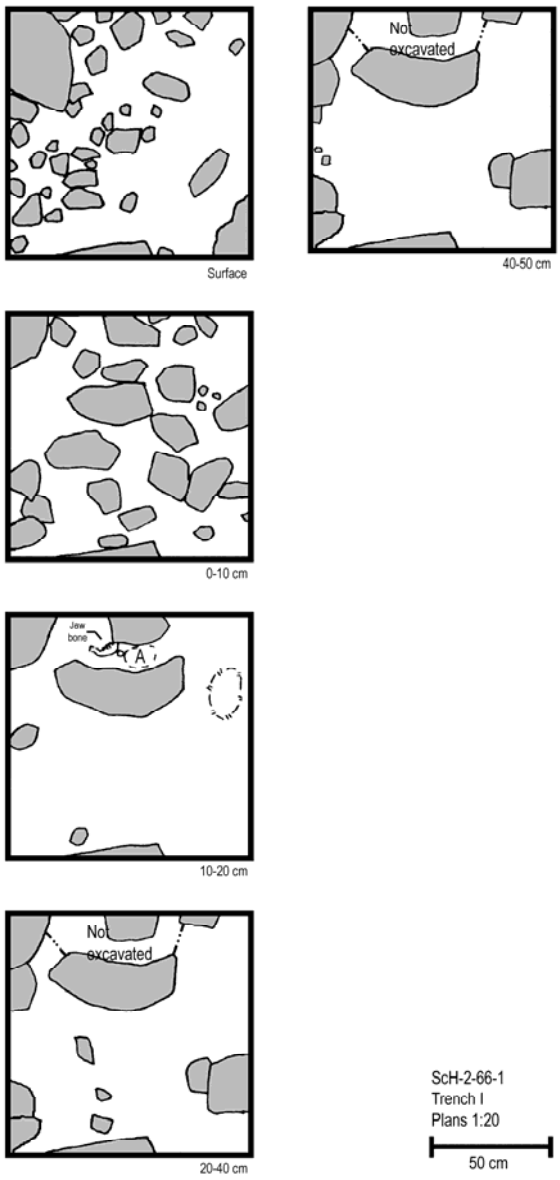


Fig. Marae ScH-2-66-1, Trench I, Plan drawings.

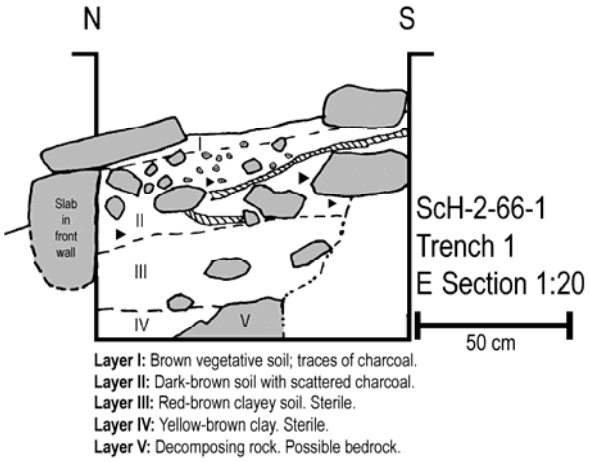


Fig. Marae ScH-2-66-1, Trench I, E section drawing.

Trench II

Trench II is located in the NW part of the lowermost courtyard and was excavated down to c. 50 cm b.s. The top 20 to 30 cm contained dark-brown soil with charcoal, pieces of coral, and a few fragments of human and pig bones. The human bone fragments, teeth from one child and one adult, were not collected, but re-buried.

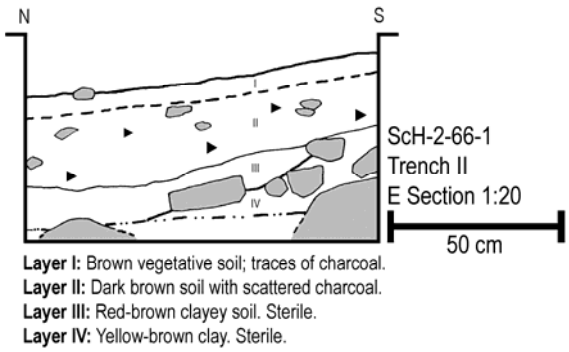


Fig. Marae ScH-2-66-1, Trench II, E section drawing.

Fig. Marae ScH-2-66-1, Trench II, Plan drawings.

13. Comments on the dating of *marae* structures in the Te Ana Complex, Zone 1

These preliminary notes are based upon six 14-C dates on charcoal and one 14-C date on pig-tooth. From the August-September 2002 field-season there exists two calibrated 14-C datings, one from *marae* ScH-2-62-3 and one from *marae* ScH-2-65-2. From the April-May 2003 field-season there exists 5 14-C dates on charcoal and 1 date on pig-tooth.

- ***Marae* ScH-2-62-3:** Beta-177605, 500 +- 60 b.p. or Cal. AD. 1320-1340 and 1390-1500 at 2-sigma. This is a standard radiometric date on a general scatter of charcoal from level 2, 10 to 20 cm b.s. This level, which continues under the *marae*, is associated with midden debris, and is probably *umu* or midden waste. The sample dates habitation activity prior to the construction of *marae* ScH-2-62-3. Sample Beta-177605 was a bulk sample and the wood in the sample was not identified. Both factors might have influenced the dating to be slightly older than it should have been. It is therefore reasonable to argue that the date is from the late spectrum of the 2-sigma calibrated range.
- **Marae ScH-2-62-3:** Wk-13176, 244 +- 38 BP, or calibrated to A.D.1520-1600, 1620-1690, 1730-1810, and 1930-1950 at 95,4 % probability. This is a sample of charcoal found at –25 to 30 cm b.s., and has been interpreted to be a part of a tuai-shell midden rake-out, which continues under the *marae*. Again, this is a bulk sample and the wood has not been identified, and we might argue that the date is to be found towards the late part of the spectrum. The date is only differentiated form Beta-177605 by 20 years, and so might be contemporary, although it is probably later.

Marae ScH-2-62-3, which is a platform type *marae* with an *ahu* of basalt slabs set on end, is a type of *marae* that have been interpreted as an early type (Sinoto 1996). Based on the current evidence, this particular *marae* seems to have been constructed at the earliest sometime between AD 1500 and AD 1650, it might be from as late as towards the close of the 17th century. As of yet this is not an argument that the type itself is not early.

- **Marae ScH-2-65-2:** Beta-177606, 170 +- 40 b.p. or Cal AD 1660-1950 at 2-sigma. This is an AMS dating of un-sourced charcoal from the top 5 cm of layer 1, trench 1, from inside the *ahu*. This first 5 cm consists of a very fine brown soil, which is associated with wind-blown sediments, which probably was deposited sometime after people abandoned the site, or perhaps with renewed clearance in modern times. Because the wood is not identified the sample might be slightly "older" than it actually is, and we might argue that the date should be towards the later range of the calibrated continuum. Historically, we know that the people of Huahine stopped practising their religion in the early 1900th century, and the monuments in the Te Ana land division might have been abandoned earlier. Thus, it is not un-realistic to believe that this date reflects some activities during the time when people abandoned this area, sometime between 1700 and 1850.

Marae ScH-2-65-2 is similar in type to *marae* ScH-2-62-3, but so far, we have not any dates associated with the construction of this structure. The date given above is clearly associated with activities after the site has been and it only states that this activity occurred sometime around AD 1700 to 1800, a date which is corroborated by historical evidence (Tyerman & Bennett in : Wallin and Solsvik 2002:39).

- **Marae ScH-2-62-1:** Waikato-13174, 439 +- 60 BP (dC13 –25.1 +/- 0.2 // % Modern 94.7 +/- 0.7), or calibrated to A.D. 1400-1640 at 95,4 % probability. This general scatter of charcoal was found just behind the SW part of the *ahu* at -20 to -30 cm b.s., and is associated with a layer of clearance or agricultural activity prior to *marae* construction. It is a bulk sample and the wood has not been identified. The sample is a bulk sample and may contain charcoal from a variety of time periods and therefore have produced a date later than the actual event. However, the fact that other surface structures in the area have been dated to sometime between AD 1300 to AD 1600 indicates that the span of this date gives an approximately reasonable correct time frame. The sample has not been sourced and we might again argue for a date towards the mid to late part of the spectrum. Given that the layer is associated with some kind of clearance or agricultural activity, the probability that the sample contains pieces of long-lived wood species is heightened.
- **Marae ScH-2-62-1:** Waikato-13175, 409 +- 39 BP (dC13 –25.1 +/- 0.2 // % Modern 95.0 +/- 0.5), or calibrated to A.D. 1420-1530 and 1560-1630 at 95,4 % probability. This sample is a bulk sample of un-identified wood from an umu that was found in front of the terrace in the centre of the courtyard of the *marae*. This *umu* is clearly cut into the soil before the construction of the *marae*. However, since only one 1 by 1 m test unit was excavated in front of the terrace, we do not know if the *umu* is associated with rituals just prior to construction, which have been attested from the Papenoo-valley, or with habitation activities on the site. Again, the lack of wood identification might be used to argue for a date that belongs to the late part of the spectrum, and that the *umu* was used sometime during the 16th century.

Marae ScH-2-62-1 is an enclosed terraced type of *marae* with a mix of coral and basalt stone *ahu*. The *marae* can be classified according to a classification worked out by Dr. Sinoto (Sinoto, Komori et al. 1981; Sinoto, Komori et al. 1983; Sinoto 1996) to be an "Inland type", but a mix of "Inland-type-1" and "Inland-type-2", based on the facing of the *ahu*. These types should be relatively early, being the second or third in a sequence. A conservative estimate of the present dating would place the construction of this *marae* sometime during the 15th or 16th century.

- **Marae ScH-2-65-1:** Waikato-13177, 372 +-44 BP (dC13 –18.5 +/- 0.2 // % Modern 95.5 +/- 0.5), or calibrated to A.D. 1440-1640 at 95,4 % probability. This date is an AMS date on a pig tooth (incisive) found at a depth of between -10 to -20 cm b.s. inside the *ahu*. This most probably dates the use-phase of the *marae*, but we have no indications to place this in the early or late end of the spectrum.

At the present, we have no samples that dates the construction phase of *marae* ScH-2-65-1, and from the dated pig tooth, Waikato-13177, we have no way of narrowing down the time frame given. Based on the fact that no activity seems to have taken place before the construction of this *marae*, as was the case with *marae* ScH-2-62-1 and *marae* ScH-2-62-3, *marae* ScH-2-65-1 is thought to be later than *marae* ScH-2-62-1. This would place the dating of the use-phase in the 16th or 17th century.

- **Marae ScH-2-66-1:** Waikato-13178, 552 +- 100 BP (dC13 –25.0 +/- 0.2 // % Modern 93.4 +/- 1.2), or calibrated to A.D. 1260-1530 and 1570-1630 at 95,4 % probability. This sample is on a scatter of charcoal found between –40 to 50 cm b.s. inside the *ahu*. This most probably dates activities prior to *marae* construction. It is a bulk sample with no identification of wood species.

To estimate the time of construction of *marae* ScH-2-66-1 we are left with only one sample with a fairly wide error limit. We know that the sample dates some kind of activity prior to the actual construction of the *marae*. From the fact that the sample was a bulk sample with no identification of wood species, we might argue that the actual date should be towards the late end of the spectrum. Also, the immediate surroundings of *marae* ScH-2-66-1 display fewer signs of having been inhabited or used as agricultural plots prior to construction, than at *marae* ScH-2-62-1. This might indicate that *marae* ScH-2-66-1 was built after *marae* ScH-2-62-1. By using such logic, we might place the construction of *marae* ScH-2-66-1 to sometime during the 16th or 17th century, but this is rather inconclusive at the moment. However, it would tie in with the date from *marae* ScH-2-65-1.

Conclusion

Marae construction in the Te Ana land division, close to the village of Maeva, on Huahine, seems to have begun sometime during the 15th or 16th century with the building of *marae* ScH-2-62-1. Later, both *marae* ScH-2-65-1 and ScH-2-66-1 was constructed, although this conclusion is based more upon the knowledge of how Polynesian social structure grows and develops rather than actual 14-C dates. At the end of this conjectural history, *marae* ScH-2-62-3 and *marae* ScH-2-65-2 was constructed as more specialized structures related to the their respectively parent structure.

Knowing that graves are found in relation to both *marae* ScH-2-65-1 or ScH-2-66-1, and one with European trade goods (Sinoto, Komori et al. 1983), we might speculate further that these *marae* was constructed even later. However, they were definitively in use during the 18th, and perhaps the early 19th century.

In the future, more, as well as more accurate dates, are going to surface from these excavations, and then we might be able to construct a more refined time frame for the construction and use of the *marae* structures in the Te Ana land division. In particular it would be helpful to correlate the current dates with earlier 14-C dates from test-excavations of habitation terraces in the same area (Sinoto and Komori 1988; Sinoto 1996).

14. Excavation of marae ScH-2-18, Marae Manunu, Motu Ovarei

Marae Manunu is one of the two "National" *marae* of Huahine, the other being *Marae* Mata'ire'a Rahi on the Mata'ire'a Hill. It is an enormous *marae* of the classic costal type where the *ahu*, in two steps, is made up of huge coral or lime stone slabs put on end and small basalt stones are stacked in between. Except for an *ava'a* in front of the *ahu* and two small stone enclosures, the courtyard is not defined in any manner, but is just a plane area of gravel and grass in front of the *ahu*. The courtyard, or *hoho*, is towards the interior, whereas the "back" of the *marae* is towards the sea. The whole complex is built on a *motu* opposite Maeva village.

Marae Manunu is situated on the flat land of the peninsula called Manunuiterai, or Toerauroa, which bounds the north side of Fanua Nui lagoon close to the village of Maeva, on the north side of Huahine Nui. The *marae* is said to be situated directly opposite the old Maeva village from the beginning of the 20th century, but with lake Faunua Nui between them. Because the state of the *marae* can be followed from the early 19th century through to today, we give both Tyerman and Bennet's and Emory's description in full below.

Description of the marae *by Daniel Tyerman & George Bennet 4. January 1822*

"The weather not permitting us to resume our journey, we made an excursion to the neighbouring *motu*, to visit the *marae* of Tani, the chief god of Huahine in the age of idolatry. It stands about a hundred yards from the shore, embosomed among trees of many kinds, which wholly obscure the edifice till the spectator arrives upon the spot. Like most erections of the kind, it consists of two stories, of oblong shape; the lower, a hundred and twenty-four feet by sixteen, and the upper diminished proportionately, with a small wing at the back. The basement is about ten feet in height, and fronted with coral blocks, placed on their edges, some of which are as high as the story itself; these form the walls of an enclosure, which is filled up with earth. The superior but smaller part is faced with coral, and filled with earth, in like manner, but not more than three feet high, having at each end an upright stone of twice that elevation. In the centre of the principal front stands the bed of Tani, a stone-framed pile, eighteen inches above ground, but twenty-four feet long by thirteen feet wide! Hard by is another and lesser enclosure, not more than half the dimensions of Tani's bed, yet large enough to hold all the gods beside that belonged to this celebrated grove and temple. All these various structures were exceedingly rude, but massy, in materials and masonry. Not a tool seems to have been lifted up upon any of the stones; the angles are ill-formed, nor are the walls in right lines; but the whole *pandemonium* is in rare preservation, scarcely a block having been dislodged from its place. Trees of centuries, judging from their venerable and magnificent appearance, overshadow this "dark place," with meeting arms, and foliage "star-proof." One of these ancients measured fifteen yards in girth above the root. …" (Tyerman & Bennet 1831, vol. 2:265-266).

Description by K. P. Emory between November 19. and December 13. 1925

"*Marae* Manunu, on the flat land of the peninsula called Manunuiterai, or Toerauroa, which bounds the north side of Fauna Nui lagoon (figs. 10; 84, no. 18; 87; pl. 15, A). The

marae is directly opposite Maeva Village, but lost to sight in the dense screen of trees, and 100 yards from the seashore. No vertical slabs other than limestone occur anywhere in the *ahu* facing. The outer face of the *ahu* is similar to its inner face. The facing warps in and out in a very irregular manner not indicated by the plan. One of the largest slabs of the outer face had fallen forward and had been replaced by a smaller slab whose base rest on the back of the fallen one. One of the natives said that when Raiti, the last Maeva native of the old culture, died at the age of about 90, in 1915, a slab of *marae* Manunu fell. This old man had left a request that he be buried at the *marae*. His grave was pointed out in the *avaa*. The fill of the *ahu* is composed of basalt and coral rocks. The top of the *ahu* is paved with basalt flagstones. At both ends the limestone facing slabs rise above the average height of the top step. The court of the *marae* adjoins the southwest face of the ahu; no pavement or enclosing wall marks the extent. At 70 feet from the face of the *ahu* is a little structure consisting of two rows of coral slabs, 5 feet apart and 8 feet long, each row having two limestone slabs 1 foot high, which were set on end. A number of *toa* trees stand on the area before the inland face of the *marae*; none however grow on the seaward side. There is a complete absence of *tamanu* trees. The low stone platform (fig. 87, c) before the inner face of the *ahu* is the *avaa*, which Tyerman (56, pp. 266-268) describes as the "… bed of Tane, a stone-framed pile, 18 inches above ground, but 24 feet long by 13 wide."

The little detached platform (fig. 87, d) southeast of the *avaa* we mistook for a modern grave. However, Tyerman (56, p. 266) in 1822 seems to have noticed it: "Hard by [the bed of Tane] is another and lesser enclosure, not more than half the dimensions of Tane's bed." In front of the avaa, and 12 feet from it, is a basalt upright (fig. 87, no. 4). Petroglyphs could be discovered on only two of the slabs of the ahu; the second slab from the left end of the southwest face, and the single slab closing in the southeast end of the upper story. The carvings are shown in figures 132, d, and 130, d, no. 1" (Emory 1933:131-133).

"Figure 87. – Plan and elevations of *marae* Manunu, Maeva (Site 132): a, first story of *ahu*, 23 feet wide at one end, 21 feet wide at opposite end, and 129 feet long, 8 feet high; b, second story, 8.5 feet wide at one end, 11 feet wide at other, and 105 feet long, 3 feet high; c, *avaa*, a platform 14 feet wide, 25 feet long, not more than 2 feet high, built mostly of coral stones; d, unpaved platform 1 foot high framed by coral slabs on edge; e, northwest end; f, southeast end; g, southwest face, drawn to scale; 1, location of cist less than 2 feet square and 1 foot high, containing pieces of an adult male skull, the skull of a younger person, and some other bones, and covered with flagstone; 2, open pit, probably for the discarded coverings of tutelary god; 3, basalt slab on end and flush with top of platform; 4, basalt upright 1.5 feet high, 8 inches square" (Emory 1933:132, fig. 87).

Description of the marae *15. October 2001*

Marae Manunu consists of an *ahu* 40 x 6 x 3 m, with an *ava'a*. There is no clearly defined court, and there is no paving in front of the *ahu*. Along the front there is fine coral gravel, slanting out about 5 to 6 m, into an undefined and grass-covered area. The *ahu* itself is built in two steps, with large coral limestone-slabs set on end and filled between with smaller coral and basalt slabs stacked on top of each other horizontally. The

first step is about 2.3 m high, and its front wall consists of 24 slabs, a few of them reach a height of about 3 m. The second step is about 1 m high, and is constructed in the same manner. Some of the blocks are refitted by using cement. At the SE end bedrock is visible. The rear wall is built in the same manner but it curves somewhat out towards the SE end.

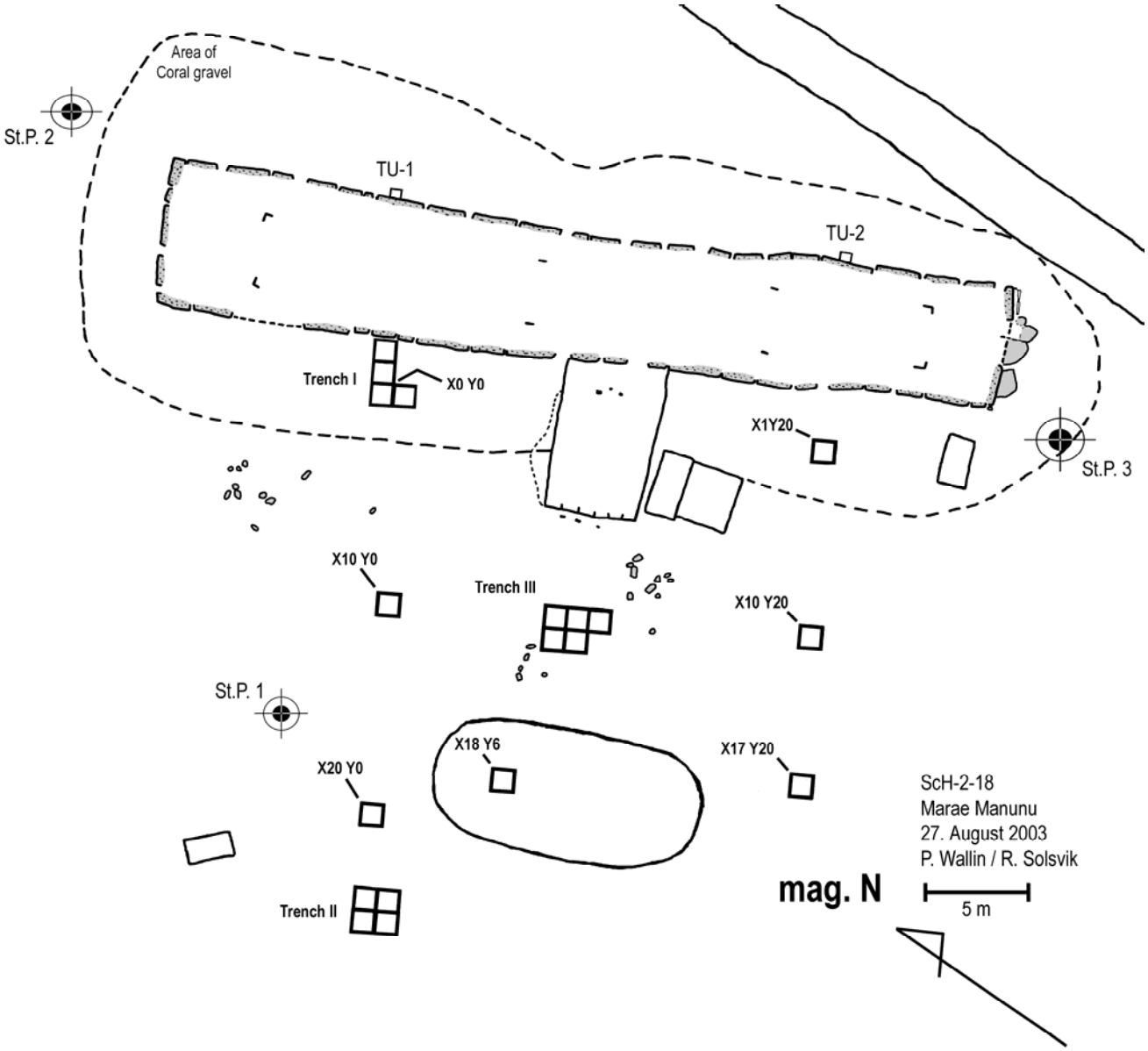


Fig. Plan of ScH-2-18, Marae Manunu, Huahine, Society Islands. With the location of trenches I - III and all test pits and test units.

In the centre of the front wall there is an *ava'a* about 7x4,5 m, and about 50cm high. It is outlined by coral limestone slabs set on end, and filled with coral pebbles about the size of a hand. The NW part of the *ava'a* seems to be built as a platform, but to the SE it seems more undefined except for the coral slabs. On top of the *ava'a*, close to the front wall of the *ahu*, stands three slender basalt uprights about 50 cm high. Three other uprights are placed just in front of the *ava'a* on ground level. To the south of the *ava'a* the grave of Faanui Raiti (died in 1915) is located; and further south along this grave there is outlined an enclosure of small slabs.

Two other, rectangular, and grave-like features are to be found within the courtyard area. One is located close to the SW corner of the *ahu*. The other is located in line with the NW-corner, about 30 meters out into the courtyard area (to the W). The latter structure is oriented NW - SE, and is an enclosure defined by slabs set on end.

In the middle of the courtyard area, about 15 m out from the *ahu* wall, there is a round-ended house foundation, 15x6 m, outlined by limestone slabs on end and filled with coral-gravel. Between the *ava'a* and the house-foundation there is a possible fallen upright.

The second slab from the NW in the front wall have one clear turtle petroglyph, and another possible turtle petroglyph.

Just in front of the front wall, at the NW end, there are two old acasia (?) trees growing, and between them there is found a fallen basalt slab. A similar three is growing besides the SE end. Other vegetation is 50 - 70 years old coconut-trees.

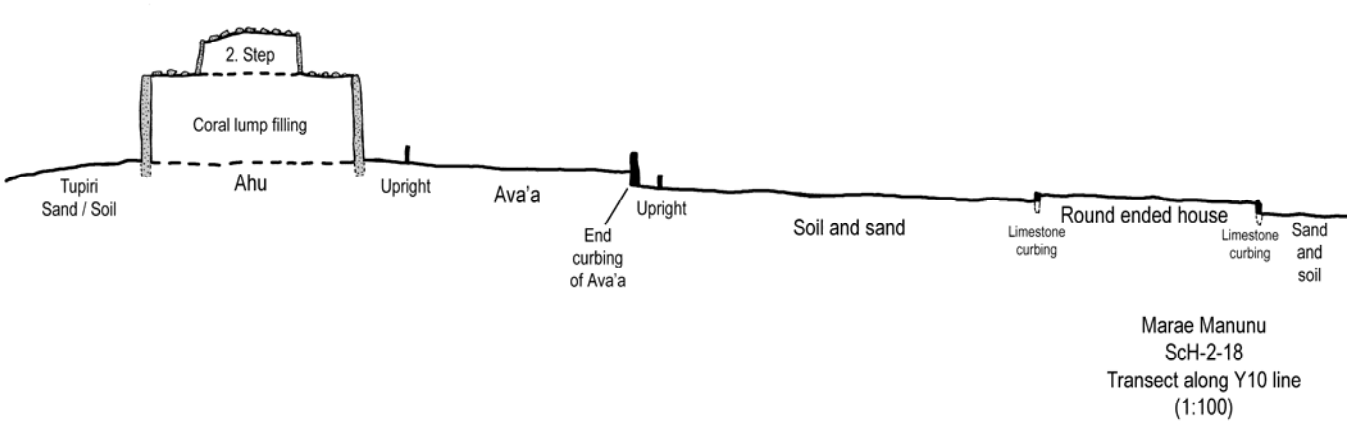


Fig. ScH-2-18, Marae Manunu, Transect drawing through the marae along the centre line of the courtyard.

In September 2002, the site was visited again, and at this time all the slabs in the front-wall of the *ahu* had been incised with graffiti. This consists mostly of names of persons,

probably young Polynesians visiting the site, and using the inscriptions as an act of cultural revival (Wallin 2004).

Comparison with Tyerman & Bennet's and Emory's descriptions

Emory described Manunu as two stories *ahu*, the first story of *ahu* 23 feet wide at the northern end and 21 feet at the southern end. It is 129 feet long and 8 feet high. Second story 8,5 feet wide at southern end and 11 feet wide at the northern end, 105 feet long and 3 feet high. The *ava'a* 14 feet wide, 25 feet long, and not more than 2 feet high.
The discrepancies between Emory's measurements and our own is due to the restoration work done by Y. Sinoto between 1967 – 1969. After reconstruction, the front wall of the *ahu* seems to have more coral limestone slabs set on end than was described by Emory. We saw several stones repaired by cement, and these have probably been used to fill in the gaps between slabs in Emory's drawing.
Out on the courtyard area the grave-like feature at the SW-corner still exists as described by Emory, as is also true of the location of the upright found some feet in front of the *ava'a*. It is described by Emory as a platform, indicating no outlining slabs. However, Tyerman describes this as "... the bed of Tane, a stone framed pile, 18 inches above ground, but 24 feet long by 13 wide" (Emory 1933:132; Tyerman xx:266-268.

Emory describes "... at 70 feet from the face of the *ahu* is a little structure consisting of two rows of coral slabs, 5 feet apart and 8 feet long, each row having limestone slabs 1 foot high, which were set on end" (Emory 1933:132). This feature can no longer be found, instead there is a round-ended house foundation, described above.
The grave of Faanui Raiti was also repaired as a part of the restoration by Dr. Sinoto. Emory did not describe it, but whether this indicates that he did not notice it or just that he did not consider it a part of the structure is difficult to tell. However, he did describe what he at first had been taken as a modern grave southeast of the *ava'a* (Emory 1933:132). Both the small enclosure next to Faanui Raiti's grave, as well as a little grave-like feature on the NW part of the courtyard area, close to a row of Pandanus trees, were not noticed by Emory. These were discovered and restored by Dr. Sinoto.

Excavation of the structure

Marae Manunu, or more precisely, the *ahu* of the complex has been restored several times from 1969 onwards by Dr. Y. H. Sinoto from the B. P. Bishop Museum in Hawaii. This, as well as the large dimensions of the *ahu*, which would have made excavations into the *ahu* very expensive, made us decide to investigate the areas outside the *ahu* itself. The courtyard was therefore the logical option for a limited test-excavation and an arbitrary co-ordinate system was established with X_0Y_0 just in front of the *ahu* and c. 10 m right of the NW corner. A total of 9 test units were excavated along three lines, spaced 10 meters apart, going ENE – WSW (see fig. p. 68). These were all excavated in 10 cm spits down to a well-defined sterile sand layer, usually reached between 20 to 30 cm b.s., after which the NW-half of the trench was taken down with a shovel to between 50-75 cm b.s.

After we thus had established the general stratigraphy of the area, three areas that seemed interesting were extended into areal excavations, but were excavated only down to c. 20 cm.

The Test Pit Units

Nine test units of 1 by 1 m was excavated in a grid system and produced a consistent picture of the stratigraphy of the courtyard, which can be summed up as below. All instances of charcoal, bones and teethes were found in Layer I in these test units.

Generalised Stratigraphy

Layer I: Brown to dark-brown vegetative sandy soil / sand with traces of charcoal. The bottom of this layer was a wash-out from the top, forming a pod-soil profile.
Layer II: Yellow-grey to grey coarse loose marine sand. Sterile.
Layer III: Grey hard marine sand with coral gravel and coral lumps. Hard packed. Sterile.

All around the *ahu* of Manunu, and for a distance of c. 5 m in front there is encountered a layer of coral gravel, or *tupiri*, lain down in connection with the construction of the *marae* and only a thin topsoil had established itself on top of the layer. This layer is only found in the two test units TP-X_0Y_0 and TP-X_1Y_{20}, and is described in the following manner:

Layer I: Brown vegetative sandy soil with much coral gravel and traces of charcoal.
Layer II: White loose coral gravel. Sterile.

Below, only a stratigraphical summary, which includes both a description of the soils and what was found in the different levels, is given for the test units.

TP-X_0Y_0

ScH-2-18, TP-X_0Y_0
Level 1, 0-22cm: A layer of coral gravel, or *tupiri*, with vegetative pebble soil at top. Placed there after reconstruction of the *ahu*. Shovelled, and not screened. The bottom was between 15 and 22 cm b.s.
Level 2, 20-30 cm: A layer of an old top soil (dark-brown vegetative sandy soil with traces of charcoal) with grey light-brown sand underneath. Three flat stones, forming an alignment where imbedded on top of this layer. A human molare was found in the old topsoil.

TP-$X_{10}Y_0$

ScH-2-18, TP-$X_{10}Y_0$
Level 1, 0-10 cm: Topsoil of brown to dark-brown vegetative sandy soil with traces of charcoal. 1 pig tooth and 7 fragments of pig bone was found.
Level 2, 10-20 cm: Light-brown sand with coral gravel with some scattered charcoal. 1 pig tooth and 1 fragment of pig bone was found.
Level 3, 20-30 cm: Bottom of the light-brown sand and top of a yellow-grey coarse sterile marine sand. No bones, teethes, or charcoal. Below c. 30 cm the TP was shovelled down to c. 60 cm b.s.

TP-$X_{20}Y_0$

This trench was excavated down to c. 30 cm b.s. and then shovelled down to 70 cm b.s. in the NW-half of the unit.

ScH-2-18, TP-$X_{20}Y_0$
Level 1, 0-10 cm: Topsoil of brown to dark-brown vegetative sandy soil with scattered charcoal. One fragment of pig bone was found.
Level 2, 10-20 cm: Bottom of topsoil, with a scatter of charcoal. Under was a coarse yellow-grey coarse marine sand. The sand contained no charcoal or bones.
Level 3, 20-30 cm: Loose, yellow-grey coarse marine sand. No bones or charcoal.

TP-$X_{25}Y_0$

This trench was excavated down to c. 30 cm b.s. and then shovelled down to c. 70-75 cm b.s. in the NW-half of the unit.

ScH-2-18, TP-$X_{25}Y_0$
Level 1, 0-10 cm: Brown to dark-brown vegetative sandy soil with a scatter of charcoal. Four pig teethes and 18 fragments of pig bones were found.
Level 2, 10-20 cm: Brown to dark-brown vegetative sandy soil with traces of charcoal, with a yellow-grey, coarse and loose, marine sand. Two fragments of pig bones found.
Level 3, 20-30 cm: Yellow-grey loose and coarse marine sand. Sterile.

TP-$X_{10}Y_{10}$

This trench was excavated down to c. 20 cm b.s. and then shovelled down to c. 30 cm b.s. in the NW-half of the unit.

ScH-2-18, TP-$X_{10}Y_{10}$
Level 1, 0-10 cm: Brown to dark-brown vegetative sandy soil. Somewhat darker in the SSW-half of the unit where there was a scatter of charcoal. One human premolare found in this darker part of the unit. One human insesive found outside this area.
Level 2, 10-20 cm: Yellow-grey coarse loose marine sand. Sterile.
Level 3, 20-30 cm: Yellow-grey coarse marine sand, and beneath a grey sand with coral gravel and lumps, hard packed.

TP-X_1Y_{20}

This trench was excavated down to c. 20 cm b.s. and then shovelled down to c. 50 cm b.s. in the NW-half of the unit.

ScH-2-18, TP-X_1Y_{20}
Level 1, 0-10 cm: Coral gravel, or *tupiri*, with partly formed topsoil on top. This layer is sterile and was shovelled away without being screened.
Level 2, 10-20 cm: Sand. Some stones, including one large coral or limestone was found. Probably not paving stones.

TP-$X_{10}Y_{20}$

This trench was excavated down to 20 cm b.s., and then shovelled down to c. 50 cm b.s. in the NW-part of the unit, without screening the fill from the shovelling.

ScH-2-18, TP-$X_{10}Y_{20}$
Level 1, 0-10 cm: Brown to dark-brown vegetative sandy soil with some scattered charcoal. One fragment of bone, possible pig found.
Level 2, 10-20 cm: Fine grained yellow-grey sand. Sterile.

TP-$X_{17}Y_{20}$

This trench was only excavated down to 10 cm b.s. before being shovelled down to c. 30 cm b.s. in the NW-part of the unit. Shovelled fill was not screened.

ScH-2-18, TP-$X_{17}Y_{20}$
Level 1, 0-10 cm: Brown to light-brown vegetative sand, more like fat soil in the top 5 cm b.s. No finds.

TP-$X_{18}Y_6$

This trench was located inside the round-ended house on the courtyard. Recent restoration work on the site have outlined this house site with coral slabs on end, c. 30 cm high, and filled the interior of these coral slabs with coral gravel, or *tupiri*. This layer of coral gravel was shovelled away without screening and a surface level was established underneath it, which became the level from which excavations proceeded. One corner of the unit was occupied with a post-hole in coral-concrete, which was part of a re-constructed *fare-pote*, build by Dr. Y. H. Sinoto at the end of the first restoration of the *marae*. The living-surface of the house, 0-15 cm under coral gravel (u.c.g.), was excavated as one level. The unit was excavated by trowel to c. 30 cm u.c.g, and the dirt screened. The fill from this unit was screened to a ¼ inch mesh screened, as with the rest of the excavations.

ScH-2-18, TP-$X_{18}Y_6$
Level 1, 0-18 cm u.c.g[2]: A brown to dark-brown vegetative sandy soil with inclusions of tiny shell fragments. Pig, dog, fish, rat, and possible bird bone was encountered. In the SW corner a cement-and-coral posthole from the 1969 reconstruction of the house was found.
Level 2, 18-30 cm u.c.g.: Light-brown coarse marine sand with coral lumps. No finds.

Test units at the back-wall or sea-ward face of the *ahu*

In order to test how deep the coral slabs, or *papa*, of the *ahu* is embedded in the ground, we decided to dig 2 test pits, 50 by 50 cm, at the back-wall (sea-ward side) of the *ahu*.

TU-I at back-wall of ahu

TU-I was located c. 10.5 m from the NW-corner of the structure, almost in line with the X_0-line of the co-ordinate system established for the courtyard. The coral gravel, or *tupiri*, layer which is also found just at the front-wall of the *ahu*, is also on the back of the structure. This was shovelled away and only layers beneath this was excavated in spits and screened through ¼ inch mesh screens.

[2] U.c.g. = under coral gravel.

A fragment of a skull bone, probably from a young individual of pig was found at –34 cm b.s., just at the side of the bottom end of the coral slab making up the rear-wall. It was at the bottom of the brown silt layer, and must have been interred during construction of the *marae*. The date of this bone fragment should date the time of construction of the *marae* or some cultural activity before this.

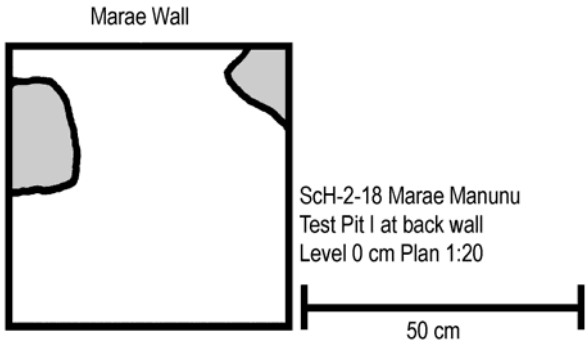
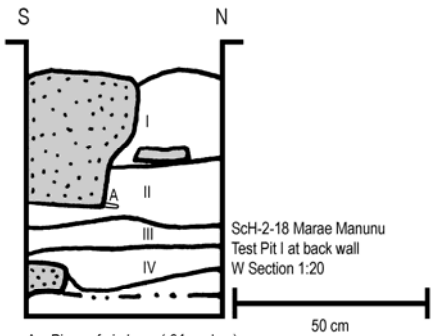


Fig. ScH-2-18, Test Unit I at back-wall of ahu, plan drawing of surface before excavation.



A = Piece of pig bone (-34 cm b.s.).

Layer I: Coral gravel with white coral sand, with a very thin layer of topsoil on top.
Layer II: Light-brown to brown vegetative clay; contains stones.
Layer III: Grey sand mixed with light-brown to brown vegetative clay.
Layer IV: Yellow-grey coarse marine sand. Sterile.

Fig. ScH-2-18, Marae Manunu, Test Unit I at back-wall of ahu, W section drawing.

TU-II at back-wall of ahu

TU-II, a 50 by 50 cm pit at the back-wall, or sea-ward side, of the *ahu*, was located 8 m from the E-corner of the structure, almost in line with the X_{20}-line of the co-ordinate system established for the courtyard. The coral gravel, or *tupiri* layer, which is also found at the back of the structure, was removed by shovel and only layers beneath this was excavated in spits and screened through ¼ inch mesh screens.

No interesting was found in this unit.

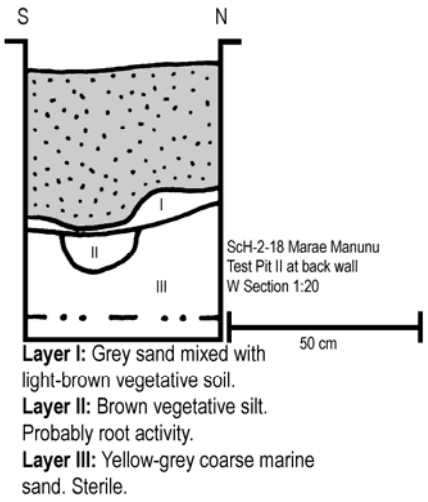


Fig. ScH-2-18, Marae Manunu, Test Unit II at back-wall of ahu, W section drawing.

Trench I ($X_{-2}Y_{-1}$ / $X_{-1}Y_{-1}$ / X_0Y_{-1} / X_0Y_0)

Trench I was an expansion of TP X_0Y_0 in which we had found an alignment of flat basalt stones, which we had interpreted as stones from an earlier pavement of the courtyard of the *marae*. This turned out to not be the case. We also expanded the excavations up to the slabs in the front-wall of the *ahu* in order to see the stratigraphy underneath the *ahu*. Totally, 4 sq.m. was excavated.

The alignment of stones had three sides (N, S, and W), and might possibly have been a shallow enclosure for sacrificial burials. Soil samples for phosphate testing was taken, but have not yet been analysed.

We found several fragments of human bone and some teethes, and some pieces of pig bone in layer I through IV, which is from 0 to c. 40 cm b.s. One piece of iron was also found (-25 cm b.s.), on which we are going to perform further analysis.

In unit $X_{-1}Y_{-1}$ about 1.30 to 1.40 cm in front of the coral slab in the front-wall of the *ahu* we found part of a pig jaw and some other small fragments of pig bone deposited directly on top of layer IV (c. -32 to -38 cm b.s.). We believe that the *marae* was built on top of this layer. Hence, the pig jaw must predate the construction of the *marae*.

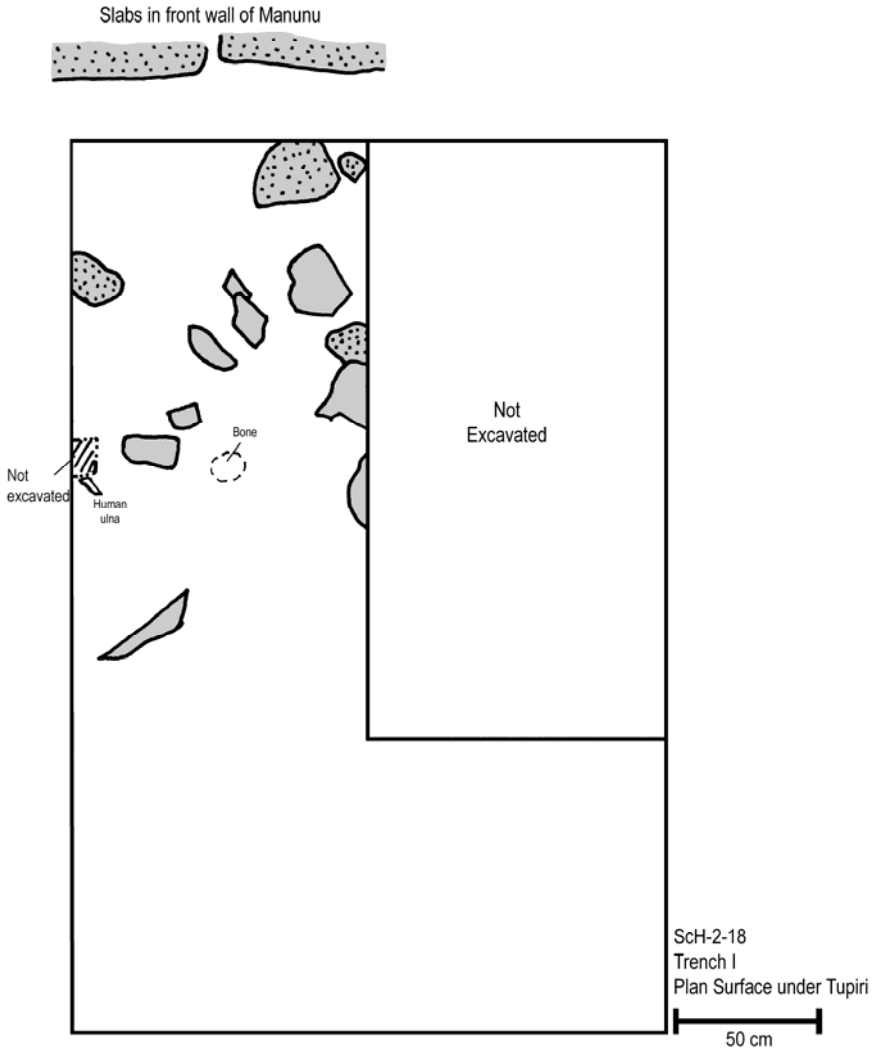


Fig. ScH-2-18, Marae Manunu, Trench I, Plan drawing 0-10 cm.

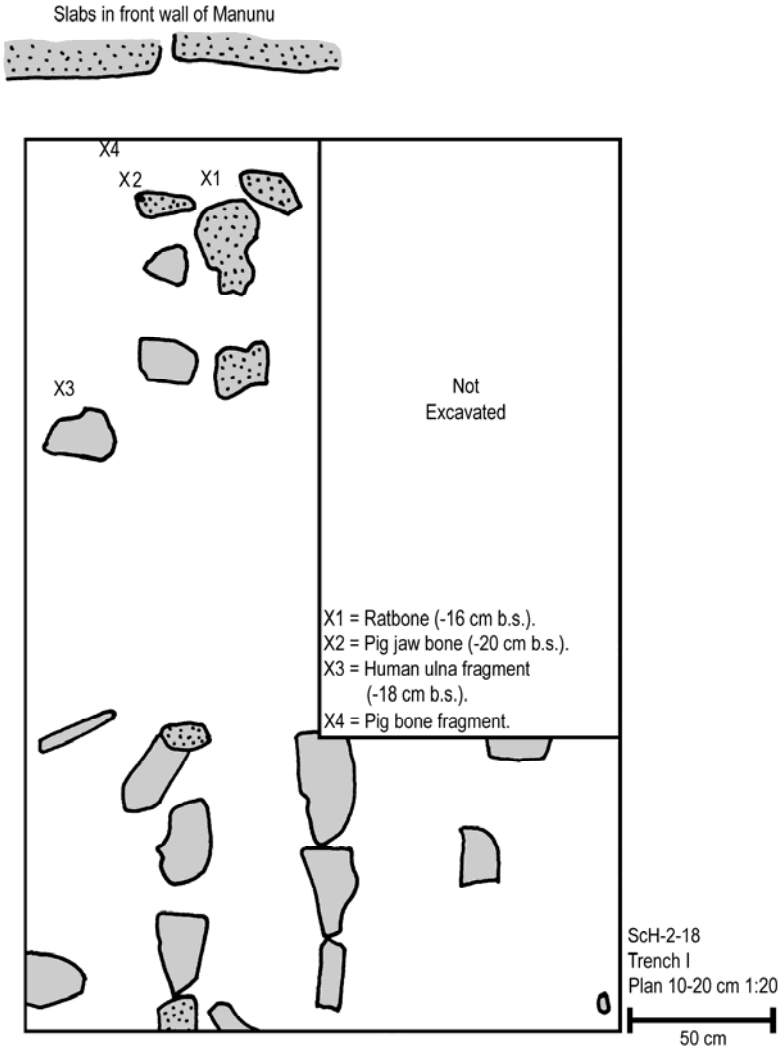


Fig. ScH-2-18, Marae Manunu, Trench I, Plan drawing 10-20 cm.

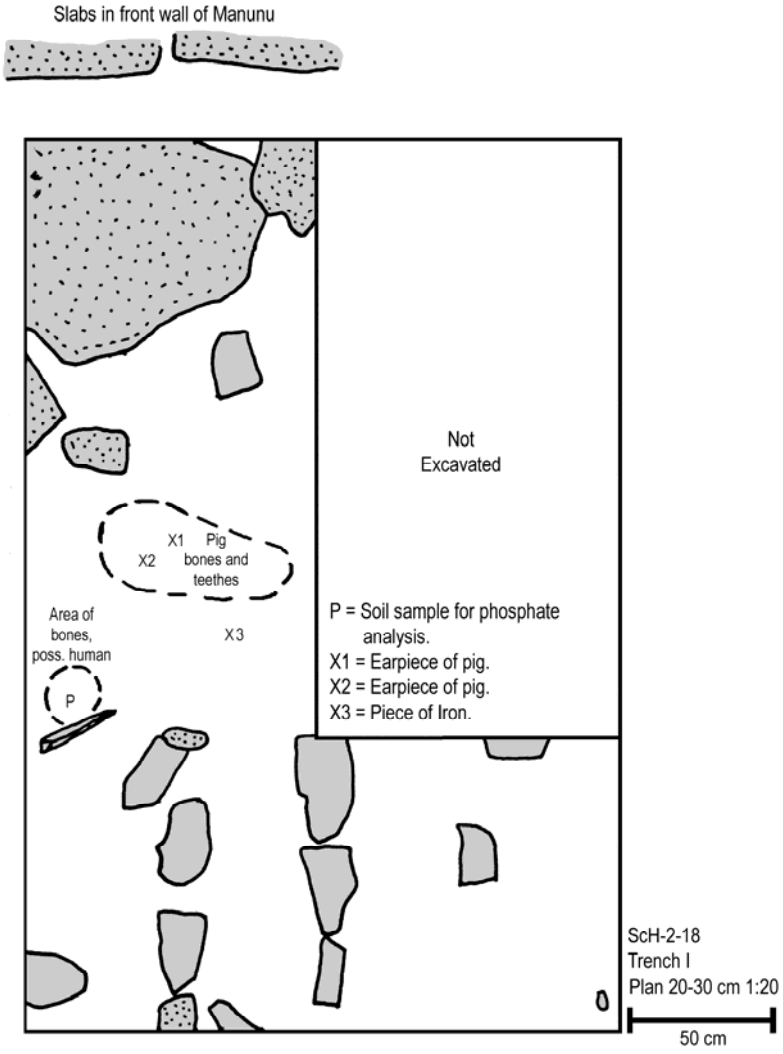


Fig. ScH-2-18, Marae Manunu, Trench I, Plan drawing 20-30 cm.

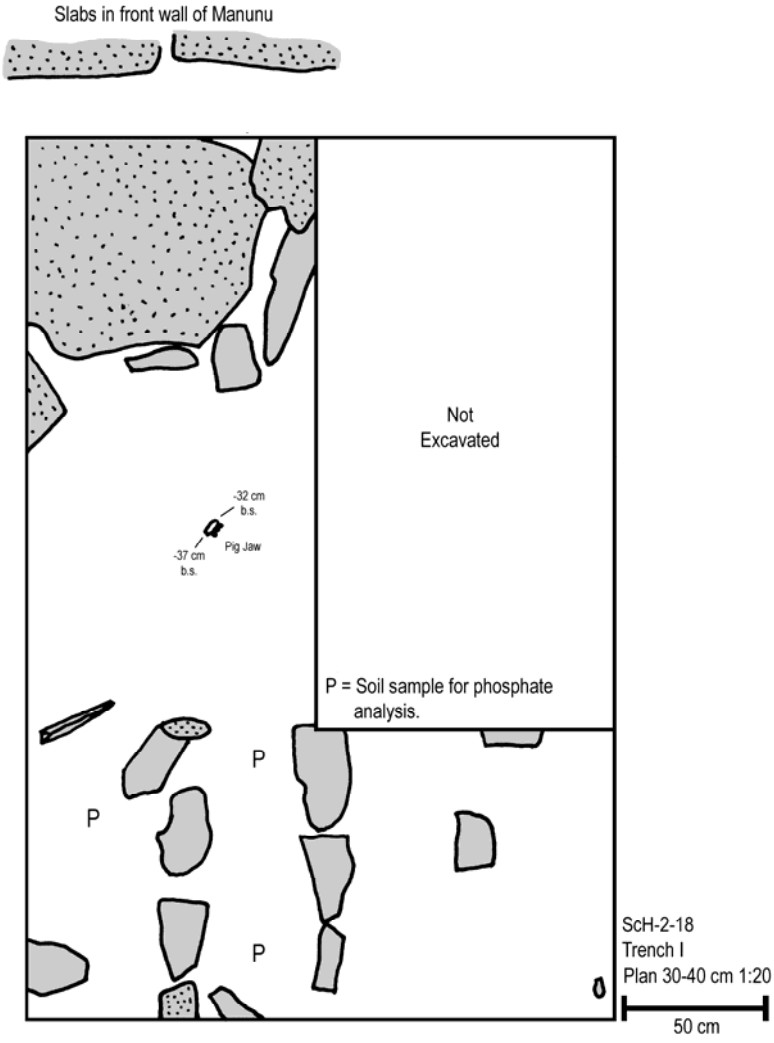
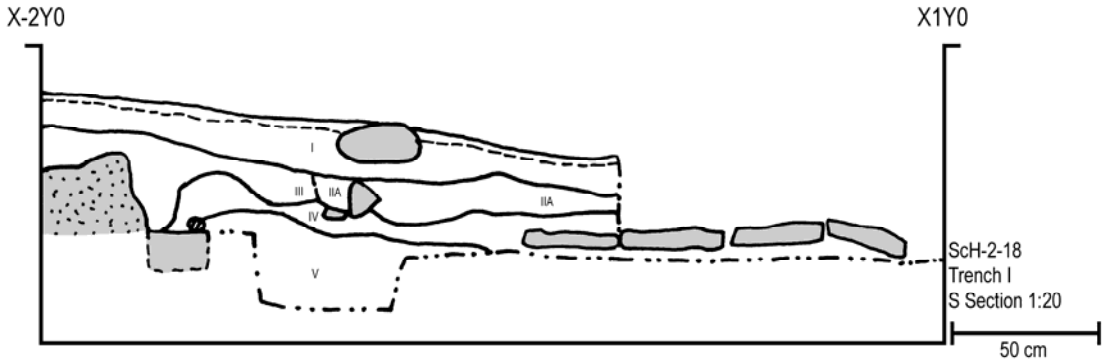


Fig. ScH-2-18, Marae Manunu, Trench I, Plan drawing 30-40 cm.

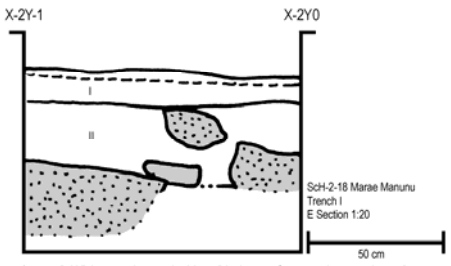
Fig. ScH-2-18, Marae Manunu, Trench I, picture of bottom of trench.

Fig. ScH-2-18, Marae Manunu, Trench I, Unit X-1Y-1, Picture of pig jaw found on top of layer IV.



Layer I: White coral gravel with a thin layer of vegetative coral sand on top (dashed line).
Layer IIA: Brown to dark-brown fine vegetative soil mixed with sand, contains coral gravel; traces of charcoal.
Layer III: Coral lumps and basalt stones mixed with light-brown to brown vegetative soil; traces of charcoal.
Layer IV: Grey to green-grey coarse sand; traces of charcoal.
Layer V: Yellow-grey coarse marine sand. Sterile.

Fig. ScH-2-18, Marae Manunu, Trench I, N Section drawing (X-2Y0 to X1Y0).



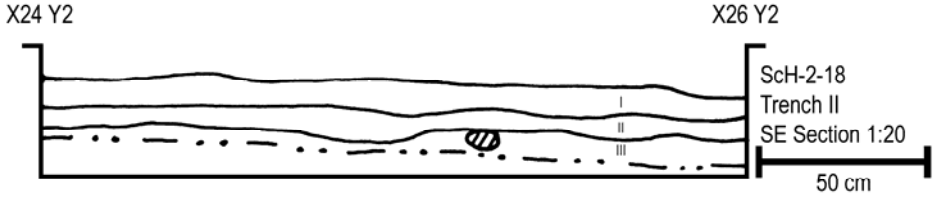
Layer I: White coral gravel with a thin layer of vegetative coral sand on top.
Layer II: Coral lumps and basalt stones mixed with sand, contains coral gravel; traces of charcoal.

Fig. ScH-2-18, Marae Manunu, Trench I, E section drawing (X-2Y-1 to X-2Y0).

Trench II ($X_{24}Y_0$ / $X_{24}Y_1$ / $X_{25}Y_0$ / $X_{25}Y_1$)

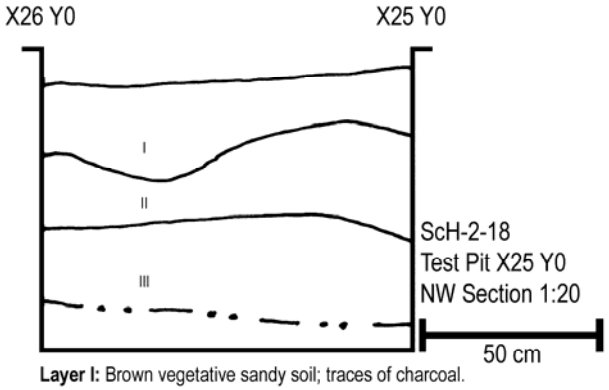
Unit $X_{25}Y_0$, which was part of the test-pit units, was excavated down to c. 30 cm and then taken down by shovel to c. 100 cm in the NW-part of the unit. This latter part was not screened. The rest of the units were only excavated by trowel down to c. 20 cm.

Trench II was an expansion of TP $X_{25}Y_0$, in which a total of 4 sq.m. was excavated. In TP $X_{25}Y_0$ we had found a lot of pig bones mixed with brown soil and scattered charcoal in the top 10 to 15 cm b.s. The same was encountered in the other units, with higher concentration of pig bone fragments in TP $X_{24}Y_1$ and $X_{25}Y_1$. The latter had also a higher content of scattered charcoal. Due to the quantity of small fragments of pig bone none have been marked on the plan drawings. The reason for the concentration of fragments of pig bone in this area might be that a *fata rau* have been located in the vicinity.



Layer I: Brown to dark-brown vegetative sandy soil with some coral lumps and gravel; traces of charcoal.
Layer II: Dark grey to light-brown sand with coral gravel and lumps.
Layer III: Yellow-grey coarse marine sand. Sterile.

Fig. ScH-2-18, Marae Manunu, Trench II, SE section drawing.



Layer I: Brown vegetative sandy soil; traces of charcoal.
Layer II: Yellow-grey coarse marine sand. Sterile.
Layer III: Grey marine sand. Sterile.

Fig. ScH-2-18, Marae Manunu, Trench II, NW section drawing of Test Pit X25Y0.

Trench III ($X_{10}Y_8$ / $X_{10}Y_9$ / $X_{11}Y_8$ / $X_{11}Y_9$)

We decided to expand TP $X_{10}Y_{10}$ because we wanted to see if there could be any traces of ritual activity that had taken place on the courtyard just in front of the *ava'a*. Except for TP $X_{10}Y_{10}$, the units were only excavated by trowel down to c. 20 cm.

Traces of cultural activity were rather slight. Except for one glass bead and three human teeth, we only discovered some scattered charcoal and a couple of modern nails. The glass bead and teethes might be an indication that this area was a spot where human sacrifices were presented to the gods on the *ava'a*.

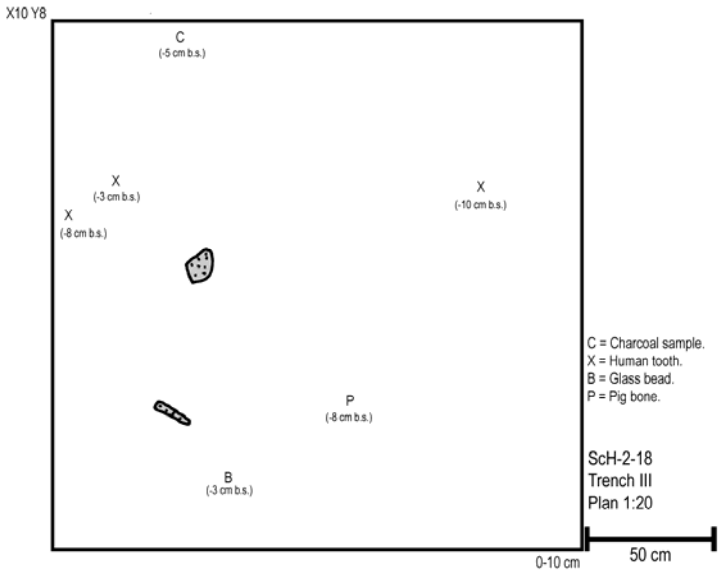
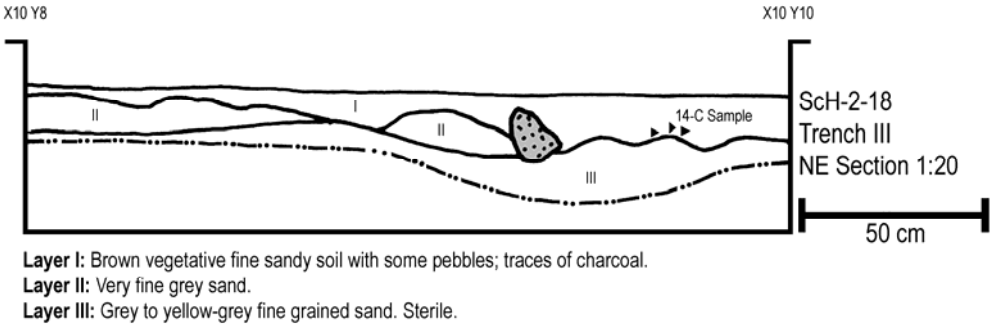
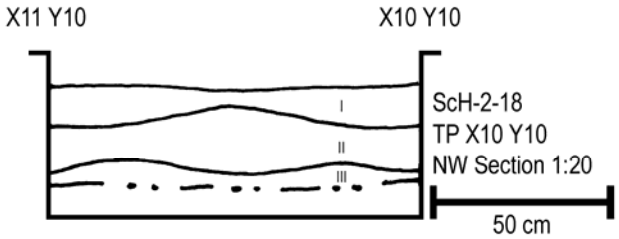


Fig. ScH-2-18, Marae Manunu, Trench III, Plan drawings.



Layer I: Brown vegetative fine sandy soil with some pebbles; traces of charcoal.
Layer II: Very fine grey sand.
Layer III: Grey to yellow-grey fine grained sand. Sterile.

Fig. ScH-2-18, Marae Manunu, Trench III, NE section drawing.



Layer I: Brown to dark-brown vegetative sandy soil; traces of charcoal.
Layer II: Yellow-grey coarse marine sand. Sterile.
Layer III: Grey hard packed marine sand with coral lumps.

Fig. ScH-2-18, Marae Manunu, Trench III, NW section drawing of Test Pit X25Y0.

Soil samples for phosphate testing

A total of 60 soil samples from between -5 and -10 cm b.s., in the area between topsoil and sand, were collected. These are going to be analysed and reported at a later stage.

Conclusions regarding the excavations at *marae* Manunu

Preliminary, the findings from the excavations of *marae* Manunu is rather slight. Future analysis of the iron piece and in particular the glass bead might give additional regarding

early-contact ritual activity at this place. Future phosphate analysis of soil samples might give additional indications of ritual activity.

Through the findings in TU-I of a skull bone under the back-wall coral slab and the fragments of pig bones in Trench I on top of a sand layer predating the construction of *marae* Manunu, we will be able to date the construction of *marae* Manunu.

Only one ^{14}C sample has so far been analysed. A piece of the pig bone found in Trench I (see Trench I, Plan 30-40 cm) was submitted to Waikato Laboratory for ^{14}C analysis and returned a date of 306±42 BP (Wk-14603). Since we believe the pig bone to have been deposited at the site before the construction of the *marae*, this would indicate that *marae* Manunu was built sometime after AD 1600. However, the isotope values for this sample indicated a possible 32% marine diet, and further investigations are necessary before calibration of the sample is undertaken.

The findings of scattered charcoal and plenty of pig bone fragments in Trench II indicates some kind of ritual activity at this spot. Most probably an offering altar, or *fata-rau* have been located here. We will be able to securely date this activity.

The excavation of TP X18Y6 inside the round ended house, or *fare pote*, believed to be a *fare-ia-manaha* is very interesting. We found the remains of pig, sheep / goat, cat, rat, fish, and bird in this unit, which indicates that the house has been used not only for the storage of drums, but for habitation or ceremonial eating as well. As of yet we have not obtained any dating of this activity. The sheep / goat and cat bones may indicate contact period activities or be recent material, however found among the other bones.

Fig. ScH-2-18, Marae Manunu, Trench I, picture showing the trench after it has been refilled.

15. Excavation of marae ScH-2-19, Marae Mata'ire'a Rahi, Mata'ire'a Hill

Mata'ire'a Rahi was the national *marae* of Huahine and consequently the most important religious structure on the island. It is located on the summit of Mata'ire'a Hill, on land Tehu'a, just above the present village and almost directly across from *marae* Manunu on the other side of the lagoon lake Fauna Nui. Teuira Henry says that the royal investment where performed at this *marae* (Henry 1928:195), and that it was also the place for the *pa'i atua* ceremony (Henry 1928:221).

In a recital by Pati'i, high priest of Mo'orea, the founding of *marae* Mata'ire'a Rahi is thus remembered:

> *"I au atu Rua-hatu, ari'i o te tai euea, i Huahine nui, e ua vahi ihora i na ava, O Apo'o-uhu e o Pe'i-hi; fao ihora i te Marae, o Mata'i-re'a. Tu'u i te outu i tai o Manunu-i-te-ra'i, o Vai-ta-raea te vai. Pâ ihora i te atua, o Tane."*
>
> "Rua-hatu, king of the mighty ocean, swam to Great-Huahine, where he broke open the passages, Apo'o-uhu (Aperature-of-the-parrot-fish) and Pe'i-hi (Prayer-for-fishing), and he erected the corner stones of the temple Mat'i-rea (Breeze-of-plenty). The cape outside is Manunu-I-te-ra'i (Benumbed-of-the-sky), and the water is Vai-ta-raea (Water-of-over-exertion. That [region] was given to the god Tane" (Henry 1928:452).

There is information about this structure from the early 19th century, descriptions by people who was accompanied to the site by a man holding an important function in the old religion. In this case we can then follow the general state of the monument from the 1820s up until today. Therefore, both Daniel Tyerman & George Bennet's and K. P. Emory's descriptions are quoted in full, although the latter description incorporates the essential parts of the former authors text.

Description of the marae by Daniel Tyerman & George Bennet 8. January 1822

"The great *marae*, so dedicated to Tani, stands superior among all these, being nearly a hundred feet by eighty in length and breadth, with walls in some parts nine feet thick. In the centre of this rude edifice, Tani's bed is seen, on which his idol was laid when prayers were offered to it, and near that another platform, which the dumb stock occupied on special occasions. At the distance of thirty feet, in front of the *marae*, is the usual raised seat for the priest when he performed his devotions; and, near the same, what may be called the altar, consisting of a flat flag-stone and an upright one, on which the animals, offered in sacrifice, were formerly slaughtered; these were swine and fowls. But the altar on which the bodies of the victims, when slain, were presented, was a frame of wooden piles and planks, sixteen feet long, six wide, and ten high. On these occasions, the fowls of the air had plenteous feasting. Near the spot were two large heaps of bones, principally the sculls of hogs. On the declivity, immediately below the *marae*, are two small terraces, raised to the height of twelve inches each from the ground, and on the lower side of these are stationed eight insulated stones, set up at some distance from one another, designating, by their position in reference to the temple, that part of it which particularly belonged to each of the eight districts of the island; and round which the inhabitants of the same, on public solemnities, congregated in tribes, as we were given to understand.

On the north of the *marae* was Tani's house (now destroyed), a little wooden chamber, built on posts, twenty-five feet high, and to which there was no access except by climbing one of them. This was the sanctuary where the image was usually kept, and from and so which it was always carried by our companion, Toumata, till the day when the idol, the sanctuary, and the worship of Tani were destroyed. … … … It ought to have been mentioned that on one side of Tani's house there is a remarkable stone, set on end, which (like the tree on the *motu*, formerly mentioned,) is said to have caught his long tail, when, from the top of it, he attempted to mount into the air on a journey of mischief. … … …" (Tyerman & Bennet 1831, vol. 2:282-283).

"Description" by Teuira Henry

What follows is the information concerning the *marae* Mata'ire'a Rahi that is found in "Ancient Tahiti", collected by John Muggridge Orsmond and later edited and published by his granddaughter Teuira Henry (1928).

"In a dense old forest the level summit of Maeva hill is crowned with a high stone wall about 120 feet square, forming a *marae* in two sections. A passage like a narrow lane leads through the centre from the ascent, and by it the priests entered and carried their offerings to the god Tane, sometimes including a human sacrifice" (Henry 1928:148).

Henry states that the following information was:

"Received from the late Huahine scholar, Raiti, grandson of Tua-roa-nui-i-aae-pau (Great-long-back-resting-in-peace), the last high priest of Maeva, whose ancestral marae was Oro-hahaa (Warrior-working) at Maeva (Henry 1928:101, note 8).

"The national *marae* of Huahine-nui were Faaou-aitu (Entering-of-the-gods), upon the hill of Mata'i-re'a (Joyous-breeze), another name also commonly give to the *marae* itself, and Toerau-roa. The national *marae* of Huahine-iti was Anini (Dizzy).... ... .The warriors prepared themselves for the decisive blow; and Puara'i sent his friend Pahero'o to represent him with other members of the family, who had leaning stones (*ofai-turui*) up in the *marae* of Matair'a, where they went preparatory to going to war to partake of sacred pork from the hands of the priests. But the priests seeing a stranger in the place of Puara'i passed him by unserved, as it was contrary to custom thus to substitute one person for another, and Pahero'o returned to his friend without having had his share of the repast. The kneeling stone is still shown as the Ofai'i-turui-o-Pahero'o (The-leaning-stone-of-Pahero'o).
Soon the uprising took place, and Pahero'o proved himself to be the most valiant of all the warriors in pursuing the conservative party out of Maeva, over the hills and across the strait in canoes, and at last overtaking and conquering them on the other side of the island. He had an immense *'omore* (wooden spear) which few other men could wield; and there is still shown at Maeva a marshy spot over which on that occasion he used the spear as a pathway. Finally, the old dynasty of Te-pa'u-i-hau-roa gave place to the new one, named Te-hau-mo'o-rere (The-government-of-the-flying-scion), which is the royal house at the present time" (Henry 1928:100-101).

Description by K. P. Emory between November 19. to December 13. 1925

"*Marae* Matairea-rahi, located on a hill overlooking the central part of Maeva Village (figs. 84, no. 19; 88). The common name is Matairea, derived from the name of the hill on which it stands, but according to Henry (32, p. 101), its own name is Faaoaitu (Faao-aitu). The plan of the marae (fig. 88) shows that it consists of two separate parts. Ellis and Tyerman (56, pp. 278-284) visited the *marae* in 1822, accompanied by the native who had been the official bearer of Tane's image. Through their account and description of the *marae* the function of the main divisions and features is learned. Tyerman (56, vol. 1, p. 282) clearly designates the southern part as the *marae* proper, and reveals the *avaa*, the position of the *turui* of the officiating priest, the position of the *fatarau*, and the *turui* of the representatives of the eight *mataeinaa* of Huahine:
"The great *marae* ... [is] nearly 100 feet by 80 feet in length and breadth with wall in some parts 9 feet thick. In the centre of this rude edifice, Tani's bed [the detached low platform before upright 8, fig. 88] is to be seen, on which his idol was laid when prayers were offered to it, and near that another platform which the dumb stock occupied on special occasions.

"At the distance of 30 feet in front of the *marae* [Tyerman must be referring here to the most conspicuous part of the *marae*, platform C, fig. 88, as the *marae*, whereas he had just spoken of the entire southern part as the *marae*], is the usual raised seat [probably upright 6, fig. 88] for the priest when he performed his devotions; and, near the same, what may be called the altar, consisting of a flagstone and an upright one, on which animals offered in sacrifice were formerly slaughtered; there were swine and fowls, but the altar on which the bodies of the victims, when slain, were presented, was a frame of wooden piles and planks, 16 feet long, 6 wide, and 10 high. On these occasions, the fowls of the air had plenteous feasting. Near the spot were two large heaps of bones, principally the skulls of hogs. On the declivity immediately below the *marae* are two small terraces, raised to the height of 12 inches each from the ground, and on the lower side of these are stationed eight insulated stones, set up at some distance from one another, designating, by their position in reference to the temple, that part of it which particularly belonged to each of the eight districts of the island; and around which the inhabitants of the same, on public solemnities, congregated in tribes, as we were given to understand [here again platform C, fig. 88, is referred to as the *marae*]."

Faatau, the only man at Maeva now living who is versed in native traditions, says that the southern half of the *marae* Matairea was occupied by the eight *mataeinaa* or their representatives who assembled each month for rites, and that each *mataeinaa* had a stone denoting its place in the space marked a and b on the plan (fig. 88). Faatau pointed out the northern half of the *marae* as the abode of Tane. Tane-te-tumu-o-te-fenua, he said, was god of the *marae*, and Tane-tihi-hiohio the *arii varua ino* (chief of the evil spirits).

Concerning the northern part of the *marae*, Tyerman (56, pp. 282-283) says:
“[On it] Tani’s house [now destroyed] was a little wooden chamber, built on posts, 25 feet high, and to which there was no access except by climbing one of them. This was the sanctuary where the image was kept … On one side of Tani’s house there is a remarkable stone, set on end, which … is said to have caught his long tail [like the tail of a comet or

meteor] when from the top of it he attempted to mount in the air on a journey of mischief."

Tyerman (56, vol. 1, pp. 266-267) notes that the image of Tane had been burned in his own house, Taumatai, in the year 1817, and that the image, a block of wood about the height and bulk of a very tall and stout man, had no separation of the part above,
"… whilst below, the uncouth body terminated in a point (without legs) like a cone inverted. It had likewise the usual mockeries to represent eyes, ears, nose, and mouth, and arms … The whole was covered with sennit, or platted twine, made from the fibres of the coconut."

The upright stone referred to by Tyerman, by the side of Tane's house may be one of the uprights 11 to 13, figure 88. These, however, are all probably sacred backrests. Upright 13 (pl. 7, A) was pointed out by my young guide as the *ofai turuiraa a* Paheroo (the backrest of Paheroo). The tradition in connection with this *marae* is given by Henry (32, p. 101). Some of the natives in the village claimed Paheroo's stone was on the southern division.

Ellis (17, p. 335) tells of seeing the ruins of the abode of the tii (images) of *oro-matua* (disembodied spirits) at Mata'ire'a *marae*, still standing when last, he visited it:
"It was a house built upon a number of large, strong poles, which raised the floor 10 to 12 feet from the ground. They were thus elevated to keep then [the oromatua] out of the way of men … Men were appointed constanly to attend them … and to sleep in the house at night."

Henry (32, p. 206) gives as the chief evil genii at this image house, Mauri, Puarai, and teafao, names of famous warrior chiefs of olden times.
If the house of Tane was not on the southern part of the *marae*, surely this house of the tii was not there. It may have stood on this northern part (fig. 88 e) or on the partly paved ground back of it. A careful search for post holes might reveal the exact position and extent of these houses" (Emory 1933:133-135).

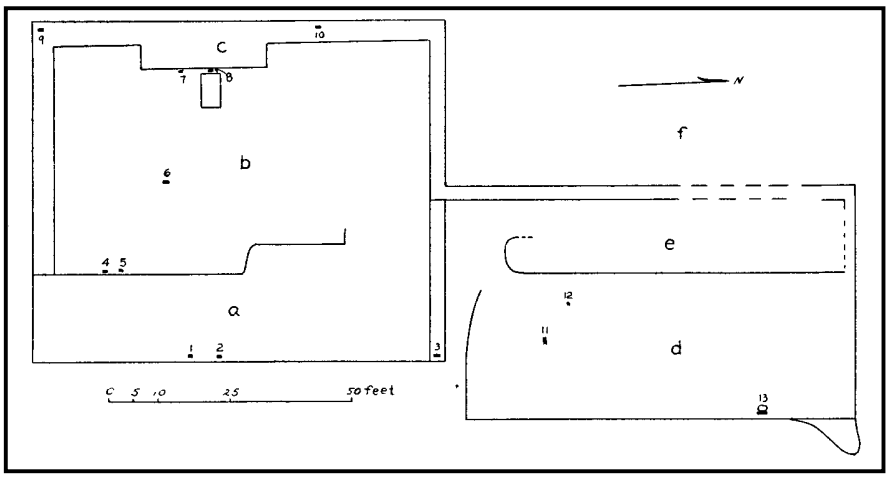


Fig. Emory's plan of ScH-2-19, *marae* Mata'ire'a Rahi (taken from Emory 1933)

“Figure 88. – *Marae* Matairea-rahi, Maeva (Site 133): a, front of southern half, roughly paved terrace reaching height of 5.5 feet along front, facing of irregular dike slabs laid up horizontally with either the side or end exposed, northern end of terrace bounded by wall 1 to 2 feet high; b, sloping surface of hillside, slightly terraced on lower (east) side, terrace facing not more than 1 foot high, along back and sides runs wall 1 to 4 feet high, 3 to 5 feet wide; c, stone platform 3 to 4 feet high built up of horizontal dike slabs and paved with flat stones, top flush with top of rear enclosing wall, lower part of court facing concealed by line of coral slabs 3 inches thick set on end or on edge; d, front of northern division of *marae*, 15 feet high along front, faced in same way as a and paved with heavy, flat stones, northeast corner buttressed by sloping face; e, earth-filled terrace 2 feet above d, faced with single course of boulders, south end clearly rounded; back of e, wall 4 feet high on inside, 1 foot high on upper side, starts from southern division of *marae* and runs north, disappearing almost completely at north end; f, sloping ground partly paved; 1-3, basalt uprights; 1, 1 foot high, 1 foot wide, 4 inches thick; 2, 2 feet high, 1.5 feet wide, 5 inches thick; 3, 2 feet high, 1.5 feet wide, 4 inches thick; 4-8, basalt uprights; 6, 2 feet high, 2 feet wide, 6 inches thick; 7, 1 foot high; 8, 14 inches high, 10 inches wide, 2 inches thick, before upright is small platform 1 foot high; 9, 10, basalt uprights 1 foot high, 1 foot wide, 3 inches thick; 11-13, uprights; 11, basalt, 20 inches high, 12 inches wide, and 3 inches thick; 12, basalt, 12 inches square; 13, limestone, 27 inches high, 33 inches wide, 4 inches thick” (Emory 1933:134, fig. 88).

Description of the marae *20. October 2001*

The Matairea-rahi is a complex structure consisting of a main *marae*-proper with two or three platforms attached to it. It is located on an eastward slope almost on the top of Mata'ire'a hill, with the *ahu* at the uphill end. The “long side” of the courtyard is oriented E - W, and the attached structures are oriented with their long axis N - S. The attached structures are named A - C (from East to West).

The *marae*-proper is enclosed on three sides, S, W, and N, with a wall 1.5 m wide and 0.5 to 1 m high. This wall is a double-wall of stacked basalt stones, with occasionally a slab on end in the first course. In the east, there is only a retaining wall, 2 – 3 m in height. The courtyard measures about 31 m from W to E, and 38 m from S to N, and is partially build slanting upwards, in two steps. There is one limestone upright in the SW corner of the wall and one almost in the NE corner, in basalt.

The *ahu* is built with both limestone slabs on end and with stacked basalt stones. The height is 0.5 m at the back and higher in the front. It is 9 m long and 1.5 m wide. The *ahu* is built into the wall, but it seems to pre-date the wall. Limestone slabs making up either end of the *ahu* can be seen between the basalt stones of the wall. Some slabs, which are intentionally broken off almost at ground level, can also be seen under the stacked basalt stones on the rear-wall of the *ahu*. The enclosing stone wall is built in line with these broken slabs. On top of the wall there is build a second step on the *ahu* with both basalt

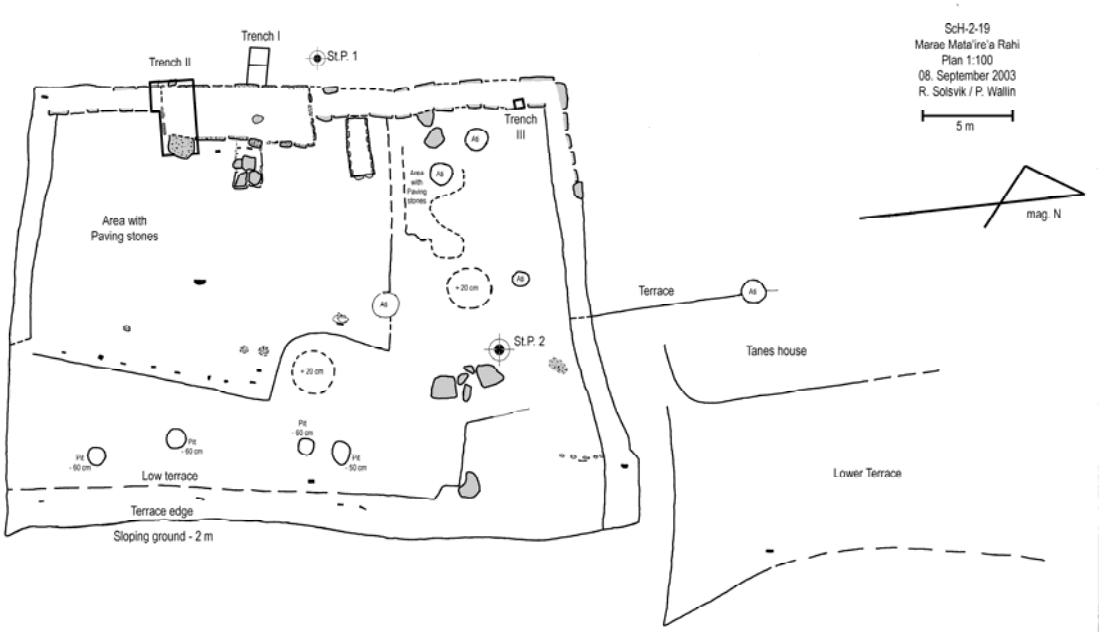


Fig. Plan drawing of ScH-2-19, Marae Mata'ire'a Rahi, Huahine, Society Islands. With the location of trenches I - IV.

stones, limestone and coral. The filling of *ahu*, as in the enclosing wall, is mainly basalt stones. In the NW corner, there is a small basalt upright 25 x 35-40 cm and facing S.

In front of the *ahu* there is 4 small basalt uprights, the northernmost have fallen, located at the middle of the *ahu*, 0.2 m wide, 0.3 m high and 0.1 - 0.2 m thick. Just in front of the two uprights in the middle, there is what seem to be an *ava'a*, about 2 m (NS) and 1 - 1.2 m (WE), made of basalt stones placed on their sides with 5 large basalt slabs as a lid or cover on top. The largest of these slabs measures about 0.5 x 0.6 m.

A short distance to the North of the *ahu* there is a small enclosure made out of limestone slabs on side, about 4 m (WE) by 1 m (NS), and about 0.2-0.25 m high, and filled mainly with basalt stones. This feature is built into the wall in the W.

In front of the *ahu*, offset a little to the S, there is a backrest. This is situated on the middle of a kind of pavement/platform-step, which is built on the courtyard (see field drawing for shape). At the very E of this pavement there is 8 uprights at the end, and in N there is one more, placed a little closer to the *ahu.* At the N end of this pavement there is a huge and old tree growing, and just to the S of this three there is another backrest, but it may be a modern one. There are also 4 uprights on the far side of the courtyard on top of the retaining wall in E. In front of these uprights there are 4 pits (about 0.8 by 0.8 m).

Structure A: This is a basalt platform, build 1.5 m to the N and NE of the *marae*-proper, oriented with its long axis NS, and about 26 m by 10-10.5 m. The sides of this structure seem to curve inwards on all sides. In the middle, there seems to have been a kind of a

basalt stone pavement, about 1 to 2 stones higher than the rest of the platform. In the "corners" of this pavement there is 4 uprights, and one more in the middle of the W side. Besides these there is also an upright on the S end of this pavement. The pavement has a tree in the middle.

Structure B: To the W of this platform, and in connection to it, there is a round-ended terrace, about 1-2 courses high. About the same length as Structure A, but not so wide. This might have been a house platform. No pavement and no uprights on this terrace.

Structure C: This is a terrace just W of B. It consists mainly of a line of stones on its E side. No particular features found.

Comparison with Tyerman & Bennet's and Emory's descriptions

Tyerman and Bennet describes the *marae* as 100 [30.48 m] by 80 [24.38 m] feet, while Emory gives the size as about 85 [25.91 m] by 70 [21.34] feet (Emory 1933:136). The real figure is actually closer to Tyerman and Bennet's figures than Emory's (Cf. Sinoto 2002:256, fig. 4b). Our own figures are taken as the longest possible length and width. This indicates that the E side of the *marae* might have been heavily overgrown when Emory visited the site in 1925, at least on the outside of the structure. This is even more evident when the general form of the *marae* is considered. In Emory's drawing it is almost square, while it actually is wider in the E than in the W. It seems that Emory measured the length and width of the *marae*-proper as between the inside of the enclosing stone wall. The rest of Tyerman and Bennet's description seems to correspond to the present structure, despite some confusion of terminology. The most remarkable is that they do not mention the platforms to the N of the *marae*, but only describes this area as the place where Tanee's house was erected.

The most evident difference between Emory's description and the state of the *marae* today is that he did not map the true form of the structure. He also missed the second enclosure/platform just to the N of the *ahu*, which must have been overgrown or in bad shape in 1925. Later this has been restored by Dr. Sinoto. There are also some uprights and backrests that did not stand when Emory was there.

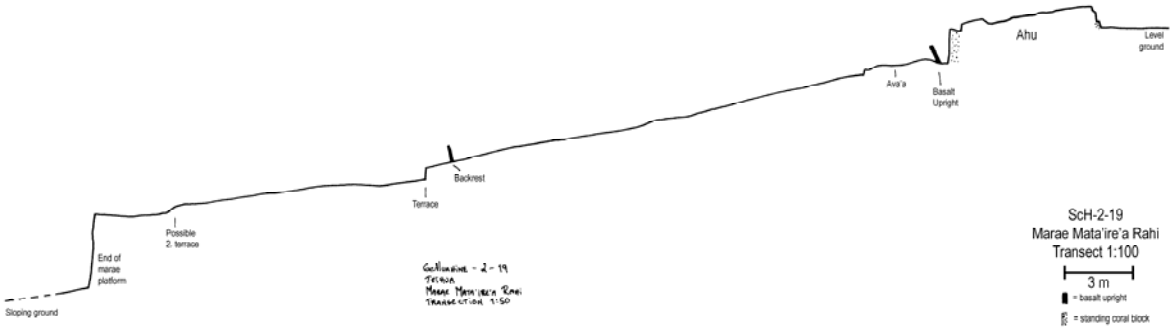


Fig. ScH-2-19, Marae Mata'ire'a Rahi, Transect drawing through the centre of the marae.

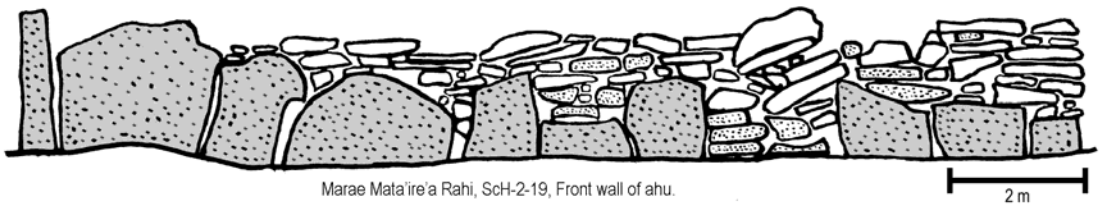


Fig. ScH-2-19, Marae Mata'ire'a Rahi, drawing of the front-wall of the ahu.

Excavation of the structure

One large trench 2x6 m (Trench II), was placed at the S-end of the *ahu*, exposing both the rear-wall and the S-end of the *ahu*, in order to investigate the construction of the *ahu* and the relationship between the current *ahu* and the enclosing wall of the *marae*. This location was chosen to facilitate the restoration of two fallen slabs, one in the front-wall and one in the rear-wall of the *ahu* at this spot. However, several *toa*-trees were growing behind the *ahu* here, and thus made it practically impossible to take the trench right through the *ahu*, to expose the slabs of the rear-wall. Another trench (Trench I), located some meters to the N, was dug to expose the slabs of the rear-wall. A third trench (Trench III) 0.5 by 0.5 m, was excavated at the NW corner of the enclosing stone wall, and a 0.5 by 0.5 m test unit (Trench IV) was excavated just down slope of the *marae* platform.

Trench I, at rear-wall of *ahu*

A 1 by 2 m trench was located at the rear-wall of, and perpendicular to, the long-axis of the *ahu*. Unit 1 is located closest to the rear-wall of the *ahu*.

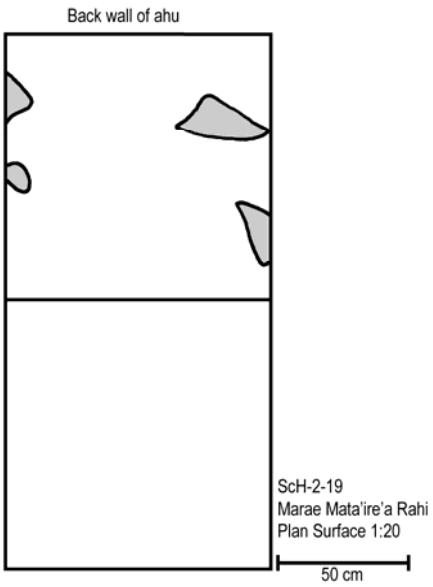


Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench I, Plan drawing 0 cm.

A torso, probably on its back and lying c. NE-SW, was found buried between and below some stones, between – 5 to 20 cm b.s. A few pieces of skull bone were located underneath a flat stone and two teethes (- 5 to 10 cm b.s.), and they all showed evidence of being fire damaged. Also, one piece of the ulna was found and parts of the ribs. The spine / ribs were not totally exposed, and at the S-half of unit 2 excavations were discontinued at -15 cm b.s. Several other small pieces of human bones and pig bones were found.

We believe that the torso was buried as such, without a head attached. The fact that we only discovered a few skull pieces seems to support this view. Furthermore, the skull fragments found at the end of the spine all showed evidence of being fired damaged. The soil around these fragments also had evidence of being burned, however, this might have been caused by a huge ati-root fire at the base of the *ahu* back-wall slabs. In the same levels as this burial we also recovered pig, dog, and fish bones.

It seems that a human torso, possibly a decapitated human has been buried very shallow at the back-wall of the *ahu*, with the upper part of the body towards the *ahu*. A few skull fragments indicate that a skull had been crushed and buried at the same time. Along with this remains of pig, dog, and fish were deposited. Both the pig and dog bones are mainly jaw parts of teeth. It seems justified to interpret this as remains of a sacrifice, possibly at the construction of the *marae* or after a re-building that took place on this structure. However, there is no stratigraphical evidence to support this.

We also found out that the bottom of the coral slabs of the *ahu* were planted about 30 to 40 cm deep into the ground, indicating that the size of the slabs once must have been quite high also at the rear side of this *ahu*.

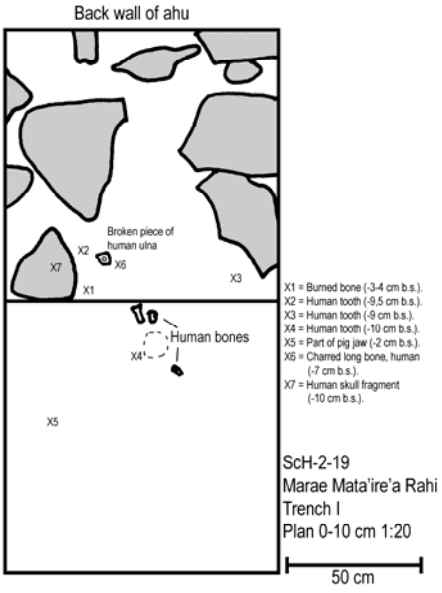


Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench I, Plan drawing 0-10 cm.

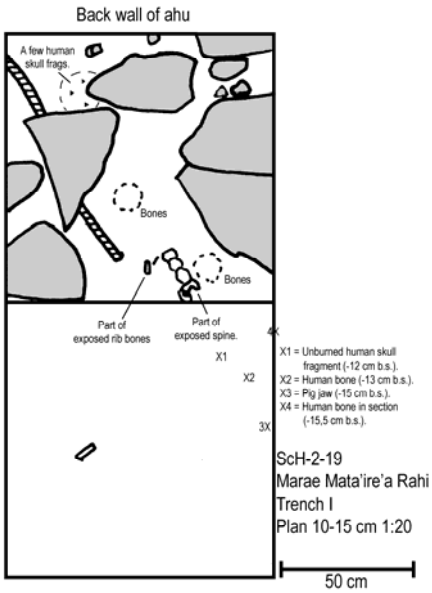


Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench I, Plan drawing 10-15 cm.

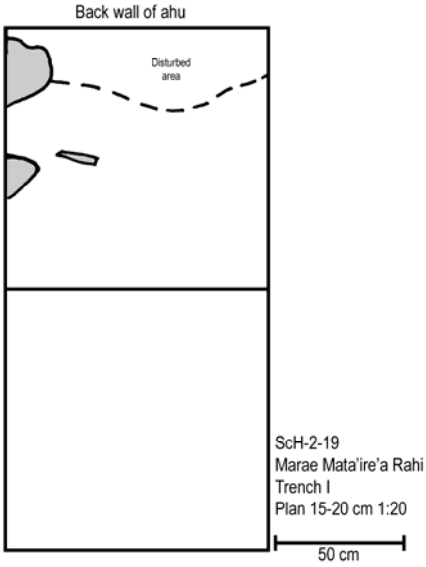


Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench I, Plan drawing 15-20 cm.

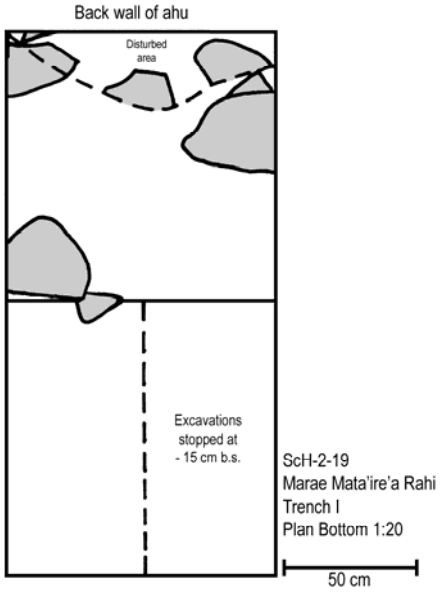
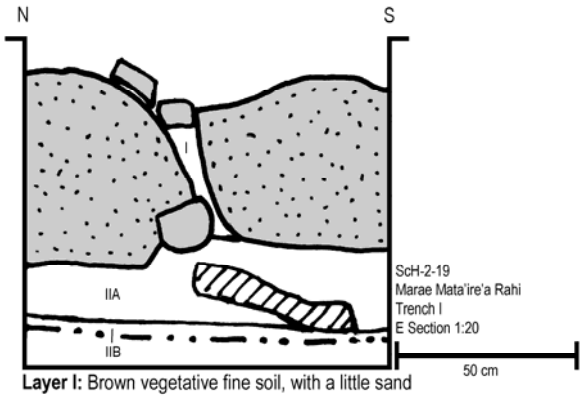


Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench I, Plan drawing Bottom.



Layer I: Brown vegetative fine soil, with a little sand inclusion; traces of charcoal.
Layer IIA: Mix of brown vegetative soil and red-brown clayey soil; traces of charcoal.
Layer IIB: Red to red-brown clayey soil, with yellow-grey decomposing stones.

Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench I, E Section drawing.

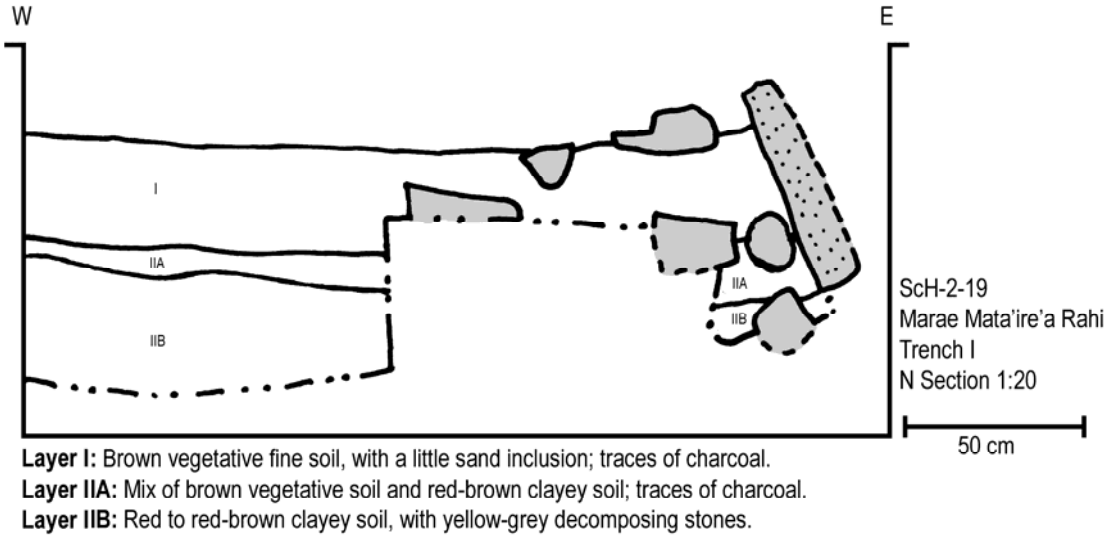


Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench I, N Section drawing.

Trench II, through the enclosing wall and *ahu*

This trench was 2 by 6 m in size and was located at the S end of the *ahu*, and oriented E/W. It was placed here since one of the large front slabs recently had fallen forward, which made the trench both an exploratory trench through the *ahu*, as well as a step in the restoration work of the disturbed part of the *ahu*. The trench also covered the junction between the *ahu* and the enclosing stone wall. We excavated down into the *ahu* in three separate areas, and they are described separately. The *ahu* was constructed on ground sloping steeply towards the East. A level point[3] was established in the SW corner of the trench, 98 cm above ground.

Inside *Ahu* 1

We began by emptying the *ahu* of its basalt stone boulders on the E side of the trench, just behind the fallen front slab. The filling consisted of mixed basalt stone material of varied shape and size. A few pieces of bone were encountered in the fill. Stone size varied between c. 15-60 cm in ø. A small area of 0.5 by 1.25 m was excavated just behind the East front-wall.

No internal construction was observed. Close to the original ground surface at the bottom of the *ahu* fill, some human, pig, bird and fish bones were recovered. Under a c. 25x20 cm large flat basalt stone a human cranium was found (Skull Concentration I, A on plan drawing). This cranium missed the jaw bone and the teeth, and no other bones of the body associated to this cranium could be confirmed, which implies that it possibly reflects a human offering placed right at the corner where the front slab and the SE slab of the S short side of the *ahu* meets. When excavating down in to the ground under the *ahu*, scattered charcoal was found in a spot c. 40 x 40 cm large, located about 1 m inside

[3] Depth below level point is given as b.st. (below stadia).

the *ahu* measured from the front slab (E on plan drawing). This may belong to an activity at this place before the *ahu* was built, or an activity that took place when the *ahu* was erected.

Under Wall

We began by removing the stones in the enclosing stone wall attached to the Southwest corner of the *marae*. The S-end of the *ahu* was exposed in its entire length and a small area of c. 0.4 by 1.3 m was excavated to understand the temporal relation between the *ahu* and the enclosing stone wall.

The enclosing stone wall was built as an attachment to the *ahu*. In constructional terms, this means that the *ahu* was constructed first and only afterwards the enclosing stone wall was build. It was also evident from the exposed coral / limestone slabs in the S-end of the *ahu* that these were quite large when the *ahu* first was constructed. After we discovered this, we re-examined the paving stones along the enclosing. All the paving stones were placed into, but not underneath, the enclosing stone wall. Consequently, the *ahu* was constructed first, then the enclosing stone wall, and last the part of the courtyard was paved.

In the exposed S end of the *ahu* we could see that formerly the *ahu* had been constructed with huge coral / limestone slabs, probably as big and high as the one standing in the SE corner. Originally then, the *ahu* of *marae* Mata'ire'a Rahi must have had a traditional coral slab *ahu* of the type found at *marae* Taputapuatea, although much smaller. The same might be seen at the back-wall of the *ahu*, where coral / limestone slabs are seen in the ground. In trench I, we found that these slabs were embedded very deep in the ground, indicating that they formerly were much higher.

During the excavation, we encountered occasional fragments of human bone, frequently tucked under or close to the coral / limestone slabs. In all the levels, we also found fragments of pig bones, usually parts of jaws or teethes.

Inside *Ahu* 2

To check further for evidence for an earlier construction stage inside the *ahu* we emptied an area from Inside *Ahu* 1 and towards the West. And an area of c. 0.5 by 1 m, called Inside *Ahu* 2, was excavated.

One burial containing at least 12 long bones and a few fragments of skull bones, were exposed in the N section c. 40-50 cm down in the fill. The burial(s) was placed in a very roughly constructed cache. The bones are laid on top of a flat stone with another flat stone on top as a lid. The top stone seems to have damaged some of the bones which were very fragile. In the process of filling in the trench we reconstructed the exposed side of the cache in order to prevent further damage of the bones. No bones were removed from the burial, and hence it cannot be dated.

The fill in this part of the *ahu* contained many small coral / limestone lumps and coral gravel, sometimes found in association with fragments of human skull bone or teethes.

This coral / limestone waste probably comes from the destruction of some of the coral / limestone slabs in the back-wall of the *ahu*, which can be seen to have been snapped off at ground level and substituted by stacked basalt boulders, was found all the way down towards the original surface on which the *marae* was build. Consequently, the *marae* must have been restored or reconstructed during the use of the temple, and this work would have probably removed or rearranged most of or all of the fill at this part of the *ahu*. It might have been done at the same time as the rough burial cache was made.

Throughout the excavation small fragments of bones of mostly human and pig bone fragments were found, but also bones of dog, fish, and bird. Most human bones were re-deposited within the *marae* before refilling the trench. Scattered charcoal was also encountered.

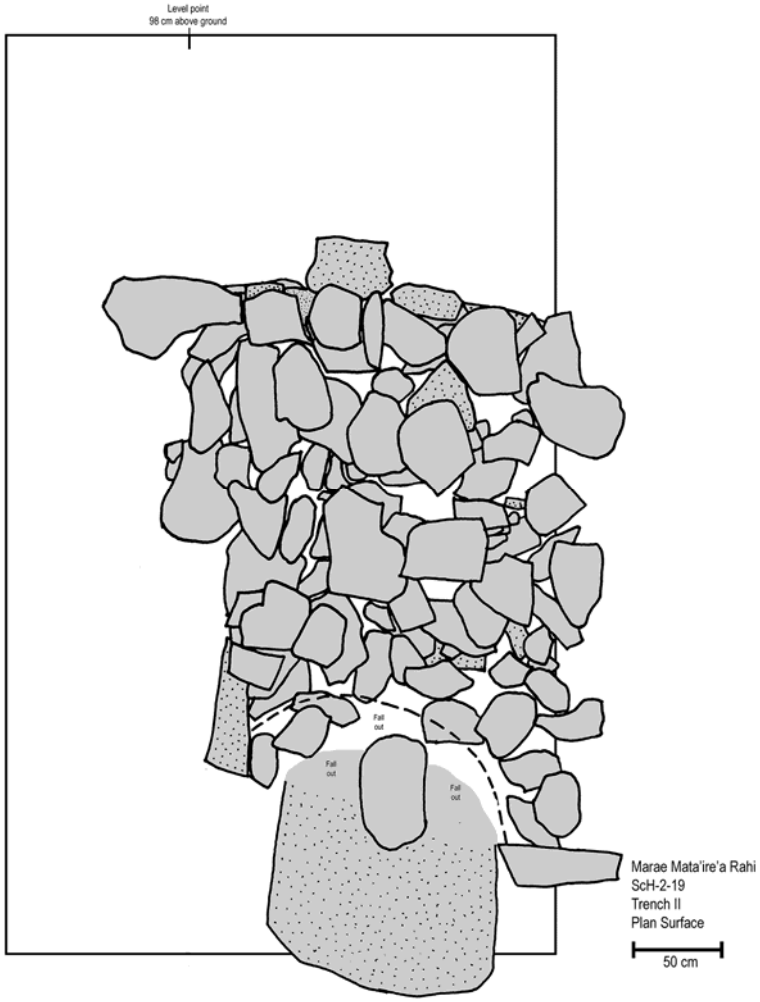


Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench II, Plan drawing Surface.

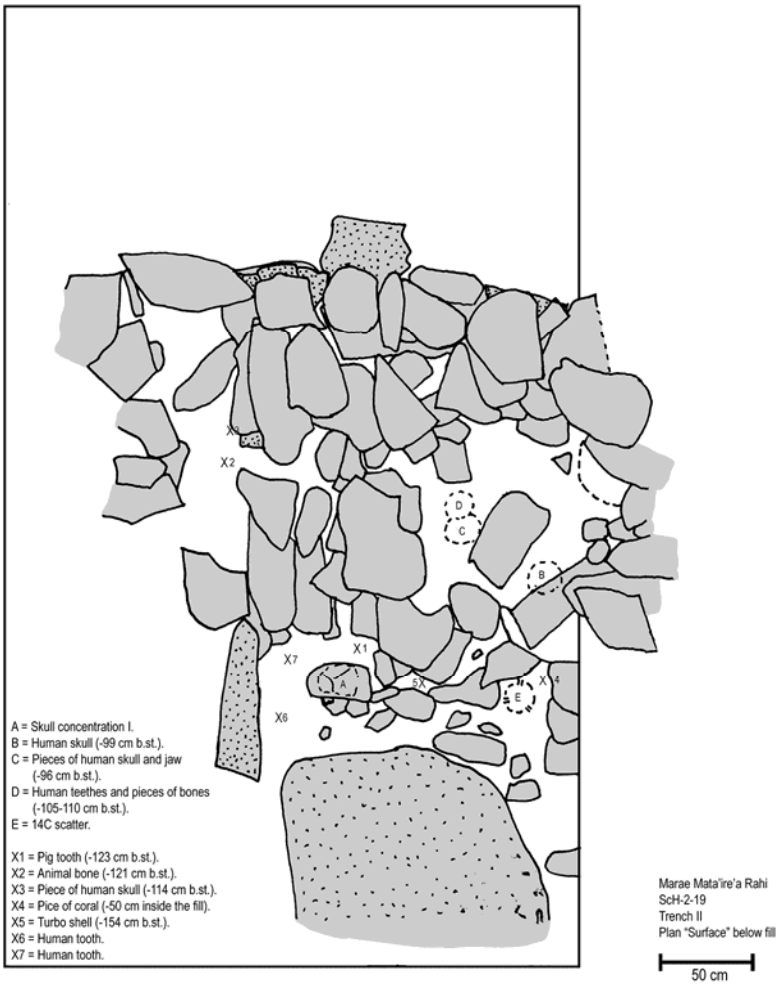


Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench II, Plan drawing Surface under fill.

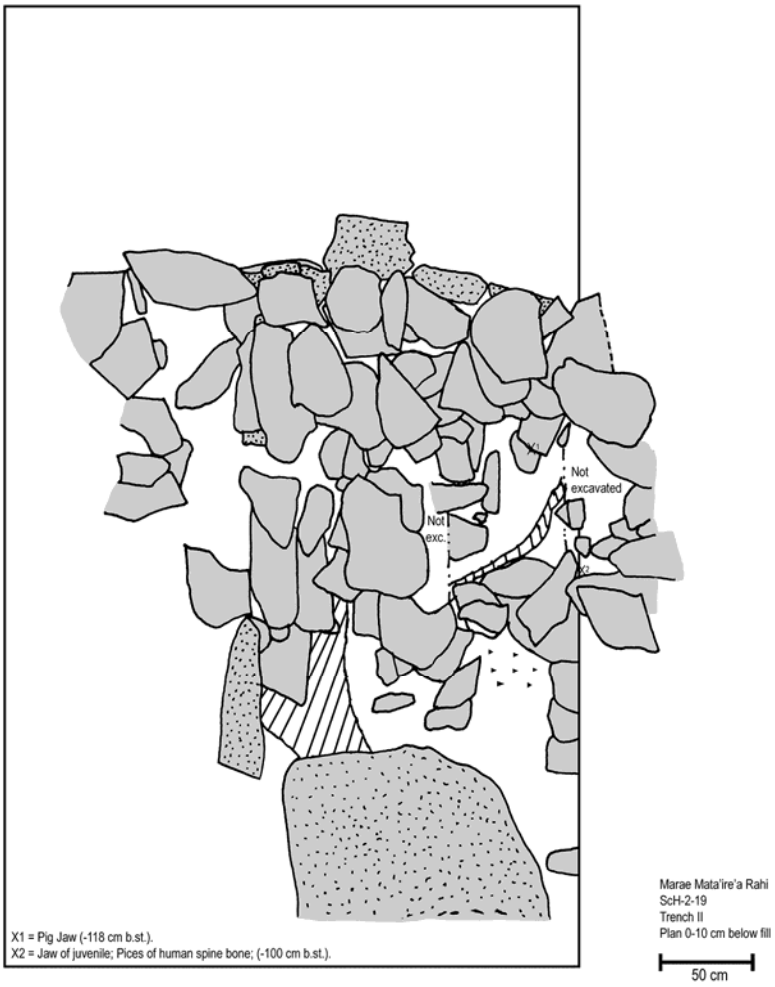


Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench II, Plan drawing 0-10 cm under fill.

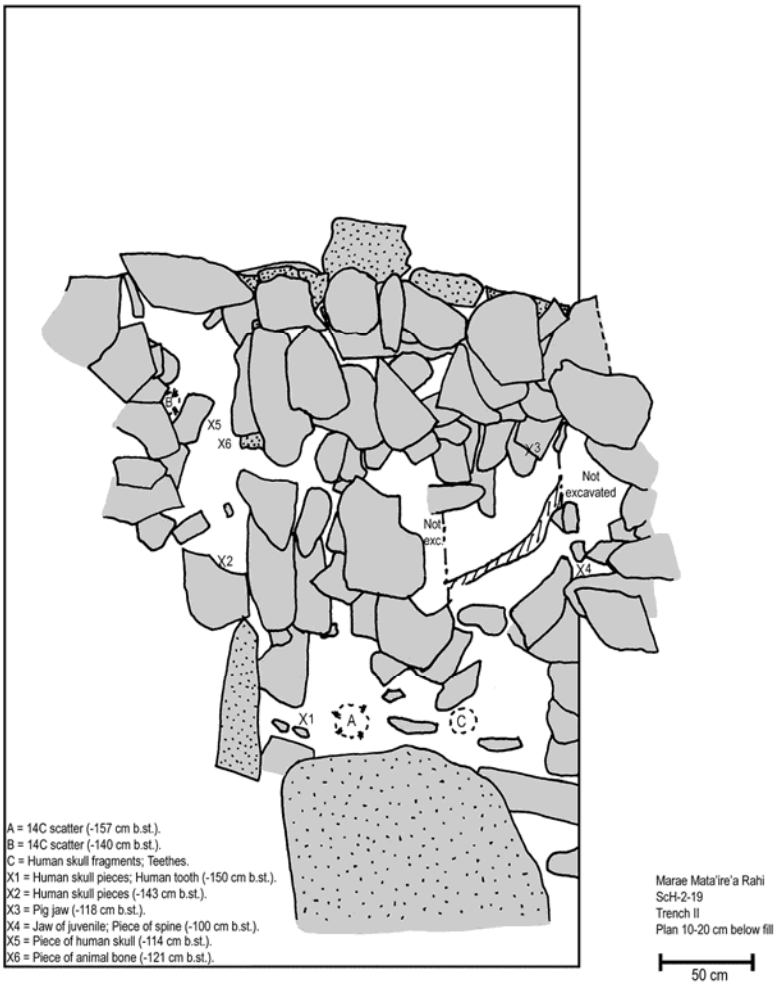


Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench II, Plan drawing 10-20 cm under fill.

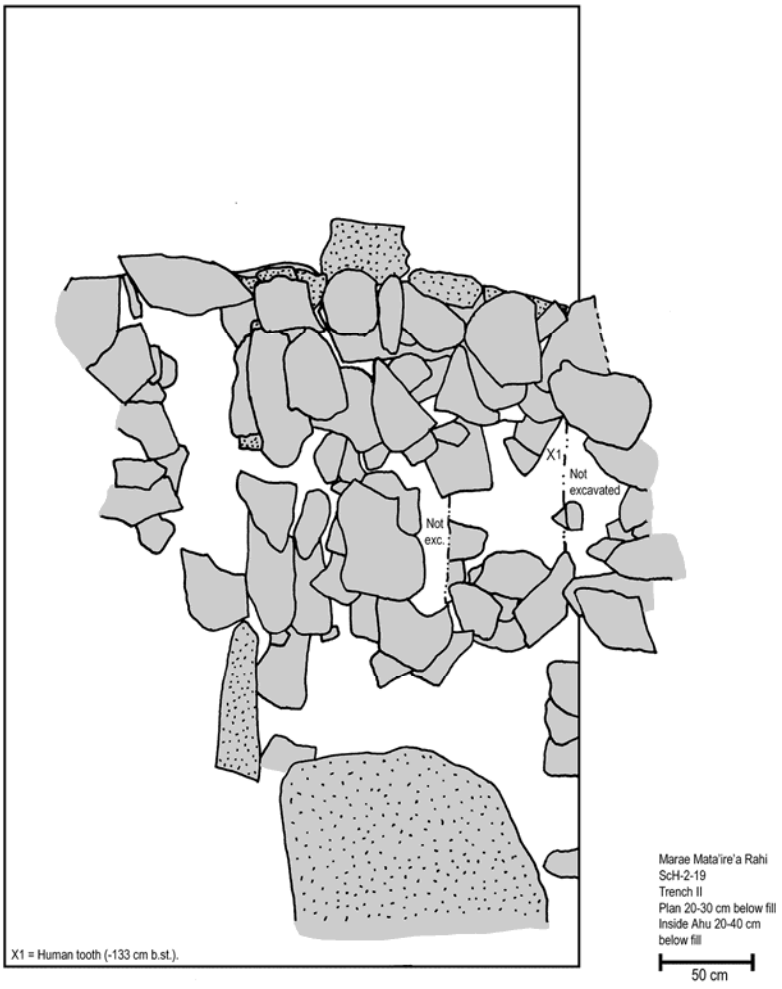


Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench II, Plan drawing 20-30 cm under fill. The area Inside Ahu 2 shows the level 20-40 cm below fill.

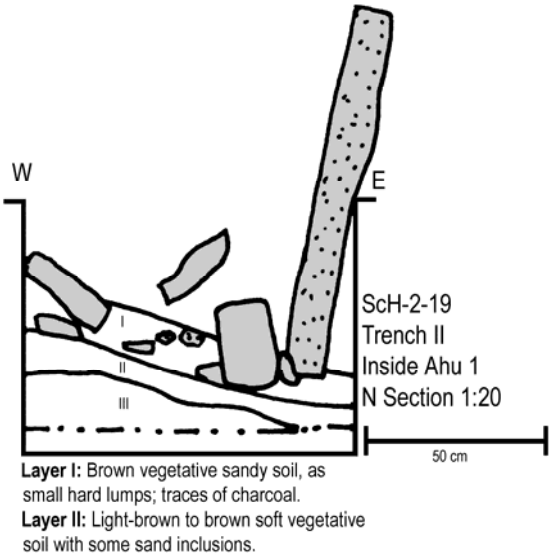


Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench II, Inside Ahu 1, N section drawing.

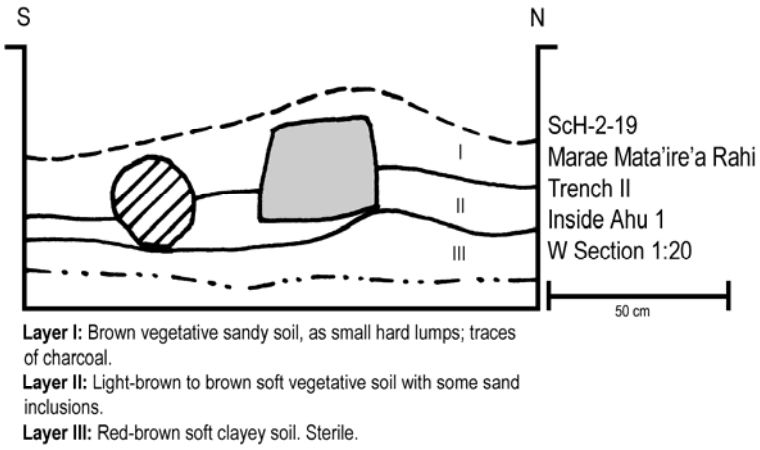
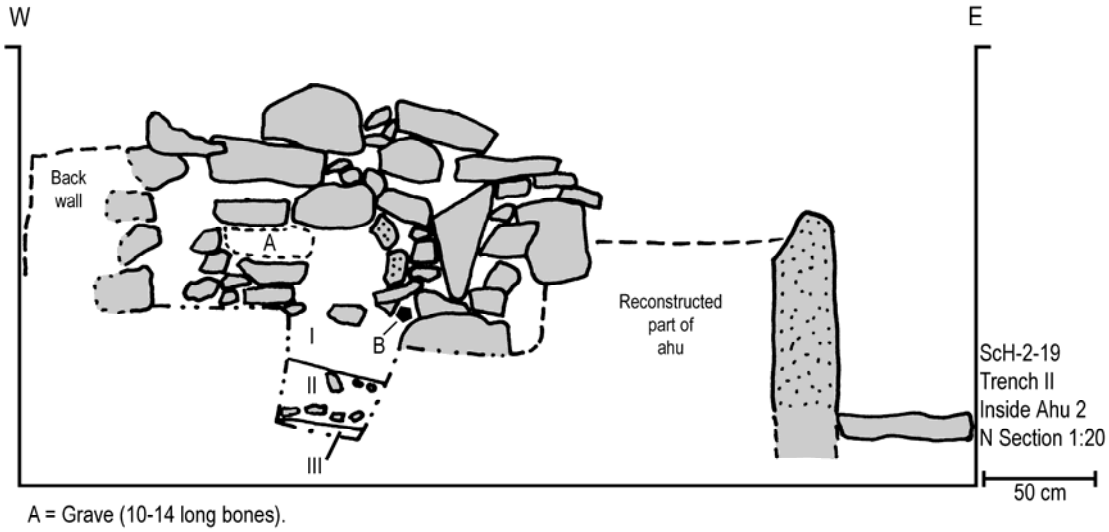


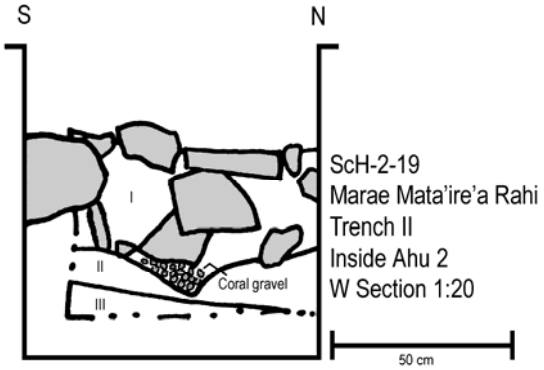
Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench II, Inside Ahu 1, W section drawing.



A = Grave (10-14 long bones).
B = Fragment of human skull, no teethes.

Layer I: Light-brown to brown vegetative clayey soil with some sand, as hard lumps; traces of charcoal.
Layer II: Light-brown to brown vegetative clayey soil; traces of charcoal.
Layer III: Red-brown soft clayey soil. Sterile.

Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench II, Inside Ahu 2, N section drawing.



Layer I: Light-brown to brown vegetative clayey soil with some sand, as hard lumps; traces of charcoal.
Layer II: Light-brown to brown vegetative clayey soil; traces of charcoal.
Layer III: Red-brown soft clayey soil. Sterile.

Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench II, Inside Ahu 2, W section drawing.

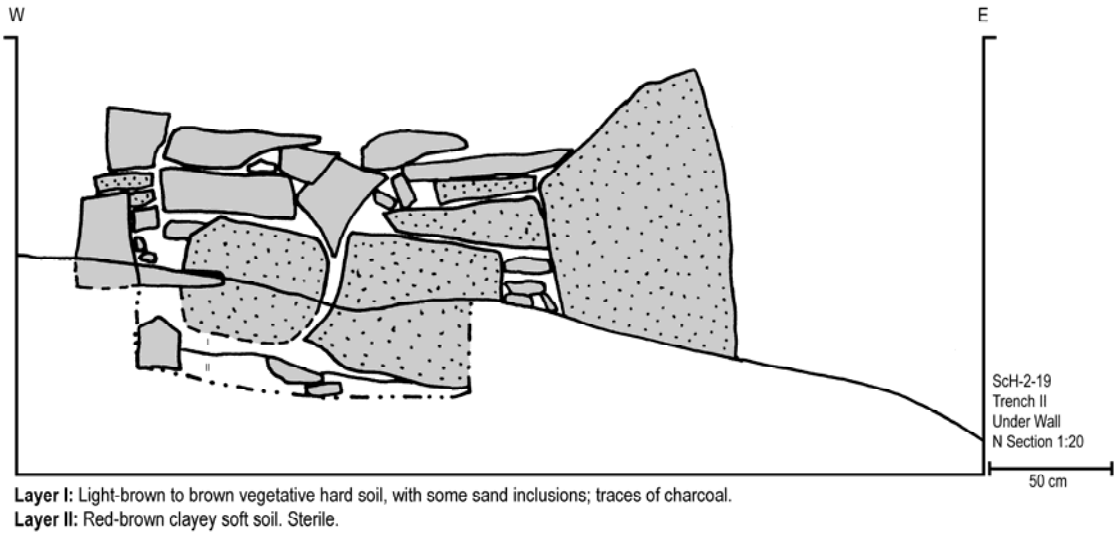


Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench II, Under Wall, N section drawing.

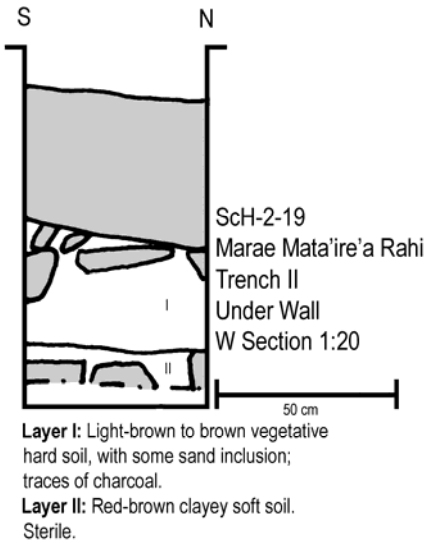


Fig. ScH-2-19, Marae Mata'ire'a Rahi, Trench II, Under Wall, W section drawing.

Testing at the enclosing wall and the *marae* terrace

Trench III, at corner in enclosing wall

One large basalt slab almost at the N-corner of the enclosing wall had fallen down, facilitating the excavation of a small, 0.5 by 0.5 m, trench under the wall. Except for two small samples of charcoal, nothing was found in this trench. The only modification of the ground had evidently been to dig out some dirt in order to place a standing basalt boulder for the enclosing stone wall.

Trench IV, at downhill end of marae terrace

One small trench, 0.5 by 0.5 m, was excavated by shovel at the base of the *marae* terrace on the downhill side, in order to see whether the slope had been modified during construction. The profile was a natural soil profile, and no modifications of the slope had been done. No profiles were drawn, but photos taken.

Conclusion regarding the excavations at *marae* Mata'ire'a Rahi

The *marae* has been constructed on an unmodified slope, which either contained some food waste as pig, dog, fish, and bird bones or sacrifices have been spread out prior to the construction of the *ahu*. The presence of human bone fragments in these layers may be taken in favour of the spread of sacrificial food as part of construction process. The excavation of trench III and IV indicates that the area which contains human and animal bone fragments are centred on the *ahu* and behind the *ahu*.

Marae Mata'ire'a Rahi have had two distinct construction phases. The first phase saw an *ahu* of probably the same dimensions as the present one, but as a classic coral slab *ahu* with large coral / limestone slabs. Whether or not this *marae* has had a surrounding stone wall or pavement in front of the *ahu* could not be determined by our investigations. The second phase probably saw a destruction of part of the *marae*, were many of the large coral / limestone slabs of the *ahu* was broken at ground level and then crushed. The coral gravel and the coral / limestone lumps was then deposited at bottom of the interior of the *ahu* and in the general fill. This indicates that the fill of the *ahu*, today consisting of large basalt boulders, have been emptied and then the *ahu* was refilled. It is probable that the burial cache found in trench II, Inside *Ahu* 2, was made at this time. In the *ahu* there is also another burial cache containing numerous long bones that is located at the top of the fill with only a flat stone as cover. This might also have been constructed during this phase of re-building the *marae* or later. During this re-building the *ahu* was remade with stacked basalt boulders and a stone wall was constructed enclosing the *marae* on three sides. Within this enclosed space, but mostly in the SW part, basalt flag stones were used as paving. The paving stones are all laid down touching the enclosing wall and nowhere does these stones go under the wall. It is probable that the pavement was put down just after the enclosing wall had been constructed.

A corpse, probably a torso, was buried behind the back-wall of the *ahu*. There is no specific stratigraphical indication telling us when this torso was buried here. In addition to this the context have also been complicated by some big ati-roots growing along the face of the back-wall slabs. Given that it is found with relative large quantities of pig bones and fragments of dog bone, it is likely that it is deposited sometime during use of, and not prior to construction of, the *marae*. It is sacrificial in nature. The burial is also very shallow, probably only c. 5 cm b.s., which might indicate that the torso have just been deposited behind the *ahu* on the ground, as sacrifices were sometimes cleaned away from the courtyard and removed in this manner as sacred refuse, mentioned by Emory as "Tiriapera (Rubbish-thrown), refuse pit or rubbish heap of a marae" (Emory 1933). The word Tu-ruma also meant "sacred refuse heap" (Emory 1933)

A interesting evidence for ritual praxis was discovered in trench II, Inside *Ahu* 1. Here a skull which was missing the jaw bone and all the teethes, had been crushed under a flat stone. The individual seemed to be a young adult. Henry T. describes the practise of bury sacrificial victims under the corner stone of the *marae* as part of the construction of a national *marae* (Henry 1928). The skull fragments in question was found at what must have been the original surface just inside the SE corner of the *ahu*.

Three samples were submitted to Waikato Laboratory in New Zealand for age determination. A sample of charcoal from a concentration of charcoal found under the fill of the *ahu* in Trench II, Inside Ahu 1 (see figure Trench II, Inside Ahu 1, Surface under fill, E). This returned a date of 387±38 BP (Wk-14604), and it is reasonable to assume that *marae* Mata'ire'a Rahi was first constructed sometime after this date. Another date on pig bone that was found in Trench II, Inside Ahu 1 (Wk-14605), in the layer under the fill of the *ahu* (see figure Trench II, Inside Ahu 1, W Section, Layer II), should be stratigraphical contemporary with Wk-14604. Wk-14605 returned a date of 225±38 BP, with d13C of 20.42. There is a possibility that the wood in sample Wk-14604 have a high inbuilt age and that the samples are contemporary. Otherwise, sample Wk-14605 might stem from disturbance in relation to the re-construction of *marae* Mata'ire'a Rahi. A third sample (Wk-14606) on bone found on top of the surface inside the *ahu*, Trench II, Inside Ahu 1 (see figure Trench II, Inside Ahu 1, Surface under fill, A) returned a date of 301±38 BP. This date is probably seriously affected by a marine diet, as the d13C value of – 16.62 indicates. If the d13C value was the sole source of calculations the marine diet of this individual would have been 49%, however, the d15N value of 10.11 indicates a lower percentage of marine diet. This sample is believed to be deposited in connection with the re-construction of *marae* Mata'ire'a Rahi, an event that likely could have taken place in the mid to late 18th century. This might also be indicated by oral history (Henry 1928:100-101).

In conclusion, we believe *marae* Mata'ire'a Rahi to have been constructed no earlier than AD 1500 to AD 1550. A re-construction of the *marae* took place evidenced by the partial destruction of the coral-slab *ahu* and building of a stacked basalt *ahu* with a surrounding stone wall. This might have taken place late in the 18th century, but this date is not conclusive.

Restoration work made on ScH-2-19, *marae* Mata'ire'a Rahi

In refilling trench II, some minor restoration work on the *ahu* of *marae* Mata'ire'a Rahi was done. The southernmost slab in the back-wall of the *ahu* had tipped backwards and was restored. The two coral slabs making up the SE corner were restored. The southernmost slab in the front-wall had also fallen out and was raised. Also, the slab to the North of this one was raised to an upright position. The Eastern most slab in the S end was dislocated during work due to the fact that the slab rested on a ati-root. Hence, we had to stabilize it. In addition to this a few basalt boulders in the N side of the enclosing wall were put in place, because they had been dislocated probably due to people climbing over the wall. Also, the slab in the location of trench III had to be put back in place. This boulder had been dislocated by an ati-root.

16. Shell and Coral Samples from Various Marae Structures on Huahine

As part of the project of dating *marae* structures in Maeva, Huahine, we have explored alternative strategies for achieving this goal. One possible way of dating the construction of Leeward Island *marae* structures may be to date the coral heads that sometimes makes up the fill of large coastal *marae* with a coral slab *ahu*. The premise for this to work is that the coral making up the fill are picked fresh from living corals in the sea. For larger coastal *marae* this might be the case. Another strategy might be to date shells which are found in relation to the sometimes-huge coral slabs in coastal *marae*. This have been attempted by Y. Sinoto in relation to tridacna shells found attached to a slab at *marae* Taputapuatea, Opoa, Raiatea (Emory and Sinoto 1965). When we investigated several *marae* in the Maeva area, we discovered sea shells inside cavities on some of the larger coral slabs making up the *ahu* at certain *marae*. It these shells have lived inside these cavities at the time the coral slab was cut out and taken from the sea, and is not just included into the slab from the time of the formation of the slab, then these shells might provide for an easy and cost-effective way of dating the construction of large coral slab *ahu* structures.

A few samples of shell and corals for future dating purposes were collected at the following structures:

***Marae* Manunu, Motu Ovarei, Huahine:** 4 samples of loose shells picked from cavities in the *ahu* slabs.
***Marae* Located Near a Water Tank on the Far Eastern End of Maeva Village, Mata'ire'a Hill:** 2 coral samples.
***Marae* Anini, Huahine:** 1 loose shell sample picked from cavities in an *ahu* slab.
***Marae* in the Grounds of Hotel Heiva, Motu Ovarei, Huahine:** 1 loose shell sample picked from cavities in an *ahu* slab.
Modern Comparison Sample: 1 sample of modern *Tua'i* shells picked in Fauna Nui opposite Maeva Village.

17. References

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|| Appendixes

Appendix 1
Habitation Site ScH-2-55-2

List of Artefacts
List of Midden samples
List of Wood, Plant and Charcoal samples

Site ScH-2-55-2

Samples for Identification and Radiocarbon Analysis on Loan to B.P. Bishop Museum, Honolulu, Hawaii

Table 1

Sample No.	Island	Area	Land	Site No.	Year	Month	Grid No.	Cm B.D.	Photo No.
Wood and Pland Material									
A	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-131.0	814
B	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-131.0	815
C	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-120.0	816
E	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-131.0	817
F	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-103.5	818
G	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-103.5	819
H	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-101.0	820
I	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-102.0	821
J	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-105.0	822
K	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-105.5	823
L	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-104.0	824
M	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-110.0	825
N	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-112.0	826
O	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-110.0	827
P	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-118.0	828
Q	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-116.0	829
R	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-114.0	830
S	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-113.0	832
S	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-113.0	831
T	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-117.0	833

V	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-126.0	834
W	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-126.0	835
X	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-133.0	836
Y	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-120.0	837
LL117-10	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre		-106.0	844
Charcoal									
D	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre	LL106	-26.0	841
J	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre	LL106	-36.0	848
A	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre	LL115	-68.5	840
Z	Huahine	Maeva	Te Ana	ScH-2-55-2	2003	Octobre	LL117	-30.0	839

Site ScH-2-55-2

Midden Samples for Analysis Loaned to the B.P. Bishop Museum, Hononlulu, Hawaii

Table 2

Island	District	Land	Site No.	Year	Grid no.	Quad.	Cm B.S.	Cm B.D.	Photo no.	Material
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	HH106	E1/2	0-10		404, 405	Shell, Coral, Bone, Teeth
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	HH106	E1/2	10-20		406, 407	Shell, Coral, Bone, Teeth
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	HH106	E1/2	10-20		793	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	HH106	E1/2	20-30		794	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	HH112		0-10		410	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	HH112		10-20		411	Bone, glazed stone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	HH112		15-20		792	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	II106	E1/2	0-10		791	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	II106	E1/2	10-20		790	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	II106	E1/2	20-30		789	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	II113	E1/2	0-10		400	Coral
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	II113	E1/2	10-20		401	Scoria
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	II113	E1/2	10-20		402	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	II113	E1/2	20-30		403	Coral, Stone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	KK114	N1/2	0-10		408	Coral, Bone, Shell
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	KK114	S1/2	0-10		191, 192	Shell, Coral, RedScoria
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	KK115	SE1/4	0-10		409	Coral
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	KK117	N1/2	0-10		181	Shell, Rock
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	KK117	N1/2	10-15		182	Shell, Rock
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	KK117	N1/2	20-30		183, 184	Shell, Coral, Rock, Red scoria
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	KK117	N1/2	30-40		185, 186, 187	Shell, Coral, Rock
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	KK117	N1/2	40		189	Rock

Huahine	Maeva	Te Ana	ScH-2-55-2	2003	KK117	N1/2	40-50		190	Coral
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106	S1/2	0-10		387	Coral
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106	N1/2	10-20		388	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106	S1/2	10-20		389	Bone, Glazed stone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106	S1/2		17	390	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106	S1/2		26	391	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106	S1/2		30	392	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106	S1/2	10-20		393	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106	NW1/4		35	801	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106	NW1/4		40	800	Pig teeth
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106	NW1/4		33	802	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106	SW1/4		38	805	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106	W1/2	20-35		803	Tridacna fragment
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106	W1/2	20-30		804	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL115	NW1/4	10-20		797	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL115	NW1/4	20-30		798	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL115	NW1/4	30-40		795	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117	N1/2	0-10		173	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117	N1/2	10-20		174	Bone, Rock, Seed
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117	NE1/4	20-30		394	Bone, Teeth
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117	NE1/4	30-40		395	Shell, Bone, Coral
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117	NE1/4	40-50		398	Coral
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117	NE1/4	60-70		796	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117	NE1/4	70-75		799	Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117	NW1/4	20-30		176	Bone, Shell
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117	NW1/4	30-40		177	Shell
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117	NW1/4	40-50		178	Shell
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117	NW1/4	80-100		399	Scora, Bone
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117	S1/2	0-20		179	Shell, Coral, Rock
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117	SE1/4	20-40		396, 397	Coral, Bone

Site ScH-2-55-2

Artefacts Deposited with the Service de la Culture et du Patrimoine, Punaauia, Tahiti

Table 3

Island	District	Land	Site No.	Year	Artefact no.	Cm B.S.	Material	Specimen	Length (mm)	Width (mm)	Thickness (mm)
Surface											
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-1		Basalt	Flake w/ polish	29	38	6
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-2		Basalt	Adze preform	33	33,5	13
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-3		Basalt	Whetstone	60	37	11,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-4		Basalt	Flake w/ polish	27	17	3,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-6		Basalt	Flake w/ polish	16	14	3,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-7		Basalt	Flake	14	13	4
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-8		Basalt	Flake w/ polish	20	34	3
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-9		Basalt	Flake	22	15	4
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-10		Basalt	Flake	12	13	3,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-12		Basalt	Flake	20	12	2,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-13		Basalt	Flake w/ polish	23,5	17	6
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-14		Basalt	Flake w/ polish	24	14	3,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-15		Basalt	Flake fragment	22	38	7
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-16		Basalt	Flake w/ polish	19	29	4
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-17		Basalt	Flake w/ polish	13	24	7,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-18		Basalt	Flake w/ polish	16,5	24	5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-20		Basalt	Flake w/ polish	13	20	3
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-21		Basalt	Flake	25	18	7
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-22		Basalt	Flake	19	17	4
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-23		Basalt	Flake	16	8	4,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-25		Basalt	Flake fragment	25	13	4

Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-26		Basalt	Flake	20,5	29	4
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-27		Basalt	Flake	14,5	21	4
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-28		Basalt	Patinated	29	27	15
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-29		Basalt	Flake w/ polish	11	12,5	2,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-30		Basalt	Flake w/ polish	20,5	39	6,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-31		Basalt	Flake w/ polish	26	16,5	7
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-32		Basalt	Flake w/ polish	32	27	7
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-34			Flake fragment	20,5	26	6
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-35		Pearl Shell	Fishhook	22	17	3
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-36		Basalt	Adze fragment	37	33	18
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-37		Basalt	Adze preform	43	21	16
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	2003SA-38		Pearl Shell	Bonito lure	38	11	9,5
Excavated Grids											
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	HH106-1	Surface	Basalt	Flake w/ polish	11	10	1
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	HH106-2	16	Basalt	Flake w/ polish	35	13	5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	KK114-1	0-10	Basalt	Flake w/ polish	16,2	19	4,1
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	KK114-2	0-10	Basalt	Flake w/ polish	24	28	11,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	KK117-1	0-10	Basalt	Adze Flake	39,5	37,5	20
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106-1	Surface	Basalt	Flake w/ polish	30	17	3,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106-2	Surface	Coral	Ball	26	24	20
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106-3	15	Basalt	Flake w/ polish	12	9	2
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106-4	Surface	Basalt	Flake w/ polish	16	12	3,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106-5	Surface	Basalt	Flake	24	16,5	3
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106-6	0-10	Basalt	Flake w/ polish	12,5	11,5	1,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106-7	0-10	Coral	Abrader	42	24	15
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106-8	12	Basalt	Adze Fragment	29,5	46,3	22
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL106-9	29	Basalt	Flake w/ polish	32,5	28,5	12,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL114-1	0-10	Basalt	Adze Flake	21	15,5	2,6
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117-1	0-20	Coral	Abrader	26	30,1	22,5
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117-2	40-50	Basalt	Flake w/ polish	26	34	6,3
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117-3	70-80	Coral	Ball	36	33,5	30
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117-4	33	Basalt	Adze Fragment	41	40	31

Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117-5	40-50	Coral	File?	41	22	10
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117-6	80-100	Basalt	Adze Fragment	88	24	21
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117-7	80-100	Coral	Ball	45	39	35
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117-8	54	Basalt	Hammer stone	74	70	57
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117-9	88	Basalt	Hammer stone	100	83	66
Huahine	Maeva	Te Ana	ScH-2-55-2	2003	LL117-10	93-103	Wood	Post	128	32	32

|| Appendix 2
Marae Excavations

List of Artefacts
List of Charcoal samples
List of Shell, Coral, and Nut fragments for dating
List of Soil samples

List of artefacts from excavations of sites

ScH-2-18, ScH-2-19, ScH-2-62-1, ScH-2-62-3, ScH-2-65-1, and ScH-2-66-1

Excavations April and May 2003

No.	Island	District	Land	Site No.	Tr.	Un.	Lev.	Cm	Year	Month	Day	Description
1003	Huahine	Maeva	Te Ana	2-62-1	I	1	1	0-5	2003	May	7	1 Basalt flake.
1060	Huahine	Maeva	Te Ana	2-62-1	I	4	I-AHU	Top of flat stone	2003	May	12	Shell; possible peeler. Found on top flat stone I-AHU.
1099	Huahine	Maeva	Te Ana	2-62-3	III		2	10-20	2003	May	7	Turbo shell peeler; x3; -26 cm b.d.
1150	Huahine	Maeva	Te Ana	2-65-1	I	3	0	Surface	2003	May	14	Piece of adze; oval cross-section; flat under.
1154	Huahine	Maeva	Te Ana	2-65-1	I	3	2	10-20	2003	May	14	One fragment of polished basalt adze.
1156	Huahine	Maeva	Te Ana	2-65-1	I	3	3	20-30	2003	May	15	A crude adzed blank; flat on one side; other rounded.

Excavations August and September 2003

	Island	Area	Land	Site No.	Tr.	Un.	Lev.	Cm	Year	Month	Day	Description
	Huahine	Motu Ovarei	Tetuatiare	ScH-2-18	I	X-1Y-1	4	-25	2003	September	2	1 Piece of iron. (X-0.30 Y-0.30).
	Huahine	Motu Ovarei	Tearanu'u	ScH-2-18	III	X11Y8	1	-3	2003	September	4	1 Glass bead (X11.64 Y8.67).
	Huahine	Motu Ovarei	Tearanu'u	ScH-2-18	III	X11Y9			2003	September	4	Modern nail.
	Huahine	Motu Ovarei	Tetu'a	ScH-2-19	II	IA2	In fill		2003	September	16	0.22 bullet. Not fired.

I-AHU = Inside Ahu

O-AHU = Outside Ahu

U-Wall = Under Wall

List of charcoal samples from excavations of sites

ScH-2-18, ScH-2-19, ScH-2-62-1, ScH-2-62-3, ScH-2-65-1, and ScH-2-66-1

Excavations April and May 2003

B.No.	Island	District	Land	Site No.	Tr.	Un.	Lev.	Cm	Year	Month	Day	Description
1004	Huahine	Maeva	Te Ana	2-62-1	I	1	1	0-5	2003	May	7	Charcoal sample.
1005	Huahine	Maeva	Te Ana	2-62-1	I	1	1	5-10	2003	May	7	Charcoal sample.
1006	Huahine	Maeva	Te Ana	2-62-1	I	1	2	10-20	2003	May	7	Charcoal sample.
1007	Huahine	Maeva	Te Ana	2-62-1	I	1	3	20-30	2003	May	7	Charcoal sample.
1008	Huahine	Maeva	Te Ana	2-62-1	I	1	3	20-30	2003	May	7	Contains of "posthole 1" (soil and carbon for analysis).
1009	Huahine	Maeva	Te Ana	2-62-1	I	1	3	20-30	2003	May	7	Contains of "posthole 2" (soil and carbon for analysis).
1010	Huahine	Maeva	Te Ana	2-62-1	I	1	4	30-40	2003	May	7	Charcoal sample.
1014	Huahine	Maeva	Te Ana	2-62-1	I	2	2	-15	2003	May	8	Found just under ahu stone.
1015	Huahine	Maeva	Te Ana	2-62-1	I	2	2	10-20	2003	May	8	Charcoal sample.
1016	Huahine	Maeva	Te Ana	2-62-1	I	2	3	20-30	2003	May	8	Charcoal sample.
1019	Huahine	Maeva	Te Ana	2-62-1	I	3	1		2003	May	9	Charcoal sample.
1020	Huahine	Maeva	Te Ana	2-62-1	I	3	1		2003	May	9	Charcoal sample.
1021	Huahine	Maeva	Te Ana	2-62-1	I	3	1		2003	May	9	Charcoal sample.
1024	Huahine	Maeva	Te Ana	2-62-1	I	4	1	0-10	2003	May	9	Sample of charcoal.
1025	Huahine	Maeva	Te Ana	2-62-1	I	4	1	0-10	2003	May	9	General sample.
1028	Huahine	Maeva	Te Ana	2-62-1	I	5	1		2003	May	8	Sample of charcoal.
1030	Huahine	Maeva	Te Ana	2-62-1	I	5	2		2003	May	8	Sample of charcoal.
1032	Huahine	Maeva	Te Ana	2-62-1	I	5	3		2003	May	9	Sample of charcoal.
1034	Huahine	Maeva	Te Ana	2-62-1	I	6	1	0-10	2003	May	7	Sample of charcoal.
1035	Huahine	Maeva	Te Ana	2-62-1	I	6	2	10-20	2003	May	7	General sample.
1037	Huahine	Maeva	Te Ana	2-62-1	I	6	3		2003	May	8	Carbon consentration, - 26 cm.
1038	Huahine	Maeva	Te Ana	2-62-1	I	6	3		2003	May	8	Sample of charcoal.
1041	Huahine	Maeva	Te Ana	2-62-1	I	8	1	0-10	2003	May	9	Sample of charcoal.

1042	Huahine	Maeva	Te Ana	2-62-1	I	8	2		2003	May	9	Sample of charcoal.
1047	Huahine	Maeva	Te Ana	2-62-1	I	11	1		2003	May	8	1 piece.
1051	Huahine	Maeva	Te Ana	2-62-1	I	11	2		2003	May	9	General sample.
1054	Huahine	Maeva	Te Ana	2-62-1	I	12	1	0-5	2003	May	7	General sample.
1056	Huahine	Maeva	Te Ana	2-62-1	I	12	1	5-10	2003	May	7	General sample.
1058	Huahine	Maeva	Te Ana	2-62-1	I	12	3	20-30	2003	May	7	General sample.
1059	Huahine	Maeva	Te Ana	2-62-1	I	8	3		2003	May	12	General sample.
1061	Huahine	Maeva	Te Ana	2-62-1	I	4	I-AHU	Bag 1	2003	May	12	General sample.
1064	Huahine	Maeva	Te Ana	2-62-1	I	4	I-AHU	Bag 2	2003	May	12	General sample.
1066	Huahine	Maeva	Te Ana	2-62-1	I	4	I-AHU	Screen	2003	May	12	General sample.
1073	Huahine	Maeva	Te Ana	2-62-1	II		1		2003	May	9	General sample.
1077	Huahine	Maeva	Te Ana	2-62-1	II		1		2003	May	12	From consentration close to terrace wall.
1080	Huahine	Maeva	Te Ana	2-62-1	II		2		2003	May	12	General sample.
1084	Huahine	Maeva	Te Ana	2-62-1	II		3		2003	May	12	From feature 2, umu.
1085	Huahine	Maeva	Te Ana	2-62-1	II		3		2003	May	12	Outside feature 2, umu.
1086	Huahine	Maeva	Te Ana	2-62-1	II		4	Feature 1	2003	May	12	From feature 2, umu.
1087	Huahine	Maeva	Te Ana	2-62-1	II		4	Feature 1	2003	May	12	One piece; - 32 cm; sample A, feature 2, umu.
1088	Huahine	Maeva	Te Ana	2-62-1	II		E-W Section		2003	May	13	From E-W section; feature1, Posthole, Sample A.
1089	Huahine	Maeva	Te Ana	2-62-1	II		E-W Section		2003	May	13	From E-W section (to terrace wall) from trench 2; Sample B.
1093	Huahine	Maeva	Te Ana	2-62-3	III	-	1	0-10	2003	May	5	General sample.
1104	Huahine	Maeva	Te Ana	2-62-3	III		3a		2003	May	7	General sample.
1105	Huahine	Maeva	Te Ana	2-62-3	III		3a		2003	May	7	Charcoal sample from shell consentration A, 14C-1
1106	Huahine	Maeva	Te Ana	2-62-3	III		3a		2003	May	7	From shell consentration A; - 43 cm.
1111	Huahine	Maeva	Te Ana	2-62-3	III		3b		2003	May	8	General sample.
1112	Huahine	Maeva	Te Ana	2-62-3	III		3b	Shell cons. A	2003	May	8	Charcoal sample, from top of shell consentration A, 1/8 inch screening.
1118	Huahine	Maeva	Te Ana	2-62-3	III		4	30-40	2003	May	8	General sample.
1119	Huahine	Maeva	Te Ana	2-62-3	III		4	30-40	2003	May	8	Sample B; - 39 cm.
1124	Huahine	Maeva	Te Ana	2-62-3	III		5	40-50	2003	May	9	General sample.
1125	Huahine	Maeva	Te Ana	2-62-3	III		5	40-50	2003	May	9	Sample A; - 47-49 cm b.d.
1130	Huahine	Maeva	Te Ana	2-65-1	I	1	1	O-AHU	2003	May	14	General sample.
1133	Huahine	Maeva	Te Ana	2-65-1	I	1	2	O-AHU	2003	May	14	General sample.
1137	Huahine	Maeva	Te Ana	2-65-1	I	1	1	I-AHU	2003	May	15	General sample.
1140	Huahine	Maeva	Te Ana	2-65-1	I	1	2	I-AHU	2003	May	16	General sample.
1143	Huahine	Maeva	Te Ana	2-65-1	I	1	3	I-AHU	2003	May	16	General sample.

1144	Huahine	Maeva	Te Ana	2-65-1	I	1	4	I-AHU	2003	May	16	Charcoal sample, - 31 cm.
1146	Huahine	Maeva	Te Ana	2-65-1	I	3	1	0-10	2003	May	14	Bottom; - 10 cm.
1147	Huahine	Maeva	Te Ana	2-65-1	I	3	1	0-10	2003	May	14	General sample.
1151	Huahine	Maeva	Te Ana	2-65-1	I	3	2	10-20	2003	May	14	General sample.
1155	Huahine	Maeva	Te Ana	2-65-1	I	3	3	20-30	2003	May	15	General sample.
1157	Huahine	Maeva	Te Ana	2-65-1	I	3	4	30-40	2003	May	15	General sample.
1160	Huahine	Maeva	Te Ana	2-65-1	I	3	5	40-50	2003	May	16	Outside feature.
1161	Huahine	Maeva	Te Ana	2-65-1	I	3	5	40-50	2003	May	16	Feature; - 47 cm.
1162	Huahine	Maeva	Te Ana	2-65-1	I	3	5	N part	2003	May	16	Northern part; - 55 cm.
1165	Huahine	Maeva	Te Ana	2-65-1	II		1	0-10	2003	May	16	General sample.
1170	Huahine	Maeva	Te Ana	2-65-1	II		2	10-20	2003	May	19	General sample.
1171	Huahine	Maeva	Te Ana	2-65-1	I	3	6	50-60	2003	May	19	From feature, level 6; sample A.
1172	Huahine	Maeva	Te Ana	2-65-1	I	3	6	50-60	2003	May	19	From feature, level 6; sample B.
1173	Huahine	Maeva	Te Ana	2-62-3	III		5	40-50	2003	May	21	44 cm b.s.; sample C.
1174	Huahine	Maeva	Te Ana	2-62-3	III		5	40-50	2003	May	21	
1176	Huahine	Maeva	Te Ana	2-62-3	III		5	40-50	2003	May	21	General sample, bottom of level 5, E half.
1179	Huahine	Maeva	Te Ana	2-62-3	III		5	40-50	2003	May	21	General sample, bottom of level 5, W half.
1182	Huahine	Maeva	Te Ana	2-62-3	III		6	E part	2003	May	21	General sample. E part.
1184	Huahine	Maeva	Te Ana	2-62-3	III		6	W part	2003	May	21	General sample. W part.
1187	Huahine	Maeva	Te Ana	2-62-3	III		?	Between stones	2003	May	21	From between stones, 70 - 75 cm b.s.; NW corner of unit.
1188	Huahine	Maeva	Te Ana	2-62-1	III		1	0-5	2003	May	21	General sample.
1190	Huahine	Maeva	Te Ana	2-62-1	III		2	5-silt	2003	May	21	General sample.
1192	Huahine	Maeva	Te Ana	2-62-1	IV		1	0-10	2003	May	21	General sample.
1195	Huahine	Maeva	Te Ana	2-62-1	IV		2	10-20	2003	May	21	General sample.
1197	Huahine	Maeva	Te Ana	2-62-1	V		1	0-5	2003	May	21	General sample.
1199	Huahine	Maeva	Te Ana	2-62-1	V		2	5-10	2003	May	21	General sample.
1201	Huahine	Maeva	Te Ana	2-62-1	V		3	10-20	2003	May	21	General sample.
1204	Huahine	Maeva	Te Ana	2-62-1	V		4	20-30	2003	May	21	General sample.
1207	Huahine	Maeva	Te Ana	2-62-1	V		5	30-50	2003	May	21	General sample.
1210	Huahine	Maeva	Te Ana	2-62-1	V		6	50-60	2003	May	22	General sample.
1211	Huahine	Maeva	Te Ana	2-62-1	V		7	60-70	2003	May	22	General sample.
1212	Huahine	Maeva	Te Ana	2-62-1	V		8	70-Silt	2003	May	22	General sample.
1214	Huahine	Maeva	Te Ana	2-66-1	I		1	0-10	2003	May	19	General sample.
1217	Huahine	Maeva	Te Ana	2-66-1	I		2	10-20	2003	May	19	General sample.

1218	Huahine	Maeva	Te Ana	2-66-1	I		2	10-20	2003	May	19	-13 cm; carbon consentration.
1222	Huahine	Maeva	Te Ana	2-66-1	I		3	20-30	2003	May	20	General sample.
1225	Huahine	Maeva	Te Ana	2-66-1	I		4	30-40	2003	May	20	General sample.
1228	Huahine	Maeva	Te Ana	2-66-1	I		5	40-50	2003	May	20	General sample.
1230	Huahine	Maeva	Te Ana	2-66-1	II		1	0-10	2003	May	19	General sample.
1232	Huahine	Maeva	Te Ana	2-66-1	II		3	20-30	2003	May	20	General sample.
1243	Huahine	Maeva	Te Ana	2-65-1	I	1	4	30-40	2003	May		General sample.
1244	Huahine	Maeva	Te Ana	2-65-1	I	3	6	Feature	2003	May	19	

Excavations August and September 2003

	Island	Area	Land	Site No.	Tr.	Un.	Lev.	Cm	Year	Month	Day	Description
	Huahine	Motu Ovarei	Tetuatiare	ScH-2-18	TP	X10-Y0	2	10-20	2003	August	28	Scattered pieces.
	Huahine	Motu Ovarei	Tetuatiare	ScH-2-18	TP	X20-Y0	1	0-10	2003	August	27	General sample.
	Huahine	Motu Ovarei	Tetuatiare	ScH-2-18	TP	X25Y0	1	0-10	2003	August	27	1 Piece of charcoal, no context.
	Huahine	Motu Ovarei	Tearanu'u	ScH-2-18	TP	X10Y10	1	0-10	2003	August	28	General sample.
	Huahine	Motu Ovarei	Tearanu'u	ScH-2-18	TP	X10Y20	1	0-10	2003	August	29	General sample.
	Huahine	Motu Ovarei	Tetuatiare	ScH-2-18	II	X24Y1	2	10-20	2003	September	2	General sample.
	Huahine	Motu Ovarei	Tetuatiare	ScH-2-18	II	X25Y0	1	0-10	2003	August	27	1 Piece.
	Huahine	Motu Ovarei	Tetuatiare	ScH-2-18	II	X25Y1	1	-5	2003	September	2	Distinctive.
	Huahine	Motu Ovarei	Tetuatiare	ScH-2-18	II	X25Y1	2	10-20	2003	September	3	General sample.
	Huahine	Motu Ovarei	Tetuatiare	ScH-2-18	II	X25Y1	2	10-20	2003	September	3	Associated with Charred Pig Bone.
	Huahine	Motu Ovarei	Tearanu'u	ScH-2-18	III	X10Y8	1	0-10	2003	September	3	General sample.
	Huahine	Motu Ovarei	Tearanu'u	ScH-2-18	III	X10Y9	1	-8	2003	September	4	General sample.
	Huahine	Motu Ovarei	Tearanu'u	ScH-2-18	III	X10Y9	?	-10 to -11	2003	September	5	Taken in section, possible feature.
	Huahine	Motu Ovarei	Tearanu'u	ScH-2-18	III	X10Y9	1	-8 to -12	2003	September	4	From S / SE corner of trench, down to 10 cm b.s.
	Huahine	Motu Ovarei	Tearanu'u	ScH-2-18	III	X10Y9	1	0-10	2003	September	4	General sample.
	Huahine	Motu Ovarei	Tearanu'u	ScH-2-18	III	X11Y9	1	-5 to -20	2003	September	4	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	1	1	0-5	2003	September	8	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	1	2	5-10	2003	September	8	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	1	2	5-10	2003	September	9	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	1	2	5-10	2003	September	9	Close to ahu slab. - 7 cm b.s.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	1	3	10-15	2003	September	9	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	1	3	15-20	2003	September	9	From burnt root in front of ahu slab.

	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	1	3-4	18-22	2003	September	9	Marked on plan (place of "head").
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	1	4	20-25	2003	September	10	From burned ati root.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	1	6	30-40	2003	September	10	Burned ati root, into ahu slabs.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	1	6	-33	2003	September	10	By NE stone
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	1	6	36-40	2003	September	10	14-C / Soil Sample from burned ati root + Skull Frag. Bag 1/2
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	1	6	36-40	2003	September	10	14-C / Soil Sample; Burned ati root. Bag 2/2.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	1	7	-45	2003	September	10	Close to bottom of slab.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	1	7	-45	2003	September	10	Under burned ati root.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	2	1	0-5	2003	September	8	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	2	2	7-10	2003	September	8	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	2-N1/2	3	10-15	2003	September	9	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	2-S1/2	3	10-15	2003	September	9	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	2-N1/2	4	15-20	2003	September	9	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	2-S1/2	4	15-20	2003	September	9	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	2-N1/2	5	20-30	2003	September	9	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	2-N1/2	6	30-40	2003	September	10	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	II	UW	1	0-10	2003	September	12	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	II	UW	1	0-10	2003	September	12	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	II	UW	2	10-20	2003	September	12	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	II	UW	3-4	-140	2003	September	12	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	II	UW	?	Bottom ?	2003	September	12	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	II	IA1	2?	-144 b.st.	2003	September	12	On original Surface, "Sample 2".
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	II	IA1	150-160		2003	September	15	-150 to 160 / 165 cm b.st.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	II	IA1	150-160	-160 b.st.	2003	September	15	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	II	IA1	150-160	-157 b.st.	2003	September	15	General sample.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	II	x	150-160	-148 b.st.	2003	September	12?	"Sample 1". -148 to 158 cm b.st.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	TP-I	Inside W	1	0-10	2003	September	11	Under and inside marae wall in corner. General scatter.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	TP-I	Inside W	1	-10	2003	September	11	Under and inside marae wall in corner. A concentration.

I-AHU = Inside Ahu

O-AHU = Outside Ahu

UW = Under Wall

IA1 = Inside Ahu 1

IA2 = Inside Ahu 2

Inside W = Inside Wall

List of Shells, Coral, and Nut fragments from excavations of sites

ScH-2-18, ScH-2-19, ScH-2-62-1, ScH-2-62-3, ScH-2-65-1, and ScH-2-66-1

Excavations April and May 2003

B.No.	Island	District	Land	Site No.	Tr.	Un.	Lev.	Cm	Year	Month	Day	Description
1001	Huahine	Maeva	Te Ana	2-62-1	I	1	1	0-5	2003	May	7	3 Shell fragments.
1002	Huahine	Maeva	Te Ana	2-62-1	I	1	1	0-5	2003	May	7	3 Nut fragments.
1011	Huahine	Maeva	Te Ana	2-62-1	I	2	1	0-10	2003	May	8	Sample of 3 pieces of coral.
1012	Huahine	Maeva	Te Ana	2-62-1	I	2	1	0-10	2003	May	8	Sample of 3 pieces of coral. Found just in front of ahu.
1013	Huahine	Maeva	Te Ana	2-62-1	I	2	2	10-20	2003	May	8	Sample of 2 pieces of shell.
1017	Huahine	Maeva	Te Ana	2-62-1	I	3	1	0-10	2003	May	9	Sample of 4 pieces of shell.
1018	Huahine	Maeva	Te Ana	2-62-1	I	3	1		2003	May	9	Sample of 8 pieces of coral.
1022	Huahine	Maeva	Te Ana	2-62-1	I	4	1	0-10	2003	May	9	Sample of 9 pieces of coral.
1023	Huahine	Maeva	Te Ana	2-62-1	I	4	1	0-10	2003	May	9	Sample of 2 pieces of shell.
1026	Huahine	Maeva	Te Ana	2-62-1	I	4		I-AHU	2003	May	9	Sample of 1 piece of coral, from inside the ahu.
1027	Huahine	Maeva	Te Ana	2-62-1	I	5	1		2003	May	8	Sample of 6 pieces of coral.
1029	Huahine	Maeva	Te Ana	2-62-1	I	5	2		2003	May	8	Sample of 5 pieces of coral.
1031	Huahine	Maeva	Te Ana	2-62-1	I	5	3		2003	May	9	Sample of 3 pieces of coral.
1033	Huahine	Maeva	Te Ana	2-62-1	I	6	1	0-10	2003	May	7	Sample of 6 pieces of coral.
1036	Huahine	Maeva	Te Ana	2-62-1	I	6	3		2003	May	8	Sample of 6 pieces of coral.
1039	Huahine	Maeva	Te Ana	2-62-1	I	8	1	0-10	2003	May	9	Sample of 2 pieces of coral.
1040	Huahine	Maeva	Te Ana	2-62-1	I	8	1	0-10	2003	May	9	Sample of 2 pieces of shells.
1043	Huahine	Maeva	Te Ana	2-62-1	I	8	2		2003	May	9	Sample of 1 piece of coral.
1044	Huahine	Maeva	Te Ana	2-62-1	I	11	1		2003	May	8	Sample of 7 pieces of coral.
1045	Huahine	Maeva	Te Ana	2-62-1	I	11	1		2003	May	8	Sample of 10 pieces of shells.
1048	Huahine	Maeva	Te Ana	2-62-1	I	11	2		2003	May	9	Sample of 3 pieces of coral.
1049	Huahine	Maeva	Te Ana	2-62-1	I	11	2		2003	May	9	Sample of 1 piece of shell.
1052	Huahine	Maeva	Te Ana	2-62-1	I	12	1	0-5	2003	May	7	Sample of 2 pieces of coral.

1053	Huahine	Maeva	Te Ana	2-62-1	I	12	1	0-5	2003	May	7	Sample of 1 piece of shell.
1055	Huahine	Maeva	Te Ana	2-62-1	I	12	1	5-10	2003	May	7	Sample of 4 pieces of coral.
1057	Huahine	Maeva	Te Ana	2-62-1	I	12	3	20-30	2003	May	7	Sample of 1 piece of coral.
1062	Huahine	Maeva	Te Ana	2-62-1	I	4	I-AHU	Bag 1	2003	May	12	Sample of 12 pieces of shell.
1063	Huahine	Maeva	Te Ana	2-62-1	I	4	I-AHU	Bag 1	2003	May	12	Sample of 3 pieces of coral.
1065	Huahine	Maeva	Te Ana	2-62-1	I	4	I-AHU	Bag 2	2003	May	12	Sample of 1 piece of shell.
1067	Huahine	Maeva	Te Ana	2-62-1	I	4	I-AHU	Screen	2003	May	12	Sample of 1 nutshell.
1068	Huahine	Maeva	Te Ana	2-62-1	I	4	I-AHU	Screen	2003	May	12	Sample of 8 pieces of coral.
1069	Huahine	Maeva	Te Ana	2-62-1	I	4	I-AHU	Screen	2003	May	12	Sample of 3 pieces of coral.
1074	Huahine	Maeva	Te Ana	2-62-1	II		1		2003	May	9	Sample of 3 pieces of shell.
1076	Huahine	Maeva	Te Ana	2-62-1	II		1		2003	May	9	Sample of 4 pieces of coral.
1078	Huahine	Maeva	Te Ana	2-62-1	II		1		2003	May	12	Sample of 3 pieces of coral.
1079	Huahine	Maeva	Te Ana	2-62-1	II		1		2003	May	12	Sample of 1 pieces of shell.
1081	Huahine	Maeva	Te Ana	2-62-1	II		2		2003	May	12	Sample of 2 pieces of shell.
1082	Huahine	Maeva	Te Ana	2-62-1	II		2		2003	May	12	Sample of 4 pieces of coral.
1094	Huahine	Maeva	Te Ana	2-62-3	III		1	0-10	2003	May	5	Sample of 1 piece of coral.
1095	Huahine	Maeva	Te Ana	2-62-3	III		1	0-10	2003	May	5	Sample of 4 pieces of shell.
1097	Huahine	Maeva	Te Ana	2-62-3	III		2	10-20	2003	May	7	Sample of 20 pieces of shells.
1098	Huahine	Maeva	Te Ana	2-62-3	III		2	10-20	2003	May	7	Sample of 2 pieces of shells. - 26 cm b.d..
1100	Huahine	Maeva	Te Ana	2-62-3	III		2	10-20	2003	May	7	Piece of coral; x3; - 26 cm b.d..
1101	Huahine	Maeva	Te Ana	2-62-3	III		2	10-20	2003	May	7	Piece of coral; x4.
1107	Huahine	Maeva	Te Ana	2-62-3	III		3a		2003	May	7	Sample of 1 pieces of coral.
1108	Huahine	Maeva	Te Ana	2-62-3	III		3a		2003	May	7	Sample of 18 pieces of shells.
1113	Huahine	Maeva	Te Ana	2-62-3	III		3b	Shell cons. A	2003	May	8	Sample of 2 pieces of coral. From shell consentration A.
1114	Huahine	Maeva	Te Ana	2-62-3	III		3b		2003	May	8	Small sample of tuai shells from level 3b; shell consentration A.
1115	Huahine	Maeva	Te Ana	2-62-3	III		3b		2003	May	8	Sample of 8 pieces of shell (other than tuai) from level 3b; shell consentration A.
1121	Huahine	Maeva	Te Ana	2-62-3	III		4	30-40	2003	May	8	Small sample of tuai shells from level 4.
1122	Huahine	Maeva	Te Ana	2-62-3	III		4	30-40	2003	May	8	Sample of 4 pieces of turbo shells.
1126	Huahine	Maeva	Te Ana	2-62-3	III		5	40-50	2003	May	9	Sample of 4 pieces of coral.
1127	Huahine	Maeva	Te Ana	2-62-3	III		5	40-50	2003	May	9	Sample of 20 tuai shells.
1128	Huahine	Maeva	Te Ana	2-62-3	III		5	40-50	2003	May	9	Sample of 2 pieces of shells (other than tuai).
1131	Huahine	Maeva	Te Ana	2-65-1	I	1	1	O-AHU	2003	May	14	Sample of 3 pieces of coral.
1132	Huahine	Maeva	Te Ana	2-65-1	I	1	1	O-AHU	2003	May	14	Sample of 1 piece of shell.
1134	Huahine	Maeva	Te Ana	2-65-1	I	1	2	O-AHU	2003	May	14	Sample of 3 pieces of coral.

1135	Huahine	Maeva	Te Ana	2-65-1	I	1	2	O-AHU	2003	May	14	Sample of 1 landsnail shell.
1138	Huahine	Maeva	Te Ana	2-65-1	I	1	1	I-AHU	2003	May	15	Sample of 5 pieces of coral.
1139	Huahine	Maeva	Te Ana	2-65-1	I	1	1	I-AHU	2003	May	15	Sample of 3 pieces of shell.
1141	Huahine	Maeva	Te Ana	2-65-1	I	1	2	I-AHU	2003	May	16	Sample of 2 pieces of coral.
1145	Huahine	Maeva	Te Ana	2-65-1	I	1	4	I-AHU	2003	May	16	Sample of 2 pieces of coral.
1148	Huahine	Maeva	Te Ana	2-65-1	I	3	1	0-10	2003	May	14	Sample of 4 pieces of coral.
1149	Huahine	Maeva	Te Ana	2-65-1	I	3	1	0-10	2003	May	14	Sample of 1 piece of shell.
1152	Huahine	Maeva	Te Ana	2-65-1	I	3	2	10-20	2003	May	14	Sample of 4 pieces of coral.
1158	Huahine	Maeva	Te Ana	2-65-1	I	3	4	30-40	2003	May	15	Sample of 1 piece of coral.
1163	Huahine	Maeva	Te Ana	2-65-1	I	3	5	40-50	2003	May	16	Sample of 1 piece of coral.
1166	Huahine	Maeva	Te Ana		II		1	0-10	2003	May	16	Cample of 1 piece of coral.
1167	Huahine	Maeva	Te Ana	2-62-2					2003	May	2	Sample of 1 piece of coral; found between stones 3 m W of uprights close to 2-62-1.
1168	Huahine	Maeva	Te Ana	2-21					2003	May	6	Sample of 3 pieces of coral.
1169	Huahine	Maeva	Te Ana	2-62-1	I	4	I-AHU		2003	May	12	Sample of 4 pieces of coral. Found on top of big flat stone.
1175	Huahine	Maeva	Te Ana	2-62-3	III		5	40-50	2003	May	21	Sample of 5 pieces of shells.
1177	Huahine	Maeva	Te Ana	2-62-3	III		5	40-50	2003	May	21	Sample of 12 pieces of shell. Bottom of level 5, E half.
1178	Huahine	Maeva	Te Ana	2-62-3	III		5	40-50	2003	May	21	Sample of 1 piece of coral. Bottom of level 5, E half.
1180	Huahine	Maeva	Te Ana	2-62-3	III		5	40-50	2003	May	21	Sample of 10 pieces of shells. Bottom of level 5, W half.
1183	Huahine	Maeva	Te Ana	2-62-3	III		6	E part	2003	May	21	Sample of 15-20 shells. E part.
1185	Huahine	Maeva	Te Ana	2-62-3	III		6	W part	2003	May	21	Sample of 14-18 pieces of shells.
1186	Huahine	Maeva	Te Ana	2-62-3	III		6	W part	2003	May	21	Sample of 1 piece of coral.
1189	Huahine	Maeva	Te Ana	2-62-1	III		1	0-5	2003	May	21	Sample of 2 pieces of shells.
1191	Huahine	Maeva	Te Ana	2-62-1	III		2	5-silt	2003	May	21	Sample of 3 pieces of shell.
1193	Huahine	Maeva	Te Ana	2-62-1	IV		1	0-10	2003	May	21	Sample of 1 piece of shell.
1196	Huahine	Maeva	Te Ana	2-62-1	IV		2	10-20	2003	May	21	Sample of 1 piece of shell and one piece of human skull fragment.
1198	Huahine	Maeva	Te Ana	2-62-1	V		1	0-5	2003	May	21	Sample of 4 pieces of shell.
1200	Huahine	Maeva	Te Ana	2-62-1	V		2	5-10	2003	May	21	Sample of 13 pieces of shell.
1202	Huahine	Maeva	Te Ana	2-62-1	V		3	10-20	2003	May	21	Sample of 4 pieces of shell.
1203	Huahine	Maeva	Te Ana	2-62-1	V		3	10-20	2003	May	21	Sample of 6 pieces of bone: 1 pig tooth; 5 pieces of undetermined bones.
1205	Huahine	Maeva	Te Ana	2-62-1	V		4	20-30	2003	May	21	Sample of 5 pieces of shells.
1208	Huahine	Maeva	Te Ana	2-62-1	V		5	30-50	2003	May	21	Sample of 8 pieces of shell.
1209	Huahine	Maeva	Te Ana	2-62-1	V		5	30-50	2003	May	21	Sample of 6 pieces of bones: 2 human tibia fragments; 1 tooth; 3 pieces undetermined.
1213	Huahine	Maeva	Te Ana	2-62-1	V		8	70-Silt	2003	May	22	Sample of 2 pieces of shells.
1215	Huahine	Maeva	Te Ana	2-66-1	I		1	0-10	2003	May	19	Sample of 3 pieces of shell.

1216	Huahine	Maeva	Te Ana	2-66-1	I		1	0-10	2003	May	19	Sample of 3 pieces of coral.
1219	Huahine	Maeva	Te Ana	2-66-1	I		2	10-20	2003	May	19	Sample of 3 pieces of coral.
1220	Huahine	Maeva	Te Ana	2-66-1	I		2	10-20	2003	May	19	Sample of 2 pieces of bones.
1221	Huahine	Maeva	Te Ana	2-66-1	I		2	10-20	2003	May	19	One piece of coral and two pieces of human bones found on top of a jaw bone.
1223	Huahine	Maeva	Te Ana	2-66-1	I		3	20-30	2003	May	20	Sample of 5 pieces of shells.
1226	Huahine	Maeva	Te Ana	2-66-1	I		4	30-40	2003	May	20	Samplel of 1 piece of shell.
1227	Huahine	Maeva	Te Ana	2-66-1	I		4	30-40	2003	May	20	Sample of 3 pieces of fish-bone.
1229	Huahine	Maeva	Te Ana	2-66-1	I		5	40-50	2003	May	20	Sample of 1 piece of coral and 1 piece of shell.
1231	Huahine	Maeva	Te Ana	2-66-1	II		1	0-10	2003	May	19	Sample of 3 pieces of coral.
1233	Huahine	Maeva	Te Ana	2-66-1	II		3	20-30	2003	May	20	Sample of 1 piece of coral.
1234	Huahine	Maeva	Te Ana						2003	May	15	Sample of modern Tuai shells picked in Fauna Nui.
1235	Huahine	Maeva	Ovarei	Manunu					2003	May	4	Sample of shells picked in cavieties in slabs of the ahu at marae Manunu, sample 1.
1236	Huahine	Maeva	Ovarei	Manunu					2003	May	4	Sample of shells picked in cavieties in slabs of the ahu at marae Manunu, sample 2.
1237	Huahine	Maeva	Ovarei	Manunu					2003	May	4	Sample of shells picked in cavieties in slabs of the ahu at marae Manunu, sample 3.
1238	Huahine	Maeva	Ovarei	Manunu					2003	May	4	Sample of shells picked in cavieties in slabs of the ahu at marae Manunu, sample 4.
1239	Huahine	Maeva	Matairea	Marae at Water tank					2003	April	29	Sample of 1 piece of coral piceked from the marae at the water tanks at the far end of Maeva.
1240	Huahine	Maeva	Matairea	Marae at Water tank					2003	April	29	Sample of 1 piece of coral piceked from the marae at the water tanks at the far end of Maeva.
1241	Huahine	Parea	Marae Anini						2003	May	18	Sample of shells picked in cavieties in slabs of the ahu at marae Anini.
1242	Huahine	Maeva	Ovarei	Marae at Sofitel Heiva					2003	May	4	Sample of shells picked in cavieties in slabs of the ahu at marae in the area of Hotel Sofitel Heiva.

Excavations August and September 2003

	Island	Area	Land	Site No.	Tr.	Un.	Lev.	Cm	Year	Month	Day	Description
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	I	1	6	-40	2003	September	10	1 Turbon Shell + 1 Piece of Coral. Shell found close to bottom of ahu slab.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	II	UW	1	0-10	2003	September	12	1 Turbo Shell Frag.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	II	UW	1	0-10	2003	September	12	1 Frag. Turbon shell. 1 Undetermined Shell Frag.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	II	IA1	In Fill	0-?	2003	September	11	2 Pieces of coral, in fill close to soil.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	II	IA1	In Fill	-138 b.st.	2003	September	11	1 Turbo Shell Frag. 1 Piece of coral. In soil close to bottom of ahu.
	Huahine	Mata'ire'a Hill	Tetu'a	ScH-2-19	II	IA2	2	10-20 b.s.	2003	September	16	2 Tuai shells. 1 Piece of coral.

I-AHU = Inside Ahu

O-AHU = Outside Ahu

UW = Under Wall

IA1 = Inside Ahu 1

IA2 = Inside Ahu 2

List of soil samples from excavations of sites

ScH-2-18, ScH-2-19, ScH-2-62-1, ScH-2-62-3, ScH-2-65-1, and ScH-2-66-1

Excavations April and May 2003

B.No.	Island	District	Land	Site No.	Tr.	Un.	Lev.	Cm	Year	Month	Day	Description
1008	Huahine	Maeva	Te Ana	2-62-1	I	1	3	20-30	2003	May	7	Contains of "posthole 1" (soil and carbon for analysis).
1009	Huahine	Maeva	Te Ana	2-62-1	I	1	3	20-30	2003	May	7	Contains of "posthole 2" (soil and carbon for analysis).
1070	Huahine	Maeva	Te Ana	2-62-1	I	4	I-AHU		2003	May	12	Sample of soil from section I-AHU, sample A
1071	Huahine	Maeva	Te Ana	2-62-1	I	4	I-AHU		2003	May	12	Sample of soil from section I-AHU, sample B
1072	Huahine	Maeva	Te Ana	2-62-1	I	-	NE cor	Under slab	2003	May	12	Sample of soil from under front wall slab of ahu, NE corner; taken during stabilizing.
1090	Huahine	Maeva	Te Ana	2-62-1	II		E-W Section		2003	May	13	Soil sample from layer 2; from E-W section (to terrace wall).
1091	Huahine	Maeva	Te Ana	2-62-1	II	Feature 2	E-W Section		2003	May	13	Soil sample from feature 2; from E-W sectin (to terrace wall).
1092	Huahine	Maeva	Te Ana	2-62-1	II	Feature 3	E-W Section		2003	May	13	Soil sample from feature 3; from E-W sectin (to terrace wall).

Excavations August and September 2003

	Island	Area	Land	Site No.	Tr.	Un.	Lev.	Cm	Year	Month	Day	Description
	Huahine	Motu Ovarei	Tearanu'u/Tetuatiare	ScH-2-18	Courtyard		1	-5 to -8	2003	September	5	One bag of c. 60 soil samples for phosphate testing.
	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	I	1	3-4	18-22	2003	September	9	Sample of burned soil (place of "head").
	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	I	1	6	36-40	2003	September	10	14-C / Soil Sample; "Feature 1" + Skull Frag. Bag 1/2
	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	I	1	6	36-40	2003	September	10	14-C / Soil Sample; "Feature 1". Bag 2/2.
	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	I	2	1	-5	2003	September	12	Soil sample in section.
	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	I	2	1	-10	2003	September	12	Soil sample in section.
	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	I	2	1	-15	2003	September	12	Soil sample in section.
	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	I	2	1	-20	2003	September	12	Soil sample in section.
	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	I	2	1	-25	2003	September	12	Soil sample in section.
	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	I	2	1	-30	2003	September	12	Soil sample in section.
	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	I	2	1	-35	2003	September	12	Soil sample in section.

	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	II	IA1	150-160		2003	September	15	Soil sample in N-section.
	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	II	IA1	150-160		2003	September	15	Soil sample in N-section.
	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	II	IA1	150-160		2003	September	15	Soil sample in N-section.
	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	II	IA2	W-Section		2003	September	17	Soil sample, W-section.
	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	II	IA2	W-Section		2003	September	17	Soil sample, W-section.
	Huahine	Mata'ire'a Hil	Tetu'a	ScH-2-19	II	IA2	W-Section		2003	September	17	Soil sample, W-section.

I-AHU = Inside Ahu

O-AHU = Outside Ahu

UW = Under Wall

IA1 = Inside Ahu 1

IA2 = Inside Ahu 2

Appendix 3
Osteological Report from sites ScH-2-18 and ScH-2-19

List of Bones recovered from Te Ana

APPENDIX III

Osteological analysis of bone remains from *marae* Manunu and *marae* Matairea Rahi, Huahine, Society Islands, French Polynesia.

Paul Wallin

Introduction

The bone remains analysed were excavated during fieldwork carried out in August-September 2003. The excavations took place on two different *marae* structures in the Maeva village area. The two *marae* (Manunu and Matairea Rahi) is traditionally seen as the to main structures on Huahine Nui.

The bones collected were brought to Norway on a special permit issued by Departement de la cultur et Patrimonie in Tahiti, French Polynesia (permit no: xxx).
The analysis was undertaken at the archaeo-osteological research laboratory at Gotland University College, Sweden.

Working methods

1) The bones were cleaned and dried in the field and packed in labelled plastic bags.
2) Each bone was determined to kind of bone, specie, side (sin=left, dx=right), and to age.
3) The age determination was performed based on Bass (1971) concerning the human remains. The age groups on human remains used are the following: Infans I (0-4 years), Infans II (5-12 years), Juvenile (13-17 years) and Adult (18-60 years) (Sjövold 1978). Age determination on animal bones is based on the work by Silver (1963). Infans animal bones are bones with metaphyseal surfaces and in size much ”smaller” than juvenile bones within each specie. Juvenile bones are represented by for example loose epiphyses or metaphyseal surfaces. Adult individuals have fused epiphyses fully grown teethes etc.
4) The MNI (Minimum Number of Individuals) determination is based on kind of bone, age and on side determination. Only fragments, which can not represent the same individual, are counted for. The kind of bone from same side and age, which is most frequent in the material therefore, represent the MNI of each specie.

Bone remains from *marae* Manunu

Human remains (Homo S.)

Cranial remains
Dentes/Mandibula
1 M2 juv dx (c 15-17 years old).
Dentes/Maxilla
1 Pm1 ad sin, 1Pm2 ad sin, 1M1 ad dx.

Post-cranial remains
Ulna
2 fr diafys ad.

MNI human remains: 1 adult individual, 1 juvenile individual.

Animal remains

Pig (Sus domesticus)
Cranial bones/dentes
Temporal bone
1 fr inf sin, 1fr inf dx, 2 fr undetermined.
Parietal bone
1 fr inf/juv, 1 fr juv dx
Zygomatic bone
1 fr juv dx.
Mandibula
5 fr undetermined.
Cranial bones
16 fr undetermined bones.
Dentes Mandibula/Maxilla
I 1 fr ad, I 2 fr juv I 3 fr inf, Pm/M 2 fr ad, Pm/M 29 fr juv/ad, Pm/M 5 fr inf/juv, Pm/M 4 fr inf.
Dentes
2 fr undetermined.

Post-cranial bones
Humerus
1 fr diafys undetermined.
Femur
1 fr prox diafys undetermined.
Tibia
1 fr diafys undetermined.
Long bone fragmants
3 fr diafys undetermined.
Costae
7 fr inf/juv
Ph2
1 inf/juv sin, 1 inf/juv dx.

Mt
1 fr distal diafys inf/juv.
Undetermined fragments possibly Sus domesticus
54 fr undetermined.

MNI Sus domesticus (at least): 1 adult, 1 juvenle, 1 infans individual.

Rat (Rattus exulans)

Cranial bones
Mandibula
1 ad sin, 1 ad dx.
Parietal bone
1 fr ad.

MNI Rattus exulans: The three bones were found widely separated in different find contexts and may therefore belong to 3 adult individuals.

Bird (Aves sp)

Undetermined bones
6 fr found at same spot.

MNI Aves sp.: 1 individual.

Fish (Pisces sp)

Undetermined bones
9 fr, undetermined

MNI Pisces sp.: The bones were found at two different locations and may therefore indicate at least 2 individuals.

Sheep/Goat (Ovis/Capra)

Cranial bone
Occipitale
1 fr ad.

MNI Ovis a./Capra h.: 1 adult individual.

Cat (Felis silvestris)

Dentes
Canine/Maxilla
1 ad

MNI Felis s.: 1 adult individual.

Bone remains from *marae* Matairea Rahi (Trench 1, Behind ahu)

Human remains

Cranial remains

Frontal bone
3 fr undetermined.
Parietal bone
13 fr ad.
Temporal bone
1 fr undetermined.
Mandibula/Maxilla
1 fr with alveoles.
Cranial bones
5 fr undetermined bones.
Dentes/Mandibula
I 1 ad dx, Pm1 1 ad sin, M1 1 ad dx.
Dentes/Maxilla
C 1 ad dx, Pm 2 1 ad dx (quite worn), M1 1 ad dx.
Dentes Undetermined
1 fr ad (only root).

Post-cranial remains

Humerus
1 distal part (4 pieces) ad dx (belonged to buried remains of 1 individual). More post-cranial remains were discovered at the same spot, which belonged to a buried person. The cranium of this person was not present or possibly destroyed. Parts of the arm bones were recovered as well as the vertebral column with costae in anatomical right positions. Coxae was also present but very fragmentary. The leg bones could not be recovered.

MNI Human remains, Trench 1, behind *ahu*: 2 adult individuals. All bones may belong to the partly destroyed buried quite young ad individual (young, according to the teethes found in the area), except one worn Pm tooth, which also indicates the presence of an other more mature adult.

Animal remains

Pig (Sus domesticus)

Cranial bones/dentes

Mandibula
1 fr juv dx (with alveoles), 1 fr caput juv dx.
Dentes
I 10 fr juv, C 1 fr ad, C 2 fr juv, Pm/M 14 fr ad, 9 fr juv, 1 fr inf/juv, Unspecified dentes 4 fr juv.

Post-cranial bones

Humerus
1 fr distal diafys inf/juv sin, 2 fr diafys inf/juv, 1 fr diafys undetermined.
Ulna
1 fr prox dx.

Femur
1 fr diafys undetermined.
Tibia
1 fr diafys undetermined.
Metapod
1 fr prox undetermined, 1 fr ad sin,1 fr dist juv.
Vertebrae
3 fr undetermined.
Undetermined fragments
95 mixed unspecified fragm.
Undetermined pig/human fragments
56 mixed unspecified fragments.

MNI Sus domesticus, Trench 1, behind ahu: 1 adult, 1 juvenile, and 2 infans/juvenile individuals.

Dog (Canis familiaris)

Cranial bones
Dentes
C 1 fragmentary ad, Pm 1 fragmentary ad, M1 1 ad.

Post-cranial bones
Vertebrae
1 fr corpus (with metafys surfaces) juv.

MNI Canis familiaris, Trench 1, behind ahu: 1 adult, 1 juvenile individual.

Bird (Aves sp)

Undetermined bones
1 fr long bone diafys.

MNI Aves sp., Trench 1, behind ahu: 1 unspecified individual.

Fish (Pisces sp)

Vertebrae
1 fragmentary vertebrae.

MNI Pisces sp., Trench 1, behind ahu: 1 unspecified individual.

Bone remains from *marae* Matairea Rahi (Trench 2, Inside ahu/under wall

Human remains (Homo s.)

Cranial remains
Parietal bone
6 fr (one from quite young ad, sacrified scull, see fig x).

Temporal bone
1 fr with part of pars petrosa ad dx.
Dentes/Maxilla
I1 1 ad dx, C 1 ad dx, M1 1 ad sin, M1 1 inf II dx (8-10 years old individual), M3 ad sin.
Dentes/Mandibula
I2 2 ad dx.
Dentes undetermined
1 root fragment (possibly I).

Post-cranial remains
Femur/Tibia
1 fr diafys.
Ph Manus
Ph 1 1 ad, Ph 2 1 ad.

MNI Homo s., Trench 2: 2 adult, 1 infans II (8-10 years old) individuals.

Animal remains

Pig (Sus domesticus)
Cranial bones
Mandibula
1 fr ad with fused gnathion, 1 fr juv (with two molars).
Dentes
C 2 ad sin mandibula, 1 inf/juv sin maxilla, Pm/M 2 ad, Pm/M 4 juv, Pm/M 3 undetermined.

Post-cranial bones
Humerus
1 diafys inf sin.
Radius
1 fr prox ad dx.
Mc IV
1 fr dist inf/juv dx.
Femur
1 fr diafys juv dx, 1 fr diafys inf dx, 1 fr diafys inf/juv sin.
Tibia
1 fr dist diafys juv sin.
Vertebrae
1 fr inf/juv (with epifys surface).
Undetermined bone fragments
42 mixed fragments.
Undetermined pig/human fragments
15 mixed fragments.

MNI Sus domesticus, Trench 2: 2 adult, 1 juvenile, 1 infans/juvenile, 1 infans individuals.

Dog (Canis familiaris)
Vertebrae
1 fr corpus inf/juv (with metafys surfaces).

MNI Canis familiaris, Trench 2: 1 infans/juvenile individual.

Rattus exulans
Post-cranial bones
Femur
1 ad sin.
Coxae
1 ad sin

MNI Rattus exulans, Trench 2: 1 adult (the bones were found together and belongs to same individual).

Bird (Aves sp)
Long bones (wing and leg bones)
1 fr carpometacarpus prox, 8 diafys fragments.

MNI Aves sp., Trench 2: 1 individual.

Fish (Pisces sp)
Vertebrae
3 fragmentary.
Undetermined fragments
2 fr undetermined.

MNI Pisces sp., Trench 2: 1 individual

Bones collected on surface from heaps on the court yard of *marae* Matairea Rahi

Heap A

Pig (Sus domesticus)
Undetermined fragment
1 fr undetermined.

MNI Sus domesticus, Heap A: 1 individual.

Heap B

Pig (Sus domesticus)
Radius
1 distal epifys juv.

MNI Sus domesticus, Heap B: 1 juvenile individual.

Discussion on the results of the osteological analysis

The bone material identified from the two sites contained mainly of human remains and bones from pigs. Besides these two species there are small amounts of bones from dogs, rats, birds and fish as well as one bone from a sheep/goat and a cat.

Human remains

The human remains most probably originate from two different kinds of depositions. There are probably both deposited ancestral bones, as well as human sacrifices. From *marae* Matairea rahi it is quite possible that the skeleton found behind the *ahu* may be a sacrifice. The head is not present or destroyed and the long bones from the legs are not represented. The state of the skeleton and the location *behind* the *ahu* may indicate that this body in fact represent a kind of ”holy” refuse (fig. 1).

Fig. 1. Fragmentary human skeleton, behind ahu, Matairea Rahi.

The human head found in the SE corner inside the *ahu* was placed there under a flat stone. The location of this head in the corner, may reflect the ethnohistorically mentioned custom that a ”human sacrifice” should be placed ”under the cornerstone” of the *ahu* during the construction of a new *marae* (fig. 2).

Fig. 2. The offering of a human cranium, Matairea Rahi.

Other human remains found in a deposit inside this *ahu*, that we did not remove due to its fragile status, probably represents deposited long bones (femurs and tibias) of several individuals that may represent ancestral bones (fig. 3).

Fig. 3. Ancestral bones inside ahu, Matairea Rahi.

The human remains found at *marae* Manunu mainly consisted of dispersed human teethes, and whether they represent sacrifices or deposited ancestors is difficult to determine. But this type of *marae* is strongly tied to human sacrifices, which may indicate that these bones probably came from such sacrifices.

The age determinations on human remains both indicate young adults, as well as adult individuals. On Matairea rahi one child was also recovered.

Pig bones
The pig bones may represent sacrifices to the gods as well as ritual food for the persons participating in different *marae* rituals. Pigs of all different age groups are identified, but most bones identified represented smaller pigs, from suckling pigs up to individuals 6-9 months old. Some of the teethes also indicate adult individuals.

Dog bones
The dogs have also been used as sacrifices and as ritual food. They were also represented by different age groups, from infans to adult.

Rat, bird, and fish bones
All kind of animals could be offered to the gods, also these species, as well as presented as food in ritual meals.

Sheep and cat bones
The representation of sheep and cat, both found in the same test square meter inside the house foundation at *marae* Manunu, may be very recent material. However it was found under gravel in the house in a mix with pig, rat, fish and bird bones. The sheep and cat bones both came from the heads of these individuals. It is furthermore a fact that for example Captain Cook in different islands gave sheeps/goats and maybe cats? to the natives. So, one should not exclude that they represent European animals sacrificed at this huge *marae* in the late 18th century or even in the early 19th century during this early contact period.

Table of identified individuals:

Specie/Site:	Manunu	Matairea rahi Tr. 1	Matairea rahi Tr.2
Human (ad)	1	2	2
Human (juv)	1	0	0
Human (inf II)	0	0	1
Pig (ad)	1	1	2
Pig (juv)	1	1	1
Pig (inf/juv)	0	2	1
Pig (inf)	1	0	1
Dog (ad)	0	1	0
Dog (juv)	0	1	0
Dog (inf/juv)	0	0	1
Rat (ad)	3	0	1
Bird	1	1	1
Fish	2	1	1
Sheep/goat	1	0	0
Cat	1	0	0

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List of bones recovered from excavation of sites

ScH-2-18 and ScH-2-19

Excavations August and September 2003

No.	Island	Land	Site No.	Tr.	Un.	Lev.	Cm	Month	Day	Specie	Bone type	No.	Part of bone	Side	Age	Weight (g)	Description
1	Huahine	Tetuatiare	ScH-2-18	TP	X0-Y0	2/3	15/20-30	August	28								1 Human tooth, molar, found under tupiri fill.
2	Huahine	Tetuatiare	ScH-2-18	TP	X10-Y0	1	0-10	August	28	Sus dom.	Fragments	7				2	7 Pig bone fragments
2	Huahine	Tetuatiare	ScH-2-18	TP	X10-Y0	1	0-10	August	28	Sus dom.	Molar	1	Fragmentary		Ad	1	
4	Huahine	Tetuatiare	ScH-2-18	TP	X10-Y0	2	10-20	August	28	Sus dom.	Mandibula	1	Fragment			1	Fragment with alveoles.
4	Huahine	Tetuatiare	ScH-2-18	TP	X10-Y0	2	10-20	August	28	Sus dom.	Molar	2			Ad	9	2 fragments of same tooth
5	Huahine	Tetuatiare	ScH-2-18	TP	X20-Y0	1	0-10	August	27	Sus dom.?		1	diafys			1	1 piece of bone.
8	Huahine	Tetuatiare	ScH-2-18	TP	X25Y0	1	0-10	August	27								4 Pig tooths and 18 fragments of Pig bone.
9	Huahine	Tetuatiare	ScH-2-18	TP	X25Y0	2	10-20	August	27	Sus dom.	Temporale?	1	Fragment			2	2 fragments of Pig bone.
12	Huahine	Tearanu'u	ScH-2-18	TP	X10Y20	1	0-10	August	29								1 Piece of bone, possibly pig.
13	Huahine	Tearanu'u	ScH-2-18	TP	X18Y6	1	0-15	September	1		Canini	1			Ad	1	1 Felis? Dolphin?. In "fare pote".
14	Huahine	Tearanu'u	ScH-2-18	TP	X18Y6	1	0-15	September	1	Rattus ex.	Mandibula	1		Sin	Ad	1	1 complete left side rat jaw In "fare pote".
15	Huahine	Tearanu'u	ScH-2-18	TP	X18Y6	1	0-15	September	1	Sus dom.	Canini	5			Inf/Juv?	6	In "fare pote".
15	Huahine	Tearanu'u	ScH-2-18	TP	X18Y6	1	0-15	September	1	Sus dom.	Pm/M	21	Fragmentary		Juv/Ad?	10	In "fare pote".
16	Huahine	Tearanu'u	ScH-2-18	TP	X18Y6	1	0-15	September	1	Ovis/Capra	Occipitale	1	Fragment			4	
16	Huahine	Tearanu'u	ScH-2-18	TP	X18Y6	1	0-15	September	1	Sus dom.?	Costae	6	Fragments			4	In "fare pote".
16	Huahine	Tearanu'u	ScH-2-18	TP	X18Y6	1	0-15	September	1	Sus dom.	Cranial bones	15	Fragments			20	Probably pig. In "fare pote".
16	Huahine	Tearanu'u	ScH-2-18	TP	X18Y6	1	0-15	September	1	Sus dom.?	Fragments	39	Fragments			12	Probably pig. In "fare pote".
17	Huahine	Tearanu'u	ScH-2-18	TP	X18Y6	1	0-15	September	1	Undetermined	Fragments	54				6	Probably most fragments from pig. In "fare pote".
18	Huahine	Tearanu'u	ScH-2-18	TP	X18Y6	1	0-15	September	1	Aves?	Fragments	6				3	6 cleaned fragments of bone. Possible bird. In "fare pote".
19	Huahine	Tearanu'u	ScH-2-18	TP	X18Y6	1	0-15	September	1	Pisces	Fragments	8				1	8 cleaned fragments of bone. Probably fish. In "fare pote".
20	Huahine	Tetuatiare	ScH-2-18	I	?X-1Y-1?	2	0-10	September	2	Sus dom.	Incicivi 1	2	Fragmentary	Sin/Dx	Inf/Juv?	2	2 Fragments of teeths. Pig. In same bag.
21	Huahine	Tetuatiare	ScH-2-18	I	?X-1Y-1?	2	0-10	September	2	Sus dom.	Ph 2	1	Fragmentary	Sin?	Inf/Juv?	2	
22	Huahine	Tetuatiare	ScH-2-18	I	?X-1Y-1?	2	0-10	September	2	Sus dom.?	Fragment	1				1	
22	Huahine	Tetuatiare	ScH-2-18	I	X-1Y-1	2	0-10	September	2	Sus dom.	Cranial fr	2	Temporale	Sin/Dx	Inf?	4	2 Fragments of bones. From skull around ear. Pig.
23	Huahine	Tetuatiare	ScH-2-18	I	X-1Y-1	3	-12 to 15 cm b.s.	September	2	Homo S.?		1	Diafys			1	1 Fragment of bone. Poss. Human. Almost N / NW corner of unit.
24	Huahine	Tetuatiare	ScH-2-18	I	X-1Y-1	3	-16	September	2	Homo S.	Ulna	1	diafys			2	1 Fragment of human ulna. (X-0.85 Y-0.95).

26	Huahine	Tetuatiare	ScH-2-18	I	X-1Y-1	5	-32	September	2	Sus dom.	Cranial fr.	1	Parietale	dx		6	1 Piece of skull bone. Pig. (X-0.78 Y-0.43).Dog theeth marks.
27	Huahine	Tetuatiare	ScH-2-18	I	X-1Y-1	5-6	-38 to -45	September	2	Sus dom.	Canini	1	Mandibula	dx	Inf	1	
27	Huahine	Tetuatiare	ScH-2-18	I	X-1Y-1	5-6	-38 to -45	September	2	Sus dom.	Insicivi	1	Mandibula	dx	Inf	1	
27	Huahine	Tetuatiare	ScH-2-18	I	X-1Y-1	5-6	-38 to -45	September	2	Sus dom.	PM	1	Mandibula	dx	Inf	1	
27	Huahine	Tetuatiare	ScH-2-18	I	X-1Y-1	5-6	-38 to -45	September	2	Sus dom.	Molar	2			Inf	2	
27	Huahine	Tetuatiare	ScH-2-18	I	X-1Y-1	5-6	-38 to -45	September	2	Sus dom.	Molar	1	Mandibula		Inf/Juv	1	Decidious tooth worn.
28	Huahine	Tetuatiare	ScH-2-18	I	X-1Y-1	5-6	-38 to -45	September	2	Sus dom.?	Fragments	10				4	10 Fragment of bones. Probably Pig.(c. X-0.65 Y-0.45).
29	Huahine	Tetuatiare	ScH-2-18	I	X-1Y-1	5-6	-38 to -45	September	2	Sus dom.	Cranial fr.	2				4	1 Fragment of skull. Pig. 1 Fragment Pig Sygomaticum. (c. X-0.65 Y-0.45).
30	Huahine	Tetuatiare	ScH-2-18	I	X-1Y-1	5	-38	September	2	Sus dom.?	Femur?	1	Prox diaf fr			3	1 Frag. Pig tooth. (X-0.65 Y-0.55). 1 Frag. Bone. Pig. (X-0.70 Y-0.70).
30	Huahine	Tetuatiare	ScH-2-18	I	X-1Y-1	5	-38	September	2	Sus dom.	Pm/M	1	M		Inf	1	1 Frag. Pig tooth. (X-0.65 Y-0.55). 1 Frag. Bone. Pig. (X-0.70 Y-0.70).
31	Huahine	Tetuatiare	ScH-2-18	I	X-1Y-1	5	-32 to -37	September	2	Sus dom.	Mandibula	3	Ramus	sin	Inf/Juv?	18	3 Frag. Of Jaw bone. Pig. (X-0.62 Y-0.45).
32	Huahine	Tetuatiare	ScH-2-18	I	X-2Y-1	3	10-20 under tupiri	September	3	Sus dom.?		1	Diafys			1	1 Frag. Bone. Poss. Pig. (c. X-1.75 Y-0.95+; 20-25 cm from ahu slab.
33	Huahine	Tetuatiare	ScH-2-18	I	X-2Y-1	2	-16	September	3	Rattus ex.	Mandibula	1	Fragmentary	dx	Ad	1	1 Frag. Bone. Rat. (c. X-1.38 Y-0.81).
34	Huahine	Tetuatiare	ScH-2-18	I	X-2Y-1	2	-20	September	3	Sus dom.?	Tibia?	1	Fragment			2	1 Frag. Bone. Prob. Pig. (X-1.86 Y-0.65).
35	Huahine	Tetuatiare	ScH-2-18	II	X24Y0	1	0-10	September	1	Sus dom.?	Fragments	13				3	13 Frag. Bone. Prob. Pig.
36	Huahine	Tetuatiare	ScH-2-18	II	X24Y0	2	10-20	September	2	Sus dom.?	Long bone fr	1	Diafys			1	1 Frag. Bone. Prob. Pig.
37	Huahine	Tetuatiare	ScH-2-18	II	X24Y1	1	0-10	September	1	Sus dom.	Insicivi	1	Fragmentary		Ad	1	Worked?
37	Huahine	Tetuatiare	ScH-2-18	II	X24Y1	1	0-10	September	1	Sus dom.	Canini	1	Fragmentary		Inf?	1	
37	Huahine	Tetuatiare	ScH-2-18	II	X24Y1	1	0-10	September	1	Sus dom.	Pm/M	4			Inf/Juv?	6	
38	Huahine	Tetuatiare	ScH-2-18	II	X24Y1	1	0-10	September	1	Sus dom.?	Fragments	33				7	33 Frag. Bones. Poss. Pig.
39	Huahine	Tetuatiare	ScH-2-18	II	X24Y1	1	0-10	September	1	Sus dom.?	Fragments	4				2	4 Frag. Bones. Prob. Pig.
41	Huahine	Tetuatiare	ScH-2-18	II	X24Y1	2	10-20	September	2	Sus dom.	Pm/M	1	Fragmentary		Juv	1	1 Pig tooth in 3 pieces.
42	Huahine	Tetuatiare	ScH-2-18	II	X24Y1	2	10-20	September	2	Sus dom.?	Fragments	7				2	7 Frag. Bones. Prob. Pig.
44	Huahine	Tetuatiare	ScH-2-18	II	X25Y0	1	0-10	August	27	Sus dom.?	Fragments	22				4	18 Frag. Bones. Prob. Pig. And 4 Teethes. Pig.
45	Huahine	Tetuatiare	ScH-2-18	II	X25Y0	2	10-20	August	27	Sus dom.	Costae	1	Fragment		Inf/Juv?	1	
45	Huahine	Tetuatiare	ScH-2-18	II	X25Y0	2	10-20	August	27	Sus dom?	Mt?	1	Dist?			1	
47	Huahine	Tetuatiare	ScH-2-18	II	X25Y1	1	0-10	September	2	Pisces	Cranial bone	1	Fragment			1	1 Frag. Bone. Prob. Fish.
48	Huahine	Tetuatiare	ScH-2-18	II	X25Y1	1	0-10	September	2	Sus dom.	Dentes	4	Fragmentary		Juv	8	
48	Huahine	Tetuatiare	ScH-2-18	II	X25Y1	1	0-10	September	2	Sus dom.	Ph?	1	Diafys	dx	Inf/Juv?	1	
48	Huahine	Tetuatiare	ScH-2-18	II	X25Y1	1	0-10	September	2	Sus. dom.?	Fragments	17				9	17 Frag. Bone. Prob. Pig.
49	Huahine	Tetuatiare	ScH-2-18	II	X25Y1	1	0-10	September	2	Sus dom.	Insicivi	2	Fragmentary		Juv	2	
49	Huahine	Tetuatiare	ScH-2-18	II	X25Y1	1	0-10	September	2	Sus dom.	Mandibula?	2	Fragments			2	
49	Huahine	Tetuatiare	ScH-2-18	II	X25Y1	1	0-10	September	2	Sus dom.	Pm/M	7	Fragmentary		Juv?	6	
51	Huahine	Tetuatiare	ScH-2-18	II	X25Y1	2	10-20	September	3	Sus dom.	Pm	1	Fragmentary			1	
51	Huahine	Tetuatiare	ScH-2-18	II	X25Y1	2	10-20	September	3	Sus dom.?	Fragments	16				5	16 Frag. Bone. Porb. Pig.
52	Huahine	Tetuatiare	ScH-2-18	II	X25Y1	2	10-20	September	3	Sus dom.	Humerus?	1	Diafys fr			2	1 Frag. Bone. Prob. Pig. Charred.
55	Huahine	Tearanu'u	ScH-2-18	III	X10Y8	1	-8 to -9	September	3	Homo S.	PM2	1	Maxilla	sin	Ad	1	1 Human PremolarMaxilla. Adult (18-35). (X10.29 Y8.05).
56	Huahine	Tearanu'u	ScH-2-18	III	X10Y8	1	-3	September	3	Homo S.	M1	1	Maxilla	dx	Ad	1	1 Human Molare. 3 Pieces. (X10.67 Y8.24).
57	Huahine	Tearanu'u	ScH-2-18	III	X10Y8	1	-5	September	3	Homo S.	Molar 2	1	Mandibula	dx	Juv/Ad	1	1 Human tooth. Juv. (X10.60 Y8.53).
59	Huahine	Tearanu'u	ScH-2-18	III	X10Y9	1	-10	September	4	Homo S.	PM1	1	Maxilla	Sin	Ad	1	1 Human PremolarMaxima. (X10.66 Y9.60).

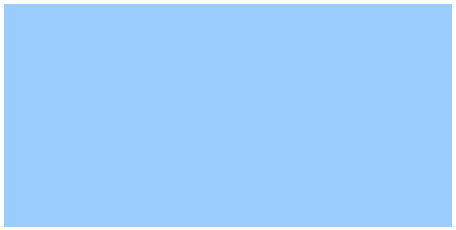
59	Huahine	Tearanu'u	ScH-2-18	III	X10Y9	1	-10	September	4	Rattus./Aves	Cranial bone	1	Fragment			1	1 very thin fragment probably from cranial bone (X10.66 Y9.60).
63	Huahine	Tearanu'u	ScH-2-18	III	X11Y8	1	-5	September	4	Homo S.	Insicivi	1	Fragmentary			1	1 Human tooth. (X11.35 Y8.30).
66	Huahine	Tearanu'u	ScH-2-18	III	X11Y9	1	-8	September	4	Sus dom.?		25	Fragments			5	25 Frag. Bones. Poss. Pig.
67	Huahine	Tetuatiare	ScH-2-18	BW	TuI	4	-34	September	5	Sus dom.	parietale	1	Fragment	dx	Inf/Juv	7	At base of coral slab in ahu.
69	Huahine	Tehu'a	ScH-2-19	I	1	1	0-5	September	8	Canis fam.	Canini	1	Fragmentary		Ad	1	
69	Huahine	Tehu'a	ScH-2-19	I	1	1	0-5	September	8	Canis fam.	PM	1	Fragmentary		Ad	1	
70	Huahine	Tehu'a	ScH-2-19	I	1	1	0-5	September	8	Sus dom.	Dentes	2	Fragmentary		Juv/Ad	2	2 Frag. Teeths. Fire damaged.
71	Huahine	Tehu'a	ScH-2-19	I	1	1	0-5	September	8	Homo S.	Tooth	1	Fragment		Juv/Ad	1	Partly burned root fragment.
71	Huahine	Tehu'a	ScH-2-19	I	1	1	0-5	September	8	Homo S.	Cranial bone	1	Parietale?		Juv/Ad	1	Partly burned fragment with suture.
71	Huahine	Tehu'a	ScH-2-19	I	1	1	0-5	September	8	Sus dom.?	Fragments	4				2	Fragments partly burned
73	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	8	Homo S.	Incicive 1	1		dx	Ad	1	Fire damaged - 9.5 cm b.s. (0.30 / 0.80)
74	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	8	Sus d/Homo S.	Fragments	8				4	8 small Bone Frag. Undetermined.
75	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	8	Sus dom.?	Fragments	9				10	Fire damaged, 9 Frag. Bones. Prob. Pig.
76	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	8	Homo S.	M1	1	Mandibula	dx	Ad	1	Fire damaged, - 9 cm b.s. Quite worn surface.
77	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	8	Sus dom.	Pm/M	2			Ad	1	2 frags from same tooth very worn surface.
78	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	8	Homo S.	Cranial bone	1	Parietale?		Ad	4	1 Frag. Skull.
81	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	9	Homo S.	Cranial bone	2	Parietale?			1	Burned fragment.
81	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	9	Sus dom.	Vertebrae	2				6	
81	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	9	Sus dom.	Metapod	1	Prox fr.			1	
81	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	9	Sus dom.?	Fragments	22				20	23 Bone Frags. Poss. Pig.
82	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	9	Sus dom.	Pm/M	4	Fragmentary		Juv/Ad	4	
82	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	9	Sus dom.	Incisivi	1			Juv	1	
83	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	9	Homo S.	Cranial bone	1	Temporale?		Ad	3	1 Bone Frag. Close to ahu slab. Fire damaged - 7 cm b.s. With suture.
83	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	9	Sus dom./Homo S.?	Tibia?	1	Diafys			2	1 Bone Frag. Close to ahu slab. Fire damaged - 7 cm b.s.
85	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	9	Sus dom.	Femur fr.?	1	Diafys			6	
85	Huahine	Tehu'a	ScH-2-19	I	1	2	5-10	September	9	Homo S.	Humerus	4	Distal del	dx	Ad	37	4 Bone Frags. From same bone. - 10 cm b.s. (on drawing).
86	Huahine	Tehu'a	ScH-2-19	I	1	3	10-15	September	9	Sus dom.?	Fragments	10				10	Fire damaged fragments, mixed bones.
86	Huahine	Tehu'a	ScH-2-19	I	1	3	10-15	September	9	Homo S.	Vertebrae	1	Fragment			1	Fire damaged fragments
86	Huahine	Tehu'a	ScH-2-19	I	1	3	10-15	September	9	Homo S.	Cranial bones	2	Frontale/Pariet			2	Fire damaged fragments
87	Huahine	Tehu'a	ScH-2-19	I	1	3	10-15	September	9	Sus dom.	M	4	Fragment		Ad	4	
87	Huahine	Tehu'a	ScH-2-19	I	1	3	10-15	September	9	Sus dom.	Canine	1	Fragment		Ad	2	
88	Huahine	Tehu'a	ScH-2-19	I	1	3	10-15	September	9	Homo S.	Pm 2	1	Fragmented root	dx	Ad	1	Quite worn and fire damaged.
89	Huahine	Tehu'a	ScH-2-19	I	1	3	10-15	September	9	Pisces	Vertebrae	1				1	Quite flat and possibly perforated in the centre. Fire damaged?
90	Huahine	Tehu'a	ScH-2-19	I	1	3	10-15	September	9	Sus dom./Homo S.?	Fragments	11				2	Mixed fragments.
92	Huahine	Tehu'a	ScH-2-19	I	1	3	15-20	September	9	Homo S.	Vertebrae	1	Fragment			1	From burried individual behind ahu.
93	Huahine	Tehu'a	ScH-2-19	I	1	3	15-20	September	9	Sus dom.?	Humerus?	1	Fragment			1	Fire damaged fragment.
93	Huahine	Tehu'a	ScH-2-19	I	1	3	15-20	September	9	Sus dom.	Mandibula	2	Caput & ramus	dx	Juv/Ad	5	1 fragm of ramus with alveoles and 1 fr with part of caput.
93	Huahine	Tehu'a	ScH-2-19	I	1	3	15-20	September	9	Sus dom.	M	1			Ad?	2	Slightly worn
93	Huahine	Tehu'a	ScH-2-19	I	1	3	15-20	September	9	Sus dom.	Ulna	1	Prox fr.	dx		6	
93	Huahine	Tehu'a	ScH-2-19	I	1	3	15-20	September	9	Homo S.	Mand/Max	1	fragment			1	Fragment with alveoles.

93	Huahine	Tehu'a	ScH-2-19	I	1	3	15-20	September	9	Homo S.	Parietale	1	fragment	Sin		4	Arcus supraciliaris
97	Huahine	Tehu'a	ScH-2-19	I	1	4	20-25	September	10	Undetermined		1				1	
97	Huahine	Tehu'a	ScH-2-19	I	1	4	20-25	September	10	Sus dom.	Pm	1				1	
106	Huahine	Tehu'a	ScH-2-19	I	2	1	0-5	September	8	Homo S.	Cranial bone	1	Temporale			2	Fire damaged.
106	Huahine	Tehu'a	ScH-2-19	I	2	1	0-5	September	8	Sus dom.	Fragments		Mixed fragm.			7	
107	Huahine	Tehu'a	ScH-2-19	I	2	1	0-5	September	8	Sus dom.	Pm/M	4			Ad	7	
107	Huahine	Tehu'a	ScH-2-19	I	2	1	0-5	September	8	Sus dom.	Inciciv	1	Mandibula fr.			1	
109	Huahine	Tehu'a	ScH-2-19	I	2	2	5-10	September	8	Homo S.	Cranial bones	3	Fragments			4	
109	Huahine	Tehu'a	ScH-2-19	I	2	2	5-10	September	8	Sus dom.?	Fragments	9				7	
110	Huahine	Tehu'a	ScH-2-19	I	2	2	5-10	September	8	Sus dom.	Incicive	2	Fragment			1	
110	Huahine	Tehu'a	ScH-2-19	I	2	2	5-10	September	8	Sus dom.	Pm/M	3	Fragment		Juv	8	
111	Huahine	Tehu'a	ScH-2-19	I	2	2	-8	September	8	Sus dom./Homo S.?	Fragments	6				3	6 Bone Frags. Undetermined.
112	Huahine	Tehu'a	ScH-2-19	I	2	2	5-10	September	8	Sus dom./Homo S.?	Fragments	7				2	7 Small Bone Frags. Undetermined.
114	Huahine	Tehu'a	ScH-2-19	I	2	2	-7	September	8	Homo S.	Canini	1	Maxilla	dx	Ad	1	1 Human Tooth.
115	Huahine	Tehu'a	ScH-2-19	I	2	2	-7	September	8	Sus dom./Homo S.?	Fragments	9	Mixedd fragm.			6	
116	Huahine	Tehu'a	ScH-2-19	I	2	2	-10	September	8	Homo S.	Pm1	1	Mandibula	Sin	Ad	1	
116	Huahine	Tehu'a	ScH-2-19	I	2	2	-10	September	8	Sus dom.	Humerus	1	Dist./diaf.	Sin?	Inf/juv	10	
117	Huahine	Tehu'a	ScH-2-19	I	2-N1/2	3	10-15	September	9	Sus dom./Homo S.?	Fragments	5				1	5 Tiny Bone Frags. Undetermined.
118	Huahine	Tehu'a	ScH-2-19	I	2-N1/2	3	10-15	September	9	Sus dom.	Metapod	1		Sin?	Ad	4	
119	Huahine	Tehu'a	ScH-2-19	I	2-N1/2	3	10-15	September	9	Sus dom.	Pm/M	6	Fragments			6	
119	Huahine	Tehu'a	ScH-2-19	I	2-N1/2	3	10-15	September	9	Sus dom.	Canini	1	Fragmentary			2	
119	Huahine	Tehu'a	ScH-2-19	I	2-N1/2	3	10-15	September	9	Sus dom.	Incisiv	4	Fragments			2	
120	Huahine	Tehu'a	ScH-2-19	I	2-N1/2	3	10-15	September	9	Sus dom.	Fragments	6	Mixed fragm.			8	
120	Huahine	Tehu'a	ScH-2-19	I	2-N1/2	3	10-15	September	9	Aves?	Fragments	2	diafys			1	
120	Huahine	Tehu'a	ScH-2-19	I	2-N1/2	3	10-15	September	9	Homo S.	Cranial bones	2	Fragments			2	
122	Huahine	Tehu'a	ScH-2-19	I	2-S1/2	3	10-15	September	9	Canis familiaris?	Vertebrae	1	Fragment		Juv	1	Epifysal surface on one side of vertebrae.
122	Huahine	Tehu'a	ScH-2-19	I	2-S1/2	3	10-15	September	9	Canis familiaris	M1?	1			Ad	1	
123	Huahine	Tehu'a	ScH-2-19	I	2-S1/2	3	10-15	September	9	Sus dom.	Pm/M	6	Fragmentary		Ad	10	
123	Huahine	Tehu'a	ScH-2-19	I	2-S1/2	3	10-15	September	9	Sus dom.	Pm/M	3			Inf/juv	5	
123	Huahine	Tehu'a	ScH-2-19	I	2-S1/2	3	10-15	September	9	Sus dom.	Incisiv	2	Fragments			1	
123	Huahine	Tehu'a	ScH-2-19	I	2-S1/2	3	10-15	September	9	Sus dom.	Canini?	1	Fragmentary		Ad?	2	
124	Huahine	Tehu'a	ScH-2-19	I	2-S1/2	3	10-15	September	9	Sus dom./Homo S.?	Fragment	29	Mixed fragm.			10	29 Bone Frags. Undetermined.
125	Huahine	Tehu'a	ScH-2-19	I	2-S1/2	3	10-15	September	9	Homo S.	Cranial bones	4	Parietale?		Ad	11	
125	Huahine	Tehu'a	ScH-2-19	I	2-S1/2	3	10-15	September	9	Sus dom.	Vertebrae	1	Fragmentary		Inf/juv	7	
125	Huahine	Tehu'a	ScH-2-19	I	2-S1/2	3	10-15	September	9	Sus dom.	Humerus	2	Diafys		Inf/juv	5	
125	Huahine	Tehu'a	ScH-2-19	I	2-S1/2	3	10-15	September	9	Sus dom.?	Fragments	10	Mixed fragm.		Inf/juv	8	
127	Huahine	Tehu'a	ScH-2-19	I	2-N1/2	4	15-20	September	9	Homo S.	Cranial bone	5	Parietale?		Ad	2	
127	Huahine	Tehu'a	ScH-2-19	I	2-N1/2	4	15-20	September	9	Sus dom.	Metapod	1	Distal part		Juv	1	Dog gnawed
127	Huahine	Tehu'a	ScH-2-19	I	2-N1/2	4	15-20	September	9	Sus dom.?	Fragments	5				1	
129	Huahine	Tehu'a	ScH-2-19	I	2-S1/2	4	15-20	September	9	Sus dom.?	Fragments	5					5 Bone Frags. Undetermined.

131	Huahine	Tehu'a	ScH-2-19	I	2-N1/2	5	20-30	September	9	Sus dom.	Dentes	2	Fragmentary		Juv	1	
131	Huahine	Tehu'a	ScH-2-19	I	2-N1/2	5	20-30	September	9	Sus dom.?	Fragments	9				1	
141	Huahine	Tehu'a	ScH-2-19	II	UW	0	Between stones	September	12	Sus dom.	Femur	1	Diafys	Dx	Juv	27	
141	Huahine	Tehu'a	ScH-2-19	II	UW	0	Between stones	September	12	Sus dom.	M3	1			Ad	7	
142	Huahine	Tehu'a	ScH-2-19	II	UW	1	Surface	September	12	Sus dom?	Fragment	1				6	1 Pig Bone, just under stone in wall.
143	Huahine	Tehu'a	ScH-2-19	II	UW	1	0-10	September	12	Sus dom.	M	3	Mandibula		Juv	20	
145	Huahine	Tehu'a	ScH-2-19	II	UW	1	0-10	September	12	Homo S.	Temporale	1	Pars petrosa	dx	Ad	3	
145	Huahine	Tehu'a	ScH-2-19	II	UW	1	0-10	September	12	Homo S.	Cranial bone	3	Parietale?		Ad	3	
145	Huahine	Tehu'a	ScH-2-19	II	UW	1	0-10	September	12	Sus dom.?	Fragments	16	Mixed fragm.			11	
146	Huahine	Tehu'a	ScH-2-19	II	UW	1	0-10	September	12	Homo S.	Cranial bone	2			Ad	3	
146	Huahine	Tehu'a	ScH-2-19	II	UW	1	0-10	September	12	Sus dom.	Fragments	2			Ad	5	4 Bone Frags. Undetermined.
150	Huahine	Tehu'a	ScH-2-19	II	UW	?	-121-122	September	12	Sus dom.	Mandibula	1	Gnathion		Ad	20	1 Bone Frag. X2 on plan.
153	Huahine	Tehu'a	ScH-2-19	II	UW	3	20-30	September	12	Sus dom.?	Fragment	1				1	
153	Huahine	Tehu'a	ScH-2-19	II	UW	3	20-30	September	12	Sus dom.	M	1	Mandibula	Sin	Ad	3	
153	Huahine	Tehu'a	ScH-2-19	II	UW	3	20-30	September	12	Sus dom.	Canini	1	Mandibula	Sin	Ad	2	
153	Huahine	Tehu'a	ScH-2-19	II	UW	3	20-30	September	12	Sus dom.	Humerus	1	Diafys	Sin	Inf	3	
155	Huahine	Tehu'a	ScH-2-19	II	UW	?	Bottom?	September	12	Homo S.	M1	1	Maxilla	Sin	Ad	1	Heavy wear
159	Huahine	Tehu'a	ScH-2-19	II	IA1	In Fill	-128	September	11	Sus dom.	Canini	1	Mandibula/Fr.	Sin	Ad	3	1 Pig Tooth Frag. In fill of stones, - 128 cm b.st. (215/80).
160	Huahine	Tehu'a	ScH-2-19	II	IA1	In Fill		September	11	Homo S.	Cranial fr.	1	Parietale?			2	1 Skull Frag. Human. Skull consentration 1.
161	Huahine	Tehu'a	ScH-2-19	II	IA1	In Fill		September	11	Homo S.	Ph1	1	Manus fr.		Ad	2	Bone consentration 1.
161	Huahine	Tehu'a	ScH-2-19	II	IA1	In Fill		September	11	Homo S.	Femur/Tibia	1	Fragment			3	Bone consentration 1.
162	Huahine	Tehu'a	ScH-2-19	II	IA1	In Fill		September	11	Sus dom.	Tibia	1	Distal part	Sin	Juv	18	Bone consentration 1, SE corner.
163	Huahine	Tehu'a	ScH-2-19	II	IA1	In Fill	0-20	September	12	Homo S.	Cranial bone	1	Parietale			1	Outside root.
163	Huahine	Tehu'a	ScH-2-19	II	IA1	In Fill	0-20	September	12	Aves?	Carpometacarpus	1	Prox fr.			1	Outside root.
163	Huahine	Tehu'a	ScH-2-19	II	IA1	In Fill	0-20	September	12	Sus dom.	Pm	1	Maxilla			1	Outside root.
164	Huahine	Tehu'a	ScH-2-19	II	IA1	In Fill	-75 b.ahu	September	12	Sus dom.	Pm	1	Mandibula		Juv	1	1 Tooth in 2 Frags. Bottom of ahu.
166	Huahine	Tehu'a	ScH-2-19	II	IA1	In Fill	?	September	?	Homo S.	Cranial bone	1	Parietale		Juv/ad	3	Fragm with sutura parietomastoidea.
167	Huahine	Tehu'a	ScH-2-19	II	IA1	2?	-143 b.st.	September	12	Homo S.	M1	1	Maxilla	Dx	Inf II	1	1 Tooth. Human. NW corner at pit. Age c.8-9 years.
169	Huahine	Tehu'a	ScH-2-19	II	IA1	150-160		September	15	Sus dom.?	Fragments	15	Mixed fragm.			15	
169	Huahine	Tehu'a	ScH-2-19	II	IA1	150-160		September	15	Sus dom.	Femur	1	Diafys	Sin	Inf/juv	7	
169	Huahine	Tehu'a	ScH-2-19	II	IA1	150-160		September	15	Sus dom.	Femur	1	Diafys	Dx	Inf	2	
171	Huahine	Tehu'a	ScH-2-19	II	IA1	150-160		September	15	Homo S.	Incisiv I/II	1	Mandibula?			1	Root only.
171	Huahine	Tehu'a	ScH-2-19	II	IA1	150-160		September	15	Sus dom.	Canini	1	Maxilla	Sin	Inf/juv	1	
172	Huahine	Tehu'a	ScH-2-19	II	IA1	150-160		September	15	Homo S.	Canini	1	Maxilla	Sin	Ad	1	1 Tooth. Human. - 150 to 160 / 165 cm b.st.
174	Huahine	Tehu'a	ScH-2-19	II	IA1	150-160	-160 b.st.	September	15	Pisces	Vertebrae	1				2	1 Bone Frag. Fish.
175	Huahine	Tehu'a	ScH-2-19	II	IA1	150-160	-160 b.st.	September	?	Sus dom.	Vertebrae	1	Fragmentary		Inf/juv	9	
177	Huahine	Tehu'a	ScH-2-19	II?	IA1	150-160	-158 b.st.	September	?	Sus dom.	Mc4	1	Distal part	Dx	Inf/juv	3	
178	Huahine	Tehu'a	ScH-2-19	II	IA1	150-160	-155 b.st.	September	15	Homo S.	M3	1	Maxilla	Sin	Ad	1	Missing roots.
184	Huahine	Tehu'a	ScH-2-19	II	IA2	1	0-10 b."s".	September	16	Homo S.	I2	1	Mandibula	Dx	Ad	1	
184	Huahine	Tehu'a	ScH-2-19	II	IA2	1	0-10 b."s".	September	16	Homo S.	Ph2	1	Manus		Ad	1	1 Tooth Frag. Human. 1 Bone Frag. Poss. Human.

185	Huahine	Tehu'a	ScH-2-19	II	IA2	1	0-10 b."s".	September	16	Sus dom/Canis f?	Fragments	4				6	5 Bone Frag. Mixed.
185	Huahine	Tehu'a	ScH-2-19	II	IA2	1	0-10 b."s".	September	16	Canis familiaris	Vertebrae	1	Corpus		Inf/juv	1	Corpus with metaphys surfaces.
186	Huahine	Tehu'a	ScH-2-19	II	IA2	1	0-10 b."s".	September	16	Aves	Long bones	6	Diafyses			4	
187	Huahine	Tehu'a	ScH-2-19	II	IA2	1	0-10 b."s".	September	16	Rattus exulans	Femur	1	Prox fr.	Sin	Ad	1	
187	Huahine	Tehu'a	ScH-2-19	II	IA2	1	0-10 b."s".	September	16	Rattus exulans	Coxae	1		Sin	Ad	1	
188	Huahine	Tehu'a	ScH-2-19	II	IA2	1	0-10 b."s".	September	16	Sus dom.	Pm/M	2	Fragmentary			1	
189	Huahine	Tehu'a	ScH-2-19	II	IA2	2	10-20 b."s".	September	16	Sus dom./Homo S.?	Fragments	15	Mixed fragm.			5	15 Bone Frags. Undetermined.
190	Huahine	Tehu'a	ScH-2-19	II	IA2	2	10-20 b."s".	September	16	Sus dom?	Vertebrae	1	Arcus?		Inf	1	
192	Huahine	Tehu'a	ScH-2-19	II	IA2	2	10-20 b."s".	September	16	Pisces	Vertebrae	2	Fragmentary			2	3 Bone Frag. Fish. Two different species
193	Huahine	Tehu'a	ScH-2-19	II	IA2	2	10-20 b."s".	September	16	Aves?	Fragments	2	Diafys fragm.			1	2 Bone Frag. Poss. Bird.
194	Huahine	Tehu'a	ScH-2-19	II	IA2	3?	Bottom	September	17	Sus dom.	Fragments	2	Mixed fragm.			2	2 Bone Frags. Costae & Tibia?
195	Huahine	Tehu'a	ScH-2-19	II	IA2		Bottom	September	17	Pisces	Fragment	2				1	1 Bone Frag. Fish. 1 Tuai shell frag.
196	Huahine	Tehu'a	ScH-2-19	II	IA2	-	-99 b.st.	September	16	Homo S.	Incisiv 2	1	Mandibula	Dx	Ad	1	1 Tooth. Human. (190/10).
197	Huahine	Tehu'a	ScH-2-19	II	IA2	-	-106 b.st.	September	16	Sus dom.	Radius	1	proximal	Dx	Ad	12	
198	Huahine	Tehu'a	ScH-2-19	II	IA2	-	-105-110	September	16	Homo S.	Incisiv 1	1	Maxilla	Dx	Ad	1	
199	Huahine	Tehu'a	ScH-2-19	II	IA2	-	-105-110	September	16	Pisces	Vertebrae	1	Fragmentary			1	
200	Huahine	Tehu'a	ScH-2-19	II	IA2	-	-118 b.st.	September	16	Sus dom.	2 Molars in jaw	1	Mandibula		Juv	8	1 Pig Jaw Frag. (120/23).
201	Huahine	Tehu'a	ScH-2-19	II	IA2	-	-133 b.st.	September	17	Homo S.	Canini	1	Maxilla	Dx	Ad	1	1 Tooth. Human. At bottom, but close to "intruding" coral lumps.
207	Huahine	Tehu'a	ScH-2-19	ourtyai	Heap A	-	c. -5	September	12	Sus dom.	Fragment	1				1	1 Bone Frag. Pig. Fire damaged
208	Huahine	Tehu'a	ScH-2-19	ourtyai	Heap B	-	c. -5	September	12	Sus dom.	Radius	1	Distal epifys		Juv	3	1 Bone Frag. Pig.

BW = Back-wall
UW = Under wall
IA1 = Inside Ahu 1
IA2 = Inside Ahu 2



||Appendix 4
Radiocarbon reports

Pre-liminary comments on the datings of the Te Ana *marae*:

These pre-liminary notes are based upon 6 14-C dates on charcoal and 1 14-C date on pig-tooth. From the August-September 2002 field-season there exists two calibrated 14-C datings, one from *marae* ScH-2-62-3 and one from *marae* ScH-2-65-2. From the April-May 2003 field-season there exists 5 un-calibrated 14-C dates on charcoal and 1 un-calibrated date on pig-tooth.

Marae ScH-2-62-3:

- ***Marae* ScH-2-62-3:** Beta-177605, 500 +- 60 b.p. or Cal. AD. 1320-1340 and 1390-1500 at 2-sigma. This is a standard radiometric date on a general scatter of charcoal from level 2, 10 to 20 cm b.s.. This level, which continues under the *marae*, is associated with midden debri, and is probably *umu* or midden waste. The sample dates habitation activity prior to the construction of *marae* ScH-2-62-3. Sample Beta-177605 was a bulk sample and the wood in the sample was not identified. Both factors might have influenced the dating to be slightly older than it should have been. It is therefore reasonable to argue that the date is from the late spectrum of the 2-sigma calibrated range.
- **Marae ScH-2-62-3:** Wk-13176, 244 +- 38 BP, or calibrated to A.D.1520-1600, 1620-1690, 1730-1810, and 1930-1950 at 95,4 % probability. This is a sample of charcoal found at –25 to 30 cm b.s., and has been interpreted to be a part of a tuai-shell midden rake-out, which continues under the *marae*. Again, this is a bulk sample and the wood has not been identified, and we might argue that the date is to be found towards the late part of the spectrum. The date clearly overlaps with Beta-177605, but may very well be later

Marae ScH-2-62-3, which is a platform type *marae* with an *ahu* of basalt slabs set on end, is a type of *marae* that have been interpreted as an early by Dr. Sinoto (Sinoto 1996). Based on the current evidence, this particular *marae* seems to have been constructed at the earliest sometime between AD 1500 and AD 1650, but more probably towards the close of the 17th century. As of yet this is not an argument that the type itself is not early.

Marae ScH-2-65-2:

- **Marae ScH-2-65-2:** Beta-177606, 170 +- 40 b.p. or Cal AD 1660-1950 at 2-sigma. This is an AMS dating of un-sourced charcoal from the top 5 cm of layer 1, trench 1, from inside the *ahu*. This first 5 cm consists of a very fine brown soil, which is associated with wind-blown sediments, which probably was deposited sometime after people stopped to use the site, or perhaps with renewed clearance in modern times. Because the wood is not identified the sample might be slightly “older” than it actually is, and we might argue that the date should be towards the later range of the calibrated continuum. Historically, we know that the people of Huahine stopped practising their religion in the early 1900th century, and the monuments in the Te Ana land division might have been abandoned earlier. Thus, it is not un-realistic to believe that this date

reflects the time when people discontinued activities in this area, sometime between 1700 and 1800.

Marae ScH-2-65-2 is similar in type to *marae* ScH-2-62-3, but so far we have not any dates associated with the construction of this structure. The date given above is clearly associated with activities after the site have been abandoned or at the very least with activities towards the end of the use of the site, and it only states that this activity occurred sometime around AD 1700 to 1800, a date which is corroborated by historical evidence (Tyerman & Bennett in : Wallin and Solsvik 2002:39).

Marae ScH-2-62-1:

- **Marae ScH-2-62-1:** Waikato-13174, 439 +- 60 BP (dC13 –25.1 +/- 0.2 // % Modern 94.7 +/- 0.7), or calibrated to A.D. 1400-1640 at 95,4 % probability. This general scatter of charcoal is from just behind the SW part of the *ahu* at –20 to 30 cm b.s., and is associated with a layer of clearance or agricultural activity prior to *marae* construction. It is a bulk sample and the wood has not been identified. That the sample is a bulk sample means that it might contain charcoal from a variety of time periods, but it might be argued on stratigraphical grounds, as well as the fact that other surface structures in the area have been dated to sometime between AD 1300 to AD 1600, that the span of this date gives an approximately reasonable correct time frame. That the charcoal in the sample has not been sourced to wood species, means that we might again argue for a date towards the mid to late part of the spectrum. Given that the layer is associated with some kind of clearance or agricultural activity, the probability that the sample contains pieces of long-lived wood species is heightened.
- **Marae ScH-2-62-1:** Waikato-13175, 409 +- 39 BP (dC13 –25.1 +/- 0.2 // % Modern 95.0 +/- 0.5), or calibrated to A.D. 1420-1530 and 1560-1630 at 95,4 % probability. This sample is a bulk sample of un-identified wood from an umu that was found in front of the terrace in the centre of the courtyard of the *marae*. This umu is clearly cut into the soil before the construction of the *marae*. However, since only one 1 by 1 m test unit was excavated in front of the terrace, we do not know if the umu is associated with rituals just prior to construction, which have been attested from the Papenoo-valley, or with habitation activities on the site. Again, the lack of wood identification might be used to argue for a date that belongs to the late part of the spectrum, and that the umu was used sometime during the 16th century.

Marae ScH-2-62-1 is an enclosed terraced type of *marae* with a mix of coral and basalt stone *ahu*. The *marae* can be classified according to a classification worked out by Dr. Sinoto (Sinoto, Komori et al. 1981; Sinoto, Komori et al. 1983; Sinoto 1996) to be an “Inland type”, but a mix of “Inland-type-1” and “Inland-type-2”, based on the facing of the *ahu*. These types should be relatively early, being the second or third in a sequence. A conservative estimate of the present dating would place the construction of this *marae* sometime during the 15th or 16th century.

Marae ScH-2-65-1:

- **Marae ScH-2-65-1:** Waikato-13177, 372 +-44 BP (dC13 –18.5 +/- 0.2 // % Modern 95.5 +/- 0.5), or calibrated to A.D. 1440-1640 at 95,4 % probability. This date is an

AMS date on a pig tooth (incisive) found at a depth of between –10 to 20 cm b.s. inside the *ahu*. This most probably dates the use-phase of the *marae*, but we have no indications to place this in the early or late end of the spectrum.

At the present, we have no samples that dates the construction phase of *marae* ScH-2-65-1, and from the dated pig tooth, Waikato-13177, we have no way of narrowing down the time frame given. Based on the fact that no activity seems to have taken place before the construction of this *marae*, as was the case with *marae* ScH-2-62-1 and *marae* ScH-2-62-3, *marae* ScH-2-65-1 is thought to be later than *marae* ScH-2-62-1. This would place the dating of the use-phase in the 16th or 17th century.

Marae ScH-2-66-1:

- **Marae ScH-2-66-1:** Waikato-13178, 552 +- 100 BP (dC13 –25.0 +/- 0.2 // % Modern 93.4 +/- 1.2), or calibrated to A.D. 1260-1530 and 1570-1630 at 95,4 % probability. This sample is on a scatter of charcoal found between –40 to 50 cm b.s. inside the *ahu*. This most probably dates activities prior to *marae* construction. It is a bulk sample with no identification of wood species.

To estimate the time of construction of *marae* ScH-2-66-1 we are left with only one sample with a fairly wide error limit. We know that the sample dates some kind of activity prior to the actual construction of the *marae*. From the fact that the sample was a bulk sample with no identification of wood species, we might argue that the actual date should be towards the late end of the spectrum. Also, the immediate surroundings of *marae* ScH-2-66-1 display fewer signs of having been inhabited or used as agricultural plots prior to construction, than at *marae* ScH-2-62-1. This might indicate that *marae* ScH-2-66-1 was build after *marae* ScH-2-62-1. By using such logic, we might place the construction of *marae* ScH-2-66-1 to sometime during the 16th or 17th century, but this is rather inconclusive at the moment. However, it would tie in with the date from *marae* ScH-2-65-1.

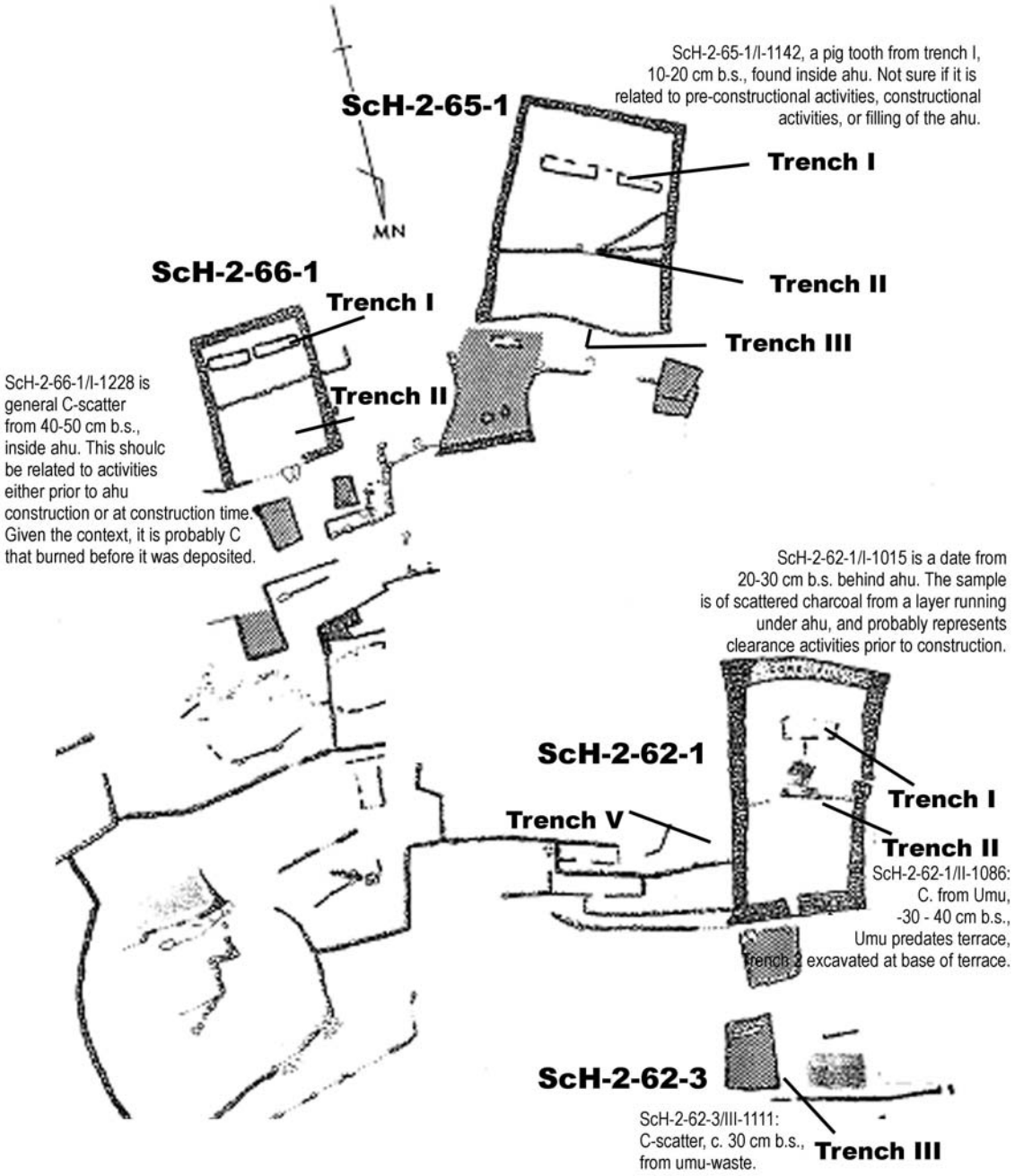
Conclusion(s):

At the moment, there are no very hard facts nor any clear cut conclusions, they are rather conjectural.

Marae construction in the Te Ana land division, close to the village of Maeva, on Huahine, seems to have begun sometime during the 15th or 16th century with the building of *marae* ScH-2-62-1. Later, both *marae* ScH-2-65-1 and ScH-2-66-1 was constructed, although this conclusion is based more upon the knowledge of how Polynesian social structure grows and develops rather than actual 14-C dates. At the end of this conjectural history, *marae* ScH-2-62-3 and *marae* ScH-2-65-2 was constructed as more specialized structures related to the their respectively parent

Knowing that graves are found in relation to both *marae* ScH-2-65-1 or ScH-2-66-1, and one with European trade goods (Sinoto, Komori et al. 1983), we might speculate further that these *marae* was constructed even later. However, they were defiantly in use during the 18th, and perhaps the early 19th century.

In the future, more – and more accurate – dates are going to surface from these excavations, and then we might be able to construct a more refined time frame for the construction and use of the *marae* structures in the Te Ana land division. In particular it would be helpful to correlate the current dates with earlier 14-C dates from test-excavations of habitation terraces in the same area (Sinoto and Komori 1988; Sinoto 1996).



Map of Te Ana with the locations of excavation trenches indicated.

Sinoto, Y. H. (1996). Mata'ire'a Hill, Huahine. A unique settlement, and a hypothetical sequence of *marae* development in the Society Islands. Oceanic Culture History. Essays in Honour of Roger C. Green. J. Davidson, G. Irwin, B. F. Leach, A. Pawley and D. Brown. Dunedin.

Sinoto, Y. H. and E. Komori (1988). Settlement Pattern Survey of Mata'ire'a Hill Maeva, Huahine, Society Islands, French Polynesia, Session IV, 1986. Bernice P. Bishop Museum Archives. Honolulu**:** 82.

Sinoto, Y. H., E. K. Komori, et al. (1981). Settement Pattern Survey of Matairea Hill Maeva, Huahine, Society Islands, French Polynesia, Session II, 1980. Bernice P. Bishop Museum Archive. Honolulu**:** 17.

Sinoto, Y. H., E. K. Komori, et al. (1983). Settlement Pattern Survey of Matairea Hill, Maeva, Huahine, Society Island, French Polynesia. Session III. B. P. Bishop Museum Archives. Honolulu, Department of Anthropology, B. P. Bishop Museum.

Wallin, P. and R. Solsvik (2002). Marae Survey 2001 and 2002 (Huahine and Mo'orea). Oslo, The Kon-Tiki Museum.

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Report on Radiocarbon Age Determination for Wk- 13174

Submitter	P Wallin
Submitter's Code	SCH-2-62-1/I-1015
Site & Location	Society Islands, Huahine., Maeva
Sample Material	Charcoal
Physical Pretreatment	Possible contaminants were removed. Washed in ultrasonic bath.
Chemical Pretreatment	Sample washed in hot 10% HCl, rinsed and treated with hot 0.5% NaOH. The NaOH insoluble fraction was treated with hot 10% HCl, filtered, rinsed and dried.

$\delta^{14}C$	-53.4 ± 7.0	‰
$\delta^{13}C$	-25.1 ± 0.2	‰
$\Delta^{14}C$	-53.2 ± 7.0	‰
% Modern	94.7 ± 0.7	%

Result **439 ± 60 BP**

Comments

AGHogg

18/9/03

- Result is *Conventional Age or % Modern* as per Stuiver and Polach, 1977, Radiocarbon 19, 355-363. This is based on the Libby half-life of 5568 yr with correction for isotopic fractionation applied. This age is normally quoted in publications and must include the appropriate error term and Wk number.
- Quoted errors are 1 standard deviation due to counting statistics multiplied by an experimentally determined Laboratory Error Multiplier of 1 .
- The isotopic fractionation, $\delta^{13}C$, is expressed as ‰ wrt PDB.
- Results are reported as *% Modern* when the conventional age is younger than 200 yr BP.

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Report on Radiocarbon Age Determination for Wk- 13175

Submitter	P Wallin
Submitter's Code	SCH-2-62-1/II-1086
Site & Location	Society Islands, Huahine., Maeva
Sample Material	Charcoal
Physical Pretreatment	Possible contaminants were removed. Washed in ultrasonic bath.
Chemical Pretreatment	Sample washed in hot 10% HCl, rinsed and treated with hot 0.5% NaOH. The NaOH insoluble fraction was treated with hot 10% HCl, filtered, rinsed and dried.

$\delta^{14}C$	-49.8 ± 4.7	‰
$\delta^{13}C$	-25.1 ± 0.2	‰
$\Delta^{14}C$	-49.6 ± 4.7	‰
% Modern	95.0 ± 0.5	%
Result	**409 ± 39 BP**	

Comments

AGHogg

18/9/03

- Result is *Conventional Age or % Modern* as per Stuiver and Polach, 1977, Radiocarbon 19, 355-363. This is based on the Libby half-life of 5568 yr with correction for isotopic fractionation applied. This age is normally quoted in publications and must include the appropriate error term and Wk number.
- Quoted errors are 1 standard deviation due to counting statistics multiplied by an experimentally determined Laboratory Error Multiplier of 1 .
- The isotopic fractionation, $\delta^{13}C$, is expressed as ‰ wrt PDB.
- Results are reported as *% Modern* when the conventional age is younger than 200 yr BP.

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Report on Radiocarbon Age Determination for Wk- 13176

Submitter	P Wallin
Submitter's Code	SCH-2-63-3/III-1111
Site & Location	Society Islands, Huahine., Maeva
Sample Material	Charcoal
Physical Pretreatment	Possible contaminants were removed. Washed in ultrasonic bath.
Chemical Pretreatment	Sample washed in hot 10% HCl, rinsed and treated with hot 0.5% NaOH. The NaOH insoluble fraction was treated with hot 10% HCl, filtered, rinsed and dried.

$\delta^{14}C$	-30.4 ± 4.6	‰
$\delta^{13}C$	-25.2 ± 0.2	‰
$\Delta^{14}C$	-29.9 ± 4.6	‰
% Modern	97.0 ± 0.5	%
Result	**244 ± 38 BP**	

Comments

18/9/03

- Result is *Conventional Age or % Modern* as per Stuiver and Polach, 1977, Radiocarbon 19, 355-363. This is based on the Libby half-life of 5568 yr with correction for isotopic fractionation applied. This age is normally quoted in publications and must include the appropriate error term and Wk number.
- Quoted errors are 1 standard deviation due to counting statistics multiplied by an experimentally determined Laboratory Error Multiplier of 1 .
- The isotopic fractionation, $\delta^{13}C$, is expressed as ‰ wrt PDB.
- Results are reported as *% Modern* when the conventional age is younger than 200 yr BP.

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Report on Radiocarbon Age Determination for Wk- 13177

(AMS measurement by IGNS [NZA-18267])

Submitter	P Wallin
Submitter's Code	SCH-2-65-1/I-1142
Site & Location	Society Islands, Huahine., Maeva
Sample Material	Pig tooth
Physical Pretreatment	Sample was cleaned, ground and visible contaminants were removed.
Chemical Pretreatment	Sample was decalcified in 2% HCl, rinsed and dried. Then gelatinised at pH=3 with HCl at 90 degrees for 4 hours. Rinsed and dried.

$\delta^{14}C$	-22.1 ± 4.8	‰
$\delta^{13}C$	-18.5 ± 0.2	‰
$\Delta^{14}C$	-45.2 ± 5.2	‰
% Modern	95.5 ± 0.5	%

Result **372 ± 44 BP**

Comments

AGHogg

18/9/03

- Result is *Conventional Age or % Modern* as per Stuiver and Polach, 1977, Radiocarbon 19, 355-363. This is based on the Libby half-life of 5568 yr with correction for isotopic fractionation applied. This age is normally quoted in publications and must include the appropriate error term and Wk number.
- Quoted errors are 1 standard deviation due to counting statistics multiplied by an experimentally determined Laboratory Error Multiplier of 1 .
- The isotopic fractionation, $\delta^{13}C$, is expressed as ‰ wrt PDB.
- Results are reported as *% Modern* when the conventional age is younger than 200 yr BP.

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Report on Radiocarbon Age Determination for Wk- 13178

Submitter	P Wallin
Submitter's Code	SCH-2-66-1/I-1228
Site & Location	Society Islands, Huahine., Maeva
Sample Material	Charcoal
Physical Pretreatment	Possible contaminants were removed. Washed in ultrasonic bath.
Chemical Pretreatment	Sample washed in hot 10% HCl, rinsed and treated with hot 0.5% NaOH. The NaOH insoluble fraction was treated with hot 10% HCl, filtered, rinsed and dried.

$\delta^{14}C$	-66.3 ± 11.6	‰
$\delta^{13}C$	-25.0 ± 0.2	‰
$\Delta^{14}C$	-66.4 ± 11.6	‰
% Modern	93.4 ± 1.2	%

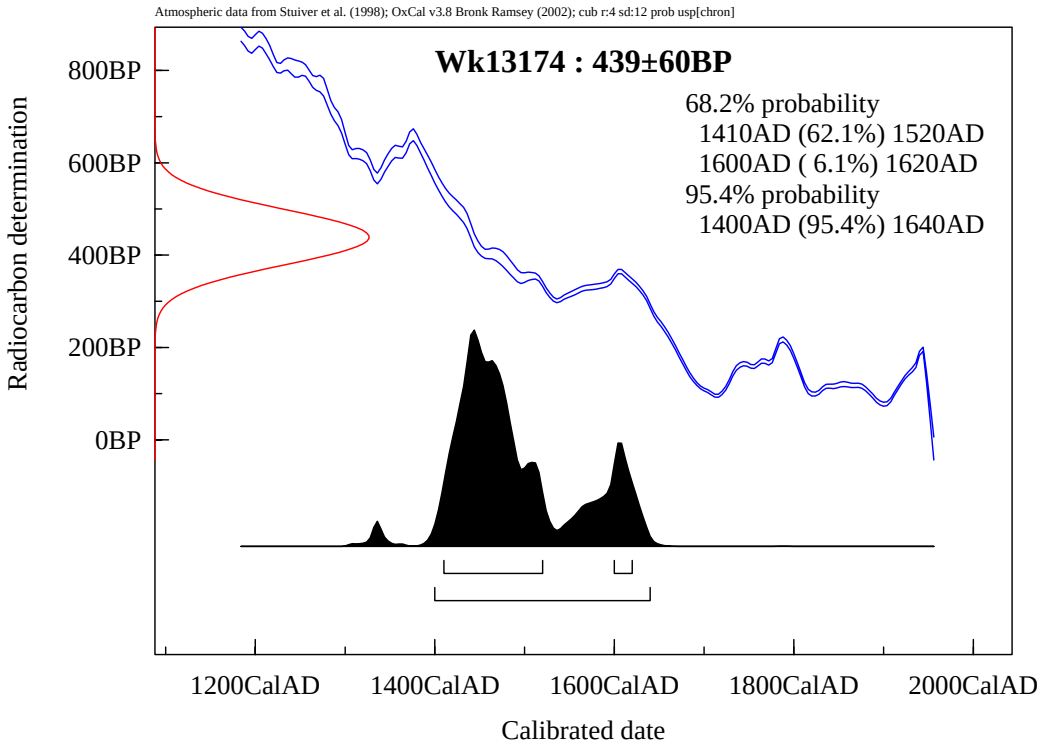
Result **552 ± 100 BP**

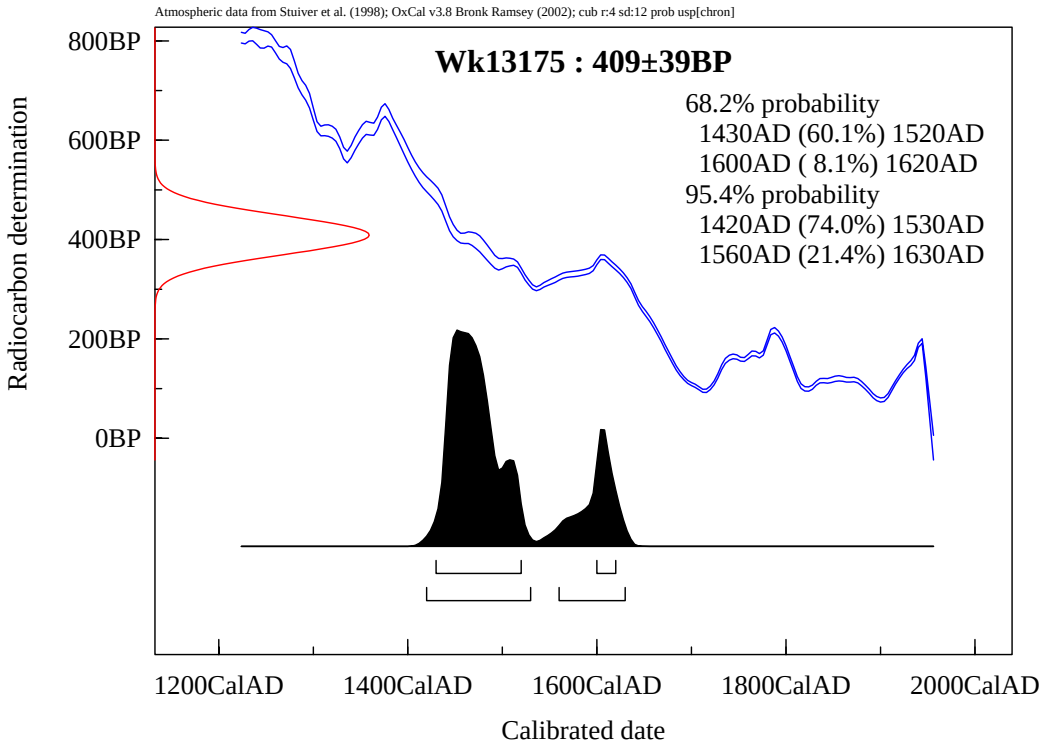
Comments

AGHogg

18/9/03

- Result is *Conventional Age or % Modern* as per Stuiver and Polach, 1977, Radiocarbon 19, 355-363. This is based on the Libby half-life of 5568 yr with correction for isotopic fractionation applied. This age is normally quoted in publications and must include the appropriate error term and Wk number.
- Quoted errors are 1 standard deviation due to counting statistics multiplied by an experimentally determined Laboratory Error Multiplier of 1 .
- The isotopic fractionation, $\delta^{13}C$, is expressed as ‰ wrt PDB.
- Results are reported as *% Modern* when the conventional age is younger than 200 yr BP.


Atmospheric data from Stuiver et al. (1998); OxCal v3.8 Bronk Ramsey (2002); cub r:4 sd:12 prob usp[chron]
Wk13174 : 439±60BP
68.2% probability
1410AD (62.1%) 1520AD
1600AD (6.1%) 1620AD
95.4% probability
1400AD (95.4%) 1640AD
Radiocarbon determination
800BP
600BP
400BP
200BP
0BP
1200CalAD
1400CalAD
1600CalAD
1800CalAD
2000CalAD
Calibrated date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Wk13175 : 409±39BP
68.2% probability
1430AD (60.1%) 1520AD
1600AD (8.1%) 1620AD
95.4% probability
1420AD (74.0%) 1530AD
1560AD (21.4%) 1630AD
Radiocarbon determination
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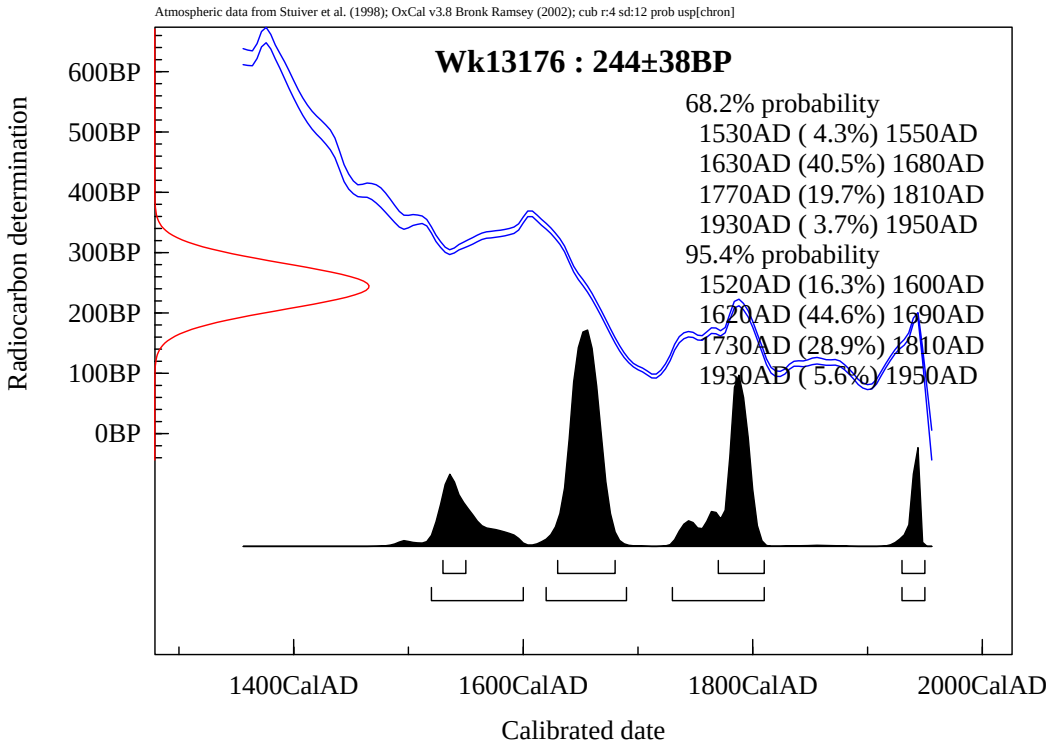
600BP
400BP
200BP
0BP
1200CalAD
1400CalAD
1600CalAD
1800CalAD
2000CalAD
Calibrated date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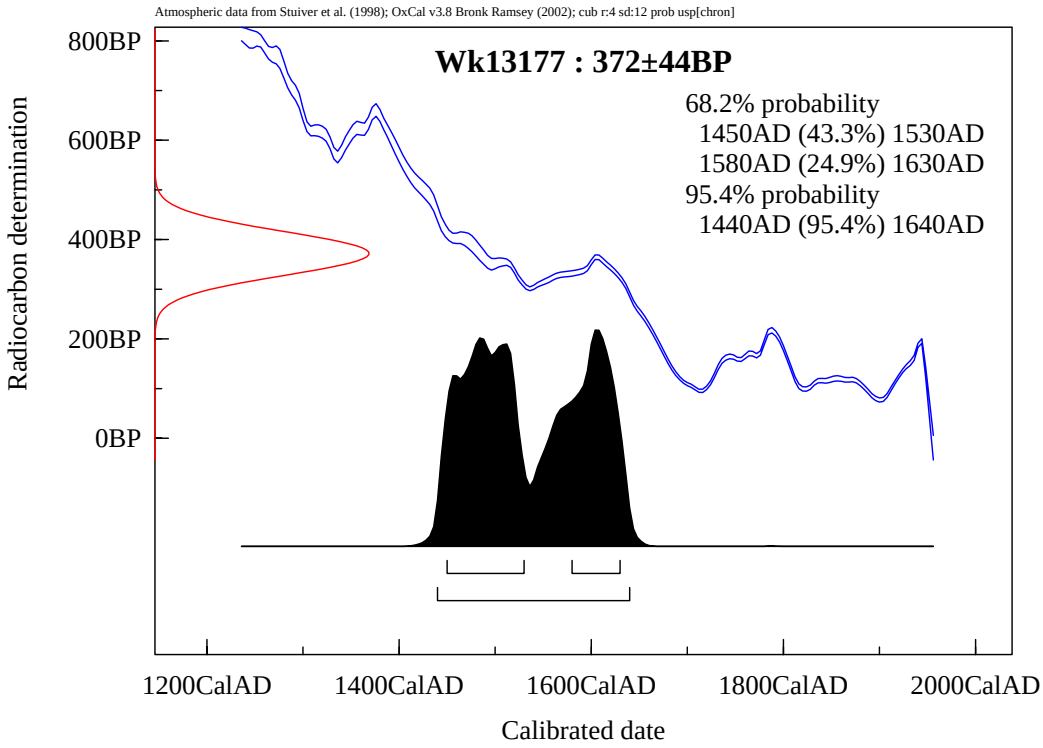
Wk13176 : 244±38BP
68.2% probability
1530AD (4.3%) 1550AD
1630AD (40.5%) 1680AD
1770AD (19.7%) 1810AD
1930AD (3.7%) 1950AD
95.4% probability
1520AD (16.3%) 1600AD
1620AD (44.6%) 1690AD
1730AD (28.9%) 1810AD
1930AD (5.6%) 1950AD
Radiocarbon determination
600BP
500BP
400BP
300BP
200BP
100BP
0BP
1400CalAD
1600CalAD
1800CalAD
2000CalAD
Calibrated date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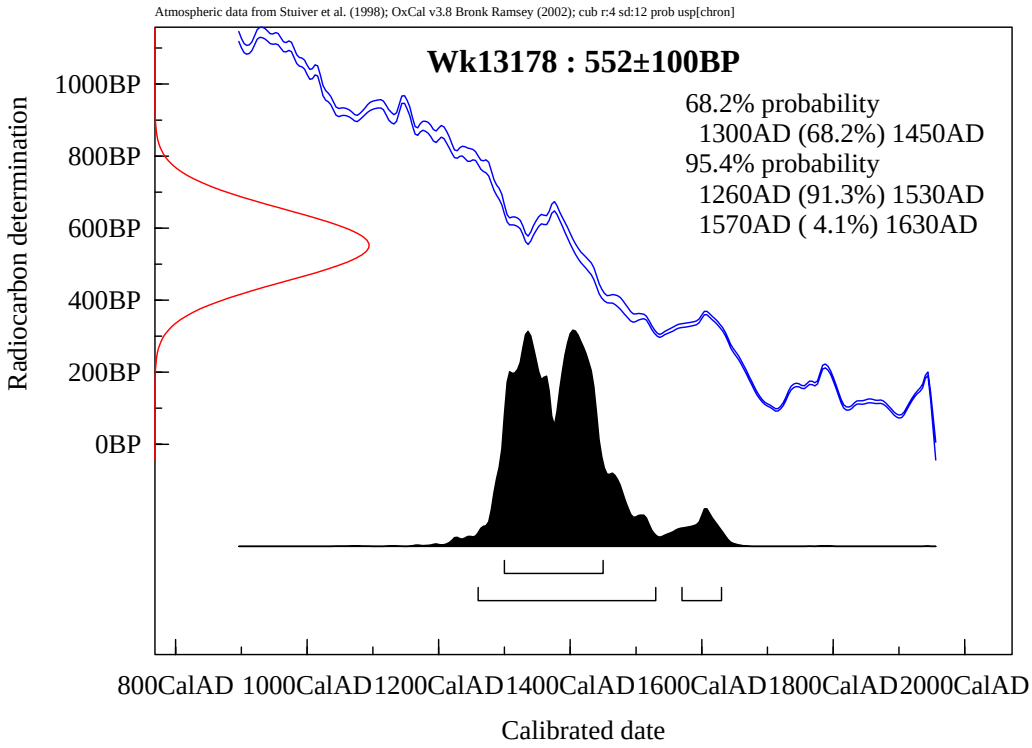
Wk13177 : 372±44BP
68.2% probability
1450AD (43.3%) 1530AD
1580AD (24.9%) 1630AD
95.4% probability
1440AD (95.4%) 1640AD
Radiocarbon determination
800BP
600BP
400BP
200BP
0BP
1200CalAD
1400CalAD
1600CalAD
1800CalAD
2000CalAD
Calibrated date


Atmospheric data from Stuiver et al. (1998); OxCal v3.8 Bronk Ramsey (2002); cub r:4 sd:12 prob usp[chron]
Wk13178 : 552±100BP
68.2% probability
1300AD (68.2%) 1450AD
95.4% probability
1260AD (91.3%) 1530AD
1570AD (4.1%) 1630AD
Radiocarbon determination
1000BP
800BP
600BP
400BP
200BP
0BP
800CalAD
1000CalAD
1200CalAD
1400CalAD
1600CalAD
1800CalAD
2000CalAD
Calibrated date

Dear Paul,

I have attached pdf copies of your date results (hard copies are in the mail). I haven't calibrated these due to questions about the suitable mix of calibration curves required. We routinely obtain d13C and 15N values in order to determine the diet of the animals dated - in the Pacific the use of two isotopes is not ideal because of the wide range of foods that are encountered - especially C4 plants (sugarcane, pineapple etc) and reef foods.

Typically d13C values of terrestrial C3 diet individuals is around -21. Marine values are around -12 per mil. C4 plants have a d13C value that is closer to the Marine endpoint. Similarly, +17 to +20 per mil are typical d15N values for predominantly marine diets +6 to +12 per mil represent agriculturalists. Unfortunately, nitrogen fixation in coral reefs can result in d15N as low as terrestrial animals.

The gelatin isotope values for your samples are as follows:
Wk14603 - d13C = -18.31 d15N = 9.5
Wk14605 - d13C = -20.42 d15N = 6.99
Wk14606 - d13C = -16.62 d15N = 10.11

At first glance this suggests that Wk14603 has around a 32% marine input into the diet, while WK14606 has around a 49% input. The d15N values are not, however, as high as I would expect from a 50% marine diet and the slightly higher d15N value of 10.11 may indicate a greater contribution from protein sources instead. If I calibrate Wk14606 using a mix of the terrestrial and marine calibration curves this will result in a date ca. 200yrs younger than the date below (ie it would appear almost modern in age).

Can you shed any light on the expected diet of these animals/human from the archaeological record ? Let me know and I will calibrate these samples for you.

Cheers for now,

Fiona

Results for 4 of your radiocarbon samples are tabulated below.
A more detailed report will follow by mail in due course.

Your code	Wk	dC13	% Modern	Result

ScH-2-19-TII-1	14604	-25.4 +/- 0.2	95.3 +/- 0.4	387 +/- 38 BP
ScH-2-18-TI-1	14603	-18.8 +/- 0.2	96.3 +/- 0.5	306 +/- 42 BP
ScH-2-19-TII-2	14605	-20.9 +/- 0.2	97.2 +/- 0.5	225 +/- 38 BP
ScH-2-19-TII-3	14606	-17.1 +/- 0.2	96.3 +/- 0.5	301 +/- 38 BP

Dr. Fiona Petchey

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Report on Radiocarbon Age Determination for Wk- 14604

(AMS measurement by IGNS [NZA-19767])

Submitter	P Wallin
Submitter's Code	ScH-2-19-TII-1
Site & Location	Huahine, Society Islands,, French Polynesia
Sample Material	Charcoal
Physical Pretreatment	Possible contaminants were removed. Washed in ultrasonic bath.
Chemical Pretreatment	Sample washed in hot 10% HCl, rinsed and treated with hot 1% NaOH. The NaOH insoluble fraction was treated with hot 10% HCl, filtered, rinsed and dried.

$\delta^{14}C$	-44.9 ± 4.2	‰
$\delta^{13}C$	-25.4 ± 0.2	‰
$\Delta^{14}C$	-47.1 ± 4.5	‰
% Modern	95.3 ± 0.4	%
Result	**387 ± 38 BP**	

Comments

AGHogg

18/5/04

- Result is *Conventional Age or % Modern* as per Stuiver and Polach, 1977, Radiocarbon 19, 355-363. This is based on the Libby half-life of 5568 yr with correction for isotopic fractionation applied. This age is normally quoted in publications and must include the appropriate error term and Wk number.
- Quoted errors are 1 standard deviation due to counting statistics multiplied by an experimentally determined Laboratory Error Multiplier of 1 .
- The isotopic fractionation, $\delta^{13}C$, is expressed as ‰ wrt PDB.
- Results are reported as *% Modern* when the conventional age is younger than 200 yr BP.

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Report on Radiocarbon Age Determination for Wk- 14603

(AMS measurement by IGNS [NZA-19766])

Submitter	P Wallin
Submitter's Code	ScH-2-18-TI-1
Site & Location	Huahine, Society Islands,, French Polynesia
Sample Material	Pig bone
Physical Pretreatment	Sample was cleaned, ground and visible contaminants were removed.
Chemical Pretreatment	Sample was decalcified in 2% HCl, rinsed and dried. Then gelatinised at pH=3 with HCl at 90 degrees for 4 hours. Rinsed and dried.

$\delta^{14}C$	-22.3 ± 4.8	‰
$\delta^{13}C$	-18.8 ± 0.2	‰
$\Delta^{14}C$	-37.4 ± 5.0	‰
% Modern	96.3 ± 0.5	%

Result **306 ± 42 BP**

Comments

AGHogg

18/5/04

- Result is *Conventional Age or % Modern* as per Stuiver and Polach, 1977, Radiocarbon 19, 355-363. This is based on the Libby half-life of 5568 yr with correction for isotopic fractionation applied. This age is normally quoted in publications and must include the appropriate error term and Wk number.
- Quoted errors are 1 standard deviation due to counting statistics multiplied by an experimentally determined Laboratory Error Multiplier of 1 .
- The isotopic fractionation, $\delta^{13}C$, is expressed as ‰ wrt PDB.
- Results are reported as *% Modern* when the conventional age is younger than 200 yr BP.

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Report on Radiocarbon Age Determination for Wk- 14605

(AMS measurement by IGNS [NZA-19768])

Submitter	P Wallin
Submitter's Code	ScH-2-19-TII-2
Site & Location	Huahine, Society Islands,, French Polynesia
Sample Material	Pig bone
Physical Pretreatment	Sample was cleaned, ground and visible contaminants were removed.
Chemical Pretreatment	Sample was decalcified in 2% HCl, rinsed and dried. Then gelatinised at pH=3 with HCl at 90 degrees for 4 hours. Rinsed and dried.

$d^{14}C$	-16.6 ± 4.3	‰
$d^{13}C$	-20.9 ± 0.2	‰
$D^{14}C$	-27.7 ± 4.5	‰
% Modern	97.2 ± 0.5	%

Result **225 ± 38 BP**

Comments

AGHogg

18/5/04

- Result is *Conventional Age or % Modern* as per Stuiver and Polach, 1977, Radiocarbon 19, 355-363. This is based on the Libby half-life of 5568 yr with correction for isotopic fractionation applied. This age is normally quoted in publications and must include the appropriate error term and Wk number.
- Quoted errors are 1 standard deviation due to counting statistics multiplied by an experimentally determined Laboratory Error Multiplier of 1 .
- The isotopic fractionation, $d^{13}C$, is expressed as ‰ wrt PDB.
- Results are reported as *% Modern* when the conventional age is younger than 200 yr BP.

The University of Waikato

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Head: Dr Alan Hogg

Report on Radiocarbon Age Determination for Wk- 14606

(AMS measurement by IGNS [NZA-19769])

Submitter	P Wallin
Submitter's Code	ScH-2-19-TII-3
Site & Location	Huahine, Society Islands,, French Polynesia
Sample Material	Human bone.
Physical Pretreatment	Sample was cleaned, ground and visible contaminants were removed.
Chemical Pretreatment	Sample was decalcified in 2% HCl, rinsed and dried. Then gelatinised at pH=3 with HCl at 90 degrees for 4 hours. Rinsed and dried.

$\delta^{14}C$	-18.4 ± 4.3	‰
$\delta^{13}C$	-17.1 ± 0.2	‰
$\Delta^{14}C$	-36.8 ± 4.5	‰
% Modern	96.3 ± 0.5	%

Result **301 ± 38 BP**

Comments

AGHogg

18/5/04

- Result is *Conventional Age or % Modern* as per Stuiver and Polach, 1977, Radiocarbon 19, 355-363. This is based on the Libby half-life of 5568 yr with correction for isotopic fractionation applied. This age is normally quoted in publications and must include the appropriate error term and Wk number.
- Quoted errors are 1 standard deviation due to counting statistics multiplied by an experimentally determined Laboratory Error Multiplier of 1 .
- The isotopic fractionation, $\delta^{13}C$, is expressed as ‰ wrt PDB.
- Results are reported as *% Modern* when the conventional age is younger than 200 yr BP.

FROM: Darden Hood, Director (mailto:mailto:dhood@radiocarbon.com)
(This is a copy of the letter being mailed. Invoices/receipts follow only by mail.)

April 16, 2003

Dr. Paul Wallin
The Kon-Tiki Museum
Bygdoynesveien 36
Oslo 0286
NORWAY

RE: Radiocarbon Dating Results For Samples SCH-2-62-3/1, SCH-2-65-2/1, SSLE1-TP6S14

Dear Dr. Wallin:

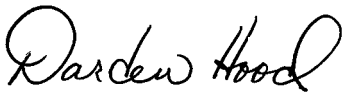
Enclosed are the radiocarbon dating results for three samples recently sent to us. They each provided plenty of carbon for accurate measurements and all the analyses went normally. As usual, the method of analysis is listed on the report with the results and calibration data is provided where applicable.

As always, no students or intern researchers who would necessarily be distracted with other obligations and priorities were used in the analyses. We analyzed them with the combined attention of our entire professional staff.

If you have specific questions about the analyses, please contact us. We are always available to answer your questions.

The cost of the analysis was charged to your VISA card. A receipt is enclosed. Thank you. As always, if you have any questions or would like to discuss the results, don't hesitate to contact me.

Sincerely,



Dr. Paul Wallin

Report Date: 4/16/2003

The Kon-Tiki Museum

Material Received: 3/20/2003

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 177605	500 +/- 60 BP	-25.7 o/oo	480 +/- 60 BP
SAMPLE : SCH-2-62-3/1			
ANALYSIS : Radiometric-Standard delivery			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 1320 to 1340 (Cal BP 630 to 600) AND Cal AD 1390 to 1500 (Cal BP 560 to 450)			
Beta - 177606	170 +/- 40 BP	-27.1 o/oo	140 +/- 40 BP
SAMPLE : SCH-2-65-2/1			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 1660 to 1950 (Cal BP 290 to 0)			
Beta - 177607	690 +/- 90 BP	-26.6 o/oo	660 +/- 80 BP
SAMPLE : SSLE1-TP6S14			
ANALYSIS : Radiometric-Standard delivery (with extended counting)			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 1230 to 1420 (Cal BP 720 to 530)			

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-25.7:lab. mult=1)

Laboratory number: **Beta-177605**

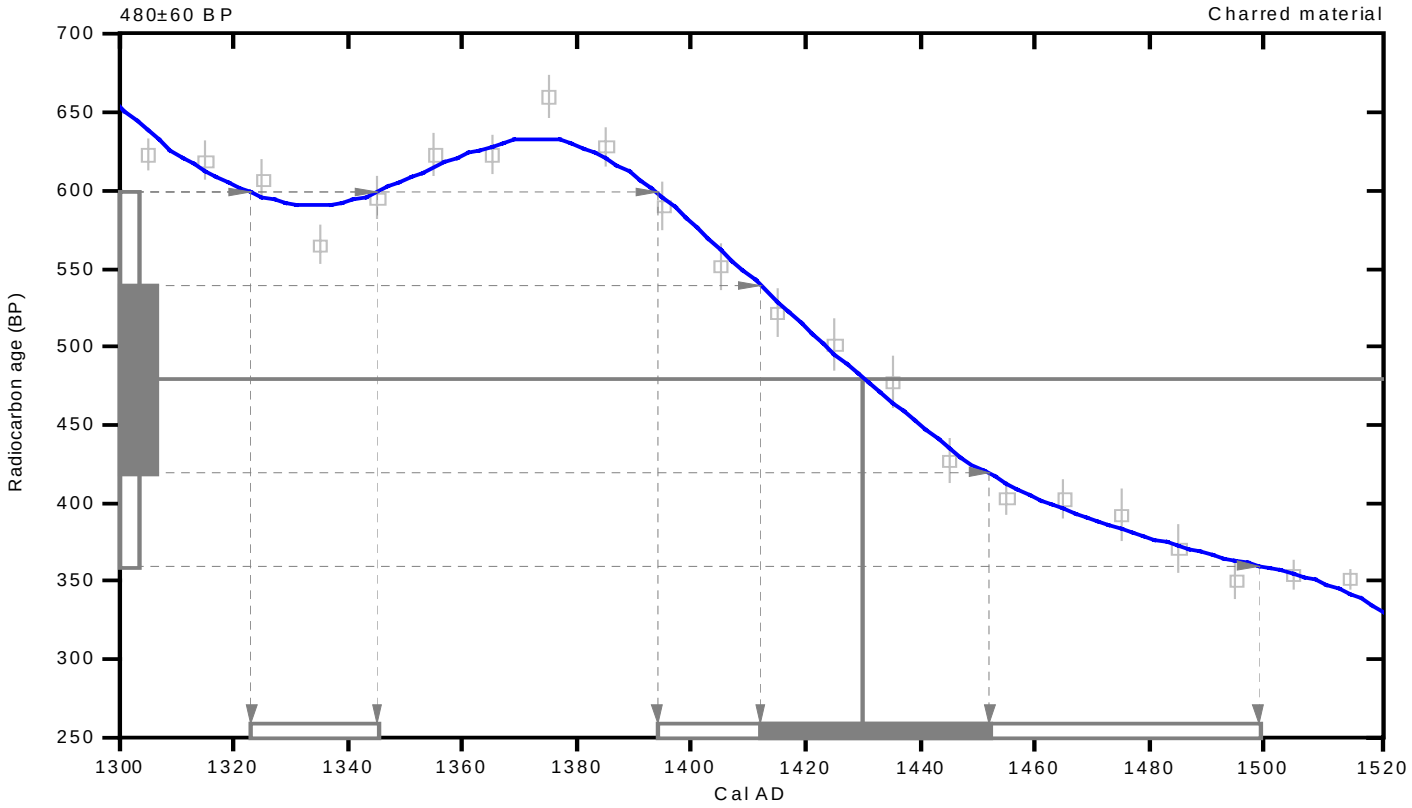
Conventional radiocarbon age: **480±60 BP**

2 Sigma calibrated results: **Cal AD 1320 to 1340 (Cal BP 630 to 600) and**
(95% probability) **Cal AD 1390 to 1500 (Cal BP 560 to 450)**

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 1430 (Cal BP 520)

1 Sigma calibrated result: (68% probability) Cal AD 1410 to 1450 (Cal BP 540 to 500)



References:

Database used

Calibration Database

Editorial Comment

Stuiver, M., van der Plicht, H., 1998, Radiocarbon 40(3), pxii-xiii

INTCAL98 Radiocarbon Age Calibration

Stuiver, M., et. al., 1998, Radiocarbon 40(3), p1041-1083

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

Beta Analytic Inc.

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-27.1:lab. mult=1)

Laboratory number: **Beta-177606**

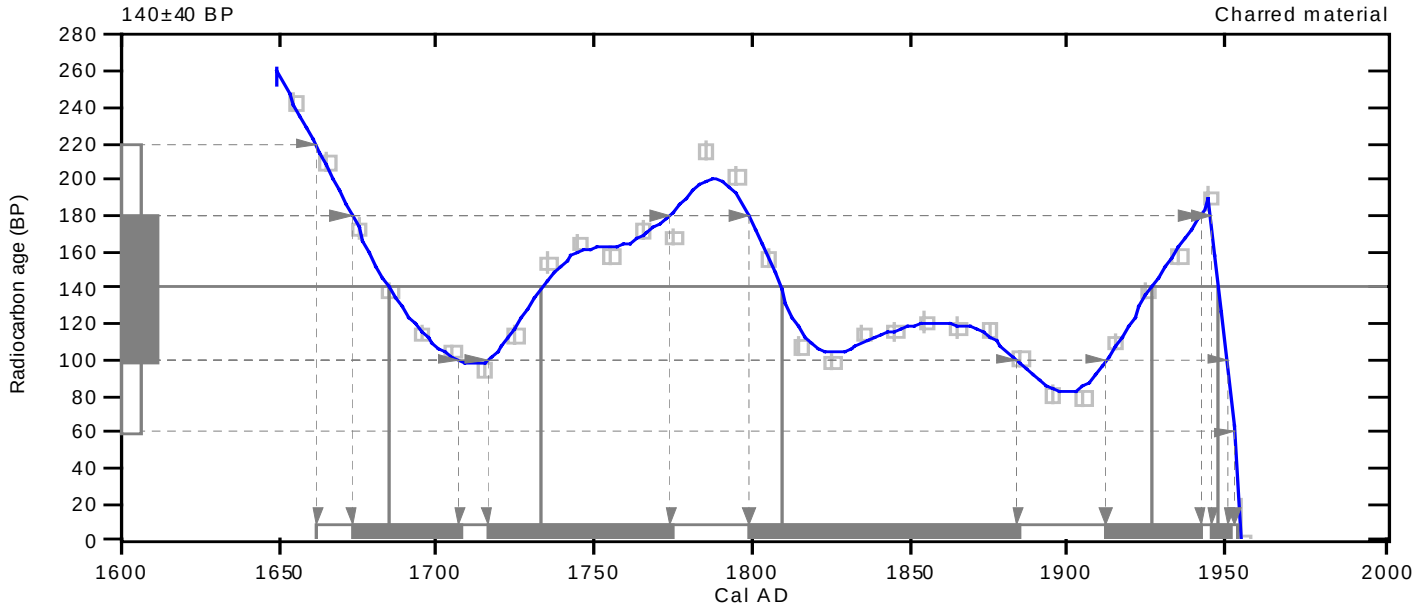
Conventional radiocarbon age: **140±40 BP**

2 Sigma calibrated result: (95% probability) **Cal AD 1660 to 1950 (Cal BP 290 to 0)**

Intercept data

Intercepts of radiocarbon age with calibration curve: Cal AD 1680 (Cal BP 260) and
Cal AD 1730 (Cal BP 220) and
Cal AD 1810 (Cal BP 140) and
Cal AD 1930 (Cal BP 20) and
Cal AD 1950 (Cal BP 0)

1 Sigma calibrated results: (68% probability) Cal AD 1670 to 1710 (Cal BP 280 to 240) and
Cal AD 1720 to 1770 (Cal BP 230 to 180) and
Cal AD 1800 to 1880 (Cal BP 150 to 70) and
Cal AD 1910 to 1940 (Cal BP 40 to 10) and
Cal AD 1950 to 1950 (Cal BP 0 to 0)



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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.6:lab. mult=1)

Laboratory number: **Beta-177607**

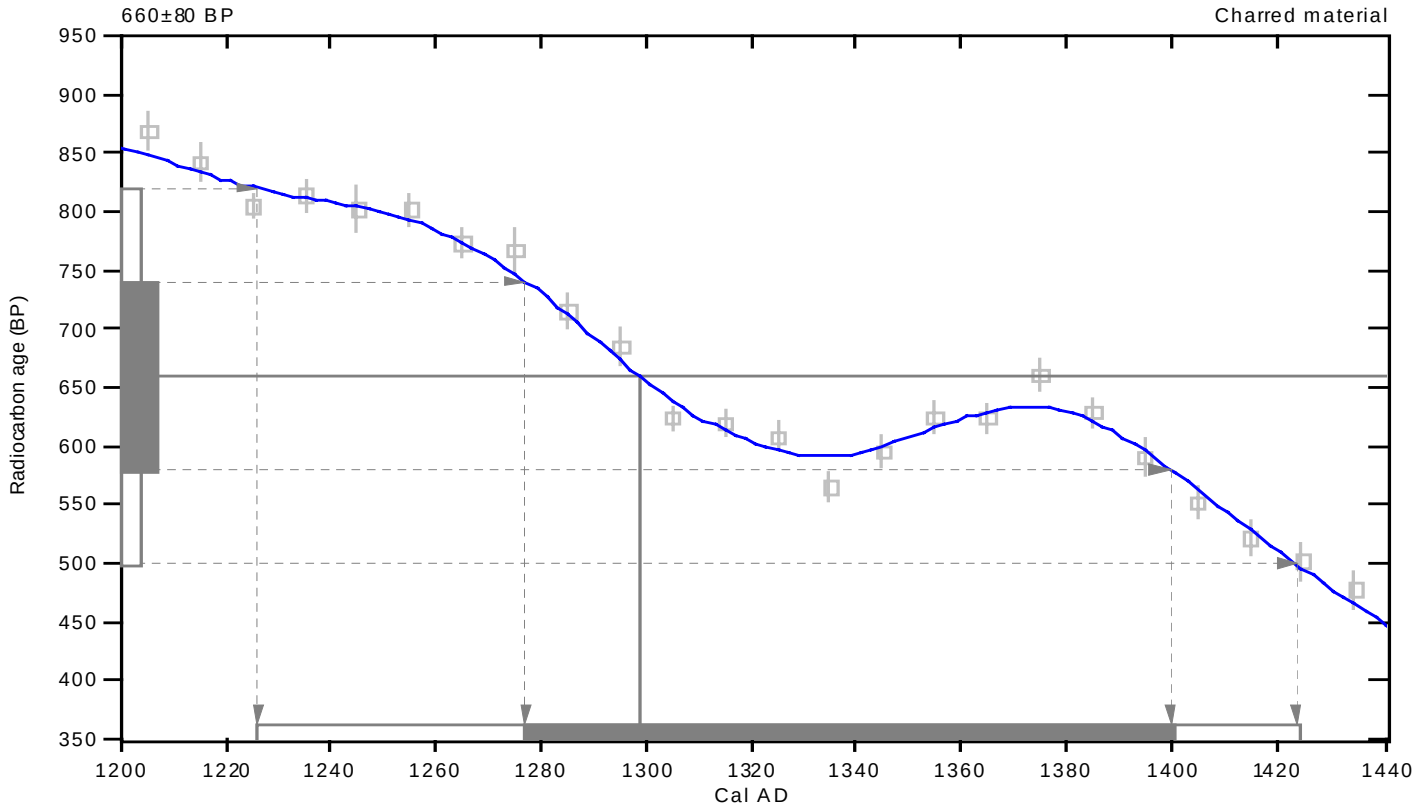
Conventional radiocarbon age: **660±80 BP**

2 Sigma calibrated result: (95% probability) **Cal AD 1230 to 1420 (Cal BP 720 to 530)**

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 1300 (Cal BP 650)

1 Sigma calibrated result: (68% probability) Cal AD 1280 to 1400 (Cal BP 670 to 550)



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