

# Chapter 6

## Anakena Re-visited: New Perspectives on Old Problems at Anakena, Rapa Nui



Paul Wallin and Helene Martinsson-Wallin

### 1 Introduction to the Problem

It is now over 30 years since we participated in the large-scale archaeological excavations at Anakena (Fig. 6.1). The results of the excavations are published in the Kon-Tiki Museum Occasional Papers (Skjølsvold 1994).

The accumulated results from archaeological research on Rapa Nui subsequent to our initial excavations at Anakena justify a re-assessment of the remains and the chronological aspects at this site. New radiocarbon-dated samples have been added to the analysis and discussion of Rapa Nui prehistory, and old samples have been re-analyzed several times (see, for example Martinsson-Wallin et al. 2013; Martinsson-Wallin and Crockford 2002; Wallin et al. 2010; Wilmshurst et al. 2011).

In this respect, we suggest that it is important to re-analyze the activity and settlement sites and monuments at Anakena and their importance for ritual activities from the time of initial colonization onward. The aim of this paper is to provide new explanations and interpretations of the formation processes of the Anakena site with special attention to the activity area we named Nau Nau East (Fig. 6.2). Features observed in this activity area included a small standing stone image upright that was crudely carved, hearths, refusal pits, postholes, grinding activities and a stone line demarcation.

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**Fig. 6.1** Overview with site locations at Anakena. Photo: Paul Wallin



**Fig. 6.2** Excavation of the site Nau Nau East in 1988. The crude image upright is visible in the rear trench. Photo: Paul Wallin

## 1.1 Chronology

At the time of our excavations in the Anakena area in the late 1980s, Arne Skjølsvold summarized and discussed the available  $^{14}\text{C}$  dates for the settlement of Rapa Nui. The results pushed the initial settlement forward from the previously established timeframe of AD 300–500, based on excavations at Poike ditch (Smith 1961a), to a date of the initial colonization around AD 800–1000 (Skjølsvold 1993: 94, 1994: 107; Martinsson-Wallin 1994; Martinsson-Wallin and Crockford 2002: 256). Roger Green (1966: 6) had previously suggested that linguistic evidence showed archaic traits in the Rapa Nui language and that the AD 300–400 date supported his linguistic model. In a paper delivered at the “Segundo Congreso Internacional de Arqueología de Isla de Pascua y Polinesia Oriental” in Hanga Roa October 17–21, 1996, Green stated, based on Skjølsvold’s re-assessment, that Rapa Nui was settled “from the Pitcairn – Mangareva region at circa 800 A.D.” (Green 1999: 109). At the same conference, we stated; “The result of the excavations show continuous traits of human activity in Anakena from c. AD 800-1000 and up to modern times” (Martinsson-Wallin and Wallin 1999: 182).

About 15 years after our excavations at Anakena, Terry Hunt and Carl Lipo investigated the dune to the northeast on the seaward side of *ahu* Nau Nau (Hunt and Lipo 2006). In accordance with our earlier investigation, they found cultural debris just on top of the bedrock at a depth of 345 cm. They evaluated dates from the early settlement in Anakena according to the “radiocarbon hygiene” criteria (Spriggs and Anderson 1993) and concluded that Anakena (and Rapa Nui) was settled around AD 1200 (Hunt and Lipo 2006).

In 2007, we carried out a re-dating project of the main trench (called C1) at Anakena from our excavation in 1987 (Skjølsvold 1994: 21–26; Wallin et al. 2010). The aim was to use the “radiocarbon hygiene” protocols and date samples from short-lived organic material such as nutshells and bones of the Polynesian rat (*Rattus exulans*). The conclusions reached from this work were that the cultural layer found on top of the bedrock under *ahu* Nau Nau on the inland side of the monument was disturbed during the initial construction phase of the large restored *ahu*. The bottom dark brown clayey layer with cultural debris was re-dated to c. AD 1000–1300 and the building phase of the first megalithic *ahu* Nau Nau was estimated to be around AD 1300 (Wallin et al. 2010: 43). Subsequently, Wilmshurst et al. (2011) carried out a general re-dating of the colonization of East Polynesia and they suggest that the earliest settlements of Central East Polynesia (Society Islands) are set at AD 1025–1121. The Rapa Nui initial settlement was proposed to be within the timeframe of AD 1200–1258 (Wilmshurst et al. 2011: 1818). This converges with a study by Mara Mulrooney (2013) on the chronology and land use of Rapa Nui suggested a “permanent and widespread settlement on the Island by at least AD 1200, with initial colonization possibly having occurred significantly earlier” (Mulrooney 2013: 4386).

The earliest cultural activity at Anakena found c. 3 m below the present surface, within a dark brown clay just on top of the bedrock, is still, after more than 30 years

of research, the earliest dated settlement activity on Rapa Nui. So far, excavated samples from this context have yielded 11 early dates. Seven of the  $^{14}\text{C}$  dates were done by the Kon-Tiki museum (Skjølsvold 1994; Wallin et al. 2010), two by Hunt and Lipo (2006) and three by Steadman et al. (1994). Radiocarbon dates of short-lived species (nutshells) as well as bones of the Polynesian rat and charcoal material from this layer have been dated. In a recent paper by DiNapoli et al. (2020), they evaluate these published  $^{14}\text{C}$  dates (using the protocol for radiocarbon hygiene and Bayesian statistics) and estimated the time of initial colonization at AD 1150–1290 at  $2\sigma$ . Furthermore, based on  $^{14}\text{C}$  dated samples and the sample proveniences within *ahu* structures, Martinsson-Wallin et al. (2013) suggest the start of the building phase of *ahu* structures to c. AD 1300–1400 (Martinsson-Wallin et al. 2013: 412). DiNapoli et al. (2020) suggest the initial *ahu* construction phase to c. AD 1350–1450 at  $2\sigma$ .

## 1.2 Rapa Nui Ritual Space: *Ahu/Moai* Concept

Several researchers have suggested that the *ahu/moai* concept is a materialized institutional ideology and have discussed the socio-cultural relationships, ritual connotations and development with changes and additions of various ideological/ritual built expressions (see Ayres 1975; Martinsson-Wallin 1994). An example of this is mentioned by McCoy (1976) and Martinsson-Wallin (1994: 72), who suggest that vertical standing stones in the rear wall of some *ahu* are an early architectural trait on Rapa Nui. Recently, Vogt and Cauwe (2019) discuss upright stones as a significant Rapa Nui ritual feature and a phenomenon with a longstanding significance. Martinsson-Wallin (1994) used relational statistics of various features connected to the ritual place in combination with radiocarbon dates and stratigraphy to show that ramps, wings and red lintels attached to the inland *paenga* platform facing are additions to the *ahu* structures over time. Mulloy (1961: 104–105), Smith (1961b: 213), and Martinsson-Wallin (2000: 49) furthermore suggest that statues were placed on the courtyard of the early monuments instead of on top of them. In a recent publication, Ayres et al. (2019) re-analyze some excavated *ahu* structures and compared the monuments with features and traits of East Polynesian ritual sites (*marae*). They suggest that these traits were included in early Rapa Nui *ahu* architecture. They argue for “vertical slabs, small, low platforms with small basalt images” in the period from initial colonization and up to AD 1400 (Ayres et al. 2019: 286). They further suggest that the development continued by a “Transformation of *Marae* into *Ahu moai* focus” in the period AD 1400–1700 (Ayres et al. 2019: 286).

The first part of the model by Ayres et al. (2019) is so far not confirmed by any securely dated *marae*-like structures from the AD 1150–1300 period on Rapa Nui. However, in light of research on the chronology of Rapa Nui initial colonization and subsequent development of ritual architecture, it is very likely that early ritual space featured upright stones. With this in mind and with the re-assessment of Rapa Nui and the Anakena chronology (DiNapoli et al. 2020; Wallin et al. 2010), our aim is

to re-analyze the early activity area, called Nau Nau East at Anakena (Martinsson-Wallin and Wallin 1994: 123–211). This area is located about 50–75 m to the east of the present *ahu* Nau Nau at Anakena. Two radiocarbon dates on charcoal samples from Nau Nau East, one from a refuse pit and another from the cultural layer, show this to be an early activity area (Skjølsvold 1994: 106) (see dating details below). This suggests that the site is contemporary with the initial Rapa Nui settlement phase.

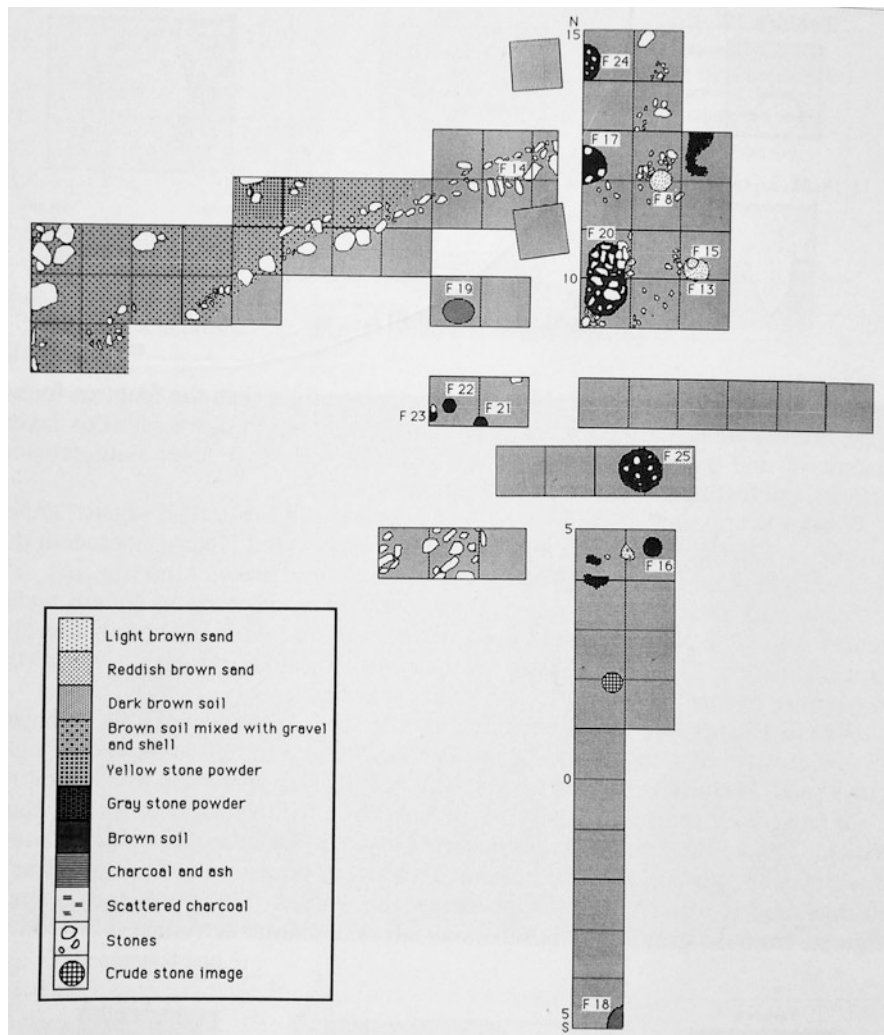
## 2 Nau Nau East: An Early Ritual Space

Initially, the activity area Nau Nau East was interpreted as an attachment to the initial phase of *ahu* Nau Nau (Martinsson-Wallin and Wallin 1994; Martinsson-Wallin 1994: 200–201). Due to the dating re-assessment for the initial settlement of Rapa Nui (c. AD 1150–1290), compared with the date of Nau Nau East, we have re-interpreted this area to be a ritual space associated with the initial settlement of the island pre-dating the earliest date of *ahu* Nau Nau. We suggest that Nau Nau East is an early expression of ritual practices that existed in the Central East Polynesian area from where the Rapanui originated. The features and remains found at Nau Nau East have already been described in detail and interpreted as a ritual space by Martinsson-Wallin and Wallin (1994: 127–141, 1999: 184–185, 2000: 30–31), but here we present a closer investigation of the different features observed at the site to explore early ritual relationships.

In this paper, we are going to reassess, clarify and contextualize the actions and practices found at the site (Fig. 6.3) and how they demonstrate the occurrence of ritual behavior. We use data retrieved from archaeological research, ethnohistory and traditional history for Rapa Nui and Polynesia to argue that the activity area Nau Nau East is an early ritual space that shows connections to similar sites in other East Polynesian islands (Kirch and Green 2001).

### 2.1 Place

Firstly, we give attention to place and the landscape setting on which Nau Nau East is located. Anakena in traditional settlement history is suggested to be the first landing place of the founding chief, *Hotu Matua*, who stepped ashore at the beach at *Hira Moko* (Anakena). According to traditional history, it is narrated that; “*Inei te ariki ana noho kona rivariva*- Here the king will live in a fine place” (Metraux 1940: 59). The activity area Nau Nau East is situated at the foot of the hill called *Maunga Auhepa* or *Maunga Hau E’epe* (Smith 1961c; Routledge 1919) overlooking the beach and this early habitation site is located close to a stream that had its outlet on the west side of the bay. The placing of Nau Nau East, behind (sacred) and higher than the early settlement (found under *ahu* Nau Nau) by the sea (profane),



**Fig. 6.3** Plan drawing of the site Nau Nau East with features indicated (from Martinsson-Wallin and Wallin 1994: 134)

can be interpreted in the Polynesian binary opposition perspective in the following binary oppositions, such as: back:front::high:low::sacred:secular::chief:commoners (Ottino 1990: 8).

The initial settlement activity beneath Ahu Nau Nau I consisted of a cultural layer, including a simple hearth, located close to the seashore just above the bedrock. Zoosteological analyses of bone refuse from the early layer show that sea mammal hunting and deep-sea fishing were of importance during the initial phase (Martinsson-Wallin and Crockford 2002; Steadman et al. 1994). This near seashore

location placed *low*, and being in the *front* of the bay, is interpreted as an area where people carried out their daily chores in the world of the living. Nau Nau East on the other hand is placed on a *high* position in the *back*. This is a position associated with ritual sacred actions executed by chiefs and priests/specialists. A secluded location close to the hillside is a logical place to establish an initial Polynesian ritual space. It was a place for the chiefs to control the people and to keep the connection to the ancient gods and ancestors, but still not too far away from the ordinary habitation area. Excavations by Skjølsvold at the artificially levelled top of the Auhepa hill did not find any built stone architecture, although large quantities of charcoal were found, which may have a ritual connection. However, Carlyle Smith interpreted it to be a site of defence (Smith 1961c: 277–278).

## 2.2 Time

In the sand layer that covered Nau Nau East, we found cultural debris, including artifacts and hearts, bones as well as a human burial that we (after examination) left in the ground and covered up with sand. One of the features (F5), a fireplace, was dated and proved to be modern in origin. However, in this fireplace, a small rounded burnt obsidian disc was found that we interpreted as an eye pupil that possibly indicated the burning of a *Moai Kava-Kava*. These activities are hypothesized to be tied to the final settlers of Anakena at the end of the nineteenth century, and the burning was possibly influenced by the early Missionaries (Martinsson-Wallin and Wallin 1994: 177). Fire damaged rongorongo tablets and wooden bird images may indicate the burning of ritual objects on Rapa Nui (Heyerdahl 1976: 46–47, Plate 135 b, c). Destruction of ritual objects by missionaries on Rapa Nui is also mentioned by Jaussen (1893: 12), and Rapanui natives told Paymaster Thomson (1889: 514) that:

the missionaries had ordered all that could be found to be burned, with a view of destroying the ancient records, and getting rid of everything that would have a tendency to attach them to their heathenism, and prevent their thorough conversion to Christianity.

Such acts are also described in other Polynesian islands in the early nineteenth century. The burning of idols probably ended the use of a main *marae* in the Society Islands around 1820 (Tyerman and Bennet 1831, vol 1: 266–267).

Below the sand layer, a cultural layer was discovered that consisted of a 40–60 cm thick dark brown clayey soil. Below this was a sterile reddish-brown soil (for plan drawings, see the excavation report in Martinsson-Wallin and Wallin 1994). The cultural layer was dated by two charcoal samples, one from the bottom of the cultural layer (T-7345, BP 810 + –80, AD 1048–1058 3.9%, 1140–1394 91.6%), and one from a refuse pit (F25) (T-7346, BP 810 + –70, AD 1052–1082 2.0%, 1148–1325 83.8%, 1346–1391 9.6%, Cal. 2 $\sigma$ ). Calibrated with a Pooled Mean, the two samples indicate a date of c. AD 1197–1297 (Cal. 2 $\sigma$ ). (All samples discussed in this paper are calibrated by using OxCal 4.4, SHCal 20.) These two dates are not

sourced to a specific species, but collected from different contexts from the same cultural horizon and gives a unified chronological outcome. More materials were saved that can be used for analyses in the future.

## 2.3 *Material Culture and Features*

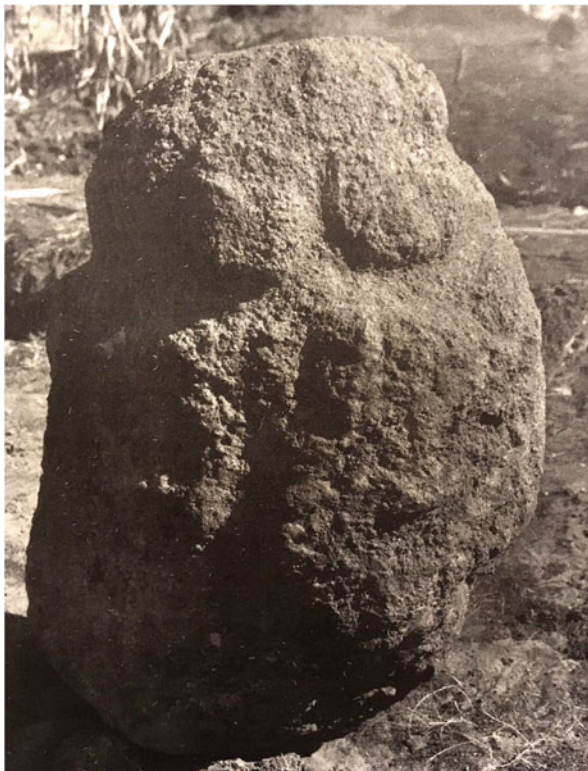
### 2.3.1 **Crude Stone Image (for Location see Fig. 6.3)**

At the southern end of the Nau Nau East area excavation, a crude anthropomorphic upright stone image (Figs. 6.4 and 6.5) made of Rano Raraku tuff was found standing. It is 70 cm high. The diameter of the “head” is c. 30 cm, the mid part or “stomach” has a diameter of c. 48 cm and the diameter at the base is c. 20 cm. It therefore has a somewhat elliptical shape. The top of the head is flat, and the base is rounded. An incision divides the head and the body. Two grooves mark the eyes and two knobs in relief shape the ears. The arms are vaguely noticeable, extending along the sides and turn in an angle to join in front of the stomach (Martinsson-Wallin

**Fig. 6.4** The crude image stone upright in situ during excavation. Photo: Helene Martinsson-Wallin







**Fig. 6.5** Crude image stone upright. Height of the upright is 70 cm. Photo: Arne Skjølsvold

and Wallin 1994: 139–141). The anthropomorphic characteristics of the image are visible but very rudimentary.

The image is firmly seated at the bottom of the cultural layer and was partly buried in the dark brown clayey soil. The sandy layer had subsequently buried the image, and the flat top of the head was only partly visible before excavation. Small simply carved images exist in Rapa Nui, and are, for example found incorporated into later *ahu* structures (Martinsson-Wallin 2000). Such simple images occur in the Society and Tuamotu islands, as guardian images (stone *ti'i*) standing at the boundaries of the ritual space (Emory 1933: 17). Skjølsvold (1965: 101–102) reported a small stone image at a ceremonial enclosure called *Te Rae Rae* on the island of Raivavae, which resemble the one at Nau Nau East. One obsidian core and a few obsidian and basalt flakes were found further south on the inland side of the crude upright image, indicating cultural activity in that direction. The crude image might have been erected there to act as a “guardian” of the ritual space.

### 2.3.2 Stone Construction/Demarcation (Feature 14, for Location see Fig. 6.3)

In the north part of the excavation area, we found a stone row that formed a c. 8.5 m long demarcation or boundary (Fig. 6.6). It was oriented in a northeast to a southwest direction and made up by two parallel rows of unworked stones of varied size (5–50 cm) (Fig. 6.7). The stones were found embedded in the dark brown cultural layer. The southwest end was probably partly disturbed due to excavations/restoration work at Anakena carried out in 1978–1979 (Martinsson-Wallin and Wallin 1994: 136). The soil on each side of the demarcation had a different composition. On the northern side (seaside), the soil was mixed with gravel, shell and a small amount of water-worn obsidian was noticed. This material seemed to be material collected from the seashore. Associated with the stone demarcation and positioned just on top of the dark brown soil, we noticed an area of about 1 × 2 m in size, with pieces of



**Fig. 6.6** Stone row demarcation looking towards the northeast. Photo: Helene Martinsson-Wallin



**Fig. 6.7** Detail of stone row demarcation. Length of this part of the stone demarcation is 4 m. Photo: Paul Wallin

red scoria and a “yellow stone powder”. These materials could have been a result of different stone working activities but considering the superposition at the site, these activities probably were of a later date than the earliest activities. On the south side (inland side) of the stone rows, the dark brown cultural layer was undisturbed (Martinsson-Wallin and Wallin 1994: 136).

The double row of stones is interpreted as a support for planks/poles or some kind of wooden fence. The field observations suggest it was excavated down on the north side, and then the planks were set into the ground and supported by a fill of stones and gravel from the beach. The construction indicates that this area may have been fenced in and divided or marked out in some way. However, there were no traces of wood among the stones indicating they have been removed in prehistoric times.

### **2.3.3 Postholes (Feature 21, 22, 23 and 15, for Location see Fig. 6.3)**

Three postholes (F21, F22 and F23) were found in the cultural layer at 1 m in depth from the surface within a limited space of one square metre. They were situated three metres south of the stone row demarcation and six metres north of the crude upright statue. The postholes were rounded, c. 25 cm in diameter, and they penetrated into the underlying sterile soil (Martinsson-Wallin and Wallin 1994: 137). The stratigraphy indicates they belonged to the early dated activity at the site, and that they would have supported solid posts, but their close spacing does not indicate structural posts for a house. Instead, the post positioning may have been uprights or foundations for sacrificial altars, or that the posts might have been

wooden idols/god images. An additional single posthole (F15) was found c. five metres to the northeast of these posts and is described under special activities below.

#### 2.3.4 Hearths (Feature 18 and 19, for Location see Fig. 6.3)

We found two hearths in the area. Feature 18 was 50 × 50 cm in size, 5 cm thick, and consisted of a bowl-shaped stripe of soot and charcoal found 35 cm beneath the surface of the dark brown cultural layer. It was located at the periphery of the site near the very south end of the excavated area and about seven metres towards the inland side of the crude upright image. It contained a few obsidian and basalt flakes, and a coral file of a long triangular type but no bones indicating the hearth was used for cooking (Martinsson-Wallin and Wallin 1994: 137, 178). The other hearth, Feature 19, has a central position in-between the row of stones and the three central postholes. It was comprised of a 60 × 60 cm large lens of soot found about 15 cm down into the dark brown cultural layer. No bones or artifacts were associated with this feature (Martinsson-Wallin and Wallin 1994: 137, 178).

Fires are of course used for cooking but fire is also of importance in Polynesian rituals since the act of burning was believed to destroy evil spirits. Fire also cleaned the space and was part of the healing process of sick persons (Handy 1927: 245–247). Fires on *marae* courtyards are also common in the Society Islands (Wallin and Solsvik 2010: 74). In ethnohistorical accounts, it is mentioned that fires were lit close to the statues (Roggeveen, 1722) and are evident in crematoria with burned human remains associated with *ahu* sites. Further evidence for the ritual use of fire comes from the legend about the people called *hanau momoko* that killed the people called *hanau epepe* by driving them into a ditch with fire. This supports the idea that fire is essential and probably has to do with sacrifices (Metraux 1940: 69–80). In addition, a small hearth was found by us on a large flat stone within the fill of *ahu* Ra'ai to the east of Anakena and dated to AD 1316–1456 (Cal. 2σ), (Ua-13165, BP 570 + –50). Similarly a burn area under the ramp of *ahu* Heki'i dated to AD 1270–1310 (Cal 2 σ), (Ua-11700, BP705 + -45) (Wallin and Martinsson-Wallin 2008). The dates fall within the early phase of *ahu* construction, in line with *ahu* Nau Nau I, and indicate the continuous importance of fire in the ritual behaviour of the Rapanui (Wallin and Martinsson-Wallin 2008: 146).

#### 2.3.5 Refuse Pits (Feature 17, 20, 24 and 25, for Location see Fig. 6.3)

Four rounded pits were found in a row with pit F24 on the north end and pit F25 on the south end at a distance of about 2–3 m from each other. All pits were found at a depth of 70–100 cm below the surface and about 30–50 cm from the surface of the brown cultural layer. The diameters vary between 60–85 cm and they all have straight sides and a flat bottom. F20 consists of two merged pits and is in the shape of a figure eight and the total size is, therefore, 75 × 135 cm (the southern part of the pit is deeper than the northern part) (Fig. 6.8). The depth of the pits varies between



**Fig. 6.8** Refuse pits F25 to the left and F17 to the right. View towards west. The horizontal length of the trench is 4 m. Photo: Paul Wallin

80 cm (F17 and F24) and 130 cm (F20 and F25). The fill in each feature consisted of loose brown soil from the site but the stones (c. 10–50 cm in size) of basalt, scoria and pumice tuff were brought from elsewhere and intentionally deposited within the pit. Some were from the beach. Such repeated behaviour could point to ritual actions (Martinsson-Wallin and Wallin 1994: 137–139). F20 and F25 include obsidian and some basalt flakes as well as a few artifacts and bones from dolphins, seals, sea birds, fish and shells.

There are no traces of fire or fire-cracked stones in F17, F20, F24 and F25, but F25 included some charcoal that was dated (see details above). The dated refuse pit (F25) contained 860 bone elements of the Polynesian rat (*Rattus exulans*), indicating an MNI (minimum number of individuals) of 76 (49 adult and 27 juvenile). There were also 160 skeletal elements from sea mammals (Dolphin, *Delphinidae* sp.) (Martinsson-Wallin and Wallin 1994: 211) indicating hunting at sea, an activity more common in early contexts and may explain the harpoon (see Fig. 6.11 below) found at the site (Martinsson-Wallin and Crockford 2002; Wallin 1996). F24 included no bone remains (Martinsson-Wallin and Wallin 1994: 126, 137, 178).

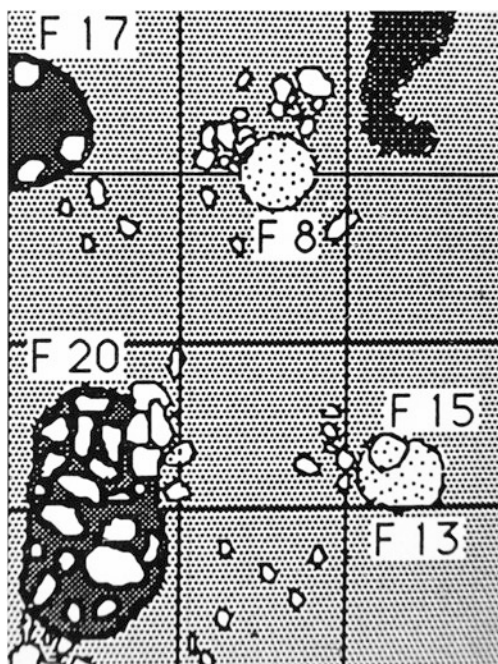
All the features have great similarities in position, size, as well as their stone fill with loose soil. Feature 20 and F25 are the most complex, with stone flakes and other materials (Fig. 6.8). In F20 we observed marks from a c. 5 cm wide digging stick on the inside of the pit wall. This indicated that the infilling of the pit happened just after their excavation since the fragile traces of the digging stick were clearly visible and unweathered. At ceremonial sites in Central East Polynesia associated refuse pits, or refuse heaps, were common. These were places for the deposition of material used when performing rituals (Emory 1933: 14; Wallin and Solsvik 2010:

60). We suggest that the content in the pits at Nau Nau East are left-over building materials, food consumed during building activities, and from tools used at certain ritual/building actions at the site.

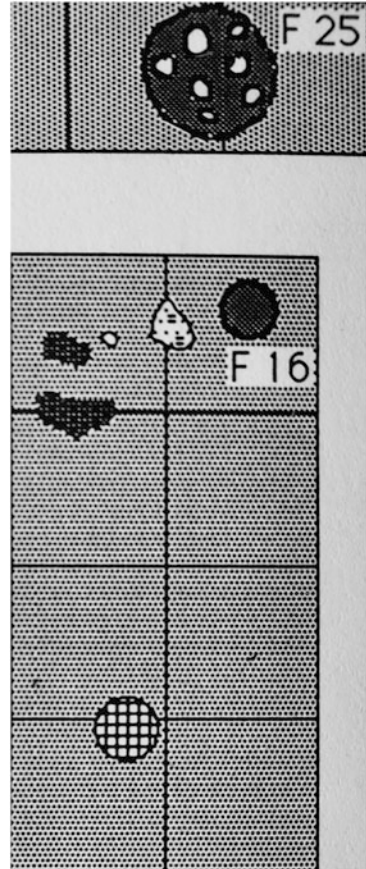
### 2.3.6 Grinding Residues/Special Activities, (for General Location see Fig. 6.3)

Other special activities are found in three areas. The first of these special activity areas (no. 1, Fig. 6.9) was located about 1 m to the east of the refuse pits F17 and F20. It consists of an area with two rounded, large pits c. 40–60 cm in diameter (F8 and F13). They were both about 30 cm deep and filled with light brown sand. The only object associated with the pits was one obsidian flake. However, towards the bottom of F13 a posthole (F15 c. 20 × 20 cm in diameter) was detected. It was v-shaped, 20 cm deep, and filled with light brown sand. A hammerstone of basalt was found in the sand fill of F15. In the immediate area were scattered c. 10–15 cm large basalt stones and spots of red ochre (*ki'ea*) as well as an irregular area of grey stone powder that may have originated from the shaping/polishing of basalt stone adzes or other tools (Martinsson-Wallin and Wallin 1994: 133). The posthole indicates a single standing post at a similar distance from the stone demarcation (F14) as the other posts (F21, F22 and F23). This post (similar to upright stones) probably has a special meaning for this activity area (Kirch and Green 2001).

**Fig. 6.9** Detail of plan drawing showing special activity area 1. Excavation units are 1 m<sup>2</sup>



**Fig. 6.10** Detail of plan drawing showing special activity area 2. Excavation units are 1 m<sup>2</sup>



The second area (no. 2, Fig. 6.10) was located c. 1 m south of F25 and about two metres north of the crude image upright. In this area, F16, a rounded 40 × 40 cm pit, 20 cm deep and filled with loose brown soil was found 30 cm below the surface of the dark brown cultural layer. It contained a few obsidian flakes (Martinsson-Wallin and Wallin 1994: 136, 178). The function of this pit is uncertain. Within this area, there was also a smaller pocket of light brown sand and two smaller areas of grey stone powder similar to the stone powder found in special activity area no. 1.

The third area (no. 3, see Fig. 6.3) shows that this activity was located 3–4 m west of the second area just described. It consisted of an area with scattered stones 10–40 cm in diameter, which were unusual objects to find in the brown cultural layer. If the stones were from a specific construction, or part of a pavement, it could not be determined during the excavations (Martinsson-Wallin and Wallin 1994: 134).

### 3 Spatial Analyses of Artifacts, Obsidian/Basalt Flaking and Bone Remains

We suggest that the portable artifacts and bones found in this area can be interpreted in relation to the features described above, which differs from the remains found in ordinary cultural layers. The obsidian, stone debris, and sea mammal bones are concentrated in the area of the refuse pits and can be understood as habitus driven. Other artifacts are unique or found in concentrations. We will start this section with a discussion of some of the specific finds. (Based on our report Martinsson-Wallin and Wallin 1994).

The small bone harpoon head is the only one so far found in Rapa Nui (Fig. 6.11). The harpoon was recovered in the early cultural layer on the inland side of the stone demarcation (F14). In addition, one unfinished basalt fishhook and one fishhook of bone (only the shank) were found in the cultural layer. The stone fishhook was found in association with the special activity area no. 1 and its production might have occurred here, as indicated by the basalt stone powder in this area, but since it is broken and unfinished, it could have been intentionally deposited close to the anthropomorphic image. Stone hooks have been found in excavations of houses

**Fig. 6.11** Harpoon head. The harpoon is 6.04 cm long and 1.27 cm wide at the central hole location. Photo: Paul Wallin





(*hare paenga*) in the vicinity but they represent later types than the one found here (Smith 1961c: 283).

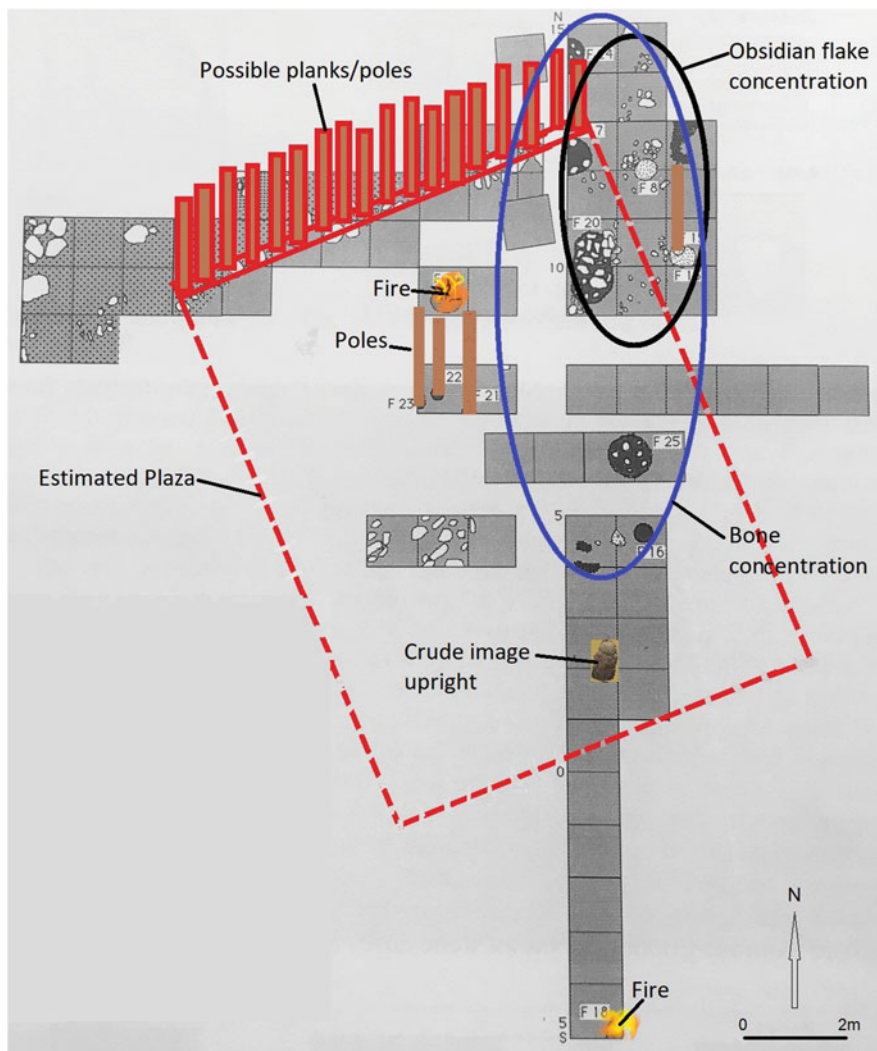
Two small obsidian disks found in the early dated layer were interpreted as pupils from wooden statues. One was recovered from special activity area no. 1 and the other just 1 m from special activity areas no. 2 and no. 3. Another group of rare artifacts are pendants of bone. One was found in the same excavation unit as the harpoon and three others within 1–2 m to the east of that location in a small cluster. Two other pendants were found in the special activity areas no. 2 and no. 3.

Bone fishhooks have been found in other excavations, but here the only one was found in association with the small upright stone image. The bone needles were found close to the central postholes and one was associated with special activity area no. 2. Four grinding–/whetstones were found within 1 square meter unit about 1 m south the special activity area no. 1, in which the grey stone powder was found. This might explain the occurrence of the grinding stones/whetstones at this location. One other grinding–/whetstone was also found about 1 m north of the grey stone powder in special activity area no. 2. Finally, six hammerstones were found in a cluster just to the east of the large refuse pit (F20), which is located in an area rich in obsidian and basalt flakes. Two hammerstones were found close to the central postholes. This was another area with high amounts of obsidian flakes. Other artifacts like chisels, adzes, scrapers, knives, drills and files were more commonly encountered and spread evenly in all areas with few identifiable concentrations. Noteworthy is the occurrence of 17 coral files found in connection with F20. These artifacts can be tied to different crafts, such as the making of wooden images carried out in this early ritual context.

Large quantities of obsidian, basalt and bone remains were found in almost all the excavation units. However, the most intensive area for obsidian flakes, fragments and cores (as well as basalt flakes) surrounded the refuse pits F20, F17 and F24 located in the north part of the excavation (see area indicated in Fig. 6.12). The pits with refuse are suggested to be part of a ritual habitus and as such, we interpret that they also attracted other waste materials.

We identified the bone remains to different species such as dolphin, seal, sea mammal, rat, bird, fish, crab/lobster, sea urchin, chitons (*plaxiphora*) and shells (For detailed osteological analysis, see Martinsson-Wallin and Wallin 1994: 203–211). In addition, we identified a few scattered human remains in the dark brown cultural layer. The crabs/lobsters and sea urchin spines were found spread over the entire excavated area but in small amounts. Shells and chitons were more common and evenly spread as well, with concentrations of shells in the western part of the stone demarcation (They were possibly fill material collected from the sea). Another concentration of shells was found close to the central postholes and in special activity area no. 2.

The amount of fish bones was limited to 1–70 g per excavation unit and evenly spread throughout the cultural layer. Bone material from sea mammals, mainly dolphins but also leopard seals, were found in the northern part of the excavation within a c. 12 × 5 m large area (see Fig. 6.12). This can perhaps be seen as an area for sacrifices and depositing of bones from ritual meals or feasting. Dolphins and



**Fig. 6.12** Reconstruction model of early ritual site features and activities. Drawing: Paul Wallin

seals are probably status food for the chiefs that probably was occasionally taboo for ordinary people (Ayres 1975).

Only six discoveries of human remains were recovered in the cultural layer. They were distributed in five different locations, in special activity area no. 3, by the central postholes, and next to F20 and F17. The bones included two teeth (one from a child and one adult), a part of a fibula leg bone, as well as three hand and finger bones. Human bones in ritual places are common and usually derived from loss during different treatments of the dead that may be ancestors, sacrifices, or enemies (Handy 1927: 132–135; Wallin and Solsvik 2010).

## 4 A Reconstruction Model of the Ritual Space

Based on the early dating of the cultural layer and the observed components found at Nau Nau East, we interpret this site as an early ritual space (Fig. 6.12) that was created by Early Central Polynesian ritual activities. The object that defines the place as special is the stone upright with crude anthropomorphic attributes. Other important features are the three centrally located postholes that indicate upright wooden poles. Such poles are described at ritual sites of the Maori in New Zealand (*pouahu*), which marked the sacred place for various rituals (Best 1925: 724). In addition, wooden posts or images are associated to the *heiau* in Hawai'i (Valeri 1985: 243). A fourth posthole indicating a post placed in a central position in special activity area no. 1 was surrounded by large amounts of sea mammal bones as well as obsidian flakes. This post may indicate a place of ritual activities and "holy" refuse. The stone demarcation that we interpret, as a foundation for planks, could be the location for something like the *unu* planks observed in Tahiti. There, the planks indicated the practice of human sacrifices at the site (Handy 1927). In Hawai'i, Valeri (1985: 238) and Kamakau (1961: 202) mention a fence consisting of planks and poles separating the ritual area from the exterior.

Hearths, or fire, as well as dispersed human remains, are indicative of ritual actions involving cleaning, clearing and sacrifices (Handy 1927: 238–239; Henry 1928: 172, 204; Palmer 1868). Traces of fires and scattered charcoal as well as human bone remains were regularly found during excavations of several *marae* courtyards in the island of Huahine in the Society Islands (see for example Wallin and Solsvik 2010: 33, 49, 57, 74, 79). As evidenced by past research on Rapa Nui, fire and cremations later became a widely spread ritual action as indicated by the many crematoria tied to the image *ahu* structures (Martinsson-Wallin 1994: 102). Roggeveen (1722: 15) also reported that the Rapanui lighted fires at their *ahu* structures.

The refuse pits, as well as sea mammals and mainly obsidian knapping and basalt grinding/polishing, are concentrated within the northeast of the excavated area. The debris could be from ceremonial feasting, the manufacturing of tools and deposition of tools used within the ritual space. That artifacts such as adzes were brought and stored at ritual spaces followed by a feast are described for the Society Islands. Such actions gave *mana* to the adze before it was employed to cut down trees used in the building of canoes (Henry 1928: 146–147).

The special activity area no. 2 was located just 2 m to the north in front of the upright stone image, which is a similar setting to the activities in special activity area no. 1. They also have the same position in front of the upright wooden post/image in that area. Images and posts are signs of sacred locations for sacred actions (Handy 1927: 191).

## 5 A Spatial Model of Settlement and Ritual Activities at Anakena

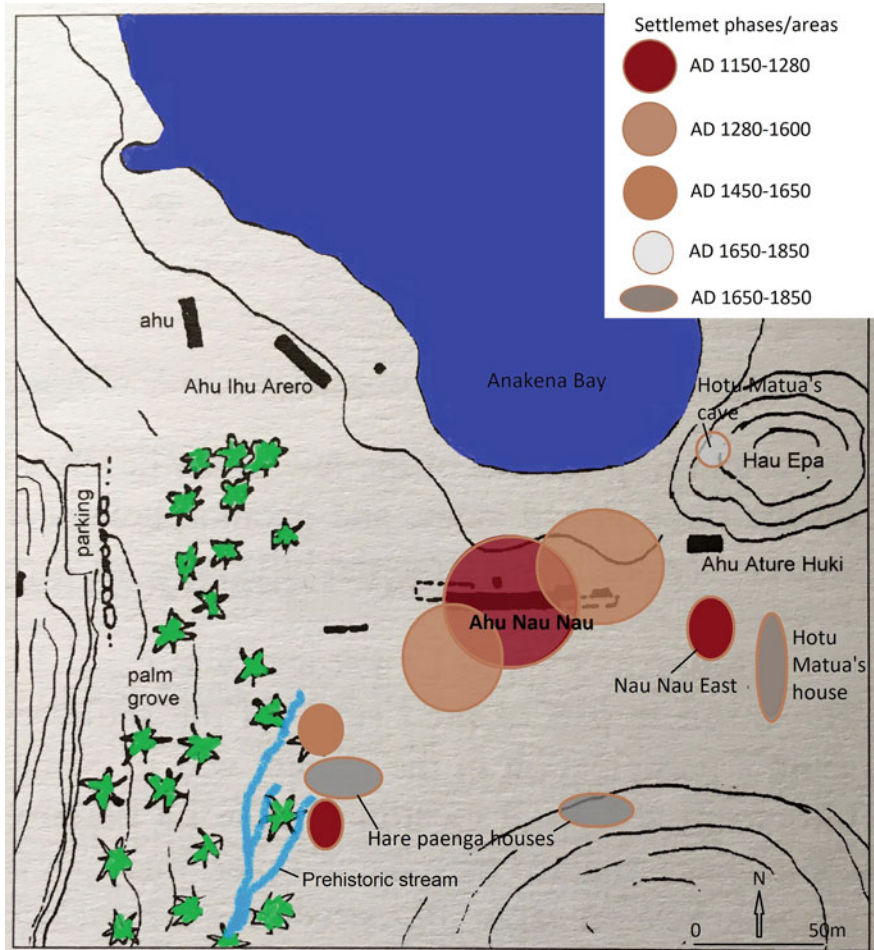
According to Skjølsvold (1994), the main aim of the archaeological excavations at Anakena was to investigate *ahu* Nau Nau and its phases of construction and use. An additional aim was to make exploratory trenches in the terrain surrounding the *ahu* to gain knowledge of the prehistoric settlement developments and activities at Anakena bay (1994: 5). Therefore, 23 trenches of varying size were excavated in the surroundings of Anakena, including the activity area of Nau Nau East (Skjølsvold 1994: folded map).

### 5.1 Settlements

Settlement activities were detected at several locations at Anakena (Fig. 6.13), which gives a good overview of the habitation area and how it changed over time. The settlement activity of greatest interest is the one found just in front of and on the seaside of *ahu* Nau Nau. The earliest activities were evidenced by cultural remains in a dark brown clayey soil at a depth of c. 3 m; just on top of the bedrock. After its discovery in 1986–1987, this activity area has been investigated two additional times; by Steadman et al. (1994) and by Hunt and Lipo (2006). All three investigations returned the initial dates of the site to around BP 900. This resulted in an estimated calibrated age of around AD 1150–1290 (DiNapoli et al. 2020). It is the earliest dated site on Rapa Nui.

A cultural deposit of 45 cm in thickness and found at a depth of about 75 cm from the present surface in “trench M” was located c. 110 m southwest of *ahu* Nau Nau. The layer consisted of brown soil with spots of charcoal, cultural remains and water polished stones indicated a nearby stream (Skjølsvold 1994: 75). This deposit has been dated to AD 1146–1407 (Cal.2 $\sigma$ ), (T-7977, BP 780 + –90). The data was derived from a single sample and not determined to species. The occurrence of activity at this time period is interesting since the excavation shows that a permanent stream once had its outlet here. The remains point to early settlements and activities close to the stream and beach.

In addition, there are dated samples from other activities/settlements found in trenches excavated in the close proximity to *ahu* Nau Nau that document the age of past constructions. For example there is a cultural layer called the “upper cultural layer” in trench E, K and A found on the seaside of *ahu* Nau Nau. This layer was dated to around AD 1250–1400 (Skjølsvold 1994: 106). *Ahu* Nau Nau I c. AD 1300–1350 was constructed on top of this earlier settlement activity. An additional but later dated layer with cultural remains such as animal bones, some obsidian and coral files were found at a depth of about one metre c. 75 m to the southwest of *ahu* Nau Nau (Trench “C86”). A charcoal sample found in a defined cultural layer lens has been dated to c. AD 1417–1688 (Cal. 2 $\sigma$ ) (T-6680, BP 370 + – 90). There



**Fig. 6.13** Interpretation of settlement site actions at Anakena. Drawing: Paul Wallin (Based on figure in Martinson-Wallin and Wallin 2000: 27)

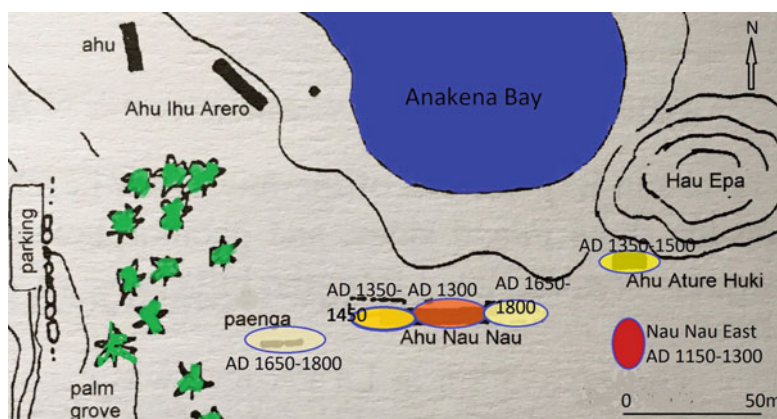
are also indications of high-status boat-shaped houses (*hare paenga*) found on the slopes around *ahu* Nau Nau of, which the largest and most intact is called Hotu Matua's house. They probably date from the period AD 1650–1850. In one of them was found a blue glass trade bead that very likely is one given to the Rapanui by some of the early Europeans like the Dutch in 1722. In addition, late activities are tied to the so-called Hotu Matua's cave (Skjølsvold 1961: 273–275) on the seaward side of the *Maunga Auhepa* hill, which has an artificially flattened top that was investigated in 1955–1956 as mentioned above (Smith 1961c: 277).

## 5.2 *Ritual Spaces*

We have suggested that the location and function of the activities at Nau Nau East are associated with ritual activities that date to around AD 1200, which so far is the earliest ritual space excavated and dated on Rapa Nui. Based on the extensive excavations in the Anakena sector during 1986–1988 we will discuss the development of the ritual spaces for this area (Fig. 6.14).

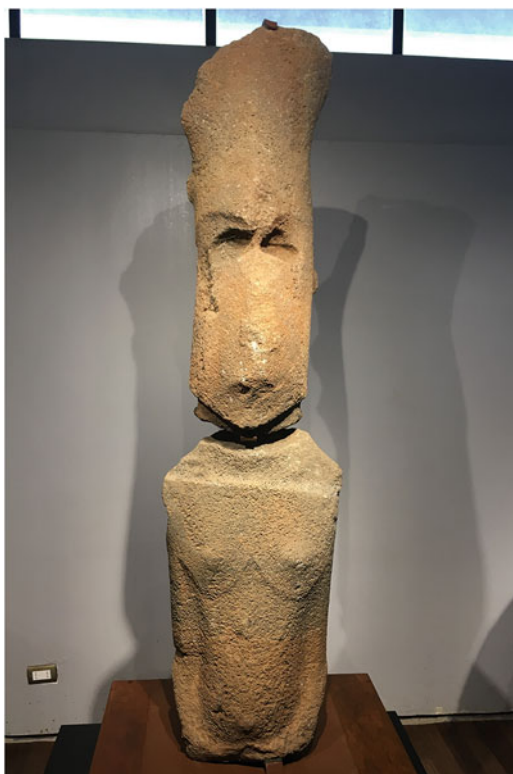
A re-assessment of the initial building phase of *ahu* Nau Nau was carried out in 2007 when the main trench excavated in front of the *ahu* was re-dated (Wallin et al. 2010). Skjølsvold initially argued, based on two dated charcoal samples, that the early phase of *ahu* Nau Nau dated to around AD 1200 “or a little earlier” (Skjølsvold 1994: 107). However, new dates on charcoal samples from the earliest stage of the paved plaza floor, and a sample found just immediately below the pavement of the plaza, gave a date range of c. AD 1285–1450 (Cal.  $2\sigma$ ) (Ua-34184, BP 640 + –65) (Wallin et al. 2010: 43). All dated *ahu* structures on Rapa Nui are furthermore re-analyzed in another paper by Martinsson-Wallin et al. (2013). The conclusion is that the building of *ahu* structures began around AD 1300–1400 (Martinsson-Wallin et al. 2013: 412). This places the initial phase of *ahu* Nau Nau to c. AD 1300 or a little later.

When re-assessing Skjølsvold’s dated samples (1994: 106, samples T-7974, T-7344, T-7350) that were derived from the “upper cultural layer” in trenches A, E and K, on the seaward side of *ahu* Nau Nau, they give a pooled mean date of c. AD 1317–1433 (Cal.  $2\sigma$ ). This means that this cultural layer is contemporary with the Phase I building of *ahu* Nau Nau. The shape of the first *ahu* was a single stone platform faced with unworked as well as nicely dressed c. one-metre high *paenga* slabs, with a paved courtyard in front (see Skjølsvold 1994: 27, Fig. 22). Small size statues of different shapes probably were erected on the paved plaza or courtyard.



**Fig. 6.14** Interpretation of ritual space and *ahu* site development at Anakena. Drawing: Paul Wallin (Based on figure in Martinsson-Wallin and Wallin 2000: 27)

**Fig. 6.15** Female statue found at Anakena. Photo: Paul Wallin



We base our argument on the presence of a smaller statue head of Rano Raraku tuff with round shape in the seawall of the present *ahu* and our finding of a basalt head of a female statue placed in the wing of the western side of the *ahu*. The body part of this statue had been found at Anakena in 1955–1956, and placed on display at the Kon-Tiki museum. In 1988 the body was brought back to Rapa Nui (Skjølsvold 1994: 88). This c. 167 cm high female basalt statue is now displayed at the local museum. The female basalt statue with its narrow shape reminds one of a basalt upright (Fig. 6.15). In conjunction with the finding of the female head, a torso of a smaller statue of red scoria was recovered. Estimating the missing head of this small red scoria statue puts the original height of this image at about 1 m (Skjølsvold 1994: 87–91).

*Ahu* Nau Nau Phase II, built of nicely dressed stones, is located to the west of *ahu* Nau Nau I. The latter was re-used as a wing during this second phase. *Ahu* Nau Nau Phase III is the presently restored *ahu* that has been dated with two charcoal samples. One gave a date of AD 1271–1485 (Cal.  $2\sigma$ ) (Ua-617, BP 610 + –85), and the other, which is a nutshell found just above the plaza floor of *Ahu* Nau Nau Phase 1 before soil covered it, gave a date of AD 1399–1455 (Cal.  $2\sigma$ ) (Ua-34,183, BP 535 + –35). Based on these dates, we suggest that the building of the restored *ahu* is around AD 1400. For stratigraphic/architectural reasons, the building of the Phase

II *ahu* is placed between c. AD 1350–1400. A final Phase IV of *ahu* Nau Nau is represented by additions of platforms to the east. A dated charcoal sample associated with a pavement that belonged to this phase gave a date of c. AD 1600–1880 (Cal.  $2\sigma$ ) (T-7976, BP 220 + – 80). Nicely dressed *paenga* indicating a structure c. 50 m to the west of *ahu* Nau Nau, was dated by a charcoal sample found in association with the *paenga* to AD 1625–1953 (Cal.  $2\sigma$ ) (T-7348, BP 200 + – 80). This date is in line with the late Phase IV activities.

*Ahu* Ature Huki is located about 70 m northeast of *ahu* Nau Nau and about 50 m north towards the seaward side of the ritual activity area Nau Nau East. The structure only has one statue and we suggest that it is interpreted as a smaller junior branch addition to the main *ahu* Nau Nau (Martinsson-Wallin and Wallin 2014). Two trenches were excavated, one on the front inland side, and one at the seaward side. The pooled mean of two dates from these trenches gave a range between c. AD 1380–1497 (Cal.  $2\sigma$ ) (T-7979, BP 510 + – 80, Ua-1144 BP 580 + – 85), which corresponds to *ahu* Nau Nau Phase II-III. The time around AD 1400 seems to be a rather expansive phase in the history of Anakena and in the building of monumental architecture of ritual/ceremonial significance on Rapa Nui.

## 6 Discussion and Conclusions

Based on inter-site relationships of artifacts and features, stratigraphy, the provenience of re-assessed dated charcoal samples, as well as evidences from ethnohistory and traditional history, we have re-interpreted the area called Nau Nau East to be an early ritual site. We have in addition taken the methods of “radiocarbon hygiene and Bayesian statistics” into account when discussing the appearance of initial settlements in East Polynesia and Rapa Nui (DiNapoli et al. 2020; Mulrooney 2013; Wilmschurst et al. 2011).

Initially, we viewed the Nau Nau East site as an attachment to *ahu* Nau Nau I, since we then viewed the settlement of Rapa Nui to be 200 years earlier. However, additional dates and calibration methods (DiNapoli et al. 2020; Hunt and Lipo 2006; Wallin et al. 2010) have re-evaluated the initial settlement chronology for Rapa Nui. There are, as shown above, several dated samples found in the cultural deposits just on top of the bedrock and under and around the earliest phase of *ahu* Nau Nau that indicate an initial settlement to c. AD 1150–1290. The site called Nau Nau East is likely contemporaneous with these early activities at Anakena.

Using the updated chronological framework and the spatial relationship of the various activities at Anakena, we re-interpret the activity area Nau Nau East to be an early ritual space clearly showing a Polynesian connection. The site is demarcated by a small crude stone upright image as well as raised poles, planks, fires and refuse pits with concentrations of sea mammal bones, as well as Polynesian rat bones. These activities indicate feasting and perhaps sacrifices at the site, which fits well into the Polynesian ontology. These were the ritual features brought to the island by people from East Polynesia. Such similarities are not surprising due to a



common origin and this has been pointed out before (Cochrane 2015), but the focus has mainly been on the architectural features of *ahu/marae* structures and not on adjacent activities. Below follows some examples from other sites in Rapa Nui and East Polynesia showing the use of these early ritual features.

In comparison, similar features have been found at the site complex located on the Terevaka volcano called *Ava Ranga Uka a Toroke Hau*. This complex is interpreted as a water and fertility sanctuary used by the elite (Vogt and Cauwe 2019). Part of the complex is an *ahu* with a single *moai*. Under the ramp, that according to the excavators dated to around AD 1300, was a crude partly worked upright stone found, which by its location seemed to antedate the ramp construction (Vogt and Cauwe 2019: 320–321). This potentially places the site in an early Rapa Nui ritual context. This upright stone might have been the original focal point of the fertility rituals at the site, like the small crude image upright at Nau Nau East and possibly other single uprights in different contexts found on the island could have had similar functions (see map in Vogt and Cauwe 2019: 323). We further suggest that the female basalt statue found at Anakena mentioned above, and other smaller statues, are tied to early ritual activities, since they often have been mutilated and re-used/incorporated into later ritual architecture as observed in several places on Rapa Nui (Martinsson-Wallin 2000). Other early features found during excavations of *ahu* structures, as has been indicated by Ayres et al. (2019), are refuse pits found at Vinapu, Akivi, Tahai, and Heki'i. At Heki'i several pits were found during excavations on the west side, outside the courtyard pavement (Martinsson-Wallin 1998), and one was dated by a burnt palm nutshell to AD 1280–1396 (Cal.  $2\sigma$ ) (Ua-11701, BP 700 + -45).

Fire is another theme of early ritual behavior. One small fire pit found under the pavement stones at Heki'i gave a date on burnt palm nutshell to AD 1278–1396 (Cal.  $2\sigma$ ) (Ua-11700, BP 705 + -45). Another fire pit found behind a smaller attached *ahu* just west of Heki'i gave a date from a level under the rear wall to AD 1185–1384 (Cal.  $2\sigma$ ) (Ua-11704, BP 795 + -50). At *ahu Ra'ai*, small fires and sooty layers have been found inside and under the *ahu* as well as under the ramp, and they were all dated to AD 1294–1456 (Cal.  $2\sigma$ ) (Wallin and Martinsson-Wallin 2008: 148–149). Charcoal fragments were also found under pavements and ramp features at *ahu Ura Uranga te Mahina*, which have been dated to the period of AD 1300–1425 (Ayres et al. 2019: 280–281). These activities are often found in association with sites that later on developed into *ahu* structures and were rebuilt and used for a long period of time. We suggest that uprights, refuse and fires, are phenomenon seen all around Rapa Nui prior to, or in connection with, initial *ahu* construction.

Such early ritual features found on Rapa Nui can be compared to similar features found in East Polynesia dated to the same time period. For example at the Ha'atuatua site on Nuku Hiva in the Marquesas Islands, an upright stone with human burials, a fire pit, and a rectangular pavement have been dated to c. AD 1200–1400 (Rolett and Conté 1995: 224–225; Suggs 1961: 63). On Huahine, in the Society Islands at the early Vaito'otia/Fa'ahia site, there was a single stone upright in association with what has been interpreted as storage houses dated to around AD 1100–1300 (Anderson and Sinoto 2002: 246). The overview map of that site indicates different

activities in the area, such as residential areas, an elite meeting-house and a site with a stone upright and storage features (Sinoto 1988: 128). In Norfolk Island, there was a simple pavement with three small uprights as well as postholes dating to c. AD 1250–1450. It was located above and a little bit away from the ordinary habitation (Anderson and Green 2001: 48). In New Zealand, there were no *marae* stone structures, but instead stone uprights called *tuahu* and poles called *pouahu* and other fenced-in areas, wooden images, as well as pavements (Best 1924: 288). Small stone images are also mentioned in connection to sweet potato fields (Leach 1984: 72). The initial settlers of New Zealand came from Central Polynesia around AD 1200 (Wilmshurst et al. 2011: 1818) and brought such images and features to New Zealand (Leach 1984: 42–43). On Maupiti, in the Society Islands, an early burial ground was found on a small island called *Motu Paeao* (Emory and Sinoto 1964). On the site was a row of 10 upright stones. Anderson et al. (1999) re-investigated the site and developed a series of new  $^{14}\text{C}$  dates, which placed the burial site at AD 1300–1450 (Anderson et al. 1999: 61).

Based on archaeological research, it is likely that Polynesian early ritual space contained stone uprights, poles, planks, images, fires, burials, feasting, refuse pits and storage features. The traditional *ahu/marae* structure made up of stones developed later but the early features were continuously incorporated into the *marae* structures/concepts, when they became monumental in Central East Polynesia around AD 1400 (Kahn 2016; Wallin and Solsvik 2010).

Based on previous research on early ritual spaces in East Polynesia, we suggest that they were special places that incorporated natural landscape features and culturally shaped features with ritual connotations that varied in shape and function. They all pre-date the initial phases of *ahu/marae* structures with monumental architecture, and the activities seen at Nau Nau East fit well into an early ritual framework and we interpret this activity area as an early ritual space at Anakena. Subsequently, the materialization of the *ahu/marae* made the ritualized sites institutionalized and the different actions were formalized, which made it possible for the high chiefs to control the rituals through specialized priests. At Anakena this happened around AD 1300–1400 when the first stone platform of *ahu* Nau Nau was built on top of the old settlement at the site.

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