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Hawaiian Tattooing[1]

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INTRODUCTION

Recent discoveries of several tattooed mummies in dry burial caves on the island of Hawaii have prompted this paper on ancient Hawaiian tattooing. Previously, information has been scant indeed, for early writers paid little attention to Hawaiian tattooing, probably because it was less striking and less extensively employed than in most Pacific islands.

In 1900, H. Ling Roth published many of the references to Hawaiian tattooing contained in early literature (35)[2]. In 1928, Margaret Mead added important items in a comparison of Hawaiian tattooing with that of the Samoans, Tahitians and Maoris (31).

Additional references which I have come upon, the location of a Hawaiian tattooing instrument in the Peabody Museum at Salem, access to some original early drawings made in the Hawaiian Islands, and, above all, access to actual tattooing preserved on mummies, has put me in a favorable position to extend previous knowledge of Hawaiian tattooing.

RECORDS OF EARLY VISITORS

COOK'S THIRD VOYAGE

Of the engraved plates appearing with the account of Cook's third voyage into the Pacific (1776-1780), only one shows tattooing (plate 62, "A man of the Sandwich Islands, Dancing") (14). But an original pen, pencil, and black-wash sketch in Bishop Museum, done by Cook's

[1] This is the first of a series of papers to be published from a fund contributed by the G. N. Wilcox Trust.
[2] Numbers in parentheses refer to Literature Cited, page 269.

artist, Webber, gives a portrait of a Hawaiian man (fig. 1), showing the right half of the face and the forehead entirely tattooed with vertical or horizontal white lines enclosing black panels, through each of which runs a zigzag line (fig. 2, *a, b*). The left breast has four vertical stripes of the pandanus-fruit pattern shown in figure 2, *c*. Over the upper part of the left arm are rows of concentric semicircles (fig. 2, *d*).

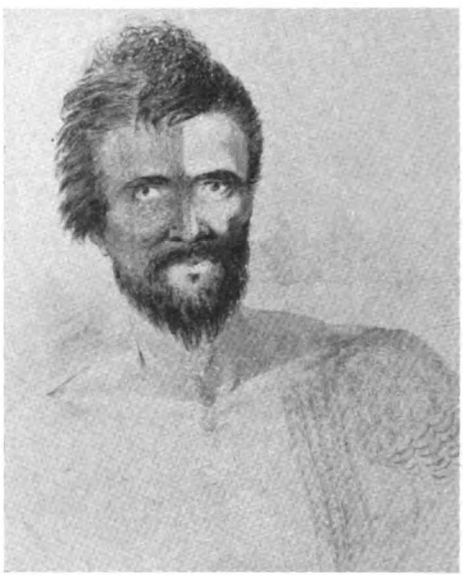

FIGURE 1.—Webber's portrait of a Hawaiian man. From a photograph of an original in Bishop Museum.

Below the rows of semicircles are rows of parallel scalloped lines (fig. 2, *e*). This arm tattooing is reproduced on the corresponding arm of the dancing man in Webber's plate 62, the scallops extending down the arm to the wrist. The vertical design on the face of the portrait (figs. 1; 2, *a*) appears, three panels wide, extending from hip to knee on each leg of the dancing man. Bishop Museum is in possession of what is apparently an original Webber sketch of three men dancing from which the dancing man was selected for the engraved plate. In the sketch, the dancing figure resembling that in the plate has a suggestion of stripes tattooed down the outside of the left arm and the front of the left leg. Obviously, Webber borrowed from the portrait the

tattoo patterns used for the engraving depicting the dancing man, whose face is practically the same as that of the portrait, but untattooed. It is quite possible, of course, that the dancer posed for the portrait. Two plain stripes down the front of the lower part of the right leg and foot of the dancing man in the engraving may have been added by Webber from memory.

A wash drawing in the British Museum, undoubtedly the original on which is based Webber's plate showing Waimea Village, Kauai (14, plate 35), shows a man with five dentated stripes running the entire length of the outside of his left leg. This, together with the portrait of the Hawaiian man, constitutes the detailed graphic record of Hawaiian tattooing made by the Cook expedition.

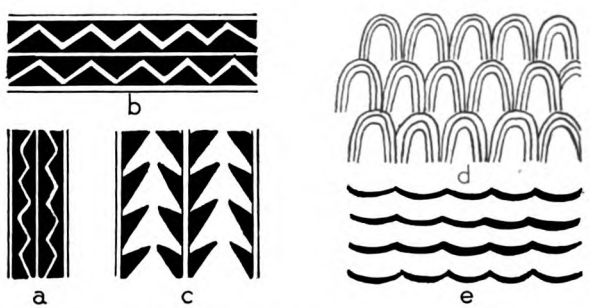

FIGURE 2.—Tattoo motifs on Webber's portrait of a Hawaiian man: **a,** vertical panels on face; **b,** horizontal panels on face; **c,** vertical panels on breast; **d, e,** markings on upper part of upper arm.

Turning now to the official version of Cook's voyage (14, vol. 2, p. 192), it is stated of the natives of Kauai that "some were punctured on the hands, or near the groin, though in a small degree." Of the natives of Niihau (14, vol. 2, p. 216), Cook writes "one of the men had the figure of a lizard punctured upon his breast, and upon those of others were the figures of men badly imitated." In the British Museum's Admiralty copy of Cook's journal, a copy of which is in the manuscript collection of Bishop Museum, are the following observations: "Tattooing or staining the skin is practiced here, but not in a high degree, nor does it appear to be directed by a particular mode, but rather by fancy. Their figures were straight lines, stars, etc., and many had the figures of the *taame* [*taumi*] or breast plate of Otaheite, though we saw it not among them." This *taumi* figure, I should say, is that

shown in figure 2, *d*. The published account places the "breast-plate" figure on the "fore-part of the body," but this remark seems to have been written in by the compiler. Says this account (14, vol. 2, pp. 232-233),

> The men are frequently punctured, though not in any particular part, as the Otaheiteans, and those of Tongataboo. Sometimes there are a few marks upon their hands, or arms, and near the groin; but frequently we could observe none at all; though a few individuals had more of this sort of ornament, than we had usually seen at other places, and ingeniously executed in a great variety of lines and figures, on the arms and fore-part of the body; on which latter, some of them had the figure of the *taame*, or breast-plate, of Otaheite, though we did not meet with the thing itself amongst them.

King mentions (14, vol. 3, p. 135) that the face was tattooed "in straight lines, crossing each other at right angles," and that "the hands and arms of the women are also very neatly marked."

The notes made by Trevenen (37) opposite King's remarks on tattooing are as follows: "It [tattooing] is not so common a custom here as at the Society or Friendly Islands. I do not recollect to have seen any man whose business it was to tattow others, nor do I believe that any of our people got a single additional mark here."

Captain Charles Clerke, in a manuscript at the British Museum, a copy of which is in Bishop Museum, made this observation: "These people are slightly and variously tattowed, just I believe as the present whim directs, but this practice is by no means in vogue here as at the Southern Isles."

In David Samwell's journal, a copy of which is in Bishop Museum, there is specific mention of a tattooed chief:

> He himself [the king of Maui, Kahekili], is a middle aged man, is rather of a mean appearance, the hair on each side of his head is cut short and a ridge left on the upper part from the forehead to the occiput, this is a common custom among these people, but each side of his head where the hair was off was tattooed in lines forming half circles which I never saw any other person have.

The following remarks of Surgeon William Ellis (18, vol. 2, pp. 151-152), are particularly enlightening:

> The custom of tattowing prevails greatly among these people, but the men have a much larger share of it than the women; many (particularly some of the natives of Mowwhee) have half their body, from head to foot, marked in this manner, which gives them a most striking appearance. It is done with great regularity and looks remarkably neat: some have only an arm marked in this manner, others a leg; some again have both arm and leg, and others only the hand. The women are for the most part marked upon the hand, and some upon the tip of their tongue, but of these we saw but few. Both sexes have a particular

mark, according to the district in which they live, or is it rather the mark of the aree, or principal man under whose jurisdiction they more immediately are.

Portlock

Portlock, who had accompanied Captain Cook, returned to Hawaii in 1786 in command of the *King George,* the first ship to visit Hawaii after Cook left. He remarks (34, p. 77): "Many of the warriors [of Oahu] were tattooed in a manner totally different from any I ever took notice of amongst the Sandwich Islands; their faces were tattooed so as to appear quite black, besides a great part of the body being tattooed in a variety of forms." George Dixon, in command of the *Queen Charlotte,* which accompanied the *King George,* records (16, p. 98) that one of the two youthful nephews of the "king" of Oahu, had his legs, thighs, arms, and various parts of his body "tattooed in a very curious manner." He comments on tattooing in general (16, p. 276) as follows: "The bodies of both sexes are tattooed, but this custom is more generally practiced by the men, whose bodies are frequently punctured in a very curious manner."

Heddington

Captain Thomas Heddington (1814, or before), in an on-the-spot drawing of a village and some of its occupants, somewhere on the island of Hawaii, depicts (24) tattooing on the legs and arms of several of the men. One man has two lines down the whole length of the outside of his right leg, each line serving as the base for a line of triangles pointed to the outside. The ankle of the other foot has some tattooing. A second man has plain bands tattooed around the wrist and around the middle of the upper arm. His left thigh has cross-hatchings in a wide mesh, and his left ankle is encircled by a wide band. A third man has a series of curved lines across the left thigh and some transverse markings down the right leg.

Kotzebue

The illustrations of tattooing and tattooing instruments shown in "Voyage Pittoresque," by Louis Choris (13), artist with Kotzebue during his visit to Hawaii in 1816 and 1817, are not entirely trustworthy. I have studied the sketches made by Choris, apparently while in the islands, which were procured by Donald Angus in England in

1937 and are now at the Honolulu Academy of Arts. They reveal that the tattooings on the torso of Liholiho, or Kamehameha II (13, plate 19), and on one of the three male dancers (13, plate 12) are additions made when the plates were prepared. Among Choris' original drawings, a sheet of paper entitled "tatouage des habitants des Iles Sandwich" shows seven tattoo motives: a coconut tree, a bird with spread wings, three dancing figures, a pair of goats, a rifle with bayonet, a checkerboard pattern, and a panel of parallel lines (fig. 3). The pair of

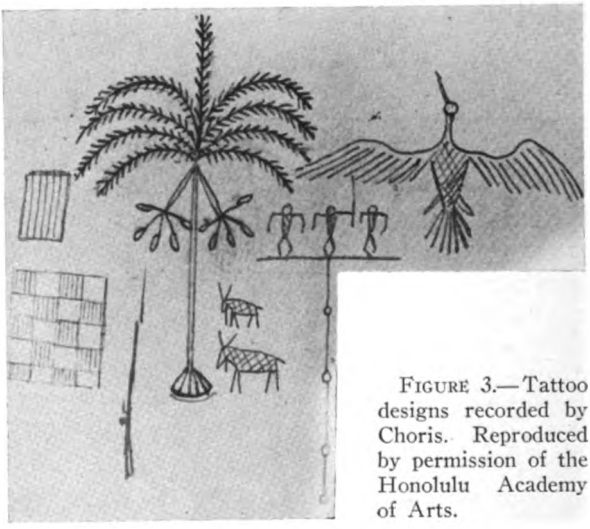

FIGURE 3.—Tattoo designs recorded by Choris. Reproduced by permission of the Honolulu Academy of Arts.

goats and the panel of parallel lines, the latter repeated in a check plaiting pattern, appear in "Voyage Pittoresque" on a portrait of a man (13, plate 15)—the goats on the outside of the right arm, the plaiting pattern on the right breast. On the right arm of another man portrayed in the same plate is the coconut tree. The plaiting pattern appears over the right half of the breast and abdomen of Liholiho (13, plate 19) and the checkerboard pattern, a little modified, over the left half of the breast and abdomen of one of the three dancing men (13, plate 12). In addition, this man has stripes over the left half of his face, and horizontal bars, in pairs, over the outside of his left arm. Only one other of the many figures shown in this plate of the dancing men (13, plate 12) is tattooed. This man, seated on the ground with

a gourd hula drum, has broken stripes over the right half of his breast and abdomen.

The remaining motifs on Choris' sheet of tattoo designs—the rifle, the bird, the three dancing figures, and the pair of goats—appear as decorations on gourds in his plate 11. Pictographs do not appear on any ornamented gourds preserved in Bishop Museum, or in other museums and private collections which I have seen. It is probable, therefore, that Choris applied these tattoo motifs to the gourds by way of embellishment. About all we can accept from Choris is his sheet of tattoo motifs. His application of the pictographs to the outside of the arm and of the patterns to the breast and abdomen may be from memory.

Chamisso, naturalist with Kotzebue, has this to say of Hawaiian tattooing as he observed it in 1816 and 1817 (*26*, vol. 3, p. 251): "It is remarkable that this national ornament has borrowed foreign patterns. Goats, muskets, even letters of the alphabet, name and birthplace, are frequently tattooed along the arm." In the volume covering his visit to the Hawaiian Islands in 1824 and 1825, Kotzebue says of tattooing (*27*, vol. 2, p. 174): "Their faces were frequently marked with lines crossing each other at right angles, and some even had their tongues tattooed; pretty drawings were frequently seen on the hands and arms of the women." Specifically, he mentions (*27*, vol. 2, p. 245): "Kahumanna [Kaahumanu] as well as Nomahanna, has the date of Tameamea's death marked upon her arm; otherwise they are not tattooed, which indeed few are, and those only the most aged people." But Arago, who undoubtedly had a better opportunity to observe, says of Kaahumanu, whom he saw in 1819, that "her legs, the palm of her left hand, and her tongue, are very elegantly tattooed" (*5*, p. 92).

Freycinet

For three weeks during the year 1819, Jacques Arago was in the Hawaiian Islands as draftsman of the expedition under Freycinet. His first work to appear, "Promenade autour du monde" (*4*), has a folio of lithographs made from his sketches. Five of the plates show Hawaiians with tattooing. Two of the plates, depicting forms of capital punishment in the islands, are based on what he heard, hence, we cannot accept the tattooing designs literally. The other three plates are

portraits and the tattooing on them may well be what he saw on the three individuals portrayed. The plate with the title, "I-kao-onoroh [Ke-kau-onohi]), femme des iles Sandwich," shows the outlined figure of a goat tattooed at the center of the woman's forehead, a series of small circles over each of her eyebrows, a chain of outlined goats around her neck, paralleled by a lower chain of indistinct markings, and the form of a chief's fan, in solid black, placed on her chest. The woman shown in the plate, "Jeune femme des iles Sandwich dansant"

FIGURE 4.—A Hawaiian woman in dancing posture, by Arago.

(fig. 4), has a goat on the forehead, enclosed in a circle of dots; the likeness of a musket with bayonet, tattooed on the right arm, together with a pair of sheep's or goat's horns and a number of fanlike objects; on the left arm are a number of semicircles; and, on each side of the body below the breast, a checkerboard pattern. A circle of dots encloses the navel; a line of lozenges, outlined by four dots, runs up one side of the body; and there are some markings on the left foot and several rows of small triangles about the ankle. Another plate, "Ooro, l'un

des principaux chefs d'Ouriouriou [Liholiho], roi des iles Sandwich," shows a man with a goat marked in the center of the forehead and a line of dots across the forehead. On his shoulder is a chief's fan with a line of goats above it; on his back is a checkerboard pattern and two more goats. (See figure 5.) These designs fit in with Arago's description of tattooing (5, p. 149):

FIGURE 5.—Arago's portrait of one of Liholiho's principal chiefs.

They [the women] make drawings of necklaces and garters on the skin in a manner really wonderful: their other devices consist of hunting-horns, helmets, muskets, rings, but more particularly fans, and goats. Those of the men are muskets, cannon, goats, and dominos; together with the name of Tammeamah, and the day of his death.

Another, more general, description (5, p. 76) adds important details:

The designs are neither so regular, nor so well made, as those of the Carolinians. Sometimes a part of the body is tattooed, sometimes a foot, or the palm of the hand, sometimes even the tongue, as in Kookini's wife, and the favorite widow of Tammeamah. In general the designs represent birds, fans, draftboards, and circles with several diameters; but more frequently numerous rows of goats, and almost always on the inner part of the arm, of the leg, and of the thigh. I have seen several of the inhabitants tattooed only on one side, which produced a very singular effect; they looked just like men half burnt, or daubed with ink, from the top of the head to the sole of the foot. Frequently, from some incon-

ceivable whim, they leave a design unfinished, as if the painter had been discouraged. . . .

In a later book, Arago gives further details (6, vol. 2, p. 75):

> With them [the women], the row of goats is constant. A young woman without goats on her body would perhaps be dishonored. But after these animals, the designs which are the most favored are the checker boards, fans, birds, with which they adorn their cheeks, the upper part of the head, the shoulders, and the breast. They are also fond of the hunter's horn, which they have traced on their posteriors. . . .
>
> At Kayakakooah [Kealakekua], as well as at Koiai [Kawaihae], I was constantly occupied making designs on the legs, the thighs, the shoulders, the head and breast of women of the people, the wives of the governor, and even the princesses, and I assure you I drew my inspiration solely from caprice or from my studies at college.

In comparing the tattooing in the Carolines with that which he saw in the Hawaiian Islands, Arago concludes (5, p. 147) that in Hawaii, "the devices are unmeaning and whimsical, without taste, and in general badly executed; while those of the Carolines possess the greatest beauty and regularity." After his stay at Kealakekua Bay, island of Hawaii, where they first arrived, Arago believed that "all of them, without exception, have their bodies or some of their limbs tattooed" (5, p. 76). He observed (5, p. 92) of Kaahumanu, the widow of Kamehameha, "Her legs, the palm of her left hand, and her tongue, are very elegantly tattooed; and her body bears the marks of a great number of burns and incisions she inflicted on herself at the death of her husband." He also remarks (5, p. 67) that the wife of governor Kuakini and her sister-in-law were "elegantly tattooed; one of them even had her tongue tattooed."

Arago's later book (6, vol. 2, p. 102) says of Kaahumanu's tattooing:

> The designs which ornamented her voluminous breast were traced with a perfect taste. She was tattooed on the tongue; the name of Tamahamah, the date of his death, could be read on her arms; the sole of her feet and the palm of her hands, so delicate, carried figures which I suspect were traced by the artist of the expedition commanded by Kotzebue.
>
> When I finished my work, she begged me to ornament her with several new designs, and Rives informed me that she strongly desired a hunter's horn on her posterior, and a figure of Tamahamah on the shoulder, to which I consented with great pleasure.

In the atlas to Freycinet's account of the voyage of the *Uranie,* a colored plate drawn by Arago depicts a Maui woman, in a seated dancing posture, who is tattooed over the whole exposed upper half of the

body and face (23, plate 88). The tattooing consists of a row of goats over each breast and a fan on each breast; a vertical line of triangles or chevrons up the center of the body; similar lines along each side of the body, the arms, one hand, and the neck; some broad stripes on the body, the arms, and one hand; and a curved stripe over each side of the face. This may be a new version of his "young woman of the Sandwich Islands, dancing," which appears among the lithographs of his first work (4), or it may be based on an actual drawing of another dancing woman. The lithograph in his first work is almost identical with that in the English translation, published a year later, with the tattooing eliminated (5, opp. p. 77). In the colored plate (23, plate 88), all details of the dancing women are different, even to the type of necklace worn. The tattooing shown is more like the delicate style which Arago depicts on Caroline natives, hence his familiarity with the Caroline Islands tattooing may have influenced him in finishing this picture.

Another colored plate in Freycinet's atlas (23, plate 85) gives "an officer of the king" in feather cloak and helmet, with a bold check pattern of tattooing over the upper right half of the chest and a pattern of solid triangles over the left, upper leg. A herringbone stripe extends the length of the lower part of the left leg, and a pattern of lozenges covers the region of the ankle. This plate was designed by S. Leroy "after Js. Arago." On the inner side of the upper left arm is tattooed, "Tamaahmah died May 8, 1819." This identical phrase, with its peculiar spelling of Kamehameha's name, appears on the upper left arm of a man depicted in a portrait by A. Pellion, of "one of the principal chiefs of the island of Owhyhi" (Freycinet's atlas, 23, plate 82, no. 2). This man has a line of what seems to be close-set M- or bird-motifs extending along each side of the forehead, passing around the eyes down to the jaw and terminating in an upturned point at the chin. This is a real portrait, and the tattooing on the face, and the lettering on the arm were probably seen by Pellion. The spelling of Kamehameha's name (Tamaahmah) closely follows that employed by Kotzebue (Tamaahmaah), who was in the islands several years earlier. Arago spells the name Tammeamah (5, p. 92). The helmet on Leroy's Hawaiian officer appears among the objects depicted on another plate in the atlas to the voyage of the *Uranie* (23, plate 90). I conclude, therefore, that Leroy's picture is a composition and may or may not be a record of Hawaiian tattooing. The lithographs of the dancing

woman and the Hawaiian warrior in Arago's atlas, published in 1822 (figs. 4, 5), probably represent Hawaiian tattooing more faithfully than the other pictures based on his sketches.

Mathison

Gilbert F. Mathison visited Oahu in 1821. I doubt whether we can place much confidence in his illustration of a "Sandwich Islander" in which tattooing of dots in transverse lines envelopes the entire right half of a man (30, opp. p. 432). The illustration serves primarily to display a group of feather tassels suspended from a spear. Mathison considered this bunch of tassels, used in the native *makahiki* festival, the most valuable curiosity obtained during his stay.

Tyerman and Bennet

The missionaries Tyerman and Bennet, who visited Hawaii in 1822, say of tattooing in the islands (38, vol. 1, p. 389): ". . . the people whom we have seen were generally tattoed, an operation performed here very early in life. The goat is the favorite figure, which they bear on their legs and arms; but the artists are not so expert as those of the Society Islands, neither are the designs so curious, nor are the colours so clear and delicate as the latter employ and execute."

Ellis

Upon observing in 1823 that a number of the natives of Honuapo, on the island of Hawaii, had one lip tattooed "after the manner of some of the New Zealand tribes," the Reverend William Ellis wrote (19, p. 192): "There was more tatauing here than we had observed at any other place; but it was very rudely done, displaying much less taste and elegance than the figures on the bodies of either the New Zealanders, Tahitians, or Marquesians, which are sometimes really beautiful."

Makoa, one of Ellis' guides in his journey around the island of Hawaii, had the following face tattooing, described and figured by Ellis (19, p. 100): "His small eyes were ornamented with tataued vandyke semicircles. Two goats, impressed in the same indelible manner, stood rampant over each of his brows; one, like the supporter of a coat of arms, was fixed on each side of his nose, and two more guarded the corner of his mouth."

Bennett

F. D. Bennett, a visitor of 1834, has this to say of Hawaiian tattooing at that time (8, vol. 1, p. 212):

> The custom of tatooing the skin was never very general amongst these islanders and is now almost obsolete. The primitive tatooed marks, as displayed on the persons of the older natives, are less elegant than those exhibited by the Society Islanders, and are chiefly representations of cocoanut trees, birds, sharks, fans, and anomalous dots and lines, thinly scattered over the trunk and extremities; the face being seldom marked.

Wilkes Expedition

By the time the United States Exploring Expedition under Charles Wilkes visited Hawaii (1840-1841), native tattooing was becoming a thing of the past. Pickering (33, p. 92) writes the following, which is based on information from an intelligent native:

> . . . the natives are unable to form any conjectures as to the origin or object of the practice of tattooing. Formerly, the body was much more covered with these markings than at present, one side often being completely blackened; and, to a certain extent, it would have been possible to designate individuals by the copy of the pattern. . . . At present, letters are frequently inscribed; and I remarked in some instances, the name of the individual.

Paris

John D. Paris, the first missionary among the natives of Kau, a district in the southern end of the island of Hawaii (1841), was lifted out of his landing boat by "a great, strong native Samson, whose entire dress was a malo and who was tattooed from head to foot" (32, p. 13). At Paris' first native meal, the two men who came in bearing a baked pig were also tattooed "from head to foot" (32, p. 14).

Arning

Eduard Arning, who was in the Hawaiian Islands from 1883 to 1886, and at that time formed a collection for the Berlin Ethnological Museum, says (7, p. 9) that the only Hawaiian he saw tattooed was a man named Hina, who was between 60 and 70 years old. Hina, he reports, had four groups of crescents on his breast, each consisting of a pair of upright crescents back-to-back. They were so placed that one pair stood over each nipple and another pair above each of the first pairs. Arning mentions that Hina was a seaman, hence the design may not be Hawaiian.

Krämer

Augustin Krämer, visiting Hawaii in 1899, met on the island of Kauai an elderly native who had the name of his deceased wife, Kaulaka, tattooed obliquely downward from the right shoulder to the breast bone. A row of about seven birds extended obliquely from the breast bone to the left shoulder. The native said these were *koa'e* (tropic) birds. (See figure 6, *a*.) Krämer remarks (28, p. 92) that the form of the bird was "quite similar to the sea-swallow design (*gogo*)" in the tattooing of the Samoans. As drawn by Krämer (28) (fig. 6, *a*), the figures are not M-shaped, but T-shaped, the cross-bar of the T, drooping. In addition, this native had tattooed on his arm the design shown in figure 6, *b*.

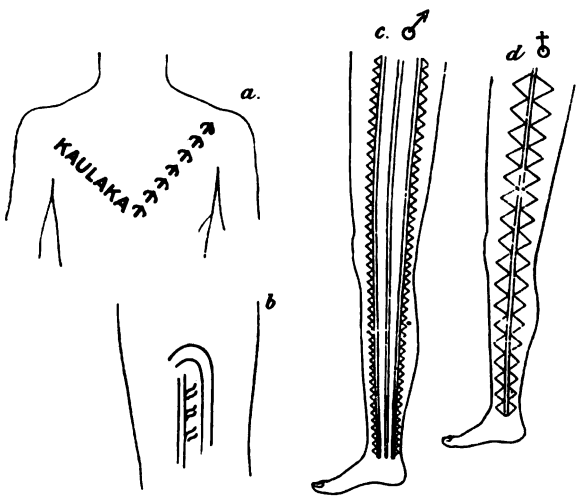

Figure 6.—Hawaiian tattoo recorded by Krämer: **a**, **b**, on breast and arm of a man of Kauai; **c**, **d**, Kauai leg tattooing.

Krämer also saw an old man from Hawaii, who had the lines shown in figure 10, *e*, *f*. The native designated these lines "alanui o Kamehameha" (road of Kamehameha). These last two designs were inadvertently omitted from his book, "Hawaii, Ostmikronesien und Samoa," but Krämer sent them to me in 1939, saying that the man was a leper on Molokai, where he also saw several women with rings tattooed on their fingers, and stars on their hands.

Mr. W. E. H. Deverill of Kauai told Krämer (28, p. 92), that "of old on Kauai the men tattooed themselves on the outside of the legs

with long stripes, likewise the women," and Krämer gives the two illustrations shown in figure 6, *c* and *d*, as examples. These illustrations, perhaps copies of originals made by Deverill, show the tattooing on the inside, not the outside, of the leg.

NATIVE ACCOUNTS

In Fornander's "Hawaiian Antiquities," a tradition recorded by a native (*22*, vol. 4, p. 156) attributes the introduction of tattooing to Olopana and his company, who voyaged back and forth to Tahiti about *27* generations before 1900: "Upon the arrival of Olopana and his company, the people of Hawaii saw that their hands and arms were tatued. The people became so infatuated with the idea that they too had their arms and hands tatued. It is said that this was the first time that tatuing was introduced into these islands."

Mary Kawena Pukui, who searched through newspapers in the Hawaiian language for references to tattooing, found a number of items in the writings of S. M. Kamakau. He claims that Kahekili, king of Maui in the time of Captain Cook, was tattooed black on the right side of his body from head to foot ("Ka Moolelo Hawaii," *Ke Au Okoa,* March 31, 1870). We have seen from the observations of Samwell, who was with Captain Cook, that this was not his distinguishing mark. However, the thunder god, Kahekili, was supposed to have the right side of his body black from head to foot, according to Kamakau, who writes: ". . . that was always the mark of Kahekili [the thunder god] from ancient times . . . so that his descendants in the world would recognize him. . . . That is why the chief of Maui, Kahekili, was tattooed black from head to foot on the right side, and his chiefs and members of his household were also tattooed with the *pahupahu* (half-way) design . . ."

Lahilahi Webb, of the Bishop Museum staff, tells me that a certain group of chiefs on Maui were known as the "blackened chiefs" (*na paele kulani*), because of their tattooing.

A writer in the newspaper, *Ke Au Hou* (Nov. 8, 1911), in speaking of the cruelty of the Oahu chief, Kahahana, says that when he saw a man or woman with "a pretty design tattooed on the hands, he had them cut off; also with the head of a man or woman . . . When a woman's feet were tattooed, double lines or a pandanus design, the foot was cut off."

In figure 7 are shown tattoo designs seen by Mary Pukui or her mother, Paahana Wiggin, upon the hands of old people in the Kau and Puna districts on the island of Hawaii. The pattern in figure 7, *b* was tattooed on the hand of Mrs. Pukui's grandmother. The practice of tattooing was discontinued in the part of Hawaii where they lived before Mrs. Wiggin was born. C. Montague Cooke, Jr. remembers that a star was tattooed on the back of one hand of his Hawaiian nurse, Kaahaaina Naihe.

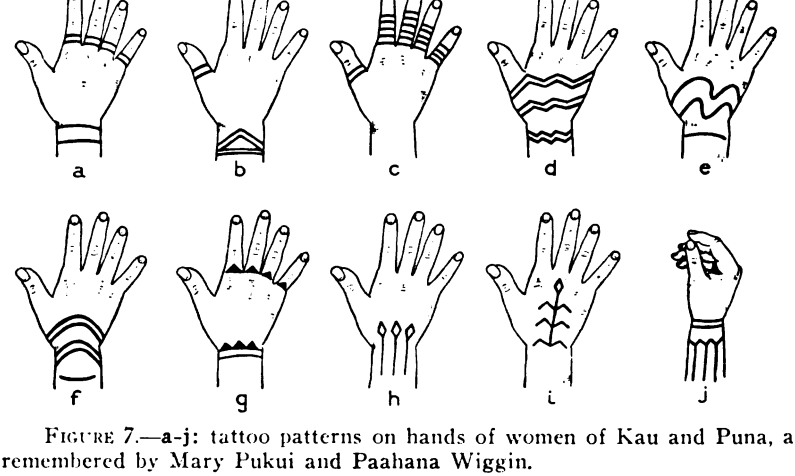

FIGURE 7.—**a-j**: tattoo patterns on hands of women of Kau and Puna, as remembered by Mary Pukui and Paahana Wiggin.

About 1923, Lorrin A. Thurston mentioned to me that he had seen women tattooed with a row of dots around the ankle, as a charm against sharks. Back of this practice was the story about a woman whose ankle was bitten by a shark, which was her guardian god (*aumakua*). Once, by mistake, he seized her ankle while she was swimming. When she cried out his name, he let go, saying "I will not make that mistake again, for I will see the marks on your ankle."

TATTOOED MUMMIES

The term mummy may be somewhat misleading as applied to the dessicated bodies found in dry burial caves. On several of the specimens which I examined, it was possible to see that no incision had been made in the abdomen or elsewhere for the purposes of preparing the body for mummification. The preservation of the skin was due simply to the dryness of the cave. However, I shall speak of portions of

bodies on which the skin has remained in a fair state of preservation as mummified.

A tattooed, mummified arm removed from a cave on Hawaii by a forest ranger in 1935 was the first specimen to come to my attention. When, in 1939, we were able to examine the specimen, Gordon T. Bowles was of the opinion that it had been the arm of a female not over 20 years of age. The tattooing pattern is reproduced in figures 8 and 10, *a*.

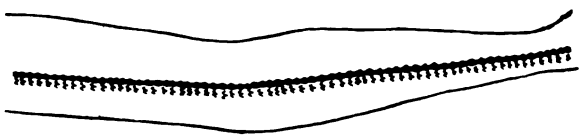

FIGURE 8.—Tattooing pattern on mummified arm.

Through the cooperation of Ronald von Holt, manager and one of the owners of Kahua Ranch in the district of Kohala, island of Hawaii, on whose lands the cave of the mummified arm is located, I was able to visit the site and to search several other burial caves for further examples of tattooing. In this exploration, I was assisted by Keith K. Jones, then a student of anthropology at the University of Hawaii. The cave from which the arm was procured, which we named Mummy Cave, is a lava tube in Honokoa gulch. Mummy Cave had been visited by William Wagner, of Parker Ranch, as early as 1904, and Mr. von Holt had entered it prior to 1935. Several mummies near the mouth of the cave were seen by both these men, but because of poor light they saw no tattooing. When we studied it in 1939, it had been visited by looters shortly prior to our arrival. It was no longer possible to locate the mummy from which the arm was taken, but another small group of burials in the cave contained the remains of one or two mummies. The intact skin of a torso and a head showed no trace of tattooing, and such skin as remained on a leg and an arm revealed none. At a third group of burials, we saw a leg and torso, the skin well preserved but without trace of tattooing. The tapa, cordage, and gourd fragments found revealed that the cave was used in pre-European times, but the presence of nails and cloth showed that it was also used into the early part of the nineteenth century.

In a remote part of another anciently used burial cave, first investigated by J. S. Emerson on January 1, 1888, and known by the name

of Kanupa[3], we came upon a much disordered female mummy which had been laid out in an extended position and wrapped in a strong, brown tapa which had a fine-check watermark. Our flashlights revealed tattooing over the lower legs (figs. 9; 10, *b-d*). A right hand and forearm and a left hand and arm, which I was able later to identify as belonging to this mummy, showed clear traces of tattooing on both

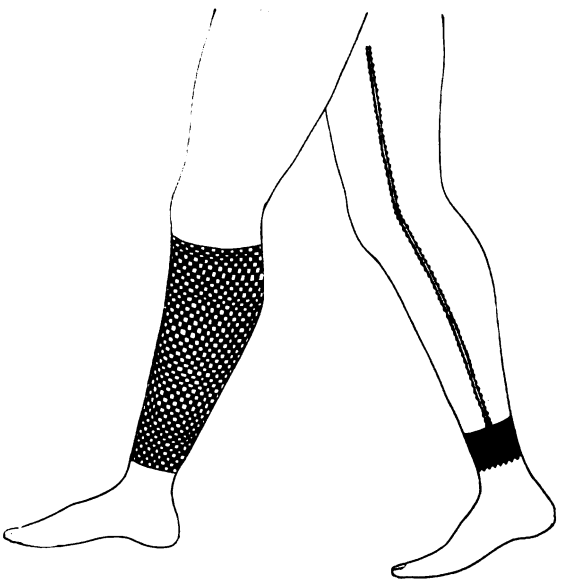

FIGURE 9.—Leg tattooing on female mummy: band of blue black around right leg is 4.2 cm. wide and starts 2 cm. above ankle bone; stripe 10 mm. wide, distance between teeth of dentated border averages 5.2 mm., the length of each being 5 mm.; squares of check pattern on left leg average 6 to 8 mm. (Specimens 1378 and 1379, Bishop Museum.)

hands. No tattooing was observable on the intact skin of the abdomen, breast, or right shoulder of the mummy, or on the little skin remaining on the upper right arm. Most of the skin remained on the right forearm and hand, but only the index finger was tattooed. Deterioration of the upper part of the left arm made it impossible to determine whether it had been tattooed, but the skin remaining on the back of the left forearm and in the region of the wrist was not tattooed. All fingers

[3] Our expedition of 1939 made detailed plans of Mummy and Kanupa Caves, as well as of Forbes Cave in Honokoa gulch. From Forbes Cave, Judge David Forbes, William Wagner, and F. A. Haenisch removed carved bowls and images, in 1904. Samples of each kind of tapa (77 in Kanupa Cave; 37 in Mummy Cave; 26 in Forbes Cave) were collected and are now mounted and filed in Bishop Museum.

of the left hand were tattooed (fig. 11), but not the back or palm of the hand. The head of the mummy was missing, unless it was the partly mummified head of a very young female which lay in a pile of about 30 burials at this spot. The majority of these were flexed bundle burials, but among them were some bundles of long bones and skulls. There were also several extended burials each of which had been laid out on a thin, roughly hewn, transversely curved plank. More or less skin remained on several other limbs and torsos but only one arm, that of an adult male, showed tattooing (fig. 12).

In another branch of Kanupa Cave were about 40 burials, many of them bundles of long bones and skulls. Two were extended burials on curved planks. There was no indication that this part of the cave had been used in historic times, and we found no mummies in this branch. A skull, on which the skin was quite well preserved, had no tattooing.

As a result of our investigation of Mummy and Kanupa Caves, I can say that tattooing was not universally practiced among the families who used them.

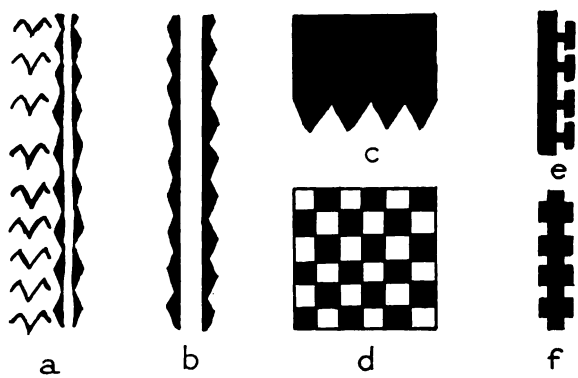

FIGURE 10.—Hawaiian tattooing patterns: **a**, along length of inner side of a mummified arm of a young female, width 14 mm.; **b-d**, on legs of female mummy shown in figure 9; **e, f**, on outer part of left arm of an old man at the leper settlement, Molokai, originally from island of Hawaii.

TATTOOING MOTIFS ON MUMMIES

The right arm of the young female found in Mummy Cave has a stripe consisting of a double line of small, flat triangles, base inward, which runs from the middle of the inside of the wrist up the inside of the forearm and continues along the upper arm to within several

inches of the armpit. A line of birds parallels this stripe (figs. 8; 10, *a*). As in most of the other examples of tattooing, the color of the markings is blue black.

The legs of the female mummy in Kanupa Cave are asymmetrically tattooed, as is strikingly illustrated by figure 9. The left leg from just above the ankle to just below the knee is completely encircled by a fine-check pattern. The right leg has a solid blue-black band, 1.8 inches wide, less than an inch above the ankle. This is dentated on the lower border. Along the middle of the inside of the leg, extending all the way up the leg from the black band to within several inches of the groin, runs a stripe consisting of a double line of minute triangles, bases inward, points outward, sides merging one into the other. (The patterns are illustrated in detail in figure 10, *b-d*).

Each hand of this mummy was tattooed. On the left hand, a solid black band covers the back of the little finger over the length of the first phalange; a double line of triangles, bases inward, runs the length

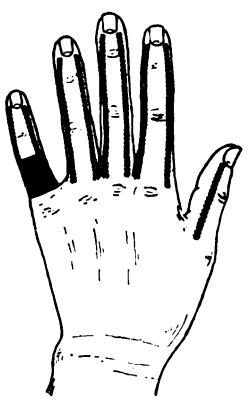

FIGURE 11.—Tattooing on left hand of female mummy: black band on phalange of little finger, covering back only, is jet black in color, whereas stripes vary from greenish blue to blue black. (Specimen 1379.)

of each side of each finger and the thumb. (See figure 11.) The right hand has only the index finger tattooed. The poor state of its preservation makes it possible to say only that a band, narrower than on the little finger of the left hand, similarly ornaments the index finger and that from this band at least five lines ran the length of the finger. I believe that these lines were stripes like those on the left hand, and that an additional stripe ran down the middle of the back of the finger.

The tattooing on the forearm of a male is illustrated in figure 12. As the skin of the arm was imperfectly preserved, I reconstructed the pattern interrupted by missing, wrinkled, and overlapping skin. Double lines formed of small triangles, bases inward, like those in the double line tattooing of the other specimens, ran from the wrist to at least the bend of the arm. They probably continued up the missing skin of the forearm. Certainly three, and in all probability four, of these stripes marked the arm from the middle of the inside to the radial side. A pair of stripes along the side of the arm, interrupted at several inch intervals by solid blue-black squares, paralleled the rows of triangles. Four of these squares could be seen, and they probably reappeared at the same distance apart along the full length of the arm.

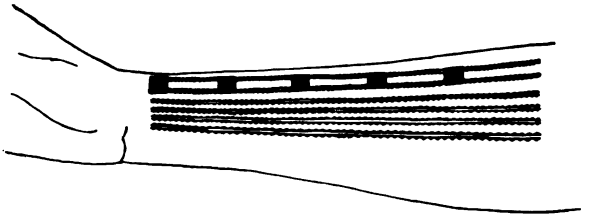

FIGURE 12.—Partially reconstructed tattooing on right arm of male mummy: stripes 5 mm. wide, the space between them at the wrist 2 mm.; twice this space intervenes between the four stripes and the pair of stripes containing the squares, which measure 12 to 14 mm. across. (Specimen 1379a.)

DISCUSSION OF HAWAIIAN TATTOOING

While most of the tattooing among the early Hawaiians was purely ornamental and was available to most of those who wanted such decoration, it was also used to brand slaves as a form of punishment, and as a sign of mourning. In later years names of loved ones were tattooed on the arms and breast.

David Malo, the most reliable native Hawaiian authority (29, p. 99), speaks of slaves (*kauwa*) who were tattooed on the forehead as *kauwa lae-puni* (slaves with bound foreheads) and *kauwa kikoni* (pricked slaves). In notations on Malo's writings, N. B. Emerson says he was informed that *kauwa* were tattooed with a round spot in the middle of the forehead; a curved line arched over the root of the nose; or two curved lines, one on each side of the face so as to include the eyes as if they were in bracket marks (29, p. 101). A Hawaiian told Emerson that he knew a man at Kipahulu, Maui, who had a small,

round, tattooed spot as large as the tip of a finger in the center of his forehead (29, p. 100).

An instance of tattooing as a mode of punishment is contained in Kamakau's writings (*Ke Au Okoa,* Sept. 29, 1870). When Kamalalawalu's warriors from Maui landed in Kohala to fight, they caught Kanaloa-kua-ana, grandson of Keawe-a-Umi, and the "king" of Hawaii, and besides cruelly beating him, tattooed him all over, turning up his eyelids and dotting them with the tattoo needle.

The high priest of Oahu, Kaopulupulu, says Kamakau (*Kuokoa,* March 23, 1867), had his knees and those of all his relatives and members of his household tattooed, in protest against Kahahana, the high chief of Oahu, who turned a deaf ear to his warnings. In Hawaiian, the word for knee, *kuli,* is the same as that for deafness.

Kamakau says (*Ke Au Okoa,* Sept. 29, 1870) that as a mark of mourning, "Some people fasted and refused to eat, some had parts of the hair cut off, some burned the skin with fire and others tattooed on the skin anywhere on the body."

Kamakau writes in the Hawaiian newspaper, *Kuokoa* (April 4, 1868), that: "When the chiefs and commoners heard that Kaumualii was dead, they wailed for him and blackened one thigh with tattooing . . . and round circles were marked on the faces of the men, women, and children."

Captain King mentions the tattooing of the tip of the tongue and has something to say concerning the purpose of this and other forms of tattooing (14, vol. 3, p. 135):

> They have a singular custom among them, the meaning of which we could never learn, that of tattowing the tip of the tongue of the females. From some information we received, relative to the custom of tattowing, we were inclined to think that it is frequently intended as a sign of mourning on the death of a chief, or any other calamitous event. For we were often told that such a particular mark was in memory of such a chief, and so of the rest. It may be here, too, observed that the lower class are often tattowed with a mark, that distinguishes them as the property of the several chiefs to whom they belong.

The marking of the tip of the tongue of a woman was witnessed by William Ellis, the missionary, when Queen Kamamalu was so tattooed as a token of mourning for her mother-in-law (19, pp. 169-170). Kotzebue (1817) says (27, vol. 2, p. 174) that "some men had their tongues tattooed." Ellis found this custom prevailing principally among the chiefs and notes (19, p. 166) that the tattoo consisted of "a black spot or line on the tongue, in the same manner as other parts

of their bodies are tataued." In reply to his expression of regret that such a painful, useless custom should be followed, Queen Kamamalu answered (19, p. 170): "He eha nui no, he nui roa ra kuu aroha!" (Pain, great indeed, but greater my affection!) Others said, "Aore roa ia e naro!" (That will never disappear!)

The name of Kamehameha and the date of his death were tattooed on the arm of a chief of Hawaii whose portrait appears in Freycinet's atlas (23, pl. 82, no. 2). Krämer (28) saw an old man of Kauai with the name of his deceased wife tattooed across his breast (see fig. 6, *a*).

The tattooing of names was not always in memory of a deceased person. Mrs. Esther Kelle, of Honolulu, told me that when she was an infant, the Hawaiian version of her first name, Ekekela, was tattooed on the inner side of her mother's arm.

Extent of and Variations in Tattooing

Many of the ancient Hawaiians, though not the majority, were tattooed. A few were heavily tattooed from head to foot, whereas a small amount of tattooing was usual; and the women were more sparsely tattooed than the men. Tattooing was not confined to those of high rank, and not all persons of high rank had their bodies embellished in this way. Apparently, Kamehameha the first was not tattooed at all. Warriors and, no doubt, athletic champions and dandies were inclined to mark their bodies with tattoo.

The arms and legs were favored areas for the tattoo designs, although the breast, face, and hands came in for almost equal attention. The back and the loins seem to have been unmarked. According to Roth (35, p. 200), Brigham says that sometimes one leg and the opposite arm were tattooed. The tattooing of half of the face and half of the chest was a well established practice.

Ellis, who was with Captain Cook, stressed the fact that "many (particularly some of the natives of Mow'whee), have one half the body from head to foot, marked . . ." (18, p. 152); and Portlock (1786) commented (34, p. 77) that: "Many of the warriors [of Oahu] were tattooed in a manner totally different from any I ever took notice of amongst the Sandwich Islands; their faces were tattooed so as to appear quite black, besides [a] great part of the body being tattooed in a variety of forms." The tattooing of half the body from head to foot of members of the household of Kahekili, high chief of Maui, Kamakau designated by the term *pahupahu*.

The Kauai tattooing illustrated by Krämer (fig. 6, *c, d*), the island of Hawaii tattooing shown by Heddington (24), and tattooed mummies from caves on Hawaii, reveal some basic uniformity within the group. Cook saw natives of Niihau with "figures of men badly imitated" tattooed upon their breast (14, vol. 2, p. 216), and Choris, who did not visit Niihau or Kauai, depicts figures of men crudely done (fig. 3). These human figures are in the style of petroglyphs of human form found throughout the islands.

The data are too scant to allow me to characterize the differences which may have existed in tattooing in the various islands of the Hawaiian group, beyond attributing a prevalence of the dark, half-body tattooing to Maui. However, family styles and the frequent use of certain motifs in one island or district certainly must have existed.

Motifs

The commonest motifs were geometric designs, consisting of straight, wavy, dentated, zigzag, or crossing parallel or diagonal lines; series of triangles; panels of checkerboard design; and stripes of pairs of lines, usually dentated outward. The latter were especially common. Circles were rare, spirals absent. Pictographs of animals, birds, and such objects as fans and coconut trees, were fairly common.

Most of the geometric motifs appear in tapa designs and are carved on Hawaiian tapa beaters or on the bamboo tapa stamps. All the motifs in figure 2, which are recorded by Webber, occur as watermark patterns carved on the faces of beaters in Bishop Museum: *a* is on beater 241 (9, fig. 34) and is called *puili* (twining); *b*, on beater 191 (9, fig. 35), called *ko'eau* (wiggling worms); *c*, on beater 224 (9, fig. 38), called *lei hala* (pandanus wreath); *d*, on beater 9384 (9, pl. 3), modified, called *kapua'i koloa* (duck foot); *e*, on beater 187 (9, fig. 35), modified, and on 2865 and B7018. The motif in figure 2, *c*, but lacking the parallel lines, is on a tapa stamp in Bishop Museum (9, fig. 67, no. 3). The motif in figure 10, *b* is on another stamp in Bishop Museum (9, pl. 9, no. 35). Triangles are usually called *niho mano* (shark teeth) (9, p. 83). The long line of small birds (fig. 10, *a*) on the mummified arm I have found duplicated on only one piece of tapa, an unnumbered specimen in Bishop Museum. It was stamped around the border with three rows of these birds printed in black and placed

between heavy double red lines. The checkerboard pattern (fig. 10, *d*) is seen on many tapas; one, a malo in Bishop Museum (no. 7777).

Some geometric patterns were used in the ornamentation of stained and fire-etched gourds. The motif in figure 2, *c* is stained on a gourd container (C8728) in Bishop Museum. That in figure 2, *e*, on a stained water gourd in the United States National Museum (no. 3570) and on a pyrograved water gourd in the Peabody Museum at Cambridge (no. 312). The motif in figure 2, *d* is on the bottom of a water gourd (17, pl. 27, *C;* specimen 1254 in Peabody Museum, Cambridge).

Most of the pictograph motifs, such as the human figures and the goats, appear as petroglyphs (20, pl. 9, *I;* figs. 16, 17, 19). The musket and the triangular human figure are etched on a little gourd whistle in Bishop Museum (20, fig. 20).

As much decorated ancient tapa and many old, ornamented gourds (17) have been preserved and hundreds of petroglyphs recorded, an excellent idea of the range and content of Hawaiian decorative design is possible. Although none of the star tattooing patterns mentioned by Cook have been reproduced, we may judge what they were like from the star patterns on tapa (9, pl. 8, 6th from left; plate 9, nos. 2, 4, 5, 24) and on gourds (17, pl. 28, *A* and *E*). When there is doubt as to whether a tattoo motif is pre-European or post-European, the question can be conclusively settled if the design can be found on any decorated object collected from Hawaii during Cook's voyage or during one of the other very early voyages.

The decoration of gourds, other than the tiny gourd whistles, with pyrogravures is not usual. Bishop Museum has no gourd drums, trunks, bottles, or containers decorated by pyrography, but Peabody Museum at Cambridge has a remarkable set of gourds, a drum, a water bottle, a cup, and a whistle, all decorated with pyrogravures. The set was transferred to the museum in 1867 by the Massachusetts Historical Society. The hula drum and the water bottle are ornamented with geometric patterns consisting of straight, wavy, and dotted lines; squares; lozenges; superimposed triangles; lines of adjacent triangles; chevrons; black bands; pairs of triangles placed point to point; parallel arches; concentric circles; and panels of dots and parallel lines. I suspect that the artist was a tattooer, or had at least employed patterns common to tattooing.

The painting, in solid black, of six lizard figures on the face of an ancient Hawaiian image in Bishop Museum (no. 132) probably repre-

sents face tattooing. The image has a lizard over each brow, a pair over the open mouth, and another pair below the mouth. The lizards, which face inward, are realistic and large enough so that a pair occupies the width of the face. This image was found in a cave at Hauula, Oahu, in 1852, and was figured in the Bishop Museum handbook (10, fig. 32).

Application of Motifs

The face was tattooed with a sprinkling of pictographs, with lines of dots framing the visage, or with a solid pattern covering one-half the face. Very rarely, the lips were tattooed. The tip of the tongue was marked with a dot or a line, simply as a token of mourning. The chest displayed pictographs, often figures repeated and arranged in a curved line patterning a necklace, or panels of geometric designs over one-half the body. The arms and legs bore stripes, usually a pair of outwardly dentated lines, running either on the outside or the inside of the limb. The legs and arms also had bands of straight or wavy lines, or a solid, wide band, passing completely around the limb, or the arms might have a few pictographs. Solid bands were likely to encompass the wrist or the ankle and a line of dots or triangles might encircle the ankle. The hands, especially of the women, were tattooed over the back and along the back of the fingers. A pair of parallel lines over the back of the hand, straight across, or in two waves or several zigzags, have been seen on women of the southern part of Hawaii. A small triangle might be set at the base of each of the long fingers, and a row of triangles at the wrist. Alexander remarks (1, p. 86) that "the women sometimes had the back of the hand marked so as to resemble an open-worked glove."

Terminology and Technique

The Hawaiian term for tattoo markings is the word *uhi,* which may also connote a veil or covering. The Andrews-Parker dictionary defines *uhi* as the "mark left by dye on the body or on tapa" (3, p. 592). The application of these markings is *kakau,* which has come to mean the art of writing. *Kakau i ka uhi* means to tattoo (literally, to put down, or strike on, the design).

The Hawaiian term for the tattooing instrument is *moli.* It was also called *uhi moli, uhi* being the term for tattoo designs. *Moli* also

was the name of a bird which lived in the cliffs of the mountains and ranged over the sea for its food. Possibly its wing bone was once used for the blade of the puncturing instrument, giving rise to the term *moli*. In the Andrews-Parker dictionary (3, p. 438), the following example of the use of *moli* is given: "Hahau iho la ka moli, pahuhu a'e la ke koko (the *moli* is struck on, the blood flows out)." From this it appears possible that *hahau* might be the name of the tapping mallet, as it is the term for the action of striking the handle of the puncturing instrument with the rod or mallet.

Surgeon Ellis reports (18, p. 152): "We never saw the operation of tattowing performed, nor could we procure a sight of the instruments used upon this occasion, but it is likely they are much the same as those of the Friendly and Society Islands."

Among the Hawaiian articles illustrated by Choris, is a tattooing instrument and its tapping "baton" (13, pl. 11, nos. 7, 8; pl. 14). Many of his drawings, however, are imperfect and misleading representations, hence none can be accepted without corroboration. The "baton" (tapping mallet) shown by Choris is a plain, thin, rough rod, half again as long as the puncturing instrument. Doubt is thrown on the accuracy of his tattooing instrument because it differs fundamentally from the one preserved in the Peabody Museum at Salem (fig. 13), and because its shape, which is like a three-pronged European fork, does not permit of its being used with a tapping mallet. Choris seems to have depicted an instrument for marking the skin in lines, prior to tattooing, for it has the long prongs of the markers used in laying down lines on tapa.

If, however, the ends of the prongs were bent over like the claws of a bird, it would appear to be like that described by Arago (5, p. 147), who visited the islands two to three years later. Arago described it as

> . . . the claw of a small bird, of which the points are drawn close together, by a thread made from the banana tree. This claw is fixed at the end of a small rod, but at right angles, so that in giving it slight blows, the claws pierce the skin by degrees. At the Carolines, the mode of tattooing is the same, though the instrument differs: there it consists of a crab's claw, the points of which are always equidistant. . . .

I cannot find that the crab's claw is used in the Carolines, and I do not see how either a crab's claw or that of a bird could be used in a tattooing instrument. Perhaps Arago's bird's claw was also a marking-

out instrument. He gives another description (5, p. 76) of a tattooing instrument which I believe to be much more accurate:

> They fix the bone of some bird to a stick; slit the bone in the middle, so as to give it two or three points, which they dip in a black colour . . . they apply these points to the part to be tattooed, and then they strike gently on the stick to which the bone is attached, with a wand, two feet in length.

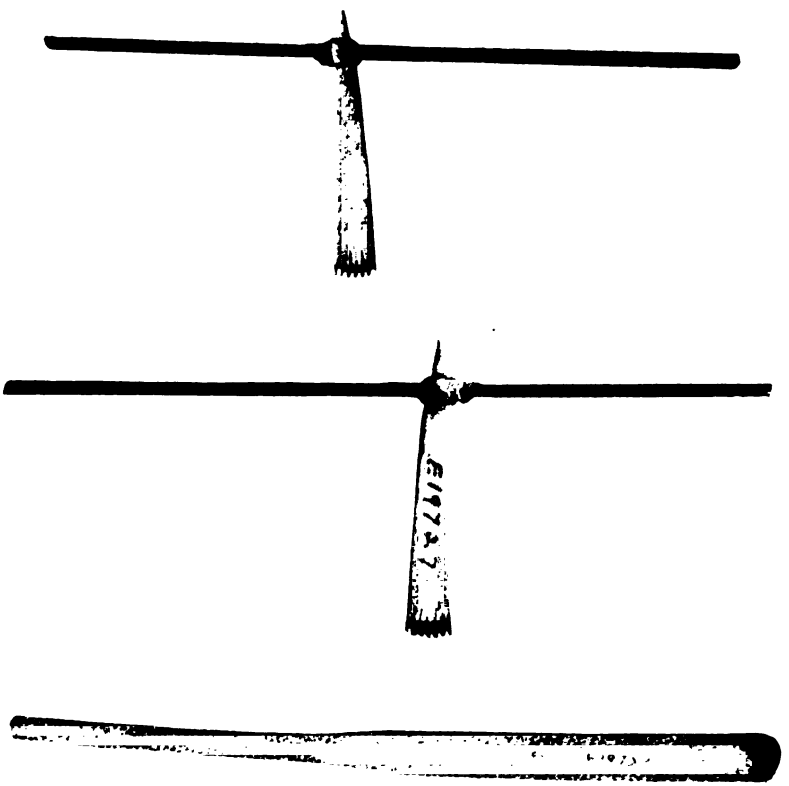

FIGURE 13.—Hawaiian tattooing instruments in Peabody Museum: tapping mallet (E.19728) of reddish-brown wood measures 7.9 inches in length; bone puncturing instrument (E.19727) 1.7 inches long, lashed to coconut-leaflet midrib 4.3 inches.

In a later book Arago gives the length of the little stick to which the bone was attached as "8 or 10 inches" (6, vol. 2, p. 75).

The Reverend William Ellis (19, p. 170) gives another version of a Hawaiian tattooing instrument, in describing the one he saw used

in tattooing the tongue of Kamamalu: "He first immersed the face of the instrument, which was a quarter of an inch wide, and set with a number of fish-bones, into the colouring matter, placed it on her tongue, and giving it a quick and smart stroke with a small rod in his right hand, punctured the skin, and injected the dye at the same time." This instrument, however, may have been a special one for the express purpose of tattooing the tongue.

It has been a great puzzle to members of the Bishop Museum staff that no Hawaiian tattooing implement has ever come into the collection of the museum or been located in any private collection in the islands. The early substitution of steel needles for a bone puncturing instrument partly explains this, but the Hawaiian instrument must have been simpler and less attractive to early collectors than the Tahitian, Marquesan, or Samoan implements, which are to be seen in many museums. The Hawaiian instrument which I came across in the Peabody Museum at Salem has a blade very simply lashed to a coconut leaflet midrib, nearer one end than the other. In the other island groups of Polynesia, the puncturing edge of the blade is at right angles to the handle, like the cutting edge of an adz; whereas the Hawaiian instrument is unique, in that the puncturing edge is parallel to the handle, as in an ax. The puncturing blade is a thin piece of white bone, probably bird bone, which measures 4.4 cm. long and 6.5 mm. wide at the lower end. The upper end tapers to a point. Seven fine teeth are cut in the lower edge. As shown in figure 13, the blade is hafted at a slight angle to a coconut leaflet midrib 4.3 inches long. The lashing is of untwisted white fibers wrapped in a figure-of-eight and fastened to one side. The tapping mallet (fig. 13) is 7.9 inches long, round in cross section throughout its length, and 0.6 inches in diameter over its distal, thicker part. The wood is heavy and reddish brown in color.

The set of tattooing tools in the Peabody Museum, Salem, was sent to his father-in-law in New England by Asa Thurston, a member of the first band of American missionaries to Hawaii, in 1820. It remained in a cabinet of Hawaiian specimens kept in the family home until 1925.

Eduard Arning, in the Hawaiian Islands between 1883 and 1886, collected several tattooing instruments which were in the Berlin Ethnological Museum. His description of them (7, p. 9) follows:

> For the tattooing there is a little stick (no. 1,416: 22½ cm. long, 1 cm. in diameter), which serves as a mallet. The puncturing instruments were struck

by it. One of the collected puncturing instruments (1,416a) consists of a small, thin, wooden stick, 16½ cm. long, on which a tapering splinter of chicken bone is fastened. The bone is 2¾ cm. long and 3 mm. broad at the base. Another (1,416b) consists of a small, thin, wooden stick 16½ cm. long, to which, likewise, a splinter of chicken bone is fastened, which, however, is 3 cm. long and 6 mm. wide at the base, and possesses three points of different length arranged in an oblique order.

Arning's puncturing blades are smaller than the one collected by Asa Thurston and have fewer teeth. He fails to mention how they were hafted to their handles, but presumably they were fastened in the same manner as the Salem instrument.

As to the procedure in tattooing, we have the remarks of Eveleth (1820-1829) concerning the laying out of the designs (21, p. 43): "The figure to be impressed is first slightly marked upon the flesh, in black lines; the skin upon these lines is then pricked with a sharply pointed instrument, which has previously been dipped in a black fluid. . . . This operation is always performed with great exactness and regularity, sometimes covering a considerable part of the body, and at others one or two limbs."

Arago (1819) is the only other writer to mention the preliminary marking (6, vol. 2, p. 74). He makes the following remarks:

> It [the tattooing instrument] is applied to the part to be tattooed, which is already designed in red or black, and all the contours are followed in striking light and rapid blows with another rod, so that the points, in entering the skin, cause a slight irritation without pain and a bloating which does not disappear for several hours. After that, they rub the designed part for a rather long time with a large leaf, acrid and full of sap, and the design which was feebly colored red at the start becomes a deep blue, harmonizing perfectly with the copper color of the Sandwich Islanders.

According to Brigham, the pigment used in tattooing was usually kukui-nut (*Aleurites moluccana*) or sugar-cane charcoal (Roth, 35, p. 200). Arago says (5, p. 76) that the coloring matter was "ground with the milk of the cocoa-nut and juice of the sugar cane." According to the Andrews-Parker dictionary (3, p. 592) one meaning of the word *uhi* is "gall of a small shell fish which was used in making a pigment for dyeing tapa and tattooing the skin." Hillebrand, the botanist, claims (25, p. 400) that the acrid juice contained in the fleshy covering of the kukui nut was employed as a black dye which was also used in tattooing. Degener (15, p. 197) reiterates Hillebrand's statement, adding that a black dye "was produced from the soot that collected on smooth clean pebbles under which *kukui* nuts had been burned." Degener maintains that one of the dyes used in tattooing was manu-

factured "from the juice of the *maaulaili* [*mau'u'ula'ili*] mixed with that of the purple fruit of the Hawaiian pokeberry (*Phytolacca brachystachys* Moq.)", but he believes it inferior to the charcoal from burned kukui nuts.

Tattooers

The fact that we can find nothing about the tattooers in Hawaii, except that they were not so expert as those of the Society Islands (Tyerman, 38, vol. 1, p. 389), indicates that they were not a special class or group of experts and that their profession was not highly honored. Trevenen, one of Cook's officers, remarked (37), "I do not recollect to have seen any man whose business it was to tattow others."

Temporary Tattooing

F. D. Bennett, who visited the islands in 1834, is the first to report a novel method of temporary tattoo. He writes (8, pp. 212-213):

> A remarkable method of staining the skin is adopted by both sexes, and appears to be peculiar to these people. It consists of applying to the surface of the body the recent root of the plant *idiee* [Plumbago zeylanica] when a temporary irritation is produced on the skin, and the latter becomes stained a dark hue, similar to that produced by lunar caustic, and equally permanent. The taste of the native is chiefly shown in arranging on his skin portions of this root in the form of stars, crosses, circles, or other devices, which subsequently remain conspicuous for their blackness above the natural hue of the native complexion.

Andrews' Hawaiian dictionary of 1865 (2, p. 78), defines *ilie* [*ilie'e* or *hilie'e*] as "A kind of vine; with its roots scars are made in the skin in mourning for the dead or *kumakena*. The operation is called *kuni* [to burn]." Hillebrand, in his "Flora of the Hawaiian Islands," published in 1888, says (25, p. 286) that this plant was common in the lower plains and lava fields and that its acrid juice, considered poisonous, had been used for black tattooing.

Another plant used in blistering and staining the skin is the *mau'u'ula'ili, Sisyrinchium acre,* defined by Andrews (2, p. 363) as "a poisonous plant used to burn and scarify the skin." This plant belongs to the iris family and grows abundantly on the uplands of Hawaii. Hillebrand says (25, p. 437) that "the natives used the acrid juice to give a blue stain to their tattoo marks," and (25, p. 286) that it used to be employed, like *Plumbago zeylanica,* for "black tattooing."

Arning met a woman high on the slopes of Mauna Kea, on the island of Hawaii, who was tattooed with this plant. He says (7, p. 10)

that a piece of leaf an inch long was pressed on the skin, usually in three horizontal stripes. The dark-brown stripes made on the skin last several weeks.

Otto Degener has gathered more data about this use of the plant (15, p. 103):

> The *maaulaili* [*maʻuʻulaʻili*] was also used in painless tattooing, especially by women. The marks in this case lasted only for about a year. The leaves were split lengthwise and the torn surface laid upon the skin in the desired pattern. A tight bandage was then applied and within an hour a reddish brown mark appeared which could neither be washed nor rubbed off. The *hula* dancers for example, would tie the leaves against their wrists and ankles so as to form certain patterns. If these were later considered sufficiently ornamental, a permanent tattoo with the *moli* would be cut into the skin.
>
> In the early days travelers would often prove to their friends at home that they had visited the Crater of Kilauea by tattooing each side of their mouths with the *maaulaili*. As this plant was known to grow in the vicinity of the crater, such a mark would attest the truth of their story.

Branding

Missionary Ellis mentions (19, p. 170) that at times of mourning marks were burned on the skin

> . . . a large number of semicircles, disposed in different forms. . . . Having stripped the bark from a small branch of a tree, about an inch in diameter, they held it in the fire, till one end of the bark was perfectly ignited, and in this state applied it to the face or bosom, which instantly raised the skin, and after the blister had subsided, the scars remained a number of days.

Campbell, who was in Hawaii in 1809, says (11, p. 142) that during the funeral of the brother of the king, "many of them, particularly the women disfigured themselves by knocking out their front teeth, and branding their faces with red hot stones and the small end of calabashes, which they held burning to their faces, till a circular mark was produced."

What are evidently circular and semicircular face brandings on a portrait of Kamamalu, favorite queen of Liholiho, are depicted by Pellion (23, pl. 83).

Arago remarks (5, p. 76) that

> . . . the same superstition which deprives them of their teeth, also imposes on them the law of burning every part of their bodies with a red-hot iron of a circular shape, in such a manner, that on first seeing them these dark and livid spots have the appearance of so many scars. Some individuals have a great number on every part of their bodies, and are quite proud of showing them to strangers.

COMPARISONS

Those observers who had occasion to travel throughout Polynesia in the early days of exploration agree that Hawaiian tattooing was less frequently employed, less well executed, and the designs less regular and remarkable than in the other groups of islands. The tattooing artist was not so conspicuous a figure; the tattooing instruments were less elaborate. Everything points to the Hawaiians having neglected the art after their isolation. At the same time, the Hawaiians seem to have brought about a number of innovations, such as a novel method of hafting the puncturing blade, a variety of dyes, and a temporary tattooing by blistering and darkening the skin with acrid vegetable juices.

In the selection of motifs the Hawaiians employed the geometric patterns which appear on their tapas, in the water-mark patterns of the tapas, on the stained gourds and the gourds ornamented by pyrogravure, and on the fine mats. Many of the pictures of men, animals, and objects, which comprise the petroglyphs of Hawaii, also appeared tattooed on the body, arms, and faces of Hawaiians. In other words, the Hawaiians did not have decorative designs restricted to tattooing motifs.

While the simpler of the Hawaiian geometric patterns and realistic figures are common to at least several other areas in Polynesia and may be found in various places over the world, some of them, and the arrangement of others, are peculiar to Hawaii. The fan motif, for example, shows the unmistakable outlines of the fan used by Hawaiian chiefs, a form peculiar to the Hawaiian Islands. This design, then, was not handed down as a tattoo motif from the past, but was developed in Hawaii. Likewise, the parallel stripes formed of two lines of triangles, bases inward, a favorite tattoo pattern (fig. 10, *b*), is a Hawaiian combination. Three to four of these stripes cover one of the four faces of many Hawaiian tapa beaters. It is likely that the motif developed in the carving of these beaters and was later used in tattooing. Thus, many, if not all Hawaiian tattoo designs, are drawn from their contemporary decorative and pictorial art. This appears to be true, in large measure, of Marquesan, Maori, and Tahitian tattooing; that is to say, of marginal Polynesia in general, as contrasted with Samoa, Tonga, and Micronesia and Melanesia, or western Polynesia and the western Pacific, in general, where tattooing decorations constitute many patterns which seem to be primarily tattoo designs.

To say what group of Polynesians had tattooing most like that of the Hawaiians is difficult. Hawaiian tattooing falls in with the typical characteristics of tattooing in marginal Polynesia. I believe that the Hawaiians had so far departed from the use of tattooing brought from other areas as to have as a reminder of them little more than vague similarities. Most of the resemblances in design between Hawaiian and other tattooing are in simple motifs that could be abandoned and recreated again and again.

We can be sure the ancestors of the Hawaiians brought with them the idea of tattooing and the Oceanic technique of a tattooing comb mounted on a handle, dipped in dye, and struck with a little mallet. The Hawaiian terms used in tattooing fit in closer with the Tahitian than with those of any other Polynesians. The Hawaiian "kakau i ka uhi" (to tattoo) is *tatau* in Tahitian. *Uhi* in Tahitian is the name of the adzlike tattooing instrument. In Hawaii, the instrument has been altered and bears the term *moli,* the name of a bird from the wing bones of which the puncturing blades were probably frequently made. *Uhi* in Hawaiian has come to mean a tattoo pattern, or tattooing. There is thus some indication that the Hawaiian tradition of the introduction of tattooing by Olopana and his people, from Tahiti, points actually to the direction from which the Hawaiians brought their art.

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