# HISTORICAL RECORDS AND ARCHAEOLOGICAL EXCAVATIONS OF TWO "NATIONAL" MARAE COMPLEXES ON HUAHINE, SOCIETY ISLANDS, FRENCH POLYNESIA – A PRELIMINARY REPORT

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#### INTRODUCTION

uahine is an island in the Leeward group of the Society Islands (Figure 1), situated at 16° 5′ south latitude and 151° 2′ west longitude, about 150 km north-west of the island of Tahiti. Huahine consists of two volcanic islands with about 112 square km of dry land, joined through an encircling reef. Huahine Iti, the smallest, is located to the south-

152° 151° 150° 149° 148°W

16° Tupai

Borabora

Maupiti

Taha'a

Huahine

Raiatea

Taha'a

Mo'orea

Mai'ao

Mo'orea

Mai'ao

Mo'orea

Mo'orea

Society Islands

Figure 1. Society Islands.

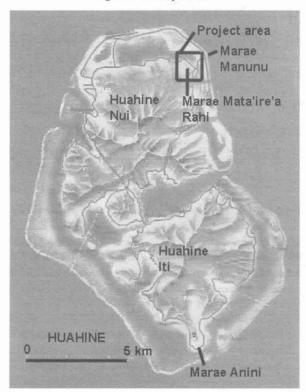


Figure 2. Huahine with Project area indicated.

southeast of the slightly larger Huahine Nui to the north.

The district of Maeva comprises the north and northeastern part of Huahine Nui (Figure 2) that surrounds the 'sacred' mountain Moua Tapu. The area with the most important archaeological remains is a headland stretching out to the north-east, where the Mata'ire'a Hill figuratively can be seen as the 'seat' and Moua Tapu with its straight and flat north side the 'backrest' of this site. The western boundary is a

ridge of the Moua Tapu, which is slanting down to the coast at this point.

The village of Maeva is situated on a thin strip of land, c. 100 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 present work has been carried out within the framework of the project 'Local Developments and Regional Interactions', which is a joint project between Dr. Yosihiko H. Sinoto of the B. P. Bishop Museum and Dr. Paul Wallin of the Institute for Pacific Archaeology and Cultural History, (Kon-Tiki Museum). The aim of this project is to investigate habitation sites and ceremonial structures at the western end of the village at the base of the Mata'ire'a Hill and on the Mata'ire'a Hill itself. During the last of two field sessions in 2003 we were

able to test-excavate the two most important temples on Huahine (according to oral traditions): *marae* Mata'ire'a Rahi on the summit of Mata'ire'a Hill and *marae* Manunu on the islet Ovarei opposite Maeva village.

## BACKGROUND TO THE PROJECT

DR. SINOTO WAS FIRST introduced to Maeva in the early 1960s by Kenneth P. Emory, who surveyed *marae* structures there already in 1925. Sinoto, together with the French archaeologist Pierre Verin carried out complementary surveys of *marae* structures on several of the Leeward Islands. At about the same time Mr. Alec Ata, then minister of Tourism, invited Sinoto to be the director of an extensive program of *marae* restorations on Huahine, Raiatea, and Mo'orea (i.e. Sinoto 1969).

Since 1979, Sinoto and his associates, Eric Komori, Elaine Rogers-Jourdane and Toru Hayashi, have carried out a survey of the Mata'ire'a Hill and adjacent areas in the district of Maeva (Figure 3). They have surveyed *marae* structures, terraces, house foundations, and other features (Sinoto and Rogers-Jourdane 1980; Sinoto, Komori et al. 1981; Sinoto, Komori et al. 1983). The investigations also included test-excavations of house sites in the upper part of the Te Ana land division (Sinoto and Komori 1988; Komori and Sinoto 2002), as well as on various locations throughout the Mata'ire'a Hill. During the 1990s they begun an extensive

excavation of water-logged cultural deposits in the lower part of the Te Ana land division (Komori 2001, Wallin, Komori and Solsvik 2004:).

Through these investigations, Sinoto developed morphological classifications of the Huahine marae (Sinoto, Komori et al. 1981:7-9). He also established typologies and chronologies for the Society Island's marae complex in general (i.e. Sinoto 1996, Komori and Sinoto 2002). The chronological relevance of these classifications and typologies have however not been tested through archaeological excavation, therefore a program of test-excavation of

*marae* structures is important as a complement to the surveys and test-excavations of settlement sites.

During our investigations different *marae* types have been excavated, including "small", "medium" and "large" sized structures located both at the coast and on the Mata'ire'a Hill. This paper is a preliminary report on the investigations and a short historical account of the two most prominent *marae* structures, *marae* Mata'ire'a Rahi and



Figure 4. Ahu of Marae Mata'ire'a Rahi.

marae Manunu on the island of Huahine. The former is mentioned in the myths as an "original" marae located central on the hill above Maeva village, and the latter is the exceptional large "coastal" marae, located at the seashore side of Fauna Nui, opposite Maeva village.

#### MARAE MATA'IRE'A RAHI (SITE: SCH-2-19)

MARAE MATA'IRE'A RAHI, OR Faao-aitu (Henry 1928:100) was recognized as the "national" marae of the island of

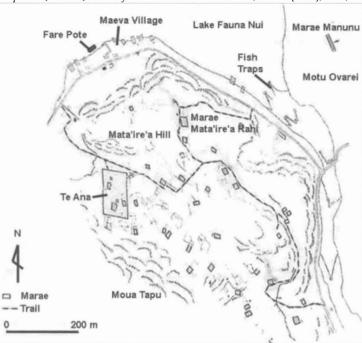


Figure 3. Project area with sites indicated.

Huahine, and was consequently the most important religious structure on the island. The marae is located on a slope on the summit of Mata'ire'a Hill. on land called Tehu'a. The ahu is placed at the up slope end directed towards Moua Tapu. The marae is enclosed by a stone wall except on the down-slope end where a c. 2 m high terrace wall makes it impossible to enter the marae from this side. The ahu is built into this enclosing stone wall. The front-wall of the ahu is composed of limestone slabs on end and with sections of stacked basalt in between, and the court is paved with basalt flagstones (Figure 4). It

was on *marae* Mata'ire'a Rahi where the important *pa'i atua* ceremony was carried out (Henry 1928:221), in which all the gods of the island were brought out and displayed. It was also on this temple where the investment of a new chief took place as mentioned by Henry (1928:195). Furthermore, the lineage head of each of the eight districts of Huahine had their own backrest on the lower part of the court at this *marae*.

#### HISTORICAL RECORDS AND SURVEY

IN THE CASE OF MARAE Mata'ire'a Rahi we are able, through descriptions left by early missionaries and scholars, to get an insight in the general state of the monument from the 1820s up until today and here we will present two of these accounts:

On January 8, 1822, Tyerman and Bennet visited Marae Mata'ire'a Rahi together with the man who was the official bearer of the image of the god *Tane*. Here follows the description they made from this visit:

"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 be-

longed 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

C 7 10 6 f f 6 b 7 1 1 d d 1 2 1 d d 2 1 1 d d

Figure 5. Marae Matairea-rahi (Emory 1933: Figure 88).

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 and Bennet 1831, 1:282-283).

From Tyerman and Bennet's conversation with Taumati, the man who used to bear Tane's image, the god of the *marae*, it is evident that this image was burned around 1817. This act probably marked the end of the use of *marae* Mata'ire'a Rahi as a temple (Tyerman and Bennet 1831, 1:266-267).

During November/December 1925 Emory surveyed *marae* structures in Maeva including the Marae Mata'ire'a Rahi (Figure 5), and he gave the following description:

"Marae Matairea-rahi, located on a hill overlooking the central part of Maeva Village (Figures. 84, no. 19; 88). The common name is Matairea, derived from the name of the hill on which it stands,

but according to Henry (32:101), its own name is Faaoaitu (Faao-aitu). The plan of the *marae* (Figure 88) shows that it consists of two separate parts. Tyerman and Ellis (sic, should be Bennet) (1:278-284) 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 and Bennet (1:282) 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:

Faatau, the only man at Maeva now living who is versed in natraditions. says that the southern half of the marae Matairea was occupied by the eight mataeinaa 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 (Figure 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) (Emory 1933:133-135).

Figure 5. (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, Figure 88).

Mata'ire'a Rahi was restored in 1969 by Y. H. Sinoto, and the state of the *marae* has been the same from this time. The most evident difference is that Sinoto discovered more back rests on the lowermost terrace than Emory did, and today there are as well eight back rests on the main court, as seen by Tyerman and Bennet in 1822.

In 2001, we visited Marae Mata'ire'a Rahi in order to describe it, and in October 2003 we also made a detailed map, as well as test excavations of the *marae*. Here follows our detailed description of the *marae* proper:

Mata'ire'a Rahi is a complex structure consisting of a *marae*-proper with two and part of a third platforms attached to it. It is located on an eastward slope almost on the top of this section 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 m to 1 m high. On the south side the wall is build only along the uppermost terrace of the courtyard and not along the lowermost terrace. This wall is a double-wall of stacked basalt stones, with occasionally a slab on end in the first course. The east side consists only of the retaining wall, the terrace 2 m - 3 m high. 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 or three 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 west wall of the ahu. The enclosing stone wall is built in line with these broken slabs. On top of the wall there is built a second step on the ahu with both basalt stones, limestone and coral. The filling of the ahu, as in the enclosing wall, is mainly basalt stones. In the NW corner there is a small basalt upright  $25 \times 35 - 40 \text{ cm}$  and facing South.

In front of the *ahu* there are 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 on end with 5 large basalt flag stones on top. The largest of these flag stones measures c. 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, c. 4 m (WE) by 1 m (NS), and c. 0.2-0.25 m high, and filled mainly with basalt stones. This feature is build into the wall in the West.

In front of the *ahu*, offset a little to the S, there is a backrest situated in the centre of a smaller court-yard made as a retaining terrace, which is built on the courtyard of the *marae*. At the very E of this pavement there are 8 uprights at the end, and in the N there is one more, placed a little closer to the *ahu*. At the N end of this pavement there is a huge old tree growing, and just to the S of this tree 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 the E. In front of these uprights there are 4 pits (about 0.8 by 0.8 m).

Structure A: This is a basalt platform, built 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. All sides of this structure seem to curve inwards. 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 are 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 with it, there is a round-ended terrace, about 1-2 courses high. It is about the same length as Structure A, but not so wide. This might have been a house platform. No pavement and no uprights were found on this terrace.

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

# COMPARISON BETWEEN TYERMAN AND BENNET'S AND EMORY'S DESCRIPTIONS

TYERMAN AND BENNET DESCRIBED the *marae* as 30.48 m by 24.38 m, while Emory gives the size as about 25.91 m by 21.34 m (Emory 1933:136). The real figure is actually closer to Tyerman and Bennet's figures than Emory's (cf. Komori and Sinoto 2002:256, Figure 4b). Our own figures are taken as the longest possible length and width. This suggests that the E side of the *marae* probably was 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 shape 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, and the back of the *marae* is concave. The rest of Tyer-

Trench II

Trench III

ScH-2-19

Marae Mata'ire'a Rahi
6 September 2003
R. Solsvik / P. Wallin
5 m
Pit
Heap
Ati tree
Upright stone

Tanes House

Figure 6. Plan drawing of Marae Mata'ire'a Rahi.



Figure 7. Transect drawing of Marae Mata'ire'a Rahi.

man and Bennet's description seems to correspond to the present structure, despite some confusion of terminology. Most remarkable is that they do not mention the platforms to the N of the *marae*, but only describe this area as the place where Tane'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 real shape of the structure. He also failed to report the second enclosure/platform just to the N of the *ahu*, which must have been overgrown or in bad shape in 1925. It is also somewhat strange that the typological oriented Emory overlooked the evidence of rebuilding represented by the broken coral slabs visible at the base of the rear-wall of the *ahu*. These broken coral slabs indicate that the *ahu* had once been a typical coral slab *ahu*. These observations suggests that current

researchers should treat Emory's survey with more skepticism than we might have done hitherto.

# **EXCAVATION OF THE STRUCTURE, SEPTEMBER 2003**

THE TEST EXCAVATION WAS DESIGNED to retrieve dateable material to date the period of initial construction of the *marae* as well as later re-building phases of the structure. Consequently, the areas excavated were quite limited and we concentrated our efforts to an area of the *ahu* where two limestone slabs had fallen outwards, one in the front-wall and one in the rear-wall (Figure 6. and Figure 7). Four trenches were excavated.

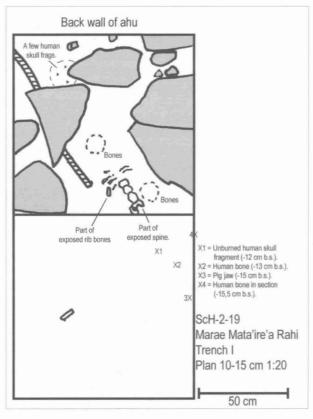


Figure 8. Trench I with skeleton indicated.

**Trench I** was a 1 m x 2 m trench excavated perpendicular to the back-wall of the *ahu* outside the *marae*.

**Trench II** was a 2 m x 6 m trench excavated at the south end of the front-wall of the *ahu* exposing both the south end of the *ahu*, as well as, two areas inside the *ahu*, called **Inside Ahu 1**, and **Inside Ahu 2**. This latter trench was excavated in order to investigate the construction of the *ahu* and to get the relationship between the *ahu* and the enclosing stone wall of the *marae*.

**Trench III**, a 0.5 m x 0.5 m test pit, was excavated at the North corner of the enclosing wall, to search for dateable material under the wall, and

**Trench IV**, similar in size as Trench III was excavated just down slope of the *marae* platform, to search for dateable material under this section of the terraced courtyard.

Trench I, at rear-wall of ahu

A human torso, laying on its back in an approximately NE-SW direction, was found buried between and below some stones, at a depth of c. - 5 to - 20 cm b.s. A few pieces of skull bone fragments were located underneath a flat stone as well as two teeth (- 5 to 10 cm b.s.), most of the skull bones showed evidence of being fire damaged. Also one piece of the ulna was found and parts of the ribs, vertebrae and coxae. No bones from the legs were indicated. The vertebrae and ribs were not totally exposed, since we stopped the excavation due to the very fragmented state of the bones. The torso was recovered in situ after documentation. Several other small pieces of human bones and pig bones were found as well.

Our interpretation is 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 all showed evidence of being fire-damaged. The soil around these fragments also showed evidence of being burned, but this might have been caused by a fire in a huge ati-root at the base of the ahu rear wall slabs. At the same level as this burial we also recovered pig, dog, and fish bones (Figure 8). It seems justified to interpret this as remains of a sacrifice, possibly an offering during the construction of the marae or after a re-building of this structure. The burial is also very shallow, probably only c. 5 cm b.s., which might indicate that the torso had just been covered by earth behind the ahu on the ground, as sacrifices were sometimes cleaned away from the courtyard and removed in this manner as holy garbage, mentioned by Emory as "Tiriapera (Rubbishthrown), refuse pit or rubbish heap of a marae" (Emory 1933:14). The word Tu-ruma also meant "sacred refuse heap" (Emory 1933:14).

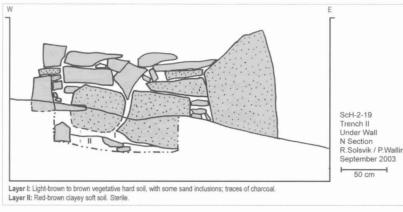


Figure 9. Stratigraphy under wall enclosure in Trench II.

Trench I also showed that the coral slabs of the *ahu* were set 30 - 40 cm deep into the ground, and that some of the slabs had been split vertically giving the impression that they are much smaller than they had once been. This fact indicates that the size of the slabs once must have been about 60 - 100 cm high also at the rear side of this *ahu*.

Trench II, excavation through the ahu and enclosing wall
Three areas of Trench II were excavated separately:
Under Wall, which is the area of Trench II located outside

the *ahu* towards the south and constituted the removal of part of the enclosing stone wall.

Inside Ahu 1. which is the area just behind the large fallen slab in the front wall of the south end of the ahu, and c. 50 cm into the ahu. Inside Ahu 2, which was an area almost in the middle of the ahu to the Northwest Inside Ahu 1.

### Under Wall

When removing stones of the enclosing stone wall it



Figure 10. Human skull found under flat stone inside the *ahu*.



Figure 11. Bone cache inside ahu, Trench II.

became evident that it had been constructed as an attachment to the *ahu*. It was also evident from the exposed slabs in the south end of the *ahu* that these were quite large when the *ahu* first was constructed, probably as large as seen in the South-West corner today (Figure 9). Due to this discovery, we re-

examined the paving stones along the enclosing stone wall, and found that the paving stones were placed into, but not underneath, the wall. Consequently, the following construction sequence was observed: The *ahu* was constructed first, then the enclosing stone wall, and lastly the upper part of the courtyard was paved. Given these facts, the *ahu* of Marae Mata'ire'a Rahi first probably had a traditional coral slab *ahu* of the type found in many Leeward Islands *marae*. During the excavation we encountered occasional fragments of human bone, as well as fragments of pig bones, usually parts of jaws or teeth.

#### Inside Ahu 1

The fill of the *ahu* consisted of mixed basalt stone material of varied shape and size c. 15-60 cm. A few pieces of bone were encountered in the fill. No internal construction or earlier building phases were 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 25 x 20 cm large flat basalt stone a human cranium was found (Figure 10). This cranium had no lower jawbone and there were no teeth. Furthermore, no other bones of the body associated to this cranium could be confirmed. This implies that it was a human offering placed right at the corner where the front slab and the

SE slab of the S end side of the ahu meet.

When excavating into the ground under the ahu, scattered charcoal was found in a c. 40 x 40 cm large spot that was about 5 cm thick. This might belong to an activity at this place before the ahu was built, or an activity associated with the building of the ahu.

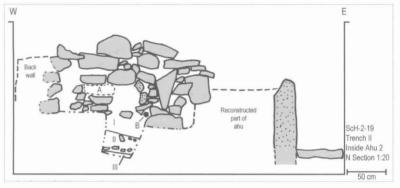


Figure 12. Cross section of ahu, Trench II.

A = Grave (10-14 long bones)

B = Fragment of human skull, no teeth

Layer I: light brown to brown vegetative clayey soil with sand as hard lumps, traces of

Layer II: light brown to brown clayey soil with traces of charcoal

Layer III: red-brown, soft clayey soil, sterile



Figure 13. Marae Manunu during excavation.

Inside Ahu 2

To investigate further evidence of an earlier construction stage inside the ahu, we excavated an area called Inside Ahu 2.

A roughly shaped burial-cist/cache containing at least 12 long bones (mainly femur and tibia) and a few fragments of skull bones, were exposed in the N section c. 40 - 50 cm down in the fill. The bones were placed on a flat stone and had another flat stone on top. The covering stone on top seemed to have damaged some of the bones, which today 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 this burial (Figure 11).

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 bones or teeth. This coral/limestone waste probably comes from the destruction of some of the coral/limestone slabs in the rear wall of the ahu that obviously had been snapped off at ground level and substituted by stacked basalt boulders. This coral/ limestone waste was found all the way down towards the

> original surface on which the ahu was built. Consequently, the marae must have been restored or reconstructed during the use of the temple, and this work would probably have removed or rearranged most of the entire fill at this part of the ahu. The rough burial cache was probably constructed at this prehistoric reconstruction of the marae (Figure 12). Other human, pig, dog, fish and bird bones were also found during the excavation of this trench as well as scattered charcoal.

# DATING THE CONSTRUCTION AND PREHISTORIC RE-BUILDING OF THE MARAE

THREE 14C DATES, ONE ON CHARCOAL and two on bones, have so far been analyzed at the Waikato Laboratory in New Zealand.

One sample of charcoal was recovered from Trench II, Inside Ahu 1. Under the fill of basalt stones and into the soil of the original ground level an area of 40 x 40 x 5 cm with small pieces of scattered charcoal was found. This charcoal does not belong to an ordinary umu, but it must have been deposited/burned at the site before the prehistoric reconstruction of the ahu, and probably also before or in connection with the initial construction phase of the marae. The sample was analyzed at Waikato (Wk-14604) and returned a date of 397  $\pm$  38 BP (d<sup>14</sup>C = 44.9  $\pm$  4.2 %c; d<sup>13</sup>C =  $25.4 \pm 0.2 \%$ ; D<sup>14</sup>C =  $47.1 \pm 4.5 \%$ ). Calibrated at 2 sigma it yields a result of AD 1430-1640.

A second date was conducted on a piece of pig jaw that was recovered from Trench II, Inside Ahu 1, in the soil under the stone fill of the ahu. The analysis at Waikato (Wk-14605) returned a date of 225 ± 38 BP ( $d^{14}C = 16.6 \pm 0.3 \%$ );  $d^{13}C = 20.9 \pm 0.2 \%$ );  $D^{14}C$ =  $27.7 \pm 4.5 \%$ ). Calibrated (at 2 sigma) with an estimated 20 % marine diet, as indicated by the d<sup>13</sup>C value, gave a time range of AD 1670-1820.

A third date from Trench II, Inside Ahu 1 was produced on a piece from the human skull found under a flat stone on top of the surface soil under the fill in the SE corner of the ahu. This skull was interpreted as a human sacrifice. The analysis (Wk-14606) returned a date of 301  $\pm$  38 BP (d<sup>14</sup>C =  $18.4 \pm 4.3 \%$ ;  $d^{13}C = 17.1 \pm 0.2 \%$ ;  $D^{14}C = 36.8 \pm 4.5 \%$ ). The d<sup>13</sup>C value indicates a marine diet of 50 %, but it is not certain. This value might as well have been affected by a protein-rich diet, as indicated by the D14C value, and we have therefore calibrated this date with an estimated 35 % marine diet, which gives (at 2 sigma) a time range of AD 1660-1820.

The charcoal samples give us a possible dating of the initial building phase of this structure sometime around AD 1500. The two bone samples when calibrated, indicate a secondary rebuilding phase of the ahu at around AD 1700. This

19

date might correspond well with traditional evidence for a shift in dynasties at Maeva around this time (Handy 1930:95-98).

## MARAE MANUNU (SITE: SCH-2-18)

MARAE MANUNU IS SITUATED on the flat land of Motu Ovarei, formerly called Manunuiterai or Toerauroa, which bounds the north side of Fauna Nui lagoon close to the village of Maeva, on the north-east corner of Huahine Island. Manunu is a huge *marae* of the classic coastal type where the *ahu*, in two steps, is made of huge coral or lime stone slabs placed on end (Figure 13). Except for an *ava'a* in front of the *ahu* and two small stone enclosures, the courtyard is not defined, but is just a flat area of gravel and grass in front of the *ahu*. The courtyard, or *hoho*, is oriented towards the interior, and the rear wall of the *ahu* is oriented towards the open sea.

Manunu, was also described as the "national" marae of Huahine Nui. It was consecrated to the god Tane, the supreme god of Huahine Nui, and it is said it was given its name from the legendary chiefess Hotuhiva, who arrived from Ra'iatea inside a sacred drum at the point where the marae is located. "As she emerged from the drum she found herself crippled with numbness in all her limbs, for which reason the point was afterwards called Manunu (Benumbed)" (Henry 1928:100). This also became the name of the marae. It is also said that the "national" marae of Huahine Nui was moved from Mata'ire'a Rahi down to the coast where marae Manunu is located (Handy 1930:97). This great marae was only equalled in rank by marae Anini on Tiva point on Huahine Iti, dedicated to the war god 'Oro, and by marae Mata'ire'a Rahi. As such, Manunu was a marae where human sacrifices were offered to Tane, and was quite possibly the place where the pa'i atua ceremonies were held.

# MANUNU IN HISTORICAL RECORDS

MARAE MANUNU WAS FIRST (to our knowledge) described in some detail by Daniel Tyerman and George Bennet, who visited the site on January 4. 1822. Their short description is given in full:

"The weather not permitting us to resume our journey, we made an excursion to the neighboring 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 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 illformed, 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 "starproof." One of these ancients measured fifteen yards in girth above the root..." (Tyerman and Bennet 1831, 2:265-266).

Kenneth P. Emory visited Marae Manunu sometime between November 19 and December 23, 1925, and described it in detail. He also made a drawing of the front wall of the *ahu*. Most of his description is given below:

"Marae Manunu, on the flat land of the peninsula called Manunuiterai, or Toerauroa, which bounds the north side of Fauna Nui lagoon (Figures 10; 84, no. 18; 87; Plates 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 rests 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 ava'a. 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." "In front of the ava'a, and 12 feet from it, is a basalt upright (Figure 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, ava'a, 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, Figure 87).

During our project at Maeva we also made a detailed description, and since there is a difference in appearance of the *marae* in this period, we will give our record of the structure:

Marae Manunu consists of an ahu c. 40 x 6 x 3 m. with an ava'a in front. 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 grasscovered 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 limestone slabs 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.

In the center of the front wall there is an ava'a c. 7 x 4,5 m, and 50 cm 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, c. 15 m out from the ahu wall, there is a round-ended house foundation, 15 x 6 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 has one clear turtle petroglyph, and another possible turtle petroglyph. Modern graffiti is also visible on some of the stones.

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

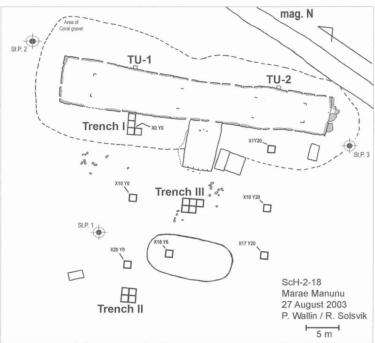


Figure 14. Plan drawing of marae Manunu with trenches indicated.

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

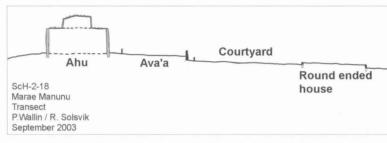


Figure 15. Transect drawing with main features indicated.

young people from the nearby village, visiting the site, and maybe the inscriptions can be seen as an act of a cultural revival (Wallin 2005).

The major discrepancies between early descriptions and measurements, in particular between Emory's and our own, may be due to the restoration work done by Sinoto between 1967 – 1969. It also seems that the site had a period of rapid deterioration between 1925 and 1967, in that more limestone slabs had fallen in these years than between the years 1822 and 1925. During reconstruction, Sinoto erected and repaired most of the slabs in the front wall of the *ahu*, which today have more slabs than was described by Emory.

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, today close to a row of Pandanus trees, were not noticed by Emory. These were discovered and restored by Sinoto.

#### **EXCAVATION AUGUST-SEPTEMBER 2003**

THE AHU OF MARAE MANUNU was, as mentioned, restored in 1969 and repaired a second time in 1984 by Sinoto. An excavation inside the *ahu* of this *marae* would have required a substantial labor force and would probably cause unnecessary damage to a structure that was carefully pieced together, for this we had neither the time nor the funds. The courtyard was therefore the logical option for our test-excavation and a coordinate system was established with  $X_0Y_0$  just in front of the *ahu* and c. 10 m to the right of the NW corner (Figures 14 and 15). A total of 9 test units where excavated along three lines, spaced 10 meters apart, oriented ENE – WSW. These were all excavated in 10 cm layers down to a well-defined sterile sand layer, usually reached between 20 to 30 cm b.s.

A generalized stratigraphic description made from observation of all units can be given as follows:

**Layer I:** Brown to dark-brown vegetative sandy soil with traces of charcoal. The bottom of this layer was a washout 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.

After the establishment of the general stratigraphy, three promising areas were selected for more extended excavations.

All around the *ahu* of Manunu, and for a distance of 5-6 m in front of the structure, we encountered a layer of coral gravel, or *tupiri*, 10-15 cm thick deposited in connection to the construction of the *marae*.

# DATING THE CONSTRUCTION OF MARAE MANUNU

ONE TRENCH AND TWO TEST units were excavated in direct association with the *ahu* of Marae Manunu. **Trench I** was located just in front of the northwest part of the front-wall of the *ahu*; **Test Unit I**, in connection with the northwest part of the rear-wall of the *ahu*; and **Test Unit II** in connection with the southeast part of the rear wall of the *ahu*. The two test units did not give any additional information, and are not reported below. The objective for all three units was to find out how deep the

limestone slabs of the *ahu* were embedded in the ground and to search for dateable material to date the construction of the *ahu*.

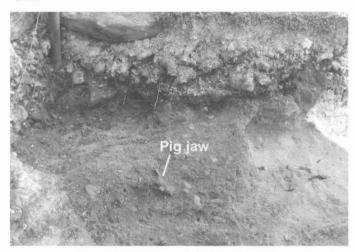


Figure 16. Fragmented pig jaw, Trench I.

#### Trench I

Trench I was an expansion of a test pit located in front of the *marae* in which we found an alignment of flat basalt stones, which we first interpreted as stones from an earlier pavement of the courtyard of the *marae*, but which turned out to be something else, maybe a shallow enclosure for sacrificial burials or maybe even part of a natural feature. 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*. In total 4 square meters were excavated in 10 cm spits and screened through 5 mm mesh screens.

The alignment of stones (that we first thought was part of a courtyard pavement) had three sides (N, S, and W), and might as mentioned, possibly been a shallow enclosure for sacrificial burials. Soil samples for phosphate analysis, which may confirm such an interpretation was collected, but has not yet been analyzed.

We found several fragments of human bone and some teeth, as well as 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.). Currently under analysis to find out if it is modern or historic period iron.

At about a length of 1.30 to 1.40 cm from the coral slab of the front-wall of the *ahu* we found part of a pig jaw and some other small fragments of pig bones deposited directly on top of layer IV (32 to 38 cm b.s.) (Figure 16). According to our interpretation of the stratigraphy in this trench the

*marae* must have been build on top of this layer and consequently the pig jaw had been deposited some time before the construction of the *marae*.

# <sup>14</sup>C Dates from Marae Manunu

ONE PIECE OF THE PIG-JAW recovered from Trench I, 32 to 37 cm b.s., upon sterile beach sand. A part of this jaw was submitted to Waikato Laboratory in New Zealand for  $^{14}$ C analysis (Wk-14603). It returned a date of  $306 \pm 42$  BP ( $d^{14}$ C =  $22.3 \pm 4.8$  %c;  $d^{13}$ C =  $18.8 \pm 0.2$  %c;  $D^{14}$ C =  $37.4 \pm 5.0$  %c), but as can be seen from the  $d^{13}$ C value the pig might have consumed up to 32% marine diet. Below we give two calibration ranges (at 2 Sigma) for this date: the first calibrated using 25% marine diet: AD 1650-1820; and the second using the maximum of 32% marine diet: AD 1630-1820.

# TRACES OF RITUAL ACTIVITY ON MARAE MANUNU

THE EXCAVATION OF A FARE-IA-MANAHA. This unit was located inside the round-ended house located 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 at the interior of these coral slabs with coral gravel, or *tupiri*. This layer of coral gravel was taken away and excavations proceeded from the new surface level.

Under the coral gravel we found an up to 18 cm deep cultural deposit, which contained scattered charcoal, shell and bones. The bones have been osteologically analyzed, and the usual bones found in Polynesian middens including pig, rat, fish, and probably sea birds were found. Dog bones were not present. More unusual, we also recovered remains from at least one sheep and one cat. The sheep or goat and cat bones both came from the cranium of these individuals. Accounts from Cook's visit indicates that he gave away a sheep/goat and maybe cats to the natives. So, one should not exclude that they represent European animals sacrificed at this huge *marae* in the late 18<sup>th</sup> century or even in the early 19<sup>th</sup> century.

One might speculate further in whether these recovered bones together with abundant fragments of charcoal do represent the remains of sacrifices or food. The question then is if these remains indicate symbolic or real meals consumed by priest or chiefs inside the fare-ia-manaha (Henry 1928:135), or whether it might be evidence of a later habitation on the site? As no dateable material so far was analyzed from this deposit it is difficult to determine which activity was involved. However, since there are only skull fragments from the sheep and the cat present, we argue that the bones indicate some kind of ritual sacrifice or deposit. The sheep/goat and cat bones may indicate that animals acquired through contact with European ships speedily found their way up into the social and ritual fabric of Huahine society and ended up as offering to the gods. The missionary William Ellis observed already in the 1820s that cats were a domesticated favorite in most households, and that goats thrived well on the island (Ellis 1977:72).

# TRENCH II AND III, EXPLORING ACTIVITIES ON THE $\it Marae$ Courtyard

TRENCH II, 2 x 2 M LOCATED on the South courtyard side were excavated and extended since the test pit here indicated a quite high degree of pig bone fragments mixed with brown soil and scattered charcoal in the top 10 to 15 cm b.s. This extension confirmed this pattern. One possible interpretation of the concentration of pig bone encountered in this area is that a *fata rau* (offering platform) once had been located in the vicinity. It might also be that an earth-oven that we did not locate is to be found in this area.

Trench III is a 4 sq m extension of a test unit located at the centre of the courtyard between the *ava'a* and the house (in which we found a human tooth). The extension was excavated because we wanted to see if there could be any traces of ritual activity in the area just in front of the *ava'a*.

Except for one glass bead, possibly of contact period origin, and three human teeth, we only discovered some scattered charcoal and a couple of modern nails. The glass bead and teeth might be an indication that this area was a spot where human sacrifices and valuables were presented to the gods on the *ava'a*, however, at the moment we do not have the evidence to underpin this argument.

#### CONCLUDING DISCUSSION

THE TWO STRUCTURES MATA'IRE'A RAHI and Manunu were both named "National" structures of great importance for Huahine Nui. It has been argued that Marae Mata'ire'a Rahi was the earliest, followed by Marae Manunu. Both, however, were dedicated to the god Tane, even if Manunu resembles the temples of the war-god 'Oro as seen in *marae* Anini, on Huahine Iti, as well as in the original 'Oro temple at *marae* Taputapuatea on Raiatea. Maeva might have been a more conservative area protecting their old god Tane from such influences.

The excavations of Marae Mata'ire'a Rahi indicated at least two distinct construction phases. The first phase was dated calibrated at 2 sigma to c. AD 1430-1640. This structure had an ahu of probably the same dimensions as the present one, but constructed 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. Comparative evidence from other marae structures in the Society Islands and purely architectural considerations seems to argue against the existence of a basalt stone wall with a coral-slab ahu. The second phase observed was dated and calibrated at (at 2 sigma) to a time range of c. AD 1660-1820. This phase is indicated by the destruction of part of the marae, where many of the large coral/limestone slabs of the ahu were broken at ground level and crushed. The coral gravel and the coral/limestone lumps were then deposited at the bottom of the interior of the ahu, as well as in the general fill on top consisting of basalt stones. This indicates that the fill of the ahu, have been emptied and that the ahu then was refilled. It is probable that burial caches were made at this time. During this re-building the ahu was remade and faced with stacked basalt boulders; a stone wall

was probably constructed enclosing the *marae* on three sides and the courtyard paved.

Interesting evidence for ritual praxis was also discovered at Mata'ire'a Rahi. Behind the rear wall of the *ahu* we found a human corpse, probably only the torso, that was shallowly buried. Given that it is found in connection to a relatively large quantity of pig bones and fragments of dog bone, it is likely that it was deposited/sacrificed sometime during use of, and not prior to, construction of the *marae*. Inside the *ahu* a skull was found placed under a flat stone. It was missing the jawbone and all of the teeth. This individual seemed to be a young adult. Henry describes the practice of burying sacrificial victims under the corner stone of the *marae* as part of the construction of a National *Marae* (Henry 1928:132, 197). According to the dating of this skull it indicates that it was deposited at the re-building phase of the *marae*.

Our two main purposes with the excavation of Marae Manunu were to date the structure and to investigate traces of ritual actions. A pig bone found in a layer which went in right under the slabs of the *ahu* was used for the radiocarbon date of the structure and gave the following result calibrated at 2 sigma: AD 1630-1820.

Indication of varied ritual actions have also been detected by finds of scattered charcoal and plenty of pig bone fragments in a trench in the courtyard. This deposition might suggest a ritual activity at this spot. Most probably an offering altar, (fata-rau) was located here. The excavation inside the round-ended house, or fare pote, believed to be a fare-iamanaha is very interesting. Here we found the remains of pig, sheep/goat, cat, rat, fish, and bird, which suggests that the house had been used not only for storage of drums, but for habitation or ceremonial meals. The sheep/goat and cat bones indicate contact with early European visitors.

Finally, an interesting reinterpretation of a note by P. Marcantoni (1928:61) that Marae Manunu was built first, immediately followed by Mata'ire'a Rahi may be possible to do in the light of our excavations. However, it is quite clear that an early phase of Mata'ire'a Rahi was built first, but Marcantoni's information may have been tied to the rebuilding phase of Mata'ire'a Rahi. Based on the results the following scenario is suggested: When establishing a new national temple at Manunu around AD 1700, the *mana* of Mata'ire'a Rahi possibly was lowered by destruction of the *ahu* and its slabs. When this was done, Manunu could be built and shortly thereafter Mata'ire'a Rahi was reestablished, human sacrifices were presented and the *ahu* and the *marae* rebuilt as indicated through the archaeological excavations.

We may also mention that the results of this preliminary report can be altered or supplemented, once more radiocarbon samples and phosphate analyses are processed in the near future.

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#### REFERENCES

- Ellis, W., 1977. *Polynesian Researches*. Second printing, Vermont: Charles E. Tuttle Company.
- Emory, K. P., 1933. *Stone Remains in the Society Islands*. Honolulu: B. P. Bishop Museum Bull. 116.
- Handy, E. S. C., 1930. History and culture in the Society Islands. Honolulu: B. P. Bishop Museum Bull. 79.
- Henry, T., 1928. Ancient Tahiti. Honolulu: B. P. Bishop Museum Bull. 48.
- Komori, E., 2001. Final Report on Archaeological Test Excavations in Selected Areas of a Cultural and Historical Park in Maeva, Huahine. Honolulu: B. P. Bishop Museum, Department of Anthropology.
- Komori, E. and Y. Sinoto. 2002. Archaeological Research: Mata'ire'a Project, Te Ana Complex, Zone I, Area 2. Report to the Ministry of Culture, Government of French Polynesia. Honolulu: B. P. Bishop Museum, Department of Anthropology.
- Marcantoni, P., 1928. Historie de Huahine. *Soc. Etudes Oceaniennes*, 25, 26. Pape 'ete.
- Sinoto, Y. H., 1969. Réstauration de Marae aux Iles de la Société. Bulletin de la Société des Études Océaniennes 14(7 and 8):236-244. Pape éte.
- 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, eds. Dunedin.
- Sinoto, Y. H. and E. K. Komori 1988. Settlement Pattern Survey of Mata'ire'a Hill Maeva, Huahine, Society Islands, French Polynesia, Session IV, 1986. Honolulu: B. P. Bishop Museum, Department of Anthropology.
- Sinoto, Y. H., E. K. Komori, et al., 1981. Settlement Pattern Survey of Mata'ire'a Hill Maeva, Huahine, Society Islands, French Polynesia, Session II, 1980. Honolulu: B. P. Bishop Museum Archive.
- Sinoto, Y. H., E. K. Komori, et al., 1983. Settlement Pattern Survey of Matairea Hill, Maeva, Huahine, Society Island, French Polynesia. Session III. Honolulu: B. P. Bishop Museum Archives.
- Sinoto, Y. H. and E. H. Rogers-Jourdane 1980. Settlement Pattern Survey of Matairea Hill, Huahine, Society Islands, Session I, 1979. Honolulu: B. P. Bishop Museum Archives.
- Tyerman, D. and G. Bennet. 1831. *Journal of their voyages and travels* (compiled by James Montgomery). Vol. 1. London.
- Wallin, P., 1993. Ceremonial Stone Structures. The Archaeology and Ethnohistory of the Marae Complex in the Society Islands, French Polynesia. Uppsala: AUN 18.
- Wallin, P., 2005. How Marae Change: In Modern Times, For Example. In: BIPPA vol. 24.
- Wallin, P., E. Komori, and R. Solsvik (2004). Excavation of one habitation site and various marae structures on land Fareroi, Te Ana, Tehu'a, Tearanu'u, and Tetuatiare, in Maeva, Huahine, Society Islands, French Polynesia 2003. Oslo: Kon-Tiki Museum.