

Tuggle and Tomonari-Tuggle: The Petroglyphs of Kahalu'u, Kona, Hawai'i  
**The Petroglyphs of Kahalu'u, Kona, Hawai'i**

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**INTRODUCTION**

The small *ahupua'a* of Kahalu'u lies along the coast of central Kona (Figure 1). For many centuries before western contact this region was the home of the kings of leeward Hawai'i, the royalty supported by the riches of the Kona coastal waters and the agricultural lands of upland Kona. In Kahalu'u there are at least ten major *heiau*, ten other shrines or small temples, and a royal residential complex (Fig. 2 shows six of the *heiau*). Near one of the *heiau*, Ke'ekū, is an important petroglyph site (Site 12954, Figure 2). The present paper describes this set of petroglyphs and others nearby, and draws attention to the associations with the religious and royal complex of Kahalu'u.

Previous archaeological work in the area includes Forbes (n.d., ca. mid 1800s), Stokes (n.d., 1910, 1991), Reineke (1930s), Kekahuna (1952), Cox and Stasack (1970), Hawai'i

Register of Historic Places (HRHP 1970), Emory et al. (1971), Kirch (1973), Soehren (1979), Hammatt and Folk (1980b), Cordy (1986a, 1986b), Hay et al. (1986), and Walker and Rosendahl (1989).

The research upon which the paper is based was conducted in 1989 (Tuggle 1990). The drawings of the petroglyphs included herein are derived from that fieldwork<sup>1</sup>. The two main petroglyph sites (12913 and 12954) were recorded by drawing, photography, and videotape. A reference system was established with piled rocks and a string grid. The recording of the petroglyphs emphasized location and shape, with the main purpose being to provide documentation of the total set of images. The petroglyph fields were visited numerous times under various lighting conditions to provide the most accurate accounting possible. However, detailed studies of individual figures, such as depth and technique of production, were not carried out.

Island  
of  
Hawai'i

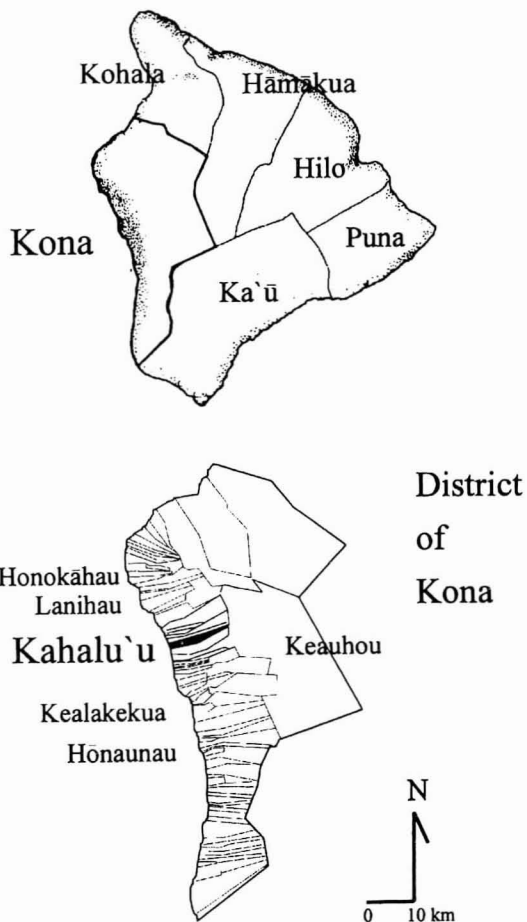


Figure 1. Island of Hawai'i and District of Kona, showing the *ahupua'a* of Kahalu'u. Island map shows pre-contact population density. Kona map shows all of the *ahupua'a*, with names of some of the more important ones.

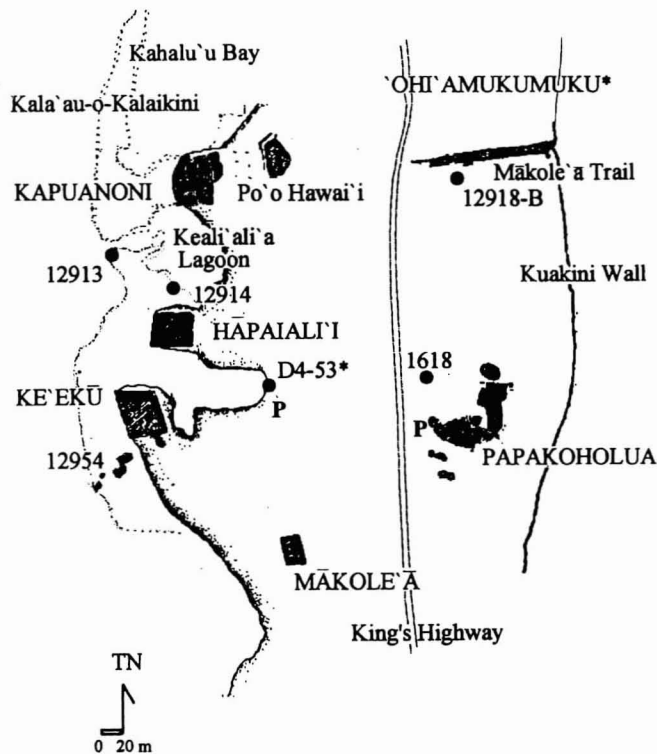


Figure 2. Location of the Kahalu'u petroglyphs (site numbers), *heiau* (*heiau* are in caps), and other important features. P = *papamū*, \* = destroyed. Modern structures are not included in this map.

THE PETROGLYPHS OF KAHALU'U

There are six locales of petroglyphs in the central Kahalu'u area (See Fig. 2), with two sites inland and four sites at the coast, including the large set at Ke'ekū. In addition, there are two *papamū* ("game boards" pecked in the lava that were used for a checker-like game called *konane*).

THE INLAND PETROGLYPHS

Site 1618<sup>2</sup> consists of two groups of images pecked (or bruised) on flat pāhoehoe (Fig. 3) located between the *heiau* Papakoholua and the route of the Old Government Road (or "King's Highway") (HRHP 1970, Walker and Rosendahl 1988, Tuggle 1990:26). The images are very faint, a function of shallow pecking. There are five human figures, two small cupules, an uncertain image, and one inscription. The adjacent portion of the King's Highway no longer exists (now a modern road), but it is possible that these petroglyphs were made at a resting place along that trail.

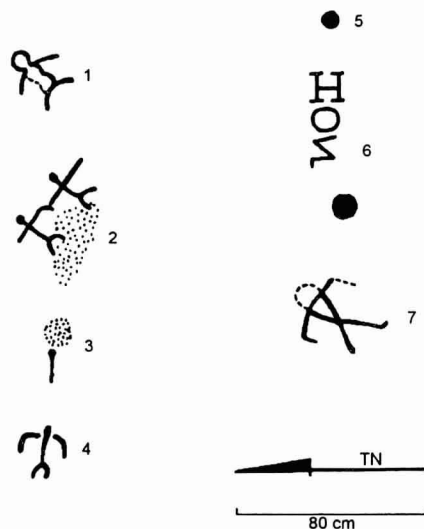
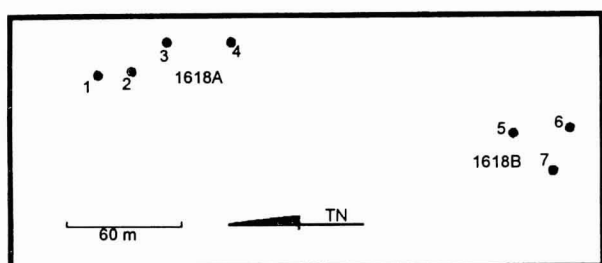


Figure 3. Petroglyphs of Sites 1618.

Site 12918-B is a single petroglyph located on a pāhoehoe exposure on the coastal end of the Mākole'ā Trail (Walker and Rosendahl 1988; Tuggle 1990). The image is rectangular in shape, but not otherwise identifiable. The Mākole'ā Trail was recorded as early as 1909 (Baldwin 1909), but was probably pre-contact in origin.

THE COASTAL PETROGLYPHS: THREE SMALL GROUPS

Site 12913 (Fig. 4) is a group of petroglyphs remarkably located at the edge a pāhoehoe tidal flat, about 60 m from the

high tide line at the northwest corner of Hapaiali'i *heiau*, and is submerged in a medium surge zone except at very low tide (Tuggle 1990:65). The group is generally surrounded by large basalt boulders up to 1.5 m in height. The petroglyphs are at the outer point of a break in the pāhoehoe flats that leads into a small lagoon known as Keali'ali'a. It is not known if the break is natural, but if so the petroglyphs may have been placed here to mark the access to the lagoon.

The group consists of three clusters and one isolated figure. There are at least 14 human figures, all of them stick form. There may be two or three family groups represented, although none of the figures are distinctly female, with the possible exception of one that may have a skirt and has an arm raised in a dance-like position.

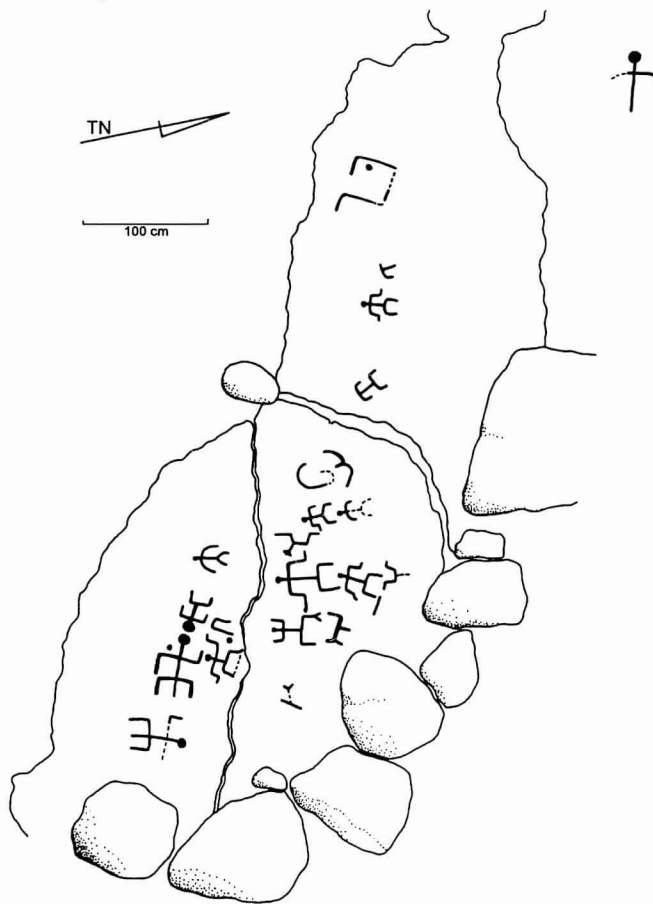


Figure 4. Petroglyphs of Site 12913.

A third set of petroglyphs was recorded at the inland edge of a saltwater marsh by Emory et al. (1971:23; Bishop Museum Site D4-53). This site has not been relocated (Walker and Rosendahl 1988:31; Tuggle 1990), and may have been destroyed by hotel construction. These petroglyphs are described as follows (Emory et al. 1971:23):

This is a small area of exposed pahoehoe at the interior margin of a marsh inland of Ke'eku Heiau. Several petroglyphs pecked into the lava include two small circles, a *papamū*..., several vague anthropomorphic figures, and some modern names. The field covered an area of 19 by 12 meters...

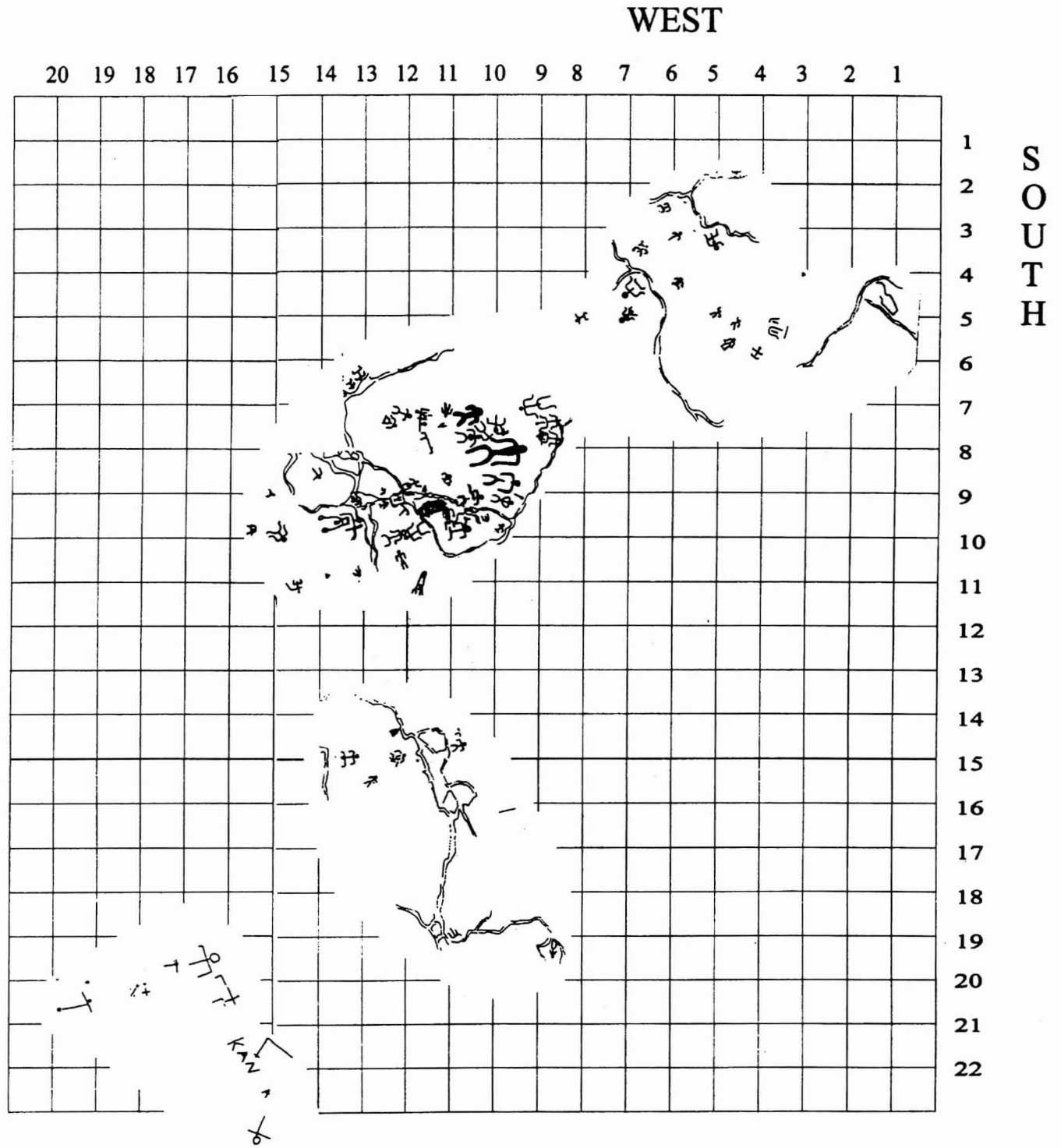


Figure 6. Grid of Site 12954, Groups A-D.

Site 12914 consists of two human stick forms located near the small lagoon (Tuggle 1990:26).



Photo 1. The Ke'ekū petroglyph Site 12954.

#### THE COASTAL PETROGLYPHS: THE KE'EKŪ FIELD

The main petroglyphs (Site 12954) of the Kahalu'u area are located on a pāhoehoe flat, submerged at high tide, adjacent to Ke'ekū heiau (see Figure 2 and Photo 1). They were recorded at least as early as 1906 (Stokes 1910, 1991). Subsequently these petroglyphs have been noted, photographed, or discussed in general terms by Cox and Stasack (1970), Emory et al (1971; including a 1918 photograph by A.S. Baker), Walker and Rosendahl (1988), and Tuggle (1990). The images have generally been created by pecking (cf. Stokes 1910:37), but many of them are very shallow or faint.

The petroglyphs are generally in good condition, with no obvious damage from recent vandalism, although they suffer from the gradual erosion of tidal submersion. Stokes (1910:36) indicates that he tried to make the images visible for photography by painting them with a mixture of white lead and kerosene (with no indication of how many of the petroglyphs were thus painted). The white lead was unsuccessful, and eventually Stokes used chalk to mark them for photography, as was the general practice of the day. Stokes also mentions (1910:49) that he had been told that King Kalakaua had "tried to break off some of the petroglyphs to take them to Honolulu," but there was no direct evidence that this had been done.

The Ke'ekū petroglyphs occur in six clusters, identified here as A through F (Figure 5). Groups A through D have been placed on a single grid for reference (Figure 6), with details of Groups A-E shown in Figures 8-12<sup>3</sup> (Group F, predominantly cupules, is not illustrated). The grid identification uses metric location (meter, 10<sup>th</sup> of meter), west (W) and S (S) of an arbitrary reference point at the NE corner of the field. In addition, petroglyphs that are noted in the text have been assigned a number, as indicated in Table 1, identified by group letter, followed by a number unique to the group<sup>4</sup>.

Each group is clearly separated from the others, and each is distinctive (Figures 7-11). The images are almost exclusively anthropomorphs, and the figures are predominately stick

form. There are a few with widened torsos or other body parts, but there are no distinctly triangular body forms. In the following descriptions of each group, Stokes' (1910) comments are quoted extensively, given the importance of observations made before the following 90 years of erosion and deterioration. (NB: there are some minor differences in the images described or illustrated by Stokes and those in the present paper; these are not mentioned here unless relevant to a larger point. Some of the variations may be due to differences in observation and recording, others possibly are due to changes made after Stokes' recording. A very careful field study would be required to evaluate these differences.)

#### GROUP A

Group A (Figure. 7) has 16 images in an area of about 30 m<sup>2</sup> (except for one isolate, A-1). Other than A-1, all of the other 15 are clearly human figures, most of which are complete, and they fall in a narrow size range of 25 to 50 cm in length. All of the figures are T-shape stick forms, although two have modified torsos (Type 1300, Stasack and Lee 1994).

Within the group, the figures tend to be isolated. There are no obvious sets of individuals. Thirteen of the figures are oriented NE-SW.

Stokes (1910:38) saw A-2 as "incomplete, representing either the shoulders and arms or the wide-spread legs of the human figure." Regarding A-3 and A-4 Stokes notes (1910:38; brackets added) that these:

...are two forms...close together, which are unlike any others so far observed; the first [A-3], length 10 inches

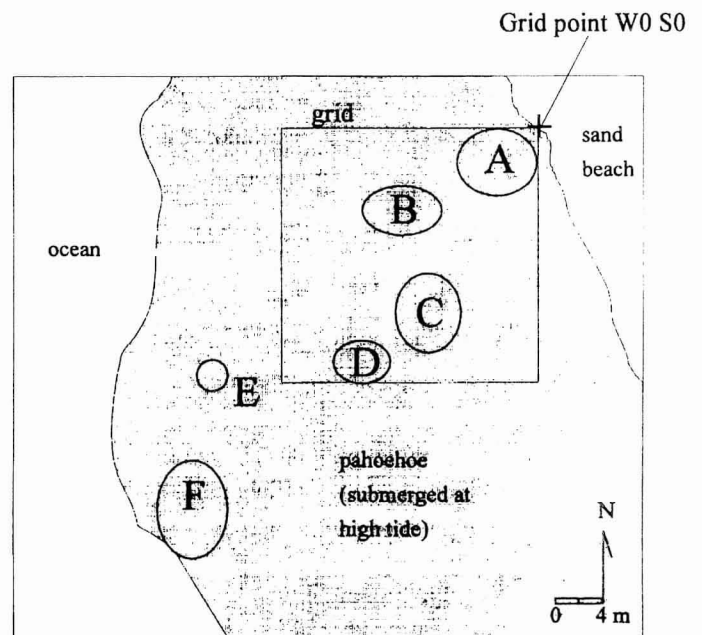


Figure 5. Grouping of petroglyphs at Site 12954.

with squared joints, has a very peculiar upward turn at the knees, which posture is difficult to explain. The second [A-4], length 13 inches, has proven unique...on account of the fact that the rock at the knees has not been abraded...the contiguous outline of the figure is very distinct. It probably was intended to portray some person or object with broken legs. Another point of peculiarity [of A-4] was the two-pronged feet....

If the missing knees of A-4 indicate that the legs are broken, perhaps the upturned portion of the legs of adjacent A-3 also represents broken legs.

Another figure in the group (A-5) is described as "an orator or spear thrower" (Stokes 1910:38). As drawn by Stokes (1910: Figure 6), this image lacks the line in the torso that exists today.

Stokes (1910:38; brackets added) describes two more figures in Group A as:

The next couple of figures, 13 and 15 inches long, have the heads outlined, and the smaller [Fig. A-6] has two small punctures for the eyes... The last, in place of the usual central line for the trunk, has a curve to represent the chest or breast.

GROUP B

Group B (Figure 8) is the densest and most complex group at Ke'ekū. The group covers about 30 m<sup>2</sup> and contains 45 images, most of which are anthropomorphs, which range from 20 to 135 centimeters in length. In addition to the human figures there is also a phallus (B-17). Most of the figures are stick shape, but three (B-5, 6, and 8) have clearly enlarged torsos and limbs. One figure has what may be a skirt (B-12), and another (B-16) has an image at the abdomen that may be a chest-plate. From the standpoint of technique, the most distinctive petroglyph at Ke'ekū is a bas-relief image (B-13) (Photo 2), said to be the slain Maui king K a m a l ā l ā w a l u (discussed below).

Most of the images are clustered into a rough semi-circle, with some isolates, plus there is a distinct set of four figures on the east end of the group. Many figures in this group are oriented E-W, or a few degrees off E-W, but very few are in a NE-SW orientation (as are most of Group A).

Stokes (1910:38-

39, brackets added) draws attention to the discrete set (B-1-4):

The pictures of the interesting quartet...are no doubt an attempt to portray the happenings of an obstetrical case... Kahalu'u, from its superior natural advantages, was the abode of many chiefs and kings..., and this group may well have been intended to record the not uncommon occurrences in Hawaiian history such as mentioned by Fornander in vol. ii, pp. 204 and 260 [*Polynesian Race*].

A reading of Stokes' reference to Fornander (1969) does not provide a clear identification of the "not uncommon" occurrence alluded to, but this may be a reference to double paternity, as discussed below.

Stokes (1910:39; brackets added) describes another group:

To the south-west of [the birth group] is another of three figures [B-5-7] with rounded limbs placed in a row.... It has not been inappropriately suggested that these were three dancers, the arms of the smallest figure [B-7] being properly placed for some of the movements of the hula. To the north and west are numerous other figures which have probably been added after the completion of the last group.

Although drawn a little differently, the nearby B-8 might also be considered part of the group that Stokes refers to as dancers. Regarding surrounding figures, Stokes (1910: 40-41; brackets added) notes:

One figure [B-9] should be noticed with the line of the trunk transversely broken by a segment of a circle .... The outlined-headed figure [B-8] has its right foot connected with a small figure [B-10] ... depicted with a rectangular abdomen. The headless figure [B-11] directly below is 10.5 inches long. A little more to the west ... is a curved-



Figure 7. Site 12954, Group A.

limbed figure [B-12] with a broken-lined trunk and a line between the feet suggestive of a skirt .... In a number of cases the males are definitely marked, leaving it open to suggestion that the unmarked figures must be females. But considering the number of unmarked figures, it does not seem reasonable to conclude that all of these were females.

Stokes (1910:40-41) describes the bas-relief figure of Kamalālāwalu (B-13) as "deeply incised" and that:

It is more than probable that this figure was not always beheaded, as outlines of what may have been the lower part of the head are still traceable. Where the head should be there is a natural crack in the bed-rock which seems to have occurred since the engraving of this and surrounding carvings. It is believed that the Hawaiians did not practice decapitation.

Other figures near B-13 described by Stokes (1910:41;



Photo 2. Petroglyph said to be an image of the sacrificed Maui king, Kamalālāwalu.



Figure 8. Site 12954, Group B.

brackets added) include:

... a figure with an upraised arm [B-14], ... [and] apparently a figure in profile [B-15]. Petroglyphs in profile are so unusual that it might be safer to consider this one incomplete .... Still further to the west is a graving [B-16] ... 40 inches long which from peculiarities of its outline might at first seem modern. However the graving is similar in all respects to those described above .... The abdomen is slightly rectangular with four upright or slanting strokes on the upper side. The feet are circles. To the west ... of Kamalālāwalu ... is a phallic emblem [B-16], ... which certainly does not seem modern.

#### GROUP C

Group C (Figure 9) has two subsets of figures. Six figures are found in an area of about 5 m<sup>2</sup>, and another two isolated figures are found about three and five meters further away. The images are all anthropomorphic stick figures (although three are damaged or incomplete), and they are in a small size range of 25 to 30 cm, comparable to the majority of those in Group A. There is no obvious clustering within the two subsets.

Stokes (1910:42) describes one image in this group (C-1) as "a male figure ... with two parallel disconnected lines for the trunk, and feet or toes represented by three disjointed strokes."

#### GROUP D

Group D (see Fig. 10) contains eight figures and one word. The figures are stick anthropomorphs, but none are complete. They are collectively larger than those found in the

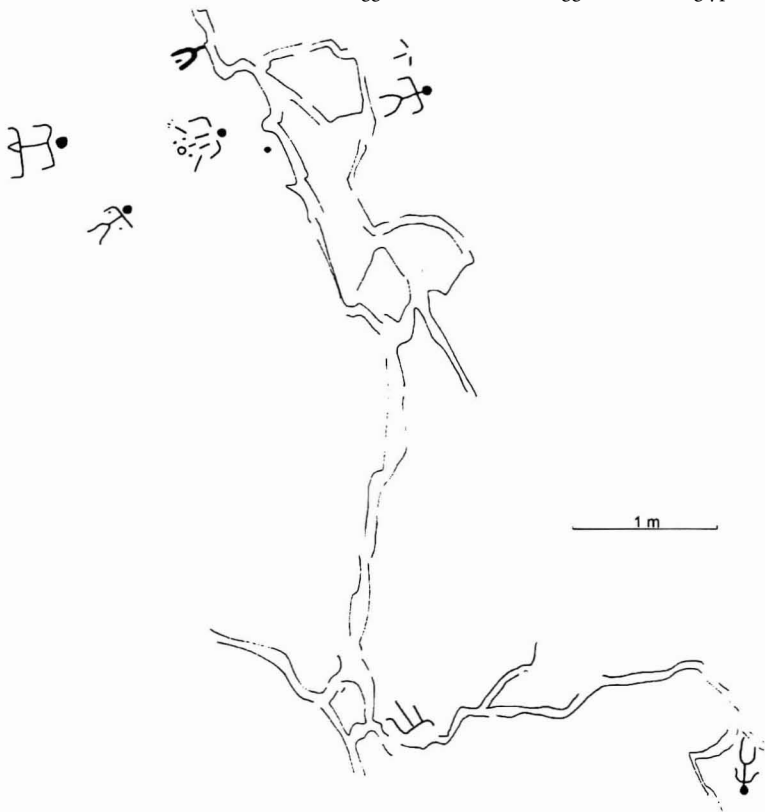


Figure 9. Site 12954, Group C.

other groups (in the 60 to 80 cm range), and generally more crudely carved. The word (now weathered), presumably a name, is KAMAA.

Two of the figures are the name are mentioned by Stokes (1910:42; brackets added):

On another swelling of lava to the west... is a very large unfinished figure [D-1]; while some distance to the south is another [D-2] with part of a name below it. These are unquestionable modern as the carving is very different from that described above, the peckings being still distinctly seen and the channels anything but smooth. They were, judging from appearances, made with a steel implement (perhaps a pick)....

This description accords well with their present appearance, except that Stokes' "modern" is now our historic (probably mid-to-late 19<sup>th</sup> century).

**GROUP E**

Group E (Figure 11) is an isolated pair of petroglyphs. They are large (80 cm long), stick figure anthropomorphs, possibly incomplete. Stokes describes one (E-1) as having:

... a flat shallow depression for a head, forearms turned inward and hands downward. No legs could be traced, but the trunk was represented by a long line interrupted by cup-marks, and a design the purport of which is now indefinite.

**GROUP F**

Group F is not a set of petroglyphs as such, but consists of about 18 bowls and cupules pecked and ground into the

pāhoehoe near the edge of the flow that drops into the sea. Some of these are certainly bait cupules, but the function of all of them is uncertain. Stokes mentions one (1910:43): "an artificial bowl 8x3.5 inches cut in a flat rock, the use of which was not apparent."

The bowl shapes are up to 30 cm across and 20 cm deep; the cupules are generally 15 cm across and up to 20 cm deep.

**STOKES' PETROGLYPHS NOT RELOCATED**

Stokes shows one photograph of two petroglyphs (1910: Fig. 17) that were not relocated in the present survey. He (Stokes 1910:42) describes their location as north and northwest (of the main petroglyphs?), and implies that they are near Group E, although this does not seem consistent with their direction location. He does not describe these petroglyphs, but the photograph shows two stick figures, with curving legs, and out-curving hands and feet (very similar, for example, to B-1).

**DISCUSSION**

Lee (1998) presents three generalizations about petroglyph fields that are relevant to the Ke'ekū petroglyphs.

The first is that the stick figure is stylistically the earliest form of human representation in Hawai'i, predating the triangular body, and that this has been supported by

at least two radiocarbon studies of buried petroglyphs (Lee 1998:242). The anthropomorphs in two main Ke'ekū fields (Site 12913 and 12954) are almost exclusively stick figures, not triangular bodied figures. A few variations include squared torsos or thickened body shapes. This indicates that the Ke'ekū petroglyphs fall at the early end of the developmental scale. This is probably sometime before AD 1500-1600 based on radiocarbon dating of deposits associated with buried petroglyphs (G. Lee, pers. com; Cleghorn 1980; Hammatt and Folk 1980a). One image in the field is a relief figure (B-13) and Cox and Stasack (1970:59) suggest that this falls on the late

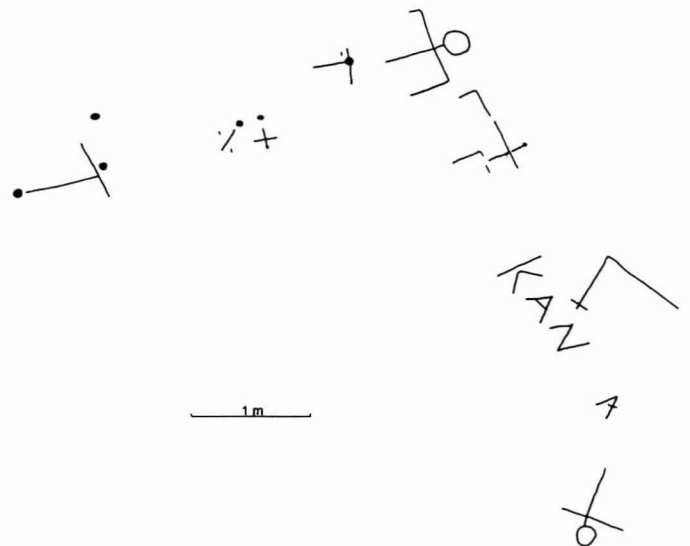


Figure 10. Site 12954, Group D.

end of the developmental range. As discussed below, traditions suggest that this is the image of a slain king, carved at the time of his death, probably in the late 1500s/early 1600s. If this is so, the creation of this figure some 200 years before European contact suggests that it does not represent style development, but is a unique treatment related to a unique event.

Second, Lee (1998:243) notes that sites associated with trails tend to have circles and other geometric designs, while sites not related to trails “tend toward figurative designs.” There are trails in the Kahalu‘u area, but none directly associated with the two main petroglyph sites at Ke‘ekū. The Ke‘ekū fields have no circles and no geometric figures; there are some cupules (Site 12954, Group F), but these are probably bait cupules and not specifically part of the true petroglyph field. Thus, the Ke‘ekū fields are consistent with the trail association pattern.

Third, petroglyph sites are often associated with openings in the earth, such as cracks and caves, and this may have been related to the spiritual aspects of *pō*, the underworld (Lee 1998:243). The Ke‘ekū petroglyphs are not adjacent to large cracks or caves (although there is said to be a large underwater cave entrance somewhere along the nearby coast), but they are at the boundary of land and sea, with the sea having an association with *pō* and the sacred realm (Fornander 1916:2-7). Further, the petroglyphs are also adjacent to Ke‘ekū, a temple of human sacrifice (Stokes 1991:77). In this sense, Lee’s argument that there may be a relationship between some petroglyphs and *pō* finds support at Ke‘ekū.

The stick figure in a variety of poses is the most common anthropomorphic form, which, comparatively, is found throughout Hawai‘i, although there is some regional variation in detail (e.g. see Emory 1924).

To look specifically at the images and what they may represent, there are a number of themes, some cross-cutting at the main complex of petroglyphs at Ke‘ekū (Group B; see Fig. 8). These include birth (and reproduction/potency), ceremony, death, and the relationship to the adjacent *heiau* of Ke‘ekū. This is not to suggest that the group is in any sense an integrated scene or tableau<sup>5</sup>, but petroglyphs were created with a purpose, and it is possible that several images in a field may be related, either depicting elements of one event, or depicting similar elements related to the significance of the site itself.

The existence of the *pāhoehoe* flow was fortuitous. The fact that it was used for petroglyphs was not fortuitous. This is a place near an ancient temple of sacrifice, a place of many temples and royal residence, a place at the sacred boundary of land and sea.

The theme of birth (and reproduction/potency) is found in the birth scene itself, the phallus, and the unusual figure (B-16) with distinctive genitalia<sup>6</sup>. The iconography of B-16 is not understood, but he could represent a deity or *ali‘i*. Further, royal birth was accompanied by various ceremonies, including hula,

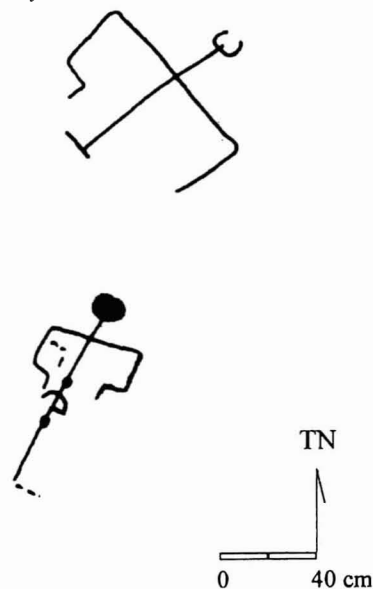


Figure 11. Site 12954, Group E

and thus the possible hula figures (B-5-8) may also be related to this theme. The birth scene may be the specific record of a royal birth in the vicinity, and one of double paternity (as Stokes’ implies, 1910:39), suggested by the presence of two males in the scene. The double paternity, termed *po‘olua*, is the recognition that the biological father is other than husband of the mother, but with both fathers acknowledged genealogically, resulting in increased prestige and a broadened kin base for the child. In fact, an *ali‘i* of double paternity is known to have been born at Kahalu‘u; this was Kuakini, born around 1791, and at his birth “there was a great hula at Kahalu‘u” (Kamakau 1961:388). This of course also brings attention to the possible hula figures in Group B. It is unlikely that the birth and hula scenes were recorded for Kuakini, in part because the birth figures are stylistically much older than this event, and in part because it is

likely that the association of such a momentous occasion with the petroglyphs would have been known to Malanui, Stokes’ informant<sup>7</sup>. However, there is a strong possibility that these figures represent a similar royal birth of double paternity and associated hula of an earlier era.

Taking the set of possible hula dancers as independent, they may be associated with another ceremony that took place in the area, otherwise unnoted or unrecognized in the images.

The themes of death and the relationship to the adjacent Ke‘ekū temple are connected in the image of Kamalālāwalu (B-13), a Maui king said to have been sacrificed at the temple. The identification of the figure as Kamalālāwalu was made by Stokes’ local guide and informant, Malanui<sup>8</sup> (Stokes 1910:35, 45, 48). Stokes (1910:49) also indicates that other “natives then living at Kahaluu referred to the figure of Kamalālāwalu by name.” It is thus quite clear that this was a local tradition, and the probability is quite high that the figure was carved with that intent, given the distinctness of the bas-relief image and the historical association of Kamalālāwalu with the area.

Kamalālāwalu was a Maui king during the time of the Hawai‘i king, Lonoikamakahiki, genealogically dated to late 1500s/early 1600s<sup>9</sup>. Kamalālāwalu took his army to Kohala with the intent of capturing the lands of Lonoikamakahiki, but he was defeated in a long battle on the plain of Waimea and he was killed at Puakō (Kamakau 1961:57-61; Fornander 1969:124). Thrum (1908) published accounts tying the death of Kamalālāwalu to two temples near Ke‘ekū (‘Ohiamukumuku and Mākole‘ā; see Fig. 3). Malanui’s statement about the death of Kamalālāwalu was summarized by Stokes (1910:45, brackets added) as follows:

When Kamalālāwalu, king of Maui, invaded Hawai‘i, Lonoikamakahiki the king of Hawaii was in Kahaluu. On hearing of the landing near Kawaihae bay, Lono held a council of war [and devised a plot of battle]. The plot succeeded, and while Kamalālāwalu marched inland, Lono brought his forces along the coast from Kahaluu and cut



off his retreat. Kamalālāwalu was killed in the engagement that ensued. His body was brought to Kahalu'u, a picture of it made on the rock, and the body sacrificed in the nearby heiau of Ke'ekū.

That Kamalālāwalu's connection with Ke'ekū was not an early 20<sup>th</sup> century invention is indicated by Forbes (n.d., ca. mid 1800s) statement that "Kamalālāwalu was slain on the pāhoehoe rocks just below Keekū." Forbes uses the term "slain" rather than "sacrificed" (an easy confusion), but the association with the pāhoehoe flats of Ke'ekū is telling.

Taking B-13 as that of Kamalālāwalu, there is nothing specific to indicate sacrifice or death. However, the fact that the petroglyph itself is very unusual (created as a bas-relief image rather than as an incised figure), supports the possibility that this was the depiction of a special image or a special event, or both<sup>10</sup>. Finally, there is one aspect of the image that might imply a relationship with death. In contrast to the great majority of images at Ke'ekū, that of the possible Kamalālāwalu is depicted with his head oriented to the west (close to the position of the winter solstice), the direction of the setting sun, associated with death and the realm of the underworld (Buck 1938; Valeri 1985:15). And finally, it might be asked at this point if the enigmatic large figures that have been suggested as hula dancers (B-5-8) may in fact not be associated with the image of Kamalālāwalu rather than with the birth scene, perhaps representing deities or spirits.

Malanui's statement that Kamalālāwalu was sacrificed at Ke'ekū is also consistent with what is know of this temple. Ke'ekū is one of the many *heiau* of Kahalu'u recorded in Hawaiian traditions. One of the most important references to it comes from a tradition concerning the king Kalaunui'ōhua, dated genealogically around the late 14<sup>th</sup>/mid-15<sup>th</sup> century<sup>11</sup>. The following statement is from Malo (1996:300-301<sup>12</sup>, brackets, parentheses, and italics original; paragraph breaks have been deleted):

It was said that during Kalaunui'ōhua(s) reign, a very powerful kāula [*prophet*] lived. Wa'ahia was this kāula wahine [*prophetess*]. Kalaunui'ōhua often tried to kill this kāula. She would not die... Kalaunui'ōhua was frustrated at this failure [to kill her]. Then this kāula wahine said to him, "Is it your wish to have me dead?" Kalaunui'ōhua said, "Yes! I want you dead!"

The kāula said, "... If you want me dead you must put me in the heiau (*temple*) and you must burn the place down. Then I will die. (Ke'ekū in the district of Kona is where this heiau is located.) On the day that you burn down the heiau I will die, but you must also stay quietly outside the hale [*house*] all day and night ... that is the way you will survive as will your kingdom, but if you do not agree to my commands you and your kingdom will be forgotten. My god, Kāne'openuioakalai will crush you and your chieftom .... He has agreed to your wish. You will have killed me." She was through talking.

Then Kalaunui'ōhua had this kāula burnt as the fire and smoke of the heiau rose up into the sky. The smoke formed into a cloud and took the shape of Moa(s) [Chickens] .... Afterwards the clouds in the sky took on strange shapes .... The sky flashed with brightness...

Then the kāula took possession (ulu iho la) of Kalaunui'ōhua(s) hand. Kānenuiakea was this god. Kalaunui'ōhua

was very powerful and if his hand pointed to do battle with another district then this district would flee.

From the sacrifice of Wa'ahia at Ke'ekū<sup>13</sup>, Kalaunui'ōhua conquered without armies all of the Hawaiian Islands through the force of her transformation and that of her god Kāne'openuioakalai. Thus Ke'ekū was long known as a major center of power. Lonoikamakahiki's sacrifice of Kamalālāwalu was part of this tradition. Celebrating what may have been a royal birth could have been part of this tradition. The creation of these images in the petroglyph field was one means of symbolizing the events and at the same time perhaps actualizing the power of the locale.

#### FOOTNOTES

- 1 The drawings were made by M. J. Tomonari-Tuggle. Photographs by Dave Tuggle.
- 2 All site numbers in the report, unless otherwise indicated, are in the system of the State of Hawai'i's Historic Preservation Division, and are preceded by the designation 50-10-37.
- 3 The cracks in the pāhoehoe near the petroglyphs are illustrated in the figures. Although this might be a source of confusion in some instances, it is important to show the cracks because they indicate something of the character of the petroglyph "gallery", and show how some of the petroglyphs are constrained and how some have been damaged. The cracks are drawn with an irregular double line, with pen width less than that used for any images.
- 4 If additional research on the field is made, these numbers can be expanded to include all figures. Further, the grid system can also be expanded as necessary.
- 5 When Stokes' guide/informant Malanui indicated that one figure is Kamalālāwalu, he also suggested that the rest of the human figures were Kamalālāwalu's army (Stokes 1910:35), but this was clearly just a guess.
- 6 A nearby natural feature and place name also has an association with reproduction. Kalaau-o-Kalaikini is the name of the extension of the pāhoehoe and a massive row of boulders that forms a natural breakwater for Kahalu'u Bay (Figure 2) (name is taken from maps of Emerson 1883, Baldwin 1909, and Kekahuna 1952). Kalaikini (also Kalaikini and Kalaehina) was a legendary figure, *kupua*, of the Kohala-Kona region, famous for his size and strength (Beckwith 1970:421-23). The translation of the name as "the erection of Kalaikini" is consistent with the character of the projection and the reputation of Kalaikini.
- 7 There is the possibility that the existing birth scene on the rocks was subsequently associated with the birth of Kaukini, and that the hula figures, typologically ambiguous, were carved at the time of his birth.
- 8 According to Stokes (1910:45, 48) Malanui was 86 years old in 1906, lived at Kahalu'u, was "the grandson of the last priest of the neighboring heiau of Kapuanoni" (see Figure 3), had obtained his knowledge from his grandfather and father, and was the "only man met on Hawai'i [by Stokes] who could give any information on the details of a heiau." On an 1883 map by Emerson, Malanui's house is shown located just inland of Ke'ekū.
- 9 Based on generations of average 20 year intervals, Kamalālāwalu has been dated to AD 1620s-1640s (Cordy 1994; Hommon 1976), although we believe that the generational average is somewhat greater, placing Kamalālāwalu closer to the beginning of the 17<sup>th</sup> century (Masse and Tuggle 1998). A 25 year generation span has also been used, which should place Kamalālāwalu in the early 1500s (Barrère 1971).

- 10 Figures with possible broken bones are also suggestive of sacrifice.  
 11 The later date derives from Cordy (1994) and Hommon (1976), the earlier from the generational calculation based on Masse and Tuggle (1998); see Footnote 9.  
 12 Chun's new translation of Malo contains the original Hawaiian text; see Chun 1996:126-127).

13 This event, with its accompanying incredible celestial activity, has been interpreted in regard to astronomical activity, including the possibility that the dramatic sky events during the burning of Wa'ahia may be a description of the great Leonid meteor shower of AD 1366 (Masse 1995; Masse et al. in prep).

Table 1. Individual petroglyphs noted in text (table does not include all images in the groups).

PETRO-GLYPH	FIGURE*	STASACK AND LEE (1994) TYPOLOGY	COMMENT	ILLUSTRATIONS OR DESCRIPTION	LOCATION**	
					W	S
A-1	outline	?			1.0	4.5
A-2	anthro.	?	incomplete	Stokes (1910:38)	3.6	5.4
A-3	anthro.	?	upturned knees/feet? Indicates broken?	Stokes (1910: Fig. 4; 38)	4.0	5.8
A-4	anthro.	1200, with curved legs and digits	missing knees, indicates broken?	Stokes (1910: Fig. 4; 38)	4.8	5.7
A-5	anthro.	1230, arms opposed; male	orator or spear thrower?	Stokes (1910: Fig. 6; 38)	5.1	3.2
A-6	anthro.	1300, eyes; male		Stokes (1910: Fig. 5; 38)	7.0	5.0
A-7	anthro.	1310		Stokes (1910: Fig. 5; 38)	7.0	4.4
B-1-4	four anthro.	1200	family group, with childbirth?	Stokes (1910: Fig. 7 <sup>^^</sup> ; 38-39); Cox and Stasack (1971: Fig. 69)	9.0	7.5
B-5	anthro.	1200? enlarged; 1500?	part of dance group?	Stokes (1910: Fig. 7, 8; 39)	10.0	8.1
B-6	anthro.	1200, enlarged	part of dance group?	Stokes (1910: Fig. 8; 39)	10.0	8.8
B-7	anthro.	1120? curved arms	part of dance group?	Stokes (1910: Fig. 8; 39)	9.9	9.3
B-8	anthro.	1200	part of dance group?	Stokes (1910: Fig. 9; 40)	10.6	7.3
B-9	anthro.	1210? 1230?		Stokes (1910: Fig. 9; 40)	10.6	7.8
B-10	anthro.	1300, rectangular torso		Stokes (1910: Figs. 9, 10; 41)	11.1	7.1
B-11	anthro.	1200, headless	incomplete, or intentionally headless?	Stokes (1910: Figs. 9, 10; 40)	11.4	7.5
B-12	anthro.	1200, with skirt; female	<i>pa'ū?</i>	Stokes (1910: Fig. 9; 41)	12.5	7.4
B-13	anthro.	?	bas-relief; said to be image of King Kamalālāwalu	Stokes (1910: Figs. 1, 12, 13; 35, 40); Cox and Stasack (1971, Fig. 83, far right)	11.6	9.4
B-14	anthro.	1200, upraised arm, male		Stokes (1910: Fig. 12)	12.0	8.9
B-15	anthro.	1600; profile		Stokes (1910: Fig. 12)	12.7	9.0
B-16	anthro.	? male, round feet, chest-plate?		Stokes (1910: Fig. 14; 41) <sup>^</sup>	13.6	9.6
B-17	phallus	?		Stokes (1910: Fig. 15, 42)	11.8	11.0
C-1	anthro.	1300, feet, male		Stokes (1910: Fig. 16; 42)	12.1	14.9
D-1	anthro.	1200, incomplete	mid-to-late 19 <sup>th</sup> century	Stokes (1910: Fig. 20; 266)	16.5	19.5
D-2	anthro.	1200, incomplete	mid-to-late 19 <sup>th</sup> century	Stokes (1910: 266)	15.0	21.5
D-3	inscription	6600	"KAMAA"	Stokes (1910: Fig. 20; 266)	15.5	21.5
E-1	anthro.	1200?		Stokes (1910: Fig. 18; 42)	NA	NA
?	anthro.	1200?	two stick figures	Stokes (1910: Fig. 17; 42)	?	?

\* anthro. = anthropomorphic figure

\*\* Locations refer to grid (see Fig. 6), measured to the approximate center of the petroglyph in meters, 10<sup>th</sup> of meter, west (W) and South (S). E-1 is not on the grid map, and ? is a petroglyph set shown in Stokes, but not relocated.

<sup>^</sup> A booklet on Hawaiian petroglyphs erroneously identifies B-16 as Kamalālāwalu (B-13) (McBride 1969:33).

<sup>^^</sup> Curiously the photograph in Stokes 1910, Fig. 7 seems to be the same one attributed to the Rev. A. S. Baker in 1918, as shown in Emory et al. 1971, Fig. 8.

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