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A PRELIMINARY

CATALOG

OF THE

BERNICE PAUahi BIS'

OF

OLYN IAN ETHNOLOGY AND NATU
HISTORY.

PARTS I.—II.

Kahilis, Feather Ornaments, Mats and Kapas.
Household Implements, Tools, Amusements,
War, Worship, Ornaments, Medicine, Fish-
eries and Canoes, Relics of Chiefs.

HONOLULU, HAWAIIAN ISLANDS.

1892.



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THE BERNICE PAUahi BISHOP MUSEUM is at present open free to the public on Fridays, from 9 A.M. until 12 M., and on Saturdays, from 2 until 5 P.M.

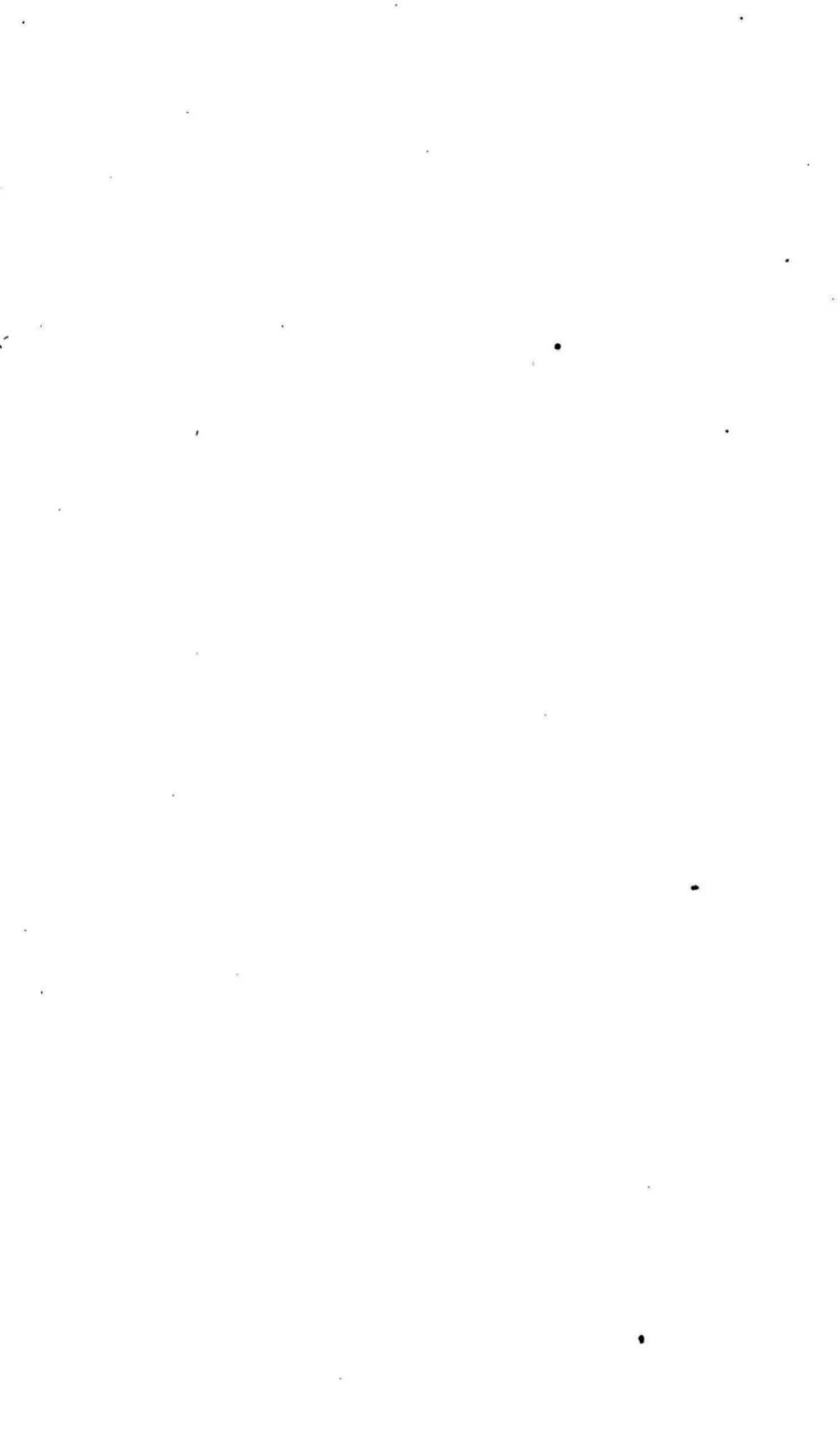
Wm. T. BRIGHAM, A.M., Curator.

J.A.



ABBREVIATIONS USED IN THIS CATALOGUE.

- QE. Queen Emma Collection.
- JSE. Joseph S. Emerson Collection
- C. Eric Craig Collection.
- MR. Main Room of the Museum.
- KR. Kahili Room of the Museum.
- PG. Picture Gallery.
- EH. Entrance Hall.
- D. Not on exhibition for want of space, or for other reasons.
- HG. Hawaiian Government Museum.



THE BERNICE PAUAHI BISHOP MUSEUM OF POLYNESIAN ETHNOLOGY AND NATURAL HISTORY

WAS founded in 1889 by Charles R. Bishop in memory of his wife, whose honored name it bears. The Museum is built of grey basalt, quarried in the neighborhood, and the interior finish is mainly in koa wood from Maui: it is essentially fireproof. It occupies a central position on the grounds of the Kamehameha Schools founded by Mrs. Bishop at Kapalama, a western suburb of Honolulu.

The nucleus of the collection within its walls was the store of kapas, mats, calabashes, kahilis, and other ornaments and relics belonging to Mrs. Bishop, and bequeathed to her as the last of the Kamehamehas. To this was added by bequest the treasures of Queen Emma; and by purchase the extensive collections of Mr. Joseph S. Emerson of the Government Survey; the stone implements of Mr. George H. Dole, late of Kauai; a very valuable collection made in New Guinea; and last, although perhaps most important in variety and value, a collection made by Mr. Eric Craig of Auckland, N. Z.

The Hawaiian Government has deposited in this Museum the collection formerly known as the Government Museum. Many other articles have been given to the Museum by friends; all these sources are mentioned in the pages of this catalogue.

Although so recently established, this Museum may already claim the first rank in certain departments, as kahilis, calabashes, kapas, mats, and Polynesian stone implements. It is hoped that eventually (when sufficient room can be provided) not only the Ethnology of Polynesia will be fully represented, but the Natural History as well, by authentically named specimens, so that the means may be provided for a study of the natural productions of

a large part of the Pacific Ocean and its Islands. At present the energies of the Museum are concentrated in securing a complete series of Hawaiian Natural History, Products, and Antiquities.

It has been thought desirable to issue the catalogue at the present time, although the collections are not yet fully classified and arranged, and are far from complete, that it may serve as a basis for future corrections and additions.

CATALOGUE.

Kahilis.—The use of feathers, whether for personal ornament or general decorative purposes, was very general among nations and tribes we are pleased to call uncivilized. Pizarro and the Conquistadores of Peru were astonished at the beauty of the feather canopies and plumes of the Inca Court. The Indians of North America, possessing less brilliant birds, yet made good use of the turkey, crow and eagle in their gorgeous war-dress, and the ancient sculptures of Central America have preserved to us through the centuries the form of feather canopies, plumes and even kahilis. In India and the East Indies the splendid fans and screens of peacock, pheasant and parrot feathers have long been celebrated by travelers. The Assyrian royal feather plumes were used much like the Hawaiian. In Papua or New Guinea the feathers of the Bird of Paradise and the cassowary are generally used for head ornaments, and the native Australian uses in a similar way the feathers of the Emu, Lyre-bird and others. Coming nearer in our own province we find the curious masks of Tahiti made of varied feathers, but no longer to be procured; the Samoan and Tongan feather currency and necklaces, and most important of all the Maori feather cloaks made of *Hihi* (*Pogonornis cincta*). Fly-flaps of feathers were common all through the Pacific, and in this Museum are several made of Emu feathers.

Nowhere in the world, however, has the use of feather ornament attained the refined magnificence seen in the Hawaiian Islands. It is not that the Hawaiian birds are more brightly plumed, for the Birds of Paradise, the Trogons and Humming-birds are far more

brilliant, and the avifauna of these Islands is limited and by no means remarkable for bright coloring. The feathers used by the ancient Hawaiians were :

- Mamo (*Drepanis pacifica*), Yellow and black.
- Oo (*Acrulocercus nobilis*), Yellow and black.
- Iwi (*Vestiaria coccinea*), Scarlet.
- Apapane (*Himatione sanguinea*), Crimson.
- Amakihi (*Drepanis flava*), Yellow.
- Ou (*Psittirostra psittacea*), Green.
- Koae (*Phaeton rubricauda*), Red.

In modern times peacock, parrot, mina, duck and barn-yard fowl have all contributed. Bird feathers on these Islands exceeded in value any other kind of property. Once a year the commoners paid a tax in feathers to the year-god [*Akua makahiki*], and feathers were also given as presents [*Palala*] to chiefs. The feathers were attached to slender fibres, as shown in Nos. 139, 140, Case 8, KR.

Feather hunting was a special vocation, and as most of the birds whose feathers were in demand are found inland and often high up in the mountains, much labor and patience was spent in catching them. Sometimes a net (No. 138, Case 8, KR.), or snare was used, but more frequently a bird-lime composed of the gum of the bread-fruit, or the viscid milk of the arboreal lobeliads, was smeared on the branches of trees the birds frequented; and it is said that the hunters sometimes transplanted strange trees to the midst of the forest to excite the birds' curiosity. To obtain the pair of tail feathers of the koae the hunters climbed the steep palis where these birds nest, and plucked the long feathers (see Nos. 18, 20, 23) while the bird was on the nest.

Kapus protected the birds to some extent, but the customs of the bird-hunters were a more complete protection, for although the oo was especially good eating, it was generally spared to renew at the next moulting the small axillary tufts of yellow feathers which were plucked, when those of less value about the tail were left untouched. It need hardly be mentioned that the often repeated statement that there are but two feathers to each bird is a popular delusion: the specimens in the collection of this Museum show plainly the mistake.

The arrangement of feathers on necklaces [*na lei*], on *kahilis*, on the capes and cloaks (*ahuula*, or when wholly of mamo, *alaneo*), on helmets [*na mahiole*], or on the wicker gods (as Kukailimoku, No.

3900, Case 17, MR.), was the principal occupation of noble women. Feathers of the leis were strung on a fibre of the olona [*Touchardia latifolia*], and the cloaks were made of a net of this same olona (Nos. 2840, 2841, Case 8, KR.) to which the feathers were sewn, as they were to the helmets and gods. In the large kahilis the feathers were bound to stems of various substances, frequently the mid-rib of a palm leaf, and clusters of these were bound to the main stem or handle. When not in actual use all feather ornaments were packed in calabashes or other suitable containers, and the great kahilis were dismounted and packed away with tobacco leaves.

Kahili, meaning a plaited or twisted thing, seems to have been originally a fly-flap, and to have later attained the enormous size affected by the kings and high chiefs. The largest *hulumanu* in this Museum is 4 feet high and $2\frac{1}{2}$ feet in diameter, while the sticks are often 15 to 18 feet long.* These sticks were sometimes made of a kauila spear [*pololu kauila*], as in Nos. 2, 4, 11, or of disks of tortoise-shell strung on a central rod and sometimes alternating with whales' ivory or human bone. Two of this second kind of stick, commenced by the high chief Paki, but never finished, may be seen in Case 8, KR. In more modern times ash handles, and those of inlaid native woods turned and polished, have been generally used. Formerly the base of the *hulumanu* was made of close feathers, and the silks and ribbons are of course quite modern, but in general use. In the present series the oldest dates from the reign of Kamehameha I.; others have been used in all the royal funerals since his time.

1	Kahili.—Hulumanu oo feathers; black and white trimmings; ash pole; Mrs. Bishop.	Case 1, KR.
2	" Blue peacock feathers; orange trimmings; Kauila spear pole; Queen Emma. Noel.... he inoa no ia no ka Moi wahine Ema a ua hea ia i keia Kahili.	Case 1, KR.
3	" Peacock feathers, short and flat; koa pole; pink and orange trimmings; H: R. H. Ruta Keelikolani.	Case 1, KR.
4	" Green peacock feathers; orange trimmings; kauila spear. Kamakamao he inoa no keia no ka Moiwahine Ema, a ua hea ia i keia kahili. QE.	Case 1, KR.

* The Rev. C. S. Stewart saw in the early days of Kamehameha II. kahilis with poles near thirty feet high, the *hulumanu* forming cylinders fifteen or eighteen inches in diameter, and twelve or fourteen feet long.

5. Kahili.—Oo feathers; purple and lavender trimming; koa pole; Mrs. Bishop. Case 1, KR.

6. " Black and white feathers; purple and white trimmings. Queen Emma. Laielohelohe he inoa no kona kūpunawahine a ua hea ia no keia kahili. Case 1, KR.

7. " Duck feathers dyed red; hulumanu globular; blue, white and cherry trimmings; painted pole; Queen Emma. Case 2, KR.

8. " Grey and white feathers in globular form; cherry and brown trimmings; painted pole; Queen Emma. Kallehoano, he inoa no ia no ka Moiwahine Ema, o keia na kahili opuu i ukali i ko ka Moiwahine hoo-lewaia ana. Case 3, KR.

9. " Grey and white feathers with red feather base; cherry and white trimmings; metal pole; given by the half-castes to the Prince of Hawaii. Case 6, KR.

10. " Grey loose feathers with tropic bird tail feathers; cherry and lavender trimmings. Kamakaalaneo, he inoa no keia no ka Moiwahine Ema, a ua hea ia ma keia ihoa keia mau kahili. Case 6, KR.

11. " Peacock feathers, blue and orange trimmings; kauila spear; Queen Emma. Case 6, KR.

12. " Ostrich feathers; purple and orange trimmings; Queen Emma. Kaleoaloha, he makana wale ia mai ka hulu; he inoa keia mawaena o ke alii a me kona haku kahili. Case 6, KR.

13. " Black feathers; light blue and pink trimmings; Mrs. Bishop. Case 6, KR.

14. " Oo feathers; buff and black trimmings. Kumaka, he inoa ia o kona kupunawahine oia ka makuahine o Kamalalawalu moi o Maui; he hulu eleele o ka Oo kona hulu. Case 7, KR.

15. " White duck feathers; pale blue trimmings; stem wound spirally with blue and white; made by Her Majesty Liliuokalani for Mrs. Bishop's funeral. Case 7, KR.

16. " Large feathers dyed red; orange and cherry trimmings. Leleolii, he inoa keia no Kekelaokalani ko ka Moiwahine makuahine; he elua laua nei ma keia inoa; heavy kauila pole. Case 7, KR.

17 Kahili.—Iwa feathers from the Guano Islands; cherry and orange trimmings; H. R. H. Keelikolani. Case 7, KR.

18 " Tropic bird feathers; cherry and white trimmings; pole native woods; Mrs. Bishop. Case 7, KR.

19 " Yellow oo feathers; blue and yellow trimmings; tortoise-shell and bone pole; H. R. H. Victoria Kamamalu. Case 7, KR.

20 " Yellow feathers with tropic bird's tails; black and orange trimmings; turned kauila pole; Queen Emma. Case 8, KR.

21 " White duck feathers, very large; light blue and white trimmings; ash pole; made for Mrs. Bishop's funeral. Case 8, KR.

22 " Yellow feathers and tropic bird tails; black feather base; black and orange trimmings; tortoise-shell and bone handle; Malulani; Queen Emma. Case 8, KR.

23 " Tropic bird tails; cherry and white trimmings; native woods pole; Mrs. Bishop. Case 9, KR.

24 " *Grey, white tipped feathers; black base; black and white trimmings; handle of tortoise-shell and human bone. The "Kumu," or principal bone is the right shin bone of Kaneoneo, a noted chief of Kauai who was killed in the battle of Nuuanu [1795]. The other bones are of chiefs who fell in the same battle and were thus honored by the conqueror. When a chief is at the point of death these bones are supposed to rattle. See No. 117. Case 9, KR.

25 " Duck feathers dyed; mate to No. 16; Leleolii; Queen Emma. Case 9, KR.

26 " Yellow and red feathers, black base, black and orange trimmings, pole of tortoise-shell and ivory; H. R. H. Victoria Kamamalu. Case 9, KR.

27 " Oo feathers; Kekuaipoia, he inoa keia o ke kupuna-wahine oia ka makuahine o Kamehameha a me Ke-liimaikai; he hulu Oo kona hulu; Queen Emma. Case 9, KR.

28 " Peacock feathers, large; pink and yellow trimmings; Mrs. Bishop. Case 10, KR.

*Presented by G. D. Gilman, Esq., of Boston.

29 Kahili.—Grey with tropic bird tails, mate to No. 10; Queen Emma. Case 10, KR.

30 " Black peacock feathers, grey and white base, black and white trimmings, tortoise-shell and ivory pole; Queen Emma. Case 10, KR.

31 " Ostrich feathers, mate to No. 12, Kaleaoaloha; Queen Emma. Case 10, KR.

32 " Red feathers; grey and white base; cherry and white trimmings; tortoise-shell and ivory pole; H. R. H. Victoria Kamamalu. Case 10, KR.

33 " Mate to No. 8; Kalelehoanoano; Queen Emma. Case 13, KR.

34 " Duck feathers dyed red, globular head, light blue and white trimmings, koa pole; Queen Emma. Case 14, KR.

35 " Grey and black feathers, large; painted pole; Keaka, he inoa keia no kona kupuna a o ka hooholo loa ana o Keakamaha, a ua hea ia i keia kahili; Queen Emma. Case 15, KR.

36 " Black and white oo feathers, short and thick, pale blue base, purple and lavender trimmings, turned koa pole; Mrs. Bishop. Case 15, KR.

37 " Blue peacock feathers, orange and purple figured base, purple and yellow trimmings, painted pole; Kalani-kaumakamana, he inoa no keia no ka Moiwahine Ema a ua hea ia i keia kahili; Queen Emma. Case 15, KR.

38 " Peacock feathers, large and flat, pink base, cherry and yellow trimmings, turned koa pole; Mrs. Bishop. Case 15, KR.

39 " Black feathers, black and orange base and trimmings; Kaowao, he inoa ia o kekahī kupuna ona; oia ke alii i ana maia e na makaainana kona kūpapau a puni na moku o Maui; he alii aloha oia i na makaainana, a he aloha na makaainana iaia; Queen Emma. Case 15, KR.

40-43 " Duck feathers dyed red, rough kauila poles, Queen Emma; Pilialoha, o na kahili pili eha keia ma ka aoao o ka pahu o Kekelaokalani i kona hoolewa ia

ana, a oia no na pili o ka pahu o ko ka Moiwahine hoolewa ia ana. These four kahilis stand at the corners of the Bird Case, KR.

44-45 A pair of kahilis made of sugar cane were presented to Queen Emma as a birthday offering, January 2, 1883, by the women of Wailuku, Maui. Ka makana Hoohiwahiwa, he kahili i hana ia mai ka ha Pu mai; he makana mai ka Hui wahine mai o Wailuku no ka la hanau. On the main stairway.

Smaller kahilis used both as insignia of chieftainship and as fly-flaps.

46 Kahili.—Red feathers, red and yellow base and top, tortoise-shell handle. Case 1, KR.

47 " Black wing feathers, red and yellow base and top, tortoise-shell and ivory handle. Case 1, KR.

48 " Peacock feathers, red and yellow base and top, native woods handle. Case 1, KR.

49 " Red feathers, native woods handle. Case 1, KR.

50 " Black and grey split feathers, whip handle. Case 1, KR.

51 " White feathers, native woods handle. Case 1, KR.

52 " Black feathers, large, native woods and bone handle. Case 1, KR.

53 " Cock feathers, brown and white, whip handle. Case 1, KR.

54 " Black feathers tipped with white, tortoise-shell and ivory handle. Case 1, KR.

55 " Oo feathers, whip handle. Case 6, KR.

56 " Peacock feathers, red and yellow top and base, native woods handle. Case 6, KR.

57 " Small red feathers, native woods handle. Case 6, KR.

58 " White feathers, native woods handle. Case 6, KR.

59 " Oo feathers, tortoise-shell and ivory handle, yellow top and base. Case 6, KR.

60 " Oo feathers, native woods handle. Case 6, KR.

61 " " " " " Case 6, KR.

62 " Black feathers, " " " Case 6, KR.

63 " Red hen feathers, native woods handle. Case 6, KR.

64 " " " " " Case 6, KR.

65 Kahili.—Peacock feathers, native woods handle. Case 6, KR.

66 " " " " " Case 6, KR.

67 " " " tall plain wood handle. Case 6, KR.

68 " White feathers, boiled, tortoise-shell and ivory handle. Case 6, KR.

69 " Peacock feathers, native woods handle. Case 7, KR.

70 " " tortoise-shell handle. Case 7, KR.

71 " Large, black, native woods handle. Case 7, KR.

72 " Green and black feathers, tortoise-shell and ivory handle. Case 7, KR.

73 " Red feathers, tortoise-shell and ivory handle. Case 7, KR.

74 " White split feathers, native woods handle. Case 7, KR.

75 " Parrot feathers, tortoise-shell and ivory handle. Case 8, KR.

76 " Black feathers with red and yellow base, tortoise-shell and ivory handle. Case 8, KR.

77 " Black and white feathers, long, whip handle. Case 8, KR.

78 " Black and white feathers, long, whip handle. Case 8, KR.

79 " Oo feathers, tortoise-shell and ivory handle. Case 8, KR.

80 " Oo feathers, tortoise-shell and ivory handle. Case 8, KR.

81 " Mina feathers, tortoise-shell and ivory handle. Case 8, KR.

82 " Mina feathers, tortoise-shell and ivory handle. Case 8, KR.

83 " Smoky feathers, tortoise-shell and ivory handle. Case 8, KR.

84 " Parrot, split feathers, tortoise-shell and ivory handle. Case 8, KR.

85 " Parrot, split feathers, tortoise-shell and ivory handle. Case 8, KR.

86 " Oo feathers. Case 8, KR.

87 " Oo with yellow and green base and top, tortoise-shell handle. Case 9, KR.

88 Kahili.—Black feathers, with blue, yellow and red base, tortoise-shell handle. Case 9, KR.

89 " Kala feathers, tortoise-shell and ivory handle. Case 9, KR.

90 " Kala feathers, tortoise-shell and ivory handle. Case 9, KR.

91 " Black feathers, tortoise-shell and ivory handle. Case 9, KR.

92 " Black feathers, tortoise-shell and ivory handle. Case 9, KR.

93 " Kala feathers, native woods and ivory handle. Case 9, KR.

94 " Red and brown, tortoise-shell and ivory handle. Case 9, KR.

95 " Oo, green and yellow base, tortoise-shell and ivory handle. Case 9, KR.

96 " Mottled, yellow and blue base and top, native woods handle. Case 9, KR.

97 " Oo, tortoise-shell and ivory handle. Case 10, KR.

98 " Blue peacock, yellow and blue base, tortoise-shell handle. Case 10, KR.

99 " Blue peacock, yellow and blue base, tortoise-shell handle. Case 10, KR.

100 " Soft white feathers, tortoise-shell and ivory handle.

101 " White duck, native woods handle. Case 10, KR.

102 " Red and black feathers, native woods handle. Case 10, KR.

103 " Red and black feathers, tortoise-shell and ivory handle. Case 10, KR.

104 " Breast feathers, tortoise-shell handle. Case 10, KR.

105 " " " " " Case 10, KR.

106 " Peacock, given to H. R. H. Keelikolani by Mrs. Parker. Case 10, KR.

107 " Black feathers, yellow base, tortoise-shell handle. Case 10, KR.

108 " Red and white feathers spirally arranged, whip handle. Case 10, KR.

109 " Black feathers, yellow base, yellow and black top, native woods handle. Case 10, KR.

110 Kahili.—Black oo, red and yellow base and top, native woods handle. Case 10. KR.

111 " Black feathers, tortoise-shell and ivory handle. Case 8, KR.

112 " Oo feathers, red and yellow base and top, coconut and ivory handle. Case 15, KR.

113 " Oo feathers, red and yellow base and top, tortoise-shell and ivory handle. Case 15, KR.

114 " Oo feathers, red and yellow base and top, tortoise-shell and ivory handle. Case 15, KR.

115 " Split feathers, tortoise-shell and ivory handle. Case 15, KR.

116 " Split feathers, tortoise-shell and ivory handle. Case 15, KR.

117 Kahili pole of tortoise-shell and human bone, sections of thigh bones of Kaneoneo and other chiefs killed in the Nuuanu battle, given by Paki to Gorham D. Gilman many years ago, and by him presented to the Museum. Case 9, KR.

118 } Kahili handles partly made by Paki, showing the method
119 } of manufacture; whale-bone core, tortoise-shell and ivory rings. Case 8, KR.

138 Ancient bird net from Kauai; JSE. Case 8, KR.

139 Mamo feathers as the collectors brought them in. Each feather is attached to a short fibre. Case 8, KR.

140 Oo feathers as brought in by the hunters. Case 8, KR.

141 Iiwi feathers as brought in by the hunters. Case 8, KR.

142 Feather currency from Samoa. Case 8, KR.

143 Kahili pole of tortoise-shell and ivory. Case 9, KR.

322 Mahiole or feather helmet from Vancouver's collection. The frame of close, firm wicker-work, the crest broad and low; covered with red, black, green and yellow feathers, now much dilapidated. Case 8, KR.

959 Mahiole or feather helmet of Kaumualii last King of Kauai. Feathers of the oo and iiwi in perfect order. When Kaumualii was summoned to Oahu by Kaahumanu he deposited this treasure with the newly arrived mission family, and half a century later it was purchased at the sale of Mrs. Whitney's effects. The purchaser, Hon. C.

R. Bishop, then Minister of Foreign Affairs, presented it to the Government Museum. Case 8, K.R.

A third form of helmet of which the Museum does not possess a specimen, may be seen on the portrait of Boki in the Picture Gallery. Helmets were also made of human hair of which a specimen may be seen in Case 31, MR.

Ahuula.—The ornamental feather robes vary in size from a small cape to long cloaks. Those made exclusively of *mamo* feathers [*ala-neo*] are very rare, and according to Mr. S. B. Wilson, the British Museum has but a small cape of this choicest of all feathers. It was, however, common to ornament the cloaks of *oo* and *iiwi* with patches of *mamo* feathers. The simple form of the cloak or cape permitted additions to be made to its length from time to time, and all large cloaks show the bands of different web almost like the rings of growth in a tree. The colors yellow, red and sometimes black were mingled in simple geometrical patterns,—triangles, crescents or bands showing great poverty of design. At the present day the royal feather cloaks are seldom worn, but cover the throne on state occasions, or serve as pall on the coffin of departed royalty. The small capes are worn by attendants on public occasions, and in modern times are sometimes made of pheasant feathers.*

323 Ahuula or feather cloak; length in front 40 in., on back 46 in.; circumference of neck 26 in., of bottom 6ft. D.
 955 " Cape of Mrs. Bishop, feathers of *oo* and *iiwi*. Case 31, KR.
 956 " Cape of Queen Emma; *oo* and *iiwi* feathers; length in front 8 in., on back 12½ in., circumference at bottom 66 in. Case 31, KR.

* By the kind permission of Her Majesty I have been enabled to examine and measure the royal robes now at the palace. These are four in number. The first belonged to Kamehameha I. and is, with the exception of a very narrow border of *iiwi* feathers, entirely yellow. The second belonged to Kiwalao and is chiefly *oo* with triangles of *iiwi*. The third is mainly *iiwi* feathers and belonged to Kalanikauikalanoe. The fourth was once a pa-u belonging to Nahienaena and has been cut in halves, the two strips united, and the whole mounted on blue cloth in rectangular form; it is entirely *oo* feathers.

I.—Length in front, 46 in.; back 56½ in.; circumference at bottom, 12ft 4 in.

II.—Length in front, 50 ¾ in.; back 60 in.; circumference at bottom, 12ft.

III.—Length in front, 45 in.; back 54½ in.; circumference at bottom, 12ft 4 in.

IV.—Length 10ft. 4 in.; width 5ft.

957 Ahuula Cape of Queen Emma; oo and iiwi feathers; length in front 8 in., on back 15 in., circumference at bottom 66 in. Case 17, KR.

958 " Cloak from England; oo and iiwi feathers; length in front 47 in., on back 48½ in., circumference at bottom 14ft. D.

2840 Nae or olona netting for making feather cloaks. Case 8, KR.

2841 Nae or olona netting for making feather cloaks. Case 8, KR.

2843 Fragment of a feather cloak. Case 8, KR.

2800 Lei mamo; choicest in the collection. Case 17, KR.

2801 " " large; bright yellow. Case 17, KR.

2802 "

2803 " Pue kukulu. Case 17, KR.

2804 " Case 17, KR.

2805 " Case 17, KR.

2806 " Case 17, KR.

2807 " Fine. Case 17, KR.

2808 " " Case 17, KR.

2809 " Small and stiff. Case 17, KR.

2810 " With red and black spirals. Case 12, KR.

2811 " Yellow and red spirals. Case 21, KR.

2812 " " " " Case 21, KR.

2813 " Mamo and iiwi alternate; lei pauku. Case 21, KR.

2814 " " " " " Case 21, KR.

2815 " Oo and pue; yellow and green. Case 21, KR.

2816 " Oo; yellow and black with long projections. Case 21, KR.

2817 " Yellow with red end. Case 21, KR.

2818 " " " " " Case 21, KR.

2819 " Green and yellow. Case 21, KR.

2820 " " " " Case 21, KR.

2821 " Yellow and long red dyed feathers. Case 7, KR.

2822 " Small stiff; yellow and green. Case 7, KR.

2823 " " " " " Case 7, KR.

2824 " " " " " Case 7, KR.

2825 " " " " " Case 7, KR.

2826 " One red, two green, three yellow sections; stiff. Case 7, KR.

2827	Lei red and yellow.	Case 7, KR.
2828	" " " "	Case 7, KR.
2829	" " " "	Case 7, KR.
2830	" Short sections alternating red and yellow; soft.	Case 7, KR.
2831	" Short sections alternating red and yellow; soft.	Case 7, KR.
2832	" Short sections alternating red and yellow; stiff.	Case 7, KR.
2833	" Short sections alternating red and yellow; stiff.	Case 7, KR.
2834	" Red and yellow, very small; stiff.	Case 7, KR.
2835	" " " " " "	Case 7, KR.
2836	" Red and blue; green dyed feathers; loose.	Case 7, KR.
2837	" " " " " " " short.	Case 7, KR.

1786-1789 Feather ornaments from New Guinea. These are chiefly made of the feathers of the various "Birds of Paradise," cassowary and parrot, and are usually worn on the head, sometimes about the neck or arm. These are all temporarily in Case 6, KR.

Kapas.—The origin of the process of beating vegetable fibre to produce a paper or cloth is obscure but its greatest development is seen in the Islands of the Pacific Ocean. The perfection of the process increases from west to east and the coarse product of New Guinea culminates in the strong and delicate fabric of the Hawaiian Islands. With the introduction of woven cloths at prices far below the cost of the less durable native manufacture, bark cloth is become a thing of the past and on the Hawaiian Islands the very implements of the makers are held as curiosities. Few are the natives who can give any trustworthy account of the cloth-making of their ancestors. Twenty-five years ago the beaters of kapas were still at work in the Hawaiian valleys and the cheerful sound of the beating was heard in all the country districts.

Hawaiian bark cloth and its manufacture is first to be considered both as the most perfect and representing the greatest variety. It was the work of women exclusively, as poi-pounding belonged to the men. The provision of bread was men's work, while clothing was

furnished by the women. From the days of Penelope, women, even of the highest rank, took a hand in the making of cloth and the female chief of Hawaii took pride in the sheets of paper-like cloth she had formed by her own skill and toil.

No loom nor complicated machinery was needed for the simple process by which bark was converted into sheets of varying size and consistency. A log of some hard wood, usually of *kawau* or *kolea* wood, was cut to a length of about six feet, hewn to a flat surface three inches wide at top, cut away slightly at either end and hollowed longitudinally underneath. This anvil, *laau kui kapa* or *kua kapa*, was supported on two stones. A variety of hand clubs, some round [*hohoia*] for the first beating, or square [*ie kuku*] for the finishing, and a few calabashes to hold water or some mucilaginous liquid were all the tools needed to make what was probably called from the means used in its creation Kapa—*ka pa* the beaten.

The raw material varied somewhat, but the most common by far was the *wauke* or *waoke* [*Broussonetia papyrifera*.] Of this there were three varieties, *waoke malolo* the best; *kuhonua* more common; *kakai* or uncultivated. Again when young the *Broussonetia* is called *poaaha*, but when too old for kapa making it is known as *kau manu*. At Palilua, Hawaii, grew a variety of *waoke* known as *kuloli*. *Broussonetia*, or paper mulberry, is a shrub or small tree, cultivated by most Polynesians: but according to Berthold Seemann, it has never been found wild. Formerly extensively cultivated on these Islands, it is now found in clumps in Kona, Hawaii, and on Maui and Kauai, as an escape from cultivation. The habit of the *waoke* is to branch from the base and not to form trunks; and it is from these numerous low branches that the bark is stripped in lengths of about six feet with a width of two inches. These strips are allowed to dry until the sap has wholly evaporated, and are then stored for future use, either with the outer bark still on, or commonly after this has been removed by scraping on a smooth board with a plate of shell or bone; the olona scrapers were generally used for this purpose. Bark stripping was called *uhele*, while the softening process was called *kikoni*. The men cut the branches, but it was always a woman's work to strip off the bark.

In use the strips were soaked in water until soft [*wali*] and then beaten with the *hohoia* [365-392, Case 16, MR.] on a smooth stone until the fibres were more or less felted together, making rather thick

strips of *moomoo*. These strips were then soaked again and beaten on the *kua kuku* with the *ie kuku*. Strip was welded to strip until sheets of a surface of 125 square feet were obtained. The surface of the mallet, or *ie kuku*, was sometimes smooth [*mole*], generally marked with parallel lines [*hoopai*], or with a still more complicated pattern [*nao*], as *koeau*, *puili*, *pepehi*, *pawehe*, etc., and it was this *nao* that gave the water mark or tissue figure to the *kapa*. Specimens of these are shown in the window frames in the main hall. In this state the pulp was sometimes colored either by dyes mostly of vegetable origin, or previously colored *kapa* was pulped and then beaten in. In modern times foreign cloth, especially Turkey red, was used, and the most common solid dye thus added was charcoal [*nanahu*], made from *waoke* stems, *pili* grass, etc. Red ochre was also used in the same way. Pieces accidentally torn were mended by this welding process and patterns were also applied cut from *kapas* of other colors. But before considering the coloring processes, it will be well to note the other barks used in making *kapa* besides *waoke*.

Second in rank comes the *mamaki* [*Pipturus albidus*], and quite similar to this is the *maaloa* [*Boehmeria stipularis*.] Much less common are the *ulei* [*Osteomeles anthyllidifolia*], *akala* [*Rubus Hawaianus*], *ulu* [*Artocarpus incisa*] and perhaps other shrubs having a mucilaginous bark.

In olden time the *kapa* beating [*kupalu*] was done in one of the six houses of a well-to-do Hawaiian [*hale kua*] but in later times I have usually seen the old women establish their *kua kuku* under some tree near a brook or kalo patch. It is interesting to note that the women engaged in the *kuku kapa paipai* had a system of signalling by blows and intervals from valley to valley. Lahuiki was the god of *kapa*-beaters. So also was *Hai*. It generally took four days to beat an ordinary sheet of *kapa*.

Roots, leaves, bark of various plants and trees contributed dye-stuffs, but the chief colors of aboriginal extraction were yellow, red, green, various shades of browns and the greys produced by an admixture of charcoal. Blue was, at least in modern times, made from introduced indigo leaves, "blueing ball," and foreign cloth. Red in many of the Museum specimens is obtained from "Turkey red." In former times it was obtained from the noni. It was customary to prepare a *kapa* intensely imbued with color and keep

this for use as solid pigment to be beaten into white kapa. Black kapa for dyeing is seen in Case 25 KR., No. 2693. When the pigments were to be applied locally, they were ground in oil usually of kamani, kukui or coconut in a stone mortar [2979-2981 Case 16, MR.], and applied by cords [1267 Case 16, MR.], dipped in the thick liquid and snapped as a carpenter's chalk-line; by pens of bambu by stamps cut on bambu strips [2985, 2986. Case 16, MH]; by a brush made of the dried fibre of the hala fruit [2982] or finally by natural objects used as dies, such as the sea urchin [2395, 2469.] In Samoa a mat stamp of several square feet extent was used [No. 2178, Case 19, MR.] Pa'us were often oiled, in which case a coconut was roasted until black and then chewed to extract the oil. The kapas thus prepared were waterproof, and in modern times superstition has largely made use of this variety for kahuna practices.

A certain red kapa was used to cover idols, while white was sometime put over the god or its worshipper during prayer; white was also the sign of kapu.

The patterns on kapa beaters are by no means numerous, although local names swell the list considerably. First of course is the smooth surface called *mole*; longitudinal grooves one-third of an inch apart convert the mole into *pepehi*; when these grooves are closer [20-25 to an inch] the pattern becomes *hoopai*, by far the most common and perhaps the best for felting the bark fibres together. If the *pepehi* is crossed by a series of parallel lines at right angles the pattern becomes *pepehi halua*, and if two series occur crossing the lines of the *pepehi* at less than a right angle the form becomes *pepehi halua maka upena* or simply *maka upena* [meshes of a net.] If any of these patterns have on their flat surfaces round holes 3-16 of an inch in diameter the term *pupu* is added, while if the holes be triangular the name is *niho mano* [shark's teeth.] So *hoopai* crossed by lines at a right angle becomes *hoopai halua*, but when the crossing lines are at other angles it becomes *hoopai pawehe* or *halua pawehe*. Another very common form is an undulating line or ridge; if the undulations are parallel they form *koeau*, if not, *pnili*. These undulations are often separated by lines when the term *halua* is added. The *iwipuhi* resembles the backbone of an eel, the *lauma'u* the pinnate leaf of a fern, the *kapuai koloa* is supposed to resemble the track of a duck. Nearly all other patterns are slight modifications of these.

Names of the patterns cut on the ohekapala or stamps cannot be

reduced to so simple a nomenclature as the numerous names are not always suggested by the form and are generally capricious and without meaning. In this collection are more than one hundred distinct patterns, but none show any fertility or artistic invention, and they are all geometrical combinations, rarely, if ever attempts to imitate natural objects. Owing to the curved shape of the bambu the width of each die was limited, and to cover a large kapa infinite pains were required to repeat the small stamp. A few of these stamps were made on wood; [2949. Case 16, MR.]

A list of the patterns of Ie kuku or Kapa beaters. The numbers are those of the specimens: Case 16, MR.

Aha or ahaana—Kapuai koloa.

Ehe hoopii 215—Koeau.

Haaō 257, 2856—Koeau halua.

Halua leihala 224.

Halua pawehe 198.

“ koeau 193, 203; better koeau halua.

“ manama—Maka upena.

“ puili 189—better Puili koeau.

“ pupu—230, 240—Mole halua pupu.

Hoopai 206, 213.

“ halua 216.

“ pawehe 198—Halua pawehe.

“ puu 212.

Huelopoki—Iwipuhi.

Iwipuhi 188.

Kalukalu—Koeau.

Kapuai koloa 227.

Koeau 196, 215.

“ halua 193, 203.

“ pawehe 253.

Lauko—Lauma'u.

Lauma'u 191, 202.

Mole 243.

“ halua 211.

“ “ pupu 214, 282, 2924.

“ “ leihala 224.

“ pupu 217.

Nanauahuki—Koeau halua.
 Oholupalupa 220—angular Puili.
 Painiu—Lauma'u.
 Papa konane 194.
 Pawehe 220.
 Pepehi 233.
 " halua 207, 283.
 " " pupu 210.
 " " niho mano 197, 219, 258, 274, 2845.
 " maka upena 208, 209, 255.
 " pupu 218.
 Puili 199, 215, 2846.
 " halua 189.
 " pawehe 190, 220.
 Pukapuka—Mole pupu 217.
 Uahaao—Halua pawehe.
 Waieli—Puili.

The proportion in which the more common forms occur on the Ie kuku in this collection is as follows :

Whole number of sides --1048

Hoopai	605
Pepehi	222
Koeau	60
Puili	53
All others	168

(Under hoopai are included all the modifications, as hoopai halua so with the others.)

VOCABULARY OF TERMS USED IN KAPA MAKING.

Aahu	Bark of waoke soaked in water until soft.
Aeokahaloa	Waoke kapa colored with charcoal 2481, 2501. The warmest kapa made.
Aha	A kapa made on Molokai.
Ahiahia	The uncolored part of dyed or painted kapa.
Ahina	Grey kapa.
Ahunalii	A colored kapa. 2482.
Akala	<i>Rubus Hawaianensis</i> ; a kapa is made from the bark.
Akoia	Snuff-colored kapa; dye of akoa tree.

Alaea	Red ochre used as coloring matter. 2377, 2376.
Alaihi	A red kapa.
Aleuleu	Old or poor kapa.
Apēupeu	" "
Apikipiki	A kind of kapa.
Awapuhi	<i>Zinziber Zerumbet</i> ; root used both as scent and dye.
Aweluvelu	Ragged or torn kapa.
Eleuli	A kapa made in Puna. 2483.
Haa	<i>Antidesma platyphyllum</i> ; seeds yield a yellow dye.
Hai	God of the poe kuku kapa.
Hai manawa	A thin white kapa.
Halakea	Kapa dyed with niu.
Hanina	A pa'u covered with olena.
Holei	<i>Ochrosia sandvicensis</i> ; the bark and root dye yellow.
Hoola	A kind of kapa.
Ia	Mallet for beating kapa; same as ie kuku.
Iho	The sheets of kapa below the kilohana in a kuina or set.
Iliahi	Sandal wood used to scent kapas.
Iliki	Varnish made of kukui bark, ti leaves and banana buds.
Kalukaluu	A delicate white kapa. 2428, 2515.
Kapeke	A malo colored differently on the two sides.
Kaumanu	Waoke too old to be used for kapa.
Keleawai	Kapa of a mud color. 2492, 2493.
Kilohana	The outer or principal sheet of a set of kapas. Usually figured, and sometimes there are more than one in a set. 2352.
Kuaula	A thick red kapa.
Kupaoa	<i>Raillardia scabra</i> ; used to scent kapa.
Kuina	A set of kapas; usually five stitched together on one edge.
Lapa	A marking comb of bambu or wood. 1262, 1265.
Lauhuki	God of those who made kapa.
Loli	To color in spots.
Maaloa	<i>Boehmeria stipularis</i> ; of which the bark was used for making kapa.
Maile	<i>Alyxia olivaeformis</i> ; used as a common scent.
Mahuna	A kind of kapa. 2689, 2685.

Mamaki	<i>Pipturus albidus</i> ; of which the bark furnished fibre for kapa making. 2691.
Mao	<i>Abutilon incanum</i> ; which furnished a green dye. 2319, 2649.
Moelua	A red kapa.
Momo	Kiiwaawaa palaholo. See moomoo.
Moomoo	Raw kapa; kapa of little value.
Nanahu	Charcoal, the most common black dye.
Nao	A pattern, also the ridges in kapa.
Na'u	<i>Gardenia Brighamii</i> ; used as a dye.
Nio	Handsome kapa.
Noni	<i>Morinda citrifolia</i> . The root colors red.
Ohekapala	Bambu stamps for printing kapa; ohe kakau.
Ohelohelo	Light red, the color of the ohelo. 2353.
Ohia	<i>Metrosideros polymorpha</i> ; used as a dye.
Ohuohu	A blackish kapa.
Okena	See olena.
Olapa	<i>Cheirodendron Gaudichaudii</i> ; used to scent kapas.
Olena	<i>Curcuma longa</i> ; Turmeric; a dye of yellow color obtained from the root.
Oloa	Waoke bark soaked until soft. Small white kapa formerly put over an idol during prayer.
Omao	Greenish kapa. 2649.
Omoha	A figure used in stamping kapa.
Onio	Spotted kapa.
Opiki	A stamp for kapa.
Ouholowai	Mamaki kapa. 2485.
Paihi	Ohia bark used as a black dye.
Paikukui	2430.
Paiua	Fine white kapa.
Paipai	The act of beating kapa.
Paipaikukui	A pale yellow kapa from Molokai. 2494.
Paipu	Calabash for packing kapas.
Paiula	Kapa made by beating welus of red with new waoke. Also weluula. 2357.
Pau[ke]	A poor kapa of no definite color.
Pa'u	Female dress of the olden time; often of three to eight sheets.
Paupau	Old, worn out, dirty kapa.

Pahupalapala.	Dye holder for kapa printing.
Pake	Soft and flexible white kapa.
Paku	To unite two kapas by beating.
Palaholo	Paste made from the fern <i>ama'uma'u</i> .
Palapalani	To print kapas and put them out to dry.
Palupalu	A yellow pa'u.
Panionio	To print kapas in gay colors.
Paniki	Glaze or dye for kapa.
Peahuakoa	Kapa dyed with the bark of the koa tree.
Pelehu and Pepele	Varieties of kapa made on Kauai.
Pili	<i>Heteropogon contortus</i> ; a grass whose charcoal was used to dye grey. Same as the grass used for thatching.
Pinauea	A kind of kapa used for the pa'u.
Poaaha	Young waoke.
Pouleulu	The male flower of breadfruit, used for making kapa.
Poulu	A shrub whose bark was used for kapa.
Pohaka	Printed kapa.
Poniponi	Kapa painted various colors.
Puakai	Red dye. Kapa striped with red. 2473, 2688.
Puali	A name for a malo, from its use in girding.
Puaniu	Kapa dyed with coconut.
Pukohukohu	Thick, red kapa malo, dyed with noni.
Pulou	Black or dark colored kapa.
Pulohiwa	Shining black kapa.
Pulu	Pulp for kapa.
Punoni	Kapa dyed with noni.
Pupupu	White kapa for pa'us.
Puukukui	Kapa made of waoke and pouleulu.
Uaua	A kapa or pa'u colored yellow.
Waiele	Black dye. Also waieleele.
Wailiilii	Thick kapa with yellow stripes.
Waipalupalu	2319.
Walahee	<i>Plectrania odorata</i> ; whose leaves are used as a black dye.
Wea	Red dye.
Welu	A rag or bit of kapa.
Weluula	Same as paiula.

NA KUA KUKU. ANVILS ON WHICH KAPA IS BEATEN.

710	Kua Kuku.—Small, JSE.	D.				
711	" " Large, old and in good condition.	D.				
712	" " Heavy dark wood.	D.				
713	" " Old.	D.				
714	" " " D.					
715	" " Kolea wood; JSE.	D.				
716	" " D,					
715	" " D.					
718	" " JSE.	D.				
719	" " D.					
720	" " Kona, Hawaii; JSE.					Case 16, MR.
721	" " Kawau wood.	D.				
722	" " Kona, Hawaii; JSE.	D.				
723	" " M. P. Ailau.	D.				
724	" " Flat top.	D.				
725	" " "	D.				
726	" " "	D.				
727	" " Gov. Col.	D.				
745	Papa hole kua ula.—Grooved slab for making pau's. Always of the hardest wood and cut longitudinally with the hoopai pattern.		28½ in. x 10¼ in.			D.
746	Papa hole kua ula.—JSE.	33	x 7¾			
						Case 16, MR.*
747	" " " " "	33½	x 8¼			D.
748	" " " " "	34¾	x 6¾			D.
749	" " " " "	52½	x 5			D.
750	" " " " "	43	x 10			D.
751	" " " " "	32½	x 8½			D.
752	" " " " "	30	x 7¾			D.
753	" " " " " [half]	25	x 4½			D.
754	" " " " "	37	x 4¾			D.
755	" " " " Gov. Col.	29	x 5¼			D.

365 Hohoa.—Club for the preliminary beating of the kapa fibre. Usually of kauila wood, North Kona, Hawaii. JSE.

* When not otherwise noted, all kapa tools are in Case 16, MR.

366	Hoho.—JSE.
367	" "
368	" H. R. H. Keelikolani.
369	" JSE.
370	" "
371	" "
372	" " 8-sided.
373	" " 5-sided. S. Kona, Hawaii.
374	" "
375	" "
376	" "
377	" " Hoopai.
378	" "
379	" "
380	" " Koaia wood, rough 4-sided.
381	" "
382	" " Koaia wood.
383	" "
384	" " Mole.
386	" "
2934	" Quadrangular, 3 sides hoopai, 1 mole.
2935	" "
2936	" "
2937	" 8-sided.
2938	" "
2939	" "
2940	" "
2941	" "
2942	" Large round club.
2943	" " "
2944	" " " JSE.
2945	" " "
2946	" " "
2947	" " "
188	Ie Kuku. Koaia wood. Sides iwipuhi, hoopai, hoopai, ka-puai koloa. JSE.
189	" Kauila. halua puili, koeau, hoopai, hoopai. JSE.

190	Ie Kuku.	Kauila wood.	Sides koeau, hoopai, hoopai halua, puili halua. JSE.
191	"	"	lau ma'u, haao, koeau, ko-eau halua. JSE.
192	"	"	koeau, hoopai, hoopai, ko-eau halua; South Kona. JSE.
193	"	"	halua koeau, puili, koeau, haao.
194	"	"	papa konane, lau ma'u, puili halua, hoopai halua. JSE.
195	"	"	lau ma'u-puili-koeau, koeau halua, hoopai, hoopai. JSE.
196	"	"	koeau, hoopai, hoopai, puili. JSE.
197	"	"	pepehi halua niho mano, ko-eau, puili halua, halua koeau. JSE.
198	"	"	halua kapuai manu, hoopai, hoopai pāwehe, haao. JSE.
199	"	"	puili halua koeau, puili, puili halua, pepehi niho mano. JSE.
200	"	"	puili halua, koeau, haao, ko-eau halua. JSE.
201	"	"	koeau halua, hoopai, hoo-pai, hoopai. JSE.
202	"	"	lau ma'u, koeau, halua ko-eau, puili. JSE.
203	"	"	koeau halua, haao, hoopai, puili. JSE.
204	"	"	puili halua, hoopai, puili halua, puili halua. JSE.
205	"	"	lau ma'u-puili, koeau halua, kapuai koloa, iwi puhi. JSE.
206	"	"	hoopai, hoopai, hoopai, hoo-pai. JSE.

207	Ie Kuku.	Akia wood.	Sides pepehi halua, pepehi, pepehi, hoopai. JSE.
208	"	Nioi.	pepehi halua maka upena, hoopai, hoopai, hoopai. JSE.
209	"	Alani.	pepehi halua maka upena, pepehi halua, hoopai pepehi. JSE.
210	"	"	pepehi halua pupu, pepehi, hoopai, hoopai. JSE.
211	"	Koiae.	mole halua, hoopai, hoopai, pepehi. JSE.
212	"	Kauila.	hoopai puu, pepehi, pepehi, pepehi halua. JSE.
213	"	"	hoopai, hoopai, hoopai, hoopai. JSE.
214	"	"	mole halua pupu, pepehi halua, pepehi, pepehi. JSE.
215	"	"	ehe hoopii, hoopai, hoopai, haao. JSE.
216	"	"	hoopai halua, hoopai, hoopai, pepehi. JSE.
217	"	Koiae.	mole pupu, hoopai, hoopai, mole pupu. JSE.
218	"	Kauila.	pepehi pupu, hoopai, hoopai, hoopai. JSE.
219	"	"	pepehi halua niho mano, hoopai, hoopai, hoopai halua. JSE.
220	"	"	oholapalapa, hoopai, hoopai, hoopai. JSE.
221	"	"	lau ma'u, koeau halua, puili, koeau. JSE.
222	"	"	hoopai, hoopai, hoopai, hoopai. JSE. D.
223	"	"	pepehi halua pupu, hoopai, hoopai, pepehi. JSE. D.

224 Ie Kuku. Kauila wood. Sides halua lei hala, mole pupu, hoopai, mole halua pupu. JSE.

225 " " pepehi halua pupu, hoopai, pepehi halua, hoopai. JSE.

226 " " hoopai, hoopai, hoopai halua, hoopai. JSE.

227 " " kapuai koloa, hoopai, hoo-pai, hoopai halua. JSE.

228 " " mole pupu, hoopai halua, hoopai, hoopai. JSE. D.

229 " " pepehi halua pupu, hoopai, hoopai halua, hoopai. JSE.

230 " " halua pupu, mole halua pupu, mole halua pupu, pepehi halua pupu. JSE. D.

231 " " hoopai halua, pepehi halua, mole, hoopai. JSE. D.

232 " " pepehi, hoopai, hoopai, hoo-pai. JSE. D.

233 " " pepehi, hoopai, hoopai, hoo-pai. JSE.

234 " " koeau halua, hoopai, puili, hoopai. JSE. D.

235 " " pepehi, hoopai, hoopai, hoo-pai. JSE. D.

236 " " iwipuhi, hoopai, hoopai, hoopai. JSE. D.

237 " " pepehi, hoopai, hoopai, hoo-pai. JSE. D.

238 " " lau ma'u, koeau halua, puili halua, koeau. JSE.

239 " " pepehi, hoopai, hoopai, hoo-pai. JSE. D.

240 " " mole halua pupu, pepehi halua pupu, pepehi halua pupu, pepehi halua, hoopai.

241 Ie Kuku. Kauila wood. Sides koeau, pepehi halua niho mano, koeau halua, puili. hoopai, hoopai, hoopai, hoopai. JSE. D.

242 " " " mole, pepehi halua, pepehi, hoopai. JSE.

243 " " " hoopai halua, hoopai, hoopai, hoopai. JSE. D.

244 " " " koeau halua, koeau, hoopai, hoopai. JSE.

245 " " " koeau halua, puili, hoopai halua, pepehi halua niho mano. JSE. D.

246 " " " puili, hoopai halua, hoopai, hoopai. JSE. D.

247 " " " puili, hoopai, hoopai, hoopai. JSE. D.

248 " " " hoopai, hoopai, halua, koeau halua, koeau, halua. JSE. D.

249 " " " hoopai, hoopai, hoopai, hoopai. JSE. D.

250 " " " pepehi, hoopai, pepehi, hoopai. JSE. D.

251 " " " pepehi, hoopai, hoopai, hoopai. JSE. D.

252 " Nioi. pepehi, hoopai, hoopai, hoopai. JSE. D.

253 " Kauila. koeau pawehe, hoopai, hoopai halua, puili-koeau.

254 " " " pepehi halua niho mano, koeau halua, puili, koeau. JSE.

255 " " " pepehi halua maka upena, koeau halua, hoopai, hoopai.

256 " " " hoopai halua, hoopai, hoopai, hoopai.

257 " " " haao, koeau halua, puili, pepehi niho mano. JSE.

258 Ie Kuku. Kauila wood. Sides pepehi halua niho mano,
puili halua, koeau halua,
haao. JSE.

259 " " pepehi, pepehi, hoopai, pe-
pehi. JSE.

260 " " puili halua, hoopai, hoopai,
hoopai. JSE. D.

261 " " pepehi halua, pepehi, hoo-
paii hoopai. JSE. D.

262 " " pepehi, hoopai, hoopai, hoo-
pai. JSE. D.

263 " " pepehi halua, mole, pepehi,
pepehi. JSE. D.

264 " " koeau halua, hoopai, hoo-
pai, puili. JSE. D.

265 " " pepehi halua pupu, hoopai,
hoopai, hoopai. JSE. D.

266 " " pepehi, hoopai, hoopai, hoo-
pai. JSE. D.

267 " " hoopai halua, hoopai, hoo-
pai, hoopai. JSE. D.

268 " " hoopai, hoopai, hoopai, pe-
pehi halua. JSE. D.

269 " " hoopai, iwipuhi, puili hoo-
pai. JSE. D.

270 " " mole, hoopai, hoopai, pe-
pehi halua. JSE. D.

271 " " hoopai, hoopai, hoopai hoo-
pai. H. R. H. Keeliko-
lani. D.

272 " " mole halua pupu, hoopai,
hoopai, pepehi halua.
JSE. D.

273 " " pepehi, pepehi, hoopai, pe-
pehi. JSE.

274 " " hoopai, pepehi halua, pe-
pehi halua, niho mano,
hoopai. JSE.

275 Ie Kuku. Kauila wood. Sides halua puili, koeau, hoopai, hoopai. D.

276 " " hoopai, koeau, hoopai, puili. JSE. D.

277 " " iwipuhi, hoopai, hoopai, hoopai. JSE. D.

278 " " pepehi halua niho mano, hoopai, hoopai, hoopai halua. JSE. D.

279 " " pepehi, hoopai, mole halua, hoopai halua. JSE. D.

280 " " puili, hoopai, hoopai, hoopai. JSE. D.

281 " " puili halua, hoopai, hoopai, hoopai. JSE. D.

282 " " mole halua pupu, mole halua pupu, pepehi halua, mole halua pupu.

283 " " pepehi halua, hoopai, mole halua, mole halua.

284 " " pepehi halua pupu, same, mole halua pupu, same. D.

285 " " mole halua pupu, same, hoopai pawehe, hoopai halua. D.

286 " " pepehi halua pupu, mole halua pupu, pepehi, hoopai halua. D.

287 " " puili, hoopai, hoopai, hoopai. D.

288 " " puili, puili halua, koeau, puili halua. D.

289 " " iwipuhi, hoopai pawehe, hoopai, puili. D.

290 " " pepehi halua maka upena, pepehi, hoopai, hoopai. JSE. D.

291 Ie Kuku. Kauila wood. Sides hoopai, hoopai, pepehi, hoopai. JSE. D.

292 " " pepehi, hoopai, pepehi, hoopai. JSE.

333 " " hoopai halua, hoopai, hoopai, hoopai. JSE. D.

334 " " pepehi halua naho mano, hoopai, hoopai, hoopai. JSE. D.

335 " " pepehi halua, pepehi, mole pupu, pepehi. JSE. D.

336 " " pepehi, hoopai, pepehi, pepehi. JSE. D.

337 " Lehua hoopai, hoopai, hoopai, hoopai. JSE. D.

338 " Kauila pepehi pupu, pepehi, pepehi, pepehi pupu. JSE. D.

339 " " puili halua, hoopai, hoopai, hoopai. JSE. D.

340 " " pepehi, pepehi halua, pepehi, pepehi. JSE. D.

341 " Koaia pepehi halua pupu, hoopai, hoopai, hoopai. JSE. D.

342 " " mole halua pupu, mole, mole halua pupu, same. JSE. D.

343 " " pepehi halua, hoopai, hoopai, hoopai. JSE. D.

344 " Kauila. hoopai, hoopai, hoopai, hoopai. JSE. D.

345 " " hoopai halua, hoopai halua, hoopai, hoopai. JSE. D.

346 " " hoopai, hoopai, hoopai, hoopai pawehe. JSE. D.

347 " " mole halua pupu, pepehi, hoopai, pepehi. JSE. D.

348 " " puili halua, hoopai, hoopai, puili halua. JSE. D.

349 Ie Kuku. Kauila wood. Sides hoopai, hoopai, pepehi ha-
lua, hoopai. JSE. D.

350 " " hoopai halua, hoopai, pe-
pehi, hoopai. JSE. D.

351 " " pepehi halua, hoopai, pepe-
hi halua. JSE. D.

352 " " hoopai, hoopai, hoopai, hoo-
pai. JSE. D.

353 " " hoopai, hoopai, hoopai, hoo-
pai. JSE. D.

354 " " hoopai, hoopai, hoopai, hoo-
pai. JSE. D.

355 " " pepehi halua pupu, pepehi
halua, hoopai, hoopai.
JSE. D.

356 " " pepehi halua, hoopai, hoo-
pai, pepehi halua. JSE.
D.

357 " " pepehi, mole pupu, pepehi,
mole pupu. JSE. D.

358 " " hoopai, puili halua, puili,
hoopai. JSE. D.

359 " " hoopai' hoopai hoopai, hoo-
pai. JSE. D.

360 " " hoopai, hoopai, hoopai, hoo-
pai. JSE. D.

361 " " hoopai, hoopai, pepehi ha-
lua, hoopai. JSE. D.

362 " " lau ma'u, puili halua, puili
halua, kapuai koloa. JSE.

363 " " hoopai, hoopai, pepehi, pe-
pehi. JSE.

364 " " koeau halua, (unfinished),
mole, pepehi. JSE.

386 " " hoopai, hoopai, hoopai, hoo-
pai. D.

387 " " puili, haao, hoopai halua.
QE.

388 Ie Kuku. Koaia wood. Sides pepehi, hoopai, hoopai, hoo-pai. D.

389 " Kauila. pepehi halua, same, same, hoopai. D.

390 " " hoopai halua, hoopoi, hoo-pai, hoopai. D.

391 " " hoopai halua, hoopai, mole halua pupu, hoopai.

392 " " pepehi, hoopai, hoopai, hoopai. D.

393 " " hoopai, hoopai, hoopai, hoopai. D.

394 " " hoopai, hoopai, hoopai, hoopai. D.

395 " " hoopai halua, hoopai, hoo-pai, hoopai. D.

396 " " mole halua pupu, hoopai, hoopai, mole halua pupu. D.

397 " " hoopai halua, hoopai, hoo-pai, mole halua. D.

398 " " pepehi, hoopai, hoopai, hoopai. D.

399 " " mole halua pupu, same, haopai, hoopai halua. D.

400 " " hoopai, hoopai, hoopai, hoopai. D.

401 " " pepehi halua pupu, hoopai halua, hoopai, hoopai. D.

402 " " mole halua pupu, hoopai halua, hoopai, hoopai. D.

403 " " hoopai halua, hoopai, hoo-pai, hoopai. D.

404 " " pepehi halua, koeau halua, mole halua pupu, same. D.

405 " " pepehi halua maka upena, hoopai, hoopai, hoopai. D.

406 Ie Kuku. Kauila wood. Sides hoopai, hoopai, hoopai, hoopai. D.

2845 " " halua niho liilii, pepehi pupu, hoopai, hoopai.

2846 " " puili, hoopai, puili halua, koeau. H. R. H. Keelikolani.

2847 " " hoopai, hoopai, hoopai, hoopaii. H. R. H. Keelikolani. D.

2848 " " hoopai, hoopai, pepehi halua, hoopai. H. R. H. Keelikolani. D.

2849 " " hoopai, pepehi halua, hoopai, hoopai. H. R. H. Keelikolani. D.

2850 " " hoopai, hoopai, hoopai, hoopai. D.

2851 " " pepehi halua pupu, hoopai, hoopai. D.

2852 " " hoopai halua, hoopai, pepehi halua pupu, hoopai. Small. D.

2853 " " hoopai, hoopai halua, pepehi halua, hoopai. H. R. H. Keelikolani. D.

2854 " " hoopai, hoopai, pepehi halua, hoopai. H. R. H. Keelikolani. D.

2855 " " hoopai, pepehi, hoopai, hoopai. JSE. D.

2856 " " koeau halua, hoopai halua, hoopai, hoopai.

2857 " " hoopai, hoopai, hoopai, hoopai. D.

2858 " " hoopai, koeau halua, hoopai, hoopai.

2859 " " hoopai, hoopai, hoopai, hoopai. D.

2860	Ie Kuku.	Kauila wood.	Sides hoopai halua, hoopai, hoopai, hoopai. D.
2861	"	"	hoopai, hoopai, hoopai, hoopai. D.
2862	"	"	pepehi, pepehi, hoopai, pepehi.
2863	"	"	pepehi, pepehi halua, pepehi, pepehi. D.
2864	"	"	hoopai, hoopai, hoopai, hoopai. D.
2865	"	"	koeau, hoopai, hoopai, hoopai. D.
2866	"	"	pepehi, hoopai, hoopai, hoopai. D.
2867	"	"	hoopai, hoopai, hoopai, hoopai. D.
2868	"	"	pepehi, hoopai, mole pupu, pepehi. D.
2869	"	"	hoopai, hoopai, hoopai, hoopai. H. R. H. Keelikolani. D.
2870	"	"	pepehi, pepehi, pepehi, hoopai. H. R. H. Keelikolani. D.
2871	"	"	hoopai, hoopai, hoopai, pepehi. D.
2872	"	"	hoopai, hoopai, hoopai, hoopai. D.
2573	"	"	hoopai, pepehi, hoopai, pepehi. D.
2874	"	"	hoopai halua, pepehi halua pupu, same, same. D.
2875	"	"	hoopai, hoopai, hoopai, hoopai. D.
2876	"	"	boopai, hoopai, hoopai, hoopai. D.
2877	"	"	hoopai, hoopai, halua, hoopai, hoopai. D.
2878	"	"	hoopai, hoopai, hoopai, hoopai. D.

2879	Ie Kuku.	Kauila wood.	Sides hoopai, hoopai, hoopai, hoopai. D.
2880	"	"	hoopai, hoopai, hoopai, hoopai. D.
2881	"	"	hoopai, hoopai, hoopai, hoopai. D.
2882	"	"	hoopai, hoopai, hoopai, hoopai. D.
2883	"	"	hoopai, hoopai, hoopai, hoopai. D.
2884	"	"	hoopai halua, hoopai, hoopai, hoopai. D.
2885	"	"	hoopai, hoopai, hoopai, hoopai. D.
2886	"	"	hoopai halua, hoopai, hoopai, hoopai. QE. D.
2887	"	"	hoopai, hoopai, hoopai, hoopai. H. R. H. Keelikolani. D.
2888	"	"	hoopai, hoopai, hoopai, hoopai. H. R. H. Keelikolani. D.
2889	"	"	hoopai, hoopai, hoopai, hoopai. H. R. H. Keelikolani. D.
2890	"	"	hoopai, hoopai, hoopai, hoopai. D.
2891	"	"	hoopai, hoopai, hoopai, hoopai. D.
2892	"	"	hoopai, hoopai, hoopai, hoopai. D.
2893	"	"	hoopai, hoopai, halua pa-wehe, hōopai. D.
2894	"	"	pepehi, pepehi, pepehi, hoopai halua. D.
2895	"	"	pepehi, mole, pepehi halua, pepehi. D.
2896	"	"	pepehi, hoopai, hoopai, pepehi halua niho mano. Long.. D.

2897	Ie Kuku.	Kauila wood.	Sides pepehi, mole halua pupu, mole halua, mole halua pupu. D.
2898	"	"	hoopai, hoopai, hoopai, pepehi. D.
2899	"	"	hoopai halua, hoopai, pepehi, hoopai halua pupu. D.
2900	"	"	hoopai, hoopai, hoopai, hoopai. D.
2901	"	"	hoopai, pepehi halua niho mano, pepehi halua, pepehi. H. R. H. Keelikolani. D.
2902	"	"	hoopai, hoopai, hoopai, hoopai. D.
2903	"	"	pepehi halua, same, pepehi, pepehi. D.
2904	"	"	hoopai, hoopai, puili, hoopai. D.
2905	"	"	hoopai, hoopai, hoopai, hoopai. D.
2906	"	"	hoopai, hoopai, pepehi, pepehi. D.
2907	"	"	pepehi, pepehi, pepehi, pepehi. H. R. H. Keelikolani. D.
2908	"	"	hoopai, hoopai, mole halua pupu, hoopai. D.
2909	"	"	hoopai, hoopai, hoopai, hoopai. D.
2910	"	"	hoopai halua, hoopai, hoopai, hoopai. D.
2911	"	"	koeau halua, hoopai, pepehi, hoopai. D.
2912	"	"	hoopai, hoopai, hoopai, hoopai. D.

2913 Ie Kuku. Kauila wood. Sides pepehi, hoopai, hoopai, hoopai. D.

2914 " " pepehi, hoopai halua, mole halua pupu, pepehi halua. D.

2915 " " hoopai, pepehi, pepehi, pepehi. D.

2916 " " pepehi, hoopai halua, pepehi halua, mole halua pupu. JSE. D.

2917 " " hoopai, hoopai, hoopai, hoopai. D.

2918 " " hoopai, hoopai, hoopai, hoopai. D.

2919 " " pepehi, pepehi, hoopai, hoopai. D.

2920 " " mole halua pupu, same, pepehi, pepehi. D.

2921 " " hoopai, hoopai, hoopai, hoopai. D.

2922 " " pepehi, pepehi, mole halua, pepehi. D.

2923 " " pepehi halua niho mano, hoopai, hoopai, hoopai [unfinished]. JSE.

2924 " " mole halua pupu, same, pepehi pupu, same. D.

2925 " " pai niu, hoopai, hoopai, koeau halua. D.

2926 " " pepehi niho mano, koeau, kapuai koloa, puili. D.

2927 " " lau ma'u, kapuai koloa, lau ma'u, lau ma'u. D.

2928 " " mole halua niho mano, mole pupu, hoopai, hoopai. JSE. D.

2929 " " hoopai, hoopai, hoopai, hoopai. D.

3075	Ie Kuku.	Kauila wood	Sides pepehi halua, hoopai, hoopai, mole. D.
3076	"	"	pepehi, pepehi halua, pepehi halua, pepehi. D.
3077	"	"	mole halua pupu, hoopai, hoopai. D.
3078	"	"	koeau halua, puili, pepehi, mole halua pupu. D.
3079	"	"	pepehi, hoopai, hoopai, pepehi. Knob on corner. D.
3080	"	"	mole halua pupu, mole, pepehi, mole halua. D.
3081	"	"	hoopai halua, pepehi, mole pupu, hoopai halua. D.
3082	"	"	pepehi, mole halua pupu, mole halua pupu, pepehi. D.
3083	"	"	mole halua pupu, hoopai, hoopai, pepehi halua. D.
3084	"	"	pepehi, pepehi, mole, hoopai halua.
3085	"	"	hoopai, hoopai, hoopai, hoopai. D.
3086	"	"	hoopai, hoopai, hoopai, hoopai. D.
3087	"	"	pepehi, pepehi, hoopai halua, pepehi. D.
3088	"	"	hoopai, hoopai, hoopai, hoopai. D.
3089	"	"	pepehi, pepehi, pepehi, hoopai. D.
3090	"	"	pepehi, pepehi, pepehi, pepehi. D.
3091	"	"	hoopai, pepehi halua, pepehi, pepehi. D.
3092	"	"	hoopai, hoopai, hoopai, hoopai. D.
3093	"	"	pepehi, pepehi, hoopai, pepehi. D.

1998 Ai iki. Kapa beater from Fiji. The pattern on all four sides is hoopai. Case 4, EH.

1262 Lapa or pen for marking parallel lines on kapa. JSE.

1263 " " " " JSE.

These two lapas are made of wood and were procured at Olaa, Hawaii. Usually they are made of bambu.

2985 Lapas of bambu with one to nine points.

2986 " " three to nine points, oblique.

1265 " pa'u for marking a single line on kapa. JSE.

1266 " " " " " JSE.

1267 Kaula kakau cord for marking interrupted lines on kapa. It was dipped in the thick dye and applied as a carpenter's chalk-line. See kapa 2352, Case 8, KR.

2006 Bambu roll for marking lines on kapa. Fiji Ids. Case 4, EH.

2178 Stamp for marking siapos. Samoan Ids. JSE. Case 19, MR.

2972 " " " " HG. D.

2995 Ohekapala, he ohe kakau. Stamps of bambu carved on the inside of one end in a raised pattern for imprinting kapa. More than a hundred different designs may be seen in Case 16, but the names of these patterns are not yet sufficiently determined to print here.

2949 Ohekapala, of wood. H.M. Liliuokalani.

2975 Pohaku kui noni. Stone pestle used to crush noni for dye or medicine. This form is a flattened spheroid with a shallow groove cut around it through its axis of rotation. It is larger and heavier than any pounder in the collection.

2998 Pohaku kui noni.

2999 " " "

2976 Pohaku kui nanahu; pestle to crush charcoal.

2977 " " " JSE.

2978 " " "

2979 Poho hooluu; stone cup for dyes.

2980 " " QE.

2981 " " "

2982 Paint brush; a dried pandanus fruit.

4169 " " " " "

2983 Kui humuhumu kapa; ivory bodkin for piercing kapas. JSE.

2984 Kapa bag of nanahu for tinting white kapas.

2987 Ipu; for red dye.

2988 Kui humu; needle for sewing kapas in a kuina, bone. JSE.

2989 " " " " " kauila. JSE.

2990 Strip of black kapa for marking.

2996 Alaea, red ochre; used both as a pigment and as a cement.

2997 Awapuhi; ginger root, used for coloring and scenting.

2994 Waoke bark strip as taken from the tree.

2991 Poaaha or dried waoke bark after passing through the first process of kapa-making. In this form it may be kept for years. From Waikapu, Maui. JSE.

2992 Poaaha; whiter and thicker.

2993 Specimens of various qualities.

4043 Instrument of kauila wood for cleaning the grooves in a pa'u board, or ie kuku. The kapa is often troublesome in clogging these depressions.

2310 Kapa pa'u oiled, single sheet. 43 in. x 9 ft. 13, KR.

2311 " " " 3 shts, upper figd. 42 x 13 13, KR.

2312 " " " 5 " " " 34 x 11 13, KR.

2313 " " " 2 " " " 41 x 9 13, KR.

2314 " " " 3 " " " 41 x 9 13, KR.

2315 " " " fragment of under sheet. 31 x 6 3/4 13, KR.

2316 " " 2 sheets, kilohana figured all over. 36 x 9 13, KR.

2317 " " mahuna, fragment. QE. 39 x 2 1/4 13, KR.

2318 " " 4 sheets, purple with black and red figures. JSE. 36 x 11 1/4 13, KR.

2319 " " mao or waipalupalu, 4 sheets yellow with black and red figures. QE. 42 x 9 13, KR.

2320 " " yellow, single sheet; hula skirt. 48 x 22 1/4 13, KR.

2321 " " sheets, 1, 2, 3, yellow, 4 and 5, brown. 39 x 9 13, KR.

2322 " " 5 sheets yellow, kilohana figured red. 33 x 10 1/2 13, KR.

2323 " " cotton cloth, figured to imitate the native manufacture, black figures. 35 x 9 1/2 13, KR.

2324 " " mate to 2323. " " D.

2325	Kapa pa'u; single sheet, cross striped red and black.	40 in. x 13 ft.	D.
2326	" " brown-pink, black figures, Molokai. Fragment.		D.
2327	" " hula, yellow with black figures.	43 x 16	13, KR.
2328	" " paiula, 5 sheets plain. Fragment.		13, KR.
2329	" " olena. Fragment.		23, KR.
2330	" " hula. Fragment. JSE.	43 x 10	D.
2331	" " " Striped. JSE.	44 x 10	13, KR.
2332	" " " black and red.	43 x 10	13, KR.
2333	Kapa moe, kilohana red-brown, dark stripes; 1 blue, 2 white sheets.	7 1/4 ft. x 10 ft.	14, KR.
2334	" " " mottled grey, 4 white, soft.	8 x 12	14, KR.
2335	" " " painted, kalukalu, fragment.		3, KR.
2336	" " " blue with black figures and stripes, 4 white.	6 1/2 x 9 3/4	14, KR.
2337	" " " paiula, red from foreign cloth, 1 white. Made in 1868, by Huli of Waiea, South Kona. JSE.	5 3/4 x 10	14, KR.
2338	" " " white with red triangles, 4 white.	7 1/2 x 9 3/4	D.
2339	" " " white, blue and pink,	6 x 7	14, KR.
2340	" " " pink and blue, 4 white.	7 1/2 x 10	14, KR.
2341	" " " white with pink and grey stripes, 4 white.	7 3/4 x 9 1/2	14, KR.
2342	" " " red with grey patches, 4 white.	7 1/2 x 9 1/2	14, KR.
2343	" " " mamaki ouholowai, soft brown with darker stripes.	6 3/4 x 10	14, KR.
2344	" " " 5 red-brown striped with black. QE.	7 x 10 1/2	14, KR.

2345 Kapa moe, kilohana 5 red-brown striped with dark-brown,
old. 6 ft. x 7 $\frac{3}{4}$ ft. 14, KR.

2346 " " " 5 dark-brown striped with black.
7 $\frac{1}{4}$ x 11 $\frac{3}{4}$ 14, KR.

2347 " " " " " HG.
7 $\frac{3}{4}$ x 11 $\frac{1}{4}$ D.

2348 " " " pink with blue mottled stripes, 4 white.
JSE. The kilohana was originally plain white, the mottling added at a later date. The red, puakai, was made by infusing waoke with noni root, maile, powdered coral unburnt, etc., and the process required five days for the infusion, when the waoke became dark red, and was then beaten into the white kapa. The dark mottling is of ae-
okahaloa kapa, the pigment being charcoal of waoke, and is beaten in as the red was previously. This kuina was made about 1881 by Kukona, of Wailuku, Maui.
7 ft. x 9 $\frac{3}{4}$ ft. 14, KR.

2349 Kapa moe, kilohana, 2, 1st. auilepe, 2nd. kuakualoi, Kau,
Hawaii. JSE.
6 $\frac{3}{4}$ x 9 $\frac{1}{4}$ 14, KR.

2350 " " " 2 dark brown, plain, 4 ginger-colored,
soft. 7 x 9 14, KR.

2351 " " " paiula, dark grey squares, 1 white.
7 $\frac{1}{4}$ x 10 15, KR.

2352 " " " 1st. blue with black squares and triangles,
1 white, 2nd. kilohana white
with broken stripes, 2 white.
12 x 10 $\frac{1}{2}$ 8, KR.

2353 " " " ohelohelo with dark mottlings, 4 white.
6 $\frac{1}{2}$ x 9 $\frac{3}{4}$ 8, KR.

2354 " " " paikukui kakau nanahu, 4 white.
7 $\frac{1}{2}$ x 9 15, KR.

2355 " " " yellow-brown with dark zigzag, 1 white,
1 pink, 1 white, 1 blue. HG.
7 x 9 $\frac{3}{4}$ 2, KR.

2356 " " " salmon-color with red and black stripes,
1 white, 1 figured, 1 white. HG.
8 x 9 $\frac{1}{4}$ 14, KR.

2357 " " " palenanahu puahala, 4 white. HG.
6 $\frac{1}{2}$ x 8 $\frac{1}{2}$ D.

2358	Kapa moe, kilohana paiula striped, 2 grey. HG.				
		6½ ft.	x	8¾ ft.	D.
2359	" " "	ulaula keokeo, white with red stripes, 1 grey, 3 white. HG.			
		6½	x	8½	D.
2360	" " "	red with blue stripes, 1 white, 1 red, 2 white. HG.			
		7½	x	9	D.
2361	" " "	paiula, foreign color, 4 white. Waipio, Hawaii. JSE.			
		7	x	9	D.
2362	" " "	white with black stripes, 4 white. JSE.			
		7½	x	10	14, KR.
2363	" " "	black with brown stripes.			
		7¼	x	9¾	3, KR.
2364	" " "	black, 3 sheets.			
		8	x	10½	3, KR.
2365	" " "	3 sheets ginger color.			
		7½	x	9	2, KR.
2366	" coarse, red, yellow and black stripes.				
		5¾	x	8¾	3, KR.
2367	" white with red and grey stripes. JSE.				
		5¾	x	9¼	3, KR.
2368	" moelola, grey.				
		8	x	10	3, KR.
2369	" kihei keiki, nao nanauahuki. Hawaii. JSE.				
		4¾	x	8	3, KR.
2370	" kilohana mamaki eleuli. JSE.				
		6	x	7	3, KR.
2371	" " " Punaluu, Kau, Hawaii. JSE.				
		8	x	9	3, KR.
2372	" pa'u, light brown, plain, coarse.				
		28 in.	x	41½ ft.	D.
2373	" kilohana mamaki, Kau, Hawaii. JSE.				
		5 ft.	x	6¼	3, KR.
2374	" red-brown, stiff.				
		7½	x	8½	3, KR.
2375	" pa'u, yellow, thick.				
		3½	x	16¼	3, KR.
2376	" malo, waoke			15 in. wide.	
2377	" " " alaea, striped with kukui wood charcoal. JSE.				
		10 in.	x	6¾	3, KR.
2378	" " " niau. JSE.				
		9	x	6¾	D.

2379	Kapa malo, olena. JSE.	9 in. x 7 ft.	2, KR.
2380	" " waoke kea. JSE.	9 x 7	2, KR.
2381	" " kaholo, grey.	12 x 6½	2, KR.
2382	" olena huipu na uhane ino.	12 x 4¾	D.
2383	" malo olena, scent maile and awapuhi. JSE.	6 x 7½	2, KR.
2384	" pa'u olena, black and red stripes and figures.	3½ ft. x 8½	2, KR.
2385	" moe, 3 sheets ginger colored, red and black figures.	4½ x 7	2, KR.
2386	" ginger colored, plain.	3½ x 4½	D.
2387	" " "	3½ x 9	2, KR.
2388	" " "	4 x 13	D.
2389	" pa'u, 4 sheets, ginger colored. QE.	3½ x 9½	2, KR.
2390	" " hula puakai, 2 sheets very old,	32 in. x 13¾	2, KR.
2391	" " " 3 " all striped.	36 x 10½	2, KR.
2392	" " " 3 "	28 x 9¼	2, KR.
2393	" mahunalii, pink. JSE.	20 x 6	2, KR.
2394	" hana kahuna, aeokahaloa.	5 ft. x 8½	3, KR.
2395	" palapala haukeuke, echinus stamp. Kauai.	HG.	
		6 x 8½	3, KR.
2396	" mahunalii. HG.	2½ x 4¼	2, KR.
2397	" niho me ka haukeuke. Kauai. HG.	2½ x 7	3, KR.
		2¼ x 6	2, KR.
2398	" pea palau, yellow with red and black figures. HG.	8 x 9½	D.
2399	" moe, kilohana paiula with black figures, 4 white.	8 x 9½	D.
2400	" " " kuilewa pattern, 4 white.	8 x 9½	2, KR.
2401	" " " 4 white.	8¾ x 10½	D.
2402	" " " with mottled stripes, 4 white.	8 x 11	D.
2403	" " " " blue, 4 white.	8 x 10¾	D.
2404	" " " chocolate, 1 ginger, 2 chocolate, 1 ginger.	6½ x 9½	D.

2405	Kapa moe, kilohana paiula, with mottled stripes, 4 white.				
2406	" " "	4 white.	7 1/3	x 9 1/2	D.
2407	" " "	3 " soft.	7 1/2	x 8 1/3	D.
2408	" " "	4 "	8 1/2	x 11 1/4	D.
2409	" " "	4 " "	7	x 9 1/4	D.
2410	" " "	1 brown, 3 ginger colored, soft.		7 1/2 x 10	D.
2411	" " " and 4 sheets brownish.		6 2/3	x 8 2/3	D.
2412	" " 5 sheets white, soft, old.	8	x 11	3, KR.	
2413	" " kilohana paiula, 4 white, soft.		6	x 9	D.
2414	" " " striped, 5 delicate sheets.		7 1/3	x 8 2/3	2, KR.
2415	" " 2 grey sheets.		8 1/2	x 11 1/3	15, KR.
2416	" pa'u, 2 striped, 4 light brown.	2 1/3	x 11 2/3	15, KR.	
2417	" moe, 1 dark brown, 1 light brown, 1 dark brown, 2 light brown. QE.	6 1/4	x 7 1/3	D.	
2418	" kilohanas 2, aeokahaloa and paiula the latter foreign color. Scented with ku'aaoa. Made by Pipipi, Kona, Hawaii, in 1864. 3 sheets. JSE.		7	x 8 1/2	8, KR.
2419	" 1 aeokahaloa, 2 white scented with mokai. Made by Kanopa, Kona, Hawaii, in 1867. JSE.		6 1/2	x 8 2/3	2, KR.
2420	" " mahuna, 4 sheets paiula.	9 1/2	x 13		D.
2421	" " kilohana paiula, 4 white soft.		9 1/4	x 12 1/2	D.
2422	" " " " " 8	x 10 1/2			D.
2423	" " 4 sheets white, soft.	7	x 9 1/4		D.
2424	" " white with red and blue stripes.	4 white.		7 1/2 x 10 1/2	D.
2425	" " kilohana paiula, 2 white. HG.		7	x 9 3/4	D.
2426	" " " " foreign color, made about 1858; 1 kalukalu; white, made at same time, 1 white made 1847. All by Kanopa of Kona, Hawaii. JSE.		6 1/4	x 9	D.

2427	Kapa moe, kilohana [foreign], 2 white. Made by Kapule, Kona, Hawaii, 1868. JSE.	6 ft. x 8 ft.	D.
2428	" " 3 kalukalu, white. Made by Huli, Kona, Hawaii, 1868. JSE.	6 x 8	D.
2429	" " kilohana paiala nanahu, 4 white. Made at Laie, Oahu. JSE.	8 x 10	D.
2430	" " kilohana paikukui, 2 olena. HG.	7 1/3 x 9	2, KR.
2431	" " 4 ginger colored, soft.	5 1/2 x 6 1/2	D.
2432	" " figured, W. P. Leleiohoku, 1848. JSE.	3 1/2 x 4 3/4	3, KR.
2433	kihei, olena nanahu, figured. HG.	5 1/2 x 6 1/2	D.
2434	" moe olena nanahu kakau. HG.	7 x 8	D.
2435	" " kilohana puahala kakau. HG.	6 1/2 x 7 1/2	D.
2436	" " kilohana pualima. HG.	7 3/4 x 10	D.
2437	" " olena kakau. HG.	3 x 8	D.
2438	" " kihei kakau, old. JSE.	3 x 4	1, KR.
2439	" pa'u olena kakau.	2 1/2 x 11	D.
2440	" " olena kakau.	3 x 23	D.
2441	" moe kilohana puahala, 1 white, 1 brown. Made in Pelekunu, Molokai. Cleaned in 1886. JSE.	6 x 7 1/2	15, KR.
2442	" pa'u olena with red and black zigzags.	3 1/2 x 8 2/3	D.
2443	" " blue with red and black triangles.	4 x 3 1/2	1, KR.
2444	" " ohelohelo with black figures, 4 lightbrown. QE.	3 1/4 x 7 1/2	13, KR.
2445	" " olena with black figures.	3 3/4 x 8 1/2	D.
2446	" moe niau; yellow with painted black stripe. JSE.	6 1/3 x 9	2, KR.
2447	" " olena with red and black diagonals.	7 x 9 1/3	D.

2448 Kapa moe, kihei, red and green figures. HG. 5 ft. x 5 ft. D.

2449 " pa'u hula, brown with black stripes, 1 red. 3 x 3 D.

2450 " moe, thick white covered with black. 5 x 6 13, KR.

2451 " malo waipalupalu, lined with black. QE. 14 in. x 8 3/4 2, KR.

2452 " pa'u mahuna, 3 sheets, oiled. 3 1/2 ft. x 10 13, KR.

2453 " " brown-red, with black and red figures. QE. 3 2/3 x 4 1/2 13, KR.

2454 " " paiula. HG. 3 x 15 13, KR.

2455 " grey, from a burial cave. JSE. 8 1/2 x 10 3, RR.

2456 " moe, kilohana paiula, 1 pale blue, 1 white. JSE. 6 3/8 x 7 1/2 11, KR.

2457 " poni, purple; from foreign cloth and indigo leaves. Kiilae, Hawaii. JSE. 5 x 7 1/2 D.

2458 " moe, kilohana paiula, palenanahu, puahala, kakau, 4 white. HG. 6 x 8 8, KR.

2459 " brown. From Kawaihae-uka. JSE. 6 1/2 x 8 1/2 2, KR.

2460 " hinahina kuikui. Kau, Hawaii. JSE. 5 2/3 x 7 2, KR.

2461 " mahuna. HG. 6 2/3 x 8 1/4 2, KR.

2462 " moe ipo of Kamehameha III. JSE. 8 x 6 1/2 14, KR.

2463 " keokeo, very soft. 4 1/3 x 8 14, KR.

2464 " moe, kilohana olena made by Limahana of Kealia, in the time of Kamehameha III. JSE. 6 1/4 x 8 14, KR.

2465 " kihei, finely printed. 6 x 6 1/2 3, KR.

2466 " kalukalu, thin, white, fragment. 1, KR.

2467 " " " " 1, KR.

2468 " pale pink, with black stripes and figures, fragment. 15, KR.

2469 " white decorated with black and pink, fragment. 15, KR.

2470 " pa'u grey with black and red zigzags. 3 ft. x 14 ft. 15, KR.

2471	Kapa puakai. Fragment.	15, KR.
2472	" " "	1, KR.
2473	" " " used for hoounauna. JSE.	1, KR.
2474	" white with red and blue bands, fragment. Liliuokalani.	H. M. 1, KR.
2475	" grey with black zigzags, fragment.	15, KR.
2476	" paupau, brown with black and red figures.	1, KR.
2477	" ginger colored with red and black figures.	1, KR.
2478	" pa'u orange with black stripes and fig- ures QE. 3½ ft. x 8	1, KR.
2479	" keokeo maoli. HG. 5 x 7	1, KR.
2480	" moe, kilohana paiula, very old. HG. 3½ x 10	D.
2481	" kihei aeokahaloa made by Pipipi 1864, Kona, Hawaii, JSE. 7½ x 8¾	D.
2482	" moe, kilohana mamaki ahunali, made by Mauila, Pu- naluu, Kau, Hawaii. JSE. 7¾ x 9¾	D.
2483	" moe, kilohana mamaki eleuli, made by Mauila. JSE. 8 x 9¼	D.
2484	" red-brown. W. P. Leleiohoku. JSE. 4¼ x 5½	D.
2485	" mamaki ouholowai, made by Kapihe, Punaluu, Kau, Hawaii. JSE. 7 x 9¼	D.
2486	" mamaki ouholowai, made by Kapihe, Punaluu, Kau, Hawaii. JSE. 7 x 9½	1, KR.
2487	" holoku or dress, thick, ruled pattern. HG.	1, KR.
2488	" poni, kolu, nanauahuki. JSE. 5 x 5½	1, KR.
2489	" pa'u hula paiula, Kalalau, Kauai. JSE. 5 x 4½	1, KR.
2490	" kihei, figured red and black. 6 x 7¾	1, KR.
2491	" " " " " 6 x 8	1, KR.
2492	" keleawai, made by Mahoe, Kawaihae, Hawaii. JSE. 6¼ x 8½	D.
2493	" " " " " " " JSE. 7 x 9	D.
2494	" pa'u paikukui, black stripes. H. R. H. Keelikolani. 2½ x 9	D.
2495	" eleele. 5 x 8	D.
2496	" grey. 7½ x 8½	D.

2497	Kapa moe, kilohana grey. QE.	8 ft.	x 10 ft.	D.
2498	" " " paiula, 1 grey fine.	5	x 6 3/4	D.
2499	" " JSE.	5 3/4	x 7 1/2	D.
2500	" " light blue. JSE.	5 2/3	x 7	D.
2501	" " kilohana grey. QE.	8	x 10	D.
2502	" " " paiula. JSE.	8	x 8 1/2	D.
2503	" " " brown. Hanalei, Kauai. JSE.	4 1/8	x 6 2/3	D.
2504	" kelewai, stiff. JSE.	6 2/3	x 9	D.
2505	" moe haimanawa. HG.	3	x 9 1/2	1, KR.
2506	" keokeo kapalapala alaea. HG.	5 1/2	x 7	1, KR.
2507	" kolu, indigo and foreign cloth. South Kona, Hawaii. JSE.	5 1/3	x 8 2/3	D.
2508	" moe, kilohana holei. Hookena, Hawaii. JSE.	7	x 9 1/2	D.
2509	" " " paiula. Honomalino, Hawaii. JSE.	6 2/3	x 9	D.
2510	" " " JSE.	6	x 8 2/3	D.
2511	" " " 1868. JSE.	8 1/2	x 11	D.
2512	" " " JSE.	7	x 9 1/3	D.
2513	" paiula made by Kekoi of Honuapo, Kau, Hawaii. JSE.	6	x 8	D.
2514	" HG.	4 2/3	x 6 2/3	D.
2515	" " kalukalu, delicate. JSE.	7 1/3	x 9 1/4	D.
2516	" " " JSE.	4 1/4	x 10 1/2	D.
2517	" moe, color foreign.	5 3/4	x 9 1/4	D.
2518	" paiula. JSE.	7	x 9	D.
2519	" olena, 2 sheets. JSE.	6	x 8 1/2	D.
2520	" JSE.	8 1/2	x 12	D.
2521	" JSE.	8 2/3	x 11	D.
2522	" JSE.	7	x 9	D.
2523	" JSE.	7 1/2	x 9	D.
2524	" JSE.	4 1/2	x 11	D.
2525	" " 2 sheets, 1868. JSE.	4 1/2	x 6	D.
5526	" " 1864, JSE.	7	x 9	D.
2527	" " pa'u hula, old. JSE.	3 1/4	x 8	D.
2528	" " mahuna paikukui.	3 1/2	x 5	D.
2529	" " pa'u.	2 1/2	x 7 3/4	D.
2530	" " much faded. HG.	3 1/4	x 3 1/2	D.

2531	Kapa kihei mamaki, nao nanauahuki, color ahinalii. It was soaked in a kalo patch, used and then dyed with seeds of haa [<i>Antidesma</i>]. Kona, Hawaii. JSE.	3 ft. x 4 ft.	D.
2532	" brown-yellow.	3 x 5 1/3	D.
2533	" dark-brown with black stripes.	3 3/4 x 7 1/3	D.
2534	" pa'u, 5 sheets, oiled, striped.	3 1/4 x 17	D.
2535	" " 5 "	3 x 15 2/3	D.
2536	" " 5 "	3 x 13 1/2	D.
2537	" " 3 "	3 1/4 x 20	D.
2538	" " 1 sheet	3 x 12	D.
2539	" " 1 "	3 x 12	D.
2540	" " 1 "	3 x 12 1/2	D.
2541	" " 1 "	3 1/2 x 15 1/2	D.
2542	" moe, kilohana olena, 2 keokeo.	4 1/4 x 5	D.
2543	" kuikui noni. JSE.	6 1/4 x 9	D.
2544	" olena. JSE.	7 1/2 x 8 3/4	D.
2545	" alaea. JSE.	7 x 9 1/4	D.
2546	" " JSE.	6 1/2 x 9	D.
2547	" kihei olena. Hawaii. JSE.	4 x 5 1/4	D.
2548	" pa'u hula, olena, black figures. JSE.	8 1/2 x 9	D.
2549	" brown. QE.	3 1/2 x 7 3/4	D.
2604	" moe, kilohana red and grey, 2 white. HG.	7 1/3 x 9	D.
2605	" " 4 sheets ouholowai. HG.	7 x 8 1/2	D.
2606	" " 2 " ginger colored, soft.	6 1/4 x 9	D.
2607	" " white, old. Kauai. JSE.	6 3/4 x 9 1/2	D.
2608	" " yellowish white.	7 x 9	D.
2609	" " kilohana olena, 1 white. JSE.	5 x 7	D.
2610	" kea, white. JSE.	5 1/4 x 7 3/4	D.
2611	" " JSE.	7 3/4 x 9 3/4	D.
2612	" " JSE.	6 1/3 x 9	D.
2613	" " JSE.	6 1/3 x 8 1/2	D.
2614	" " JSE.	8 x 10 1/3	D.
2615	" " JSE.	7 3/4 x 9 1/2	D.
2616	" " JSE.	7 3/4 x 10 1/2	D.

2617	Kapa kea, white.	JSE.	7 3/4	ft. x 10 ft.	D.
2618	" " "	JSE.	4 2/3	x 7 3/4	D.
2619	" " "	JSE.	6	x 8 1/4	D.
2620	" " "	JSE.	6	x 8 1/4	D.
2621	" " "	JSE.	5	x 6 1/2	D.
2622	" " "	JSE.	7	x 8 2/3	D.
2623	" " "	JSE.	7 1/4	x 8 1/2	D.
2624	" " "	JSE.	7	x 8 1/2	D.
2625	" " "	JSE.	4	x 10 1/3	D.
2626	" " "	JSE.	8 1/2	x 9 1/3	D.
2627	" " "		5	x 8	D.
2628	" " " very stiff.		7 1/2	x 10 1/2	D.
2629	" " "		7 1/3	x 10	D.
2630	" " "		7 1/3	x 9 1/3	D.
2631	" moe 3 sheets kalukalu. Made by Huli, South Kona, Hawaii. 1868.	JSE.	5 3/4	x 7 3/4	D.
2632	" moe.		6	x 8	D.
2633	" old. HG.		6 1/2	x 11	D.
2634	" mahuna olena. HG.		4 3/4	x 9	D.
2635	" kea. HG.		8	x 8	D.
2636	" pa'u, oiled, old.		3 1/2	x 10	D.
2637	" moe, kilohana, purple, 1 yellow-brown. Old.		5	x 7	D.
2638	" " " paiula, 1 olena, stiff. HG.		4 1/4	x 7	D.
2639	" pa'u hula olena with black figures.				
2640	" malo alaea.	JSE.	10 in.	x 6 2/3	D.
2641	" " "	JSE.	9	x 7	D.
2642	" " "	JSE.	8	x 6 1/3	D.
2643	" malo puolena.	JSE.	9	x 7 3/4	D.
2644	" " "	JSE.	10	x 9 2/3	D.
2645	" " keokeo. Hana, Maui.	JSE.	10	x 5 1/2	D.
2646	" " poaaha, fragment.	JSE.	12	x 3 1/4	D.
2647	" aha. JSE.		5 1/2 ft.	x 8 1/2	D.
2648	" pa'u, 3 sheets, brown fragment.		2 3/4	x 5 1/4	D.
2649	" mao. Green, medicine. HG.		5 1/2	x 1	D.
2650	" pa'u, green, 2 sheets. QE.		3 3/4	x 12	D.
2651	" "		3	x 14	D.

2652	Kapa pau, 5 sheets. QE.	3½ ft. x 7¾ ft.	D.
2653	" " 4 " ginger colored.	3¼ x 7½	D.
2654	" " 5 " black figures.	3 x 10½	D.
2655	" moe, 3 sheets, ginger colored.	6 x 7½	D.
2656	" " 4 " " "	5½ x 6½	D.
2657	" " 2 " " "	QE. 4 x 9½	D.
2658	" pa'u, 3 " " "	3 x 13	D.
2659	" mahunalii, from an old kahuna of Moiliili, Oahu. Used in sorcery. JSE.		
2660	" moe, kilohana paiula.	4½ x 6½	D.
2661	" brown. JSE.	6¾ x 3	D.
2662	" pa'u, ginger colored.	3 x 13½	D.
2663	" " "	4½ x 7	D.
2664	" mahuna, oiled. JSE.	4 x 8½	D.
2665	" " Honaunau, Hawaii. JSE. 3	x 4¼	D.
2666	" old, leathery, from a burial cave, Hawaii. JSE.	2 x 2½ 25, KR.	
2667	" " " " " Hawaii. JSE.	2 x 6	D.
2668	" " red " " " Hawaii. JSE.	2½ x 6	D.
2669	" oiled.	3¼ x 12	D.
2670	" "	3¾ x 5	D.
2671	" "	1½ x 3½	D.
2672	" "	3½ x 4½	D.
2673	" "	1½ x 3¾	D.
2674	" "	3 x 4	D.
2675	" "	3¼ x 3½	D.
2676	" "	1¾ x 2½	D.
2677	" pa'u mahuna paikukui palapalaia. HG.	4 x 10	D.
2678	" " hula puakai.	2½ x 8	D.
2679	" " ginger colored.	2 x 11	D.
2680	" old, striped, from burial cave, Hawaii. JSE.	2 x 6	D.
2681	" " " with black.	4½ x 4½	D.
2682	" pa'u hula, kilohana figured, 1 white, 1 red, 2 white. JSE.	1¾ x 2½	D.
2683	" old, from burial cave, Hawaii. JSE.	4¾ x 7.	D.

2684	Kapa malo, fragment. JSE.	D.
2685	" mahuna mamaki, fragment. Molokai. JSE.	D.
2686	" keokeo, old. JSE.	D.
2687	" malo puolena kamalii; boy's malo. JSE. 6 in. x 7 ft.	D.
2688	" hula puakai, fragment. Hana, Maui. JSE.	D.
2689	" mahuna, made at Kipahulu, Maui. Fragment. JSE.	D.
2690	" given to the Prince of Hawaii, on Kauai. JSE.	D.
2691	" mamaki. JSE.	25, KR.
2692	" moelola pukapuka. Kaikioewa's Col. JSE.	1, KR.
2693	" nanahu, for coloring paikukui. JSE.	25, KR.
2694	" malo puakai, from Pelekunu, Molokai. JSF.	1, KR.
2695	" pa'u hula, from Queen Kalama. JSE.	25, KR.
2696	" puakai, from Kakani, Hana, Maui. JSE.	25, KR.
2697	" ouholowai, used by chiefs only. Queen Kalama. JSE.	25, KR.
2698	" mahunalii, from the sorceress Kamaipuupaa. JSE.	25, KR.
2699	" kuikui, from Koolau, Oahu. JSE.	25, KR.
2750	" fragment from a burial cave, Hawaii. JSE.	D.
2751	" pa'u hula, " " " JSE.	D.
2752	" malo kahuna puakai. Used only by chiefs when they bathe. Hana, Maui. JSE.	D.
2753	" kahuna. JSE.	D.
2754	" " JSE.	D.
2755	" Molokai. JSE.	D.
2756	" pa'u hula paikukui. Molokai. JSE.	D.
2757	" kahuna, from Kamoiliili. JSE.	D.
2758	" pa'u hula, from Kamehameha IV. JSE.	D.
2759	" " " Kalalau, Kauai. JSE.	25, KR.
2760	" malo paiula. Kaikioewa's Collection. JSE.	D.
2761	" pa'u paikukui; used in childbirth by kahunas. Very rare. JSE.	D.
2762	" mahuna paikukui, from Queen Kalama. Kapa hoo- unauna. JSE.	24, KR.
2763	" mahuna; used by Kahunas. Lahaina, Maui. JSE.	
2764	" moe, kilohana kapalapala puahala, Kamalo, Molokai. JSE.	D.
2765	" from Hana, Maui. JSE.	D.

2766	Kapa kihei mahuna, from Laie, Oahu. JSE.	D.
2767	" " " Waimea, Kauai. JSE.	D.
2768	" mahuna used by a kahuna lapaau at Waimea, Kauai. JSE.	D.
2769	" kihei mahuna, from Kaikioewa, of Waimea, Kauai. JSE.	25, KR.
2770	" pa'u hula, made at Waimea, Oahu. [2]	D.
2771	" fragment. HG.	D.
2772	" ribbons. HG.	24, KR.
2773	" mamaki.	D.
2774	" eleele.	D.
2775	" malo kea.	D.
2776	" puahala. Honokua, S. Kona, Hawaii. JSE. 3, KR.	
2777	" kapalapala. HG. 2 $\frac{3}{4}$ x 11 $\frac{1}{2}$ 3, KR.	
2778	" malo eleuli, color olena soaked in mud. Hookena, Hawaii. JSE. 9 in. x 6	24, KR.
3201	" aeokahaloa. H. M. Liliuokalani.	
		4 ft. x 6 $\frac{3}{4}$ 24, KR.
3202	" moe, olena 2, mao, olena, mao. H. M. Liliuokalani.	
		7 $\frac{1}{2}$ x 9 $\frac{3}{4}$ 1, KR.
3203	" " kilohana palahea, 1 keokeo, 1 paiula, 2 keokeo. H. M. Liliuokalani.	
		7 $\frac{1}{2}$ x 10 24, KR.
3204	" moe, kilohana nau, 4 keokeo. H. M. Liliuokalani.	
		6 $\frac{2}{3}$ x 9 KR.
3205	" " " paiula, 4 keokeo. H. M. Liliuokalani.	
		7 $\frac{1}{2}$ x 9 $\frac{1}{3}$ D.
3206	" " 4 keokeo, no kilohana. H. M. Liliuokalani.	
		6 $\frac{2}{3}$ x 9 $\frac{1}{4}$ D.
3208	" yellow poncho, decorated, modern make.	
3209	" ribbons. 9 specimens from Mrs. J. M. Whitney.	
		24. KR.

SAMOAN KAPAS.

2201	Siapo or Bark-cloth JSE.	7 ft. x 9 ft. 19, MR.
2202	" JSE.	6 x 7 $\frac{1}{2}$ 19, MR.
2203	"	19, MR.
2204	"	19, MR.
2205	" light colored, figured C.	6 x 7 D.

2206	Mat black, varnished. Tutuila.	JSE.	4 ft.	x	7 ft.	D.
2207	" brown, figured, soft.	JSE.	5	x	6 3/4	D.
2208	" " "	JSE.	8	x	11	D.
2209	" " "	JSE.	7	x	9 1/2	D.
2210	" " "	JSE.	9	x	15 3/4	D.
2211	" " "	JSE.	7	x	11	D.
2212	" " " Tutuila.	JSE.	7	x	8 1/2	D.
2213	heavy, varnished figures.		11 1/2	x	14	D.
2214	" " " " on white.		9 1/2	x	12	D.
2215	" " " " " JSE.		9 1/2	x	10 1/4	D.
2216	" " " " JSE.	8 1/2	x	9	D.	
2217	" " " " on white.	JSE.	8	x	10	D.
2218	" " " all over.	Com. L. Kempff. U.S.N.	5 3/4	x	8 1/2	D.
2219	heavy, varnished all over.	JSE.	6 1/2	x	9	D.
2220	" JSE.		7	x	9	D.
2221	" heavy, figures on white.	Tutuila.	5 3/4	x	8	D.
2222	" " triangular pattern.	JSE.	5 1/2	x	7 1/2	D.
2223	" " figures on white.	JSE.	7 1/2	x	8	D.
2224	" " " JSE.		5 1/2	x	9 1/2	D.
2225	" " " JSE.		6 1/4	x	9	D.
2226	" " all dark.	JSE.	5 3/4	x	8 1/4	D.
2227	" " figures on white.	JSE.	6	x	8	D.
2228	" " " JSE.		5	x	7	D.
2229	" " " on brown.	JSE.	5	x	5 1/2	D.
2230	" white screen or curtain, double.	JSE.	6 1/4	x	11	D.
2231	" tainamu or mosquito curtain.	JSE.				D.
2232	" pulou or head-covering.	JSE.	22 in.	x	13	19, MR.
2179	" tiputa worn by young girls.	JSE.				19, MR.
2180	" " " wife of Malietoa, made of the leaf of the dwarf fala.	JSE.				
2950	" dark, varnished.		8 ft.	x	8 1/4 ft.	

2951	Mat tiputa, white, fringed.	8 in.	x	16	ft.
2952	" leathery, dark-red, yellowish underneath.	Marquesas			
	Ids. C.	9 ft.	x	7	25, KR.
2953	" " red painted, black vine.	Hawaiian?	HG.		
		4	x	4 1/2	25, KR.
2954	" brown figures on white.	6 1/2	x	9	D.
2955	" " " "	4	x	7	D.
2956	" white with fine black rulings.	4	x	6 1/4	D.
2957	" " " " "	3 1/2	x	5 1/3	24, KR.
2958	" brown figures.	5	x	8	D.
2959	" " and yellow figures	6 1/2	x	8 1/3	D.
2960	" " figures.	6 1/2	x	8 2/3	D.
2961	" tiputa or malo, white with black spots.	2	x	12 2/3	D.
2962	" white with brown figures. [J. D. Strong.]	9 2/3	x	11	D.
2963	" " " "	9	x	9	D.
2964	" " " "	5 1/3	x	7 1/3	D.
2965	" " " "	5 2/3	x	7 1/3	D.
3573	serrate border.	4 1/2	x	5 1/4	19, MR.
2968	" malo, white with brown figures.	1 1/2	x	10	D.
2969	" " " " "	1 2/3	x	12 1/4	D.
2970	" lavalava or pulou, fringed. JSE.	1 1/3	x	18	D.
2971	" jacket or coat, brown.				19, MR.
1765	Gbola or bark cloth for malo.	Kai, New Guinea.	MR.		
1766	Po " " "	Kela, New Guinea.	MR.		
1767	" " " "	Bukaua, New Guinea.	MR.		
1768	Obo " " "	Jabin, New Guinea.	MR.		
1769	Nakwin " " cloak	" " "	MR.		
1784	Gi " " decorated.	Poom, New Guinea.	MR.		
1785	Mal " " malo, decorated.	Siassi, Low Ids.			
		New Guinea.	MR.		
1996	Fan made of kapa. Fiji Ids. C.			4, EH.	
2027	Masi or kapa used as a turban. Fiji Ids. JSE.			4, EH.	
2028	" " " "	" HG.		2, EH.	

NA MOENA—MATS.

The Hawaiian mats in this collection are made of the leaves of Hala [*Pandanus odoratissimus*], stems of the Makaloa [*Cyperus laevigatus*], of the Akaakai [*Scirpus lacustris*]; to these may be added in the Samoan collection Faupata [*Boehmeria Harveyi*], Fau or Hau [*Paritium tiliaceum*], the latter common in the Micronesian mats, Banana fibre, New Zealand Flax [*Phormium sp.*], and rattan [*Calamus rotang*], of Malayan sleeping mats.

In the Hawaiian dwelling of the better class, the floor was made of small stones and if not entirely covered, at least a raised portion used as a bed and called *Hikiee* was covered with several layers of mats, those of coarser texture at the bottom and fine hala mats on top, or perhaps a choice makaloa. Hala mats were again used as tables [2583, KR. 15], or convenient surfaces on which to dry seeds, fruits or plants, and finally mats were used for canoe sails, *Ie pea*. Tribute was paid in mats, and they formed no inconsiderable portion of a man's wealth.

In Samoa mats, *Ie lalaga*, *ie taua*, *ie sina*, *ie ula*, etc., were used for dress as well as to sleep on [*Falamoe*] and the finer kind were reserved for presents. In Micronesia the pandanus mats are beautifully ornamented with strips of hau dyed black or brown, and serve for garments. For this use they are small, but a similar one was sent as a present to Kamehameha V. which measured .8 x 10 ft. A still finer kind is used exclusively for garments of the women and is woven on a rude loom; all others mentioned in this catalogue are hand woven or braided.

The leaves of the hala are carefully selected, scraped and split into strips of suitable width which are rolled up and kept for the weaver. The width of the strip varies from $1\frac{1}{4}$ in. for the coarse floor or bed mats to $\frac{3}{8}$ in. for those placed on top of the hikiee. Leaves dried in the sun were browner than those dried by the fire and this difference in shade is used with good effect in many mats [2582, KR. 15]. The hala tree is far less common than formerly on these islands. No attempt has ever been made to plant it, and plantation clearing, forest fires, and some unexplained disease have made material for mats scarcer and dearer than twenty years ago.

The makaloa mats were made chiefly on Niihau, although the makaloa grows on Oahu and other islands as well, and those with colored patterns, moena pawehe, were seldom, if ever, made else-

where. The fine mats can only be plaited while the sedge is young, hence the time of working is limited to a few months each year, and it is certain that the largest mats of this kind in this collection must have been in the makers hands seven or eight years. The red portion is from the lower stem. These mats are still made, but the makers are fast dying out, and the younger generation of females does not take kindly to such continuous work.

It has been not a little puzzling to know where to draw the line between mats proper and mat-work used mainly for other purposes. For example, the fine mats from Ruk and the Marshall Islands are used as garments, the makaloa was plaited into malos for the chiefs, baskets or kits were simply mats folded or stitched together. Hawaiian pillows are only lauhala mats with three instead of two dimensions, fans are generally mat-work, and some Samoan mats can hardly be distinguished from New Zealand cloaks except by slight difference in form. However, without adopting a rigid rule, fans, pillows and baskets have been relegated to the division of household utensils, mats that can only be used as portion of a garment to the Island or Group from which they originate. By this means, although the collection of mats will seem much smaller than it really is, repetition will be avoided, and all will be found in the subsequent part of this Catalogue containing the specimens from Micronesia, Melanesia and non-Hawaiian Polynesia.

The mats demand more study than has yet been given them. Some of those from the western Islands show great ingenuity in joining leaves without braiding; the pleasing alternation of two colors is noteworthy in the work of the Gilbert Islanders and the elegant designs from the looms of Ruk deserve attention. Examples of the looms on which these hibiscus and banana fibre mats are woven are to be found among the Micronesian collections.

2550	Moena Niihau, plain.	Niihau Mat.	9 1/2 ft. x 14 1/3 ft.	D.
2551	"	"	7 x 10	D.
2552	"	"	7 1/2 x 10	D.
2553	"	" very old.	6 1/2 x 12 1/4	D.
2554	"	pawehe.	W. P. Leleiohoku Collection. JSE. 9 1/2 x 18 1/2 13, KR.	
2555	"	"	" JSE. 7 1/4 x 7 1/2 10, KR.	

2556 Moena Niihau, pawehe. Niihau Mat. JSE.

7½ ft. x 9½ ft. 9, KR.

2557	"	"	"	Given by Kekauonohi to Mrs. Rooke the mother of Queen Emma.	13	x 24	1-3, KR.
2558	"	"	"		10½	x 15	5, KR.
2559	"	"	"		10½	x 10½	10, KR.
2560	"	"	"		6½	x 7¾	7, KR.
2561	"	"	"		15½	x 26	D.
2562	"	"	"		6¾	x 7¾	7, KR.
2563	"	"	"	checkered, papa konane.	11	x 13½	13, KR.
2564	"	"	"	triangular figures	6	x 9	13, KR.
2565	"	"	"		7½	x 9¼	13, KR.
2566	"	"	"	QE.	13½	x 27½	13, KR.
2567	"	"	"	zigzag lines.	7¾	x 15½	14, KR.
2568	"	"	"	fine. H. R. H. Keelikolani.	6¼	x 9½	14, KR.
2569	"	"	"		6¾	x 9¼	14, KR.
2570	"	"	"	lettered. HG.	6	x 7	15, KR.
2571	"	"	"	stripes and zigzags.	6	x 7	7, KR.
2572	"	"	"	"	5½	x 9	D.
2573	"	"	"	"	6	x 10	D.
2574	"	"	"	Largest in the collection.	14½	x 30½	3, KR.
2575	"	"	"	triangular figures.	9	x 11	3, KR.
2576	"	"	"		7½	x 11¾	3, KR.
2577	"	"	"		7½	x 10½	3, KR.
2578	"	"	"		6½	x 8½	2, KR.
2579	"	"	"		7½	x 11	2, KR.
2593	"	"	"	old.	7	x 10	D.
2587	"	"	plain.		6½	x 9¾	D.
2588	"	"	"	Kamehameha I. Very old and soft.	10½	x 20	9, KR.
2589	"	"	"		4½	x 7	D.
2590	"	"	"	QE.	5	x 6½	D.

2600	Moena Niihau malo, used only by chiefs.	Very old.	QE.
			3, KR.
2601	" " "	"	3, KR.
2580	" lauhala.	Pandanus mat; fine.	4 3/4 x 7 1/4 10, KR.
2581	" " "	"	10 1/2 x 34 1/3 3, KR.
2582	" " "	"	7 1/2 x 10 15, KR.
2583	" " "	" coarse, for dining purposes.	3 x 28 3/4 15, KR.
2586	" " "	" diagonal stripes.	4 3/4 x 6 D.
2591	" " "	"	8 x 18 1/4 D.
2598	" " "	"	7 x 11 1/2 D.
2599	" " "	"	8 x 10 3/4 D.
2602	" " "	Hinano, R. A. Lyman, Jr., Kapoho, Puna, Hawaii.	8 x 8 1/3 9, KR.
2603	" " "		7 3/4 x 9 D.
2782	" " "		8 1/2 x 10 1/2 D.
2783	" " "		9 x 10 D.
2784	" " old.		8 x 11 1/3 D.
2785	" " "		9 x 10 D.
2786	" " "		7 1/2 x 12 1/4 D.
2787	" " sleeping mat.		4 x 6 D.
2788	" " "		4 3/4 x 5 1/2 D.
2789	" " fine.		6 1/3 x 9 D.
2790	" " beautifully woven border.		5 x 6 1/2 D.
2791	" " fine. QE.		5 x 8 1/2 D.
2584	" akaakai.	Rush mat.	2 1/2 x 5 9, KR.
2585	" " "		6 x 6 9, KR.
2594	" " "		8 x 10 D.
2595	" " "		7 x 8 3/4 D.
2596	" " "		10 x 20 D.
2597	" " "		7 x 9 1/2 D.
1485	Tapore or mat to cover a Maori oven.	New Zealand.	C. 41, MR.
1510	Porera or sleeping mat.	New Zealaad.	C. D.
2780	Mat for floor.	Rotuma. JSE.	6 1/2 x 10 D.
2781	" " "		6 1/2 x 10 1/2 D.
1808	Sleeping mat.	New Guinea.	C.

3215	Mat hala with hau trimming.	Covert's Id., 1839.	
3216	" hau fibre, knotted fringe, red and blue beads.	Tonga. C.	25 1/2 in. x 26 1/4 in. D.
3217	" pandanus bordered with hau.	Marshall Ids.	3 ft. x 5 ft. D.
3218	" " "	Marshall Ids.	6 x 6 D.
3219	" " "	Marshall Ids.	5 1/2 x 6 D.
3220	" " "	Marshall Ids.	6 x 6 D.
3221	" " "	Marshall Ids.	5 1/2 x 5 1/2 D.
3222	" " "	Marshall Ids.	5 1/2 x 6 D.
3223	" " "	Marshall Ids.	6 x 6 D.
3224	" " "	Marshall Ids.	3 x 3 HG.
3225	" " "	Marshall Ids.	3 x 3 HG.
3226	" " "	Majuro, Marshall Ids.	2 3/4 x 2 3/4 * D.
3227	" " "	Marshall Ids.	2 3/4 x 2 3/4 * D.
3228	" " "	Marshall Ids.	2 5/8 x 2 3/4 * JSE.
3229	" " "	Marshall Ids.	2 7/8 x 2 7/8 * JSE.
3230	" " "	Marshall Ids.	2 3/4 x 2 3/4 * JSE.
3231	" " "	Marshall Ids.	2 3/4 x 2 3/4 * JSE.
3232	" " "	Marshall Ids.	2 1/2 x 2 3/4 * JSE.

* Worn as garments about the waist; one is adjusted in front then a similar one is fitted behind overlapping, and both are secured by a cord belt.

3233	Mat pandanu bordered with hau.	Marshall Ids.	JSE.
		2½ x 2½ *	D.
3234	" " " "	Marshall Ids.	JSE.
		2¾ x 2¾ *	D.
3235	" " " "	Marshall Ids.	JSE.
		2¾ x 2¾ *	D.
3236	" " " "	Marshall Ids.	
		2 x 2 *10, PG.	
3237	" " " "	Marshall Ids.	
		2 x 2 *10, PG.	
3238	" " " "	Marshall Ids.	
		5½ x 5½ *	D.
3239	Mat. Black and white checks.	Niue.	JSE.
		3¾ x 5⅔	D.
3240	" Black and red zigzags.	"	JSE.
		5⅓ x 6⅓	D.
3242	" Man's loin-cloth of banana fibre.	JSE. Ruk.	
		1¾ x 5½ 1, MR.	
3243	" Hibiscus fibre, 3 black stripes and border.	Kingsmill	
	Ids. C.	1½ x 5½ 2, MR.	
3244	" Hibiscus fibre, 3 black stripes and border.	Kingsmill	
	Ids. C.	1½ x 5 3, MR.	
3245	" Hibiscus fibre, 3 black stripes and border.	Kingsmill	
	Ids. C.	1½ x 5 3, MR.	
3246	" Hibiscus fibre, 3 black stripes and borders.	Kingsmill	
	Ids.	1½ x 5 1, MR.	
3247	" Hibiscus fibre, 3 black stripes and borders.	Kingsmill	
	Ids.	1½ x 5	D.
3248	" Hibiscus fibre, 3 black stripes and borders.	Kingsmill	
	Ids.	1½ x 5	D.
3249	" hau. Poncho, plain, two sewed together.	Ruk. JSE.	
		3½ x 5½	
3250	" " Woman's dress.	Ruk. HG. 19 in. x 3½ ft.	D.
3251	" " " "	JSE. 21½ x 3½	D.
3252	" " " "	JSE. 21½ x 3½	D.
3253	" " " "	JSE. 24 x 4	D.
3254	" " " "	JSE. 23 x 3¾	D.
3255	" " " "	JSE. 22½ x 3¾	D.
3256	" " " "	HG. 23 x 3½	D.

3257	Mat hau.	Woman's dress.	Ruk.	HG.	22½in.	x 3½ft.	D.
3258	" "	" "	"	"	Kingsmill	Ids.	C.
					22	x 3¾	D.
3259	" "	" "	" "	"	21	x 4	D.
3260	" "	" "	" "	"	18	x 3½	D.
3261	" "	Man's scarf, plain.	HG.		15	x 7	D.
3262	" "	" "	QE.		18	x 6¼	D.
3263	" "	" "	HG.		18	x 6½	D.
3264	" "	Woman's dress.	Ruk.	JSE.	18	x 5	D.
3265	" "	Man's lopalop.	"	JSE.	25	x 5½	D.
3266	" "	Woman's poncho	"	JSE.	33	x 6	D.
3484	" "	Man's garment, two mats sewed together.	Ruk.				
3485	"	banana fibre, two mats.	Ruk.	JSE.	32	x 7	D.
3486	" "	" man's lopalop.	Ruk.	JSE.			D.
					22½	x 6¾	D.
3487	" "	" woman's dress, no fringe.	Ruk.	JSE.			D.
					24	x 6	D.
3488	" "	" "	"	" fringed.	Ruk.	JSE.	
					21	x 6¼	
						12, PG.	
3489	" "	" lopalop.	Ruk.	JSE.	14	x 6¼	
						12, PG.	
3490	" "	" "	"	JSE.	23	x 6½	
3491	" "	" poncho for men.			42	x 6	
3492	"	pandanus; sleeping.	Ponape,	Caroline Ids.	C.		
						1½ ft. x 2½ ft.	
3493	" "	" "	"	"	Caroline Ids.	HG.	
						1½ x 10	
							8, PG.
3494	" "	double, curious structure.			4	x 4	D.
3495	" "	" "	"		4½	x 5¾	D.
3496	" "	two colors.	Gilbert	Ids.	HG.	2 x 1½	
3497	" "	sack.	" "		HG.	1¼ x 1½	
							12, PG.
3498	" "	floor, two colors.	"		8¼	x 9½	
3499	" "	sleeping.	Gilbert	"	JSE.	4¼ x 4¾	
3500	" "	two colors, longitudinal suture.			4½	x 6	D.
3501	" "	fringed strip, origin unknown.			2/3	x 11¾	D.
3502	" "	girl's garment.	Gilbert	Ids.	HG	2½ x 5	9, PG.

3503	Mat pandanus.	Girl's garment.	Gilbert Ids.	HG.	
				1 1/3 ft.	x 2 2/3 ft. D.
3504	"	"	"	"	JSE.
				1	x 3 1/2 D.
3505	"	"	very fine.	5 3/4	x 6 D.
3506	"	"	Hawaiian?	5	x 8 D.
3507	"	"	" coarse, round.	3 2/3	ft. diameter. D.
3508	"	hau, fringed.	QE.	3 1/2	x 6 D.
5093	"	Niihau,	fine texture.	4 3/4	x 6 3/4 D.
3510	"	"		3 3/4	x 6 1/4 D.
3570	Ie sina.	Bed mat	Samoa.	C.	3 1/2 x 6 D.
3571	"	"	"	HG.	3 1/2 x 6 D.
3502	"	"	"	"	2 3/4 x 5 3/4
					19, KR.

A PRELIMINARY

CATALOGUE

OF THE

BERNICE PAUAHI BISHOP MUSEUM

OF

POLYNESIAN ETHNOLOGY AND NATURAL
HISTORY.

PART II.

Household Implements, Tools, Amusements, War,
Worship, Ornaments, Medicine, Fisheries
and Canoes, Relics of Chiefs.

HONOLULU, HAWAIIAN ISLANDS.

1892.



THE information given in the following pages in regard to the Hawaiian customs and antiquities has been gathered from various sources, but in most cases has been checked by notes made by the compiler during an extended exploration of the Group in 1864-65. At that time there were many natives living who were familiar with the methods and implements of olden times. Many of the high Chiefs were alive and communicated information that they were best able to give. Priests who had officiated in the heiaus of the ancient worship could be referred to, and the old Hawaiian who did not know the name of plant, bird, fish was as rare as now is the middle-aged Hawaiian who knows aught of the lore of his fathers. The limits of a Catalogue forbid extended treatment of antiquarian subjects, and only so much has been written as seemed required to explain the collections. It is well known that the ancient Hawaiian made use of the same implement for very different purposes at different times; thus a broken poi-pounder was converted into a lamp, an ulu-maika was used for a hammer; the stone cup at one time the furnace in which the kahuna burned the spirit of his victim, later became a less dangerous cup to hold the pigment for the tatuer; a stone club or newa that had laid low many a warrior became in time the sinker for a fisherman's net. Hence it has been necessary for the Curator to use discretion in naming some objects that may not meet the approval of some antiquarians. The most important or obvious use has been selected, and the broken and useless poi-pounder that has been altered into a lamp is classed with lamps, while the newa that without change of form has been made a sinker still ranks with weapons of war.



HAWAIIAN HOUSEHOLD IMPLEMENTS.

Before describing its contents the house itself deserves attention, Several small models are in the Museum but these are not very exactly made either in form or material. While it is true that the makaainana did not all have good houses to live in, dwelling in caves or miserable huts, several families often herding together, the houses of the chiefs and well-to-do citizens were by no means uncomfortable, although destitute of much architectural beauty. Even the palace of the King was not an elaborate structure and all looked at some distance like well-trimmed haystacks, from the grass with which they were covered. Fifty years ago Honolulu was, with very few exceptions composed of such houses.

The building of a chief's house will serve as illustration of all the rest which differed mainly in size and finish. Religious rites which filled so large a part of the daily life of a respectable Polynesian had an important part in the building of his dwelling. It is not necessary here to describe them all, but the aspect of the site, what the Chinese calls its "Fung Suey," was determined by the kahuna. The time for cutting the timber, the kinds to use, as for example opposing rafters must both be of the same wood or the house would be unlucky,—the sacrifice of a man to place under the main post of the house, and final cutting of the grass over the door, all were occasions for priestly interference and taxation.

The dimensions of a native house might be twenty-five feet wide, twelve feet deep and of a height from four or five feet at the hip to ten or even fifteen at the ridge, according as the high old priestly style or the lower and more modern one was adopted. The corner posts [*poukihi*] were planted first, set deeply in the earth, or among the stones of the platform on which the better houses were built; the other posts of a side were then set at intervals of about three feet, and when the posts of front and back were complete the plates [*lohelau*] were bound firmly with coconut cord to grooves already cut in the posts, leaving a slight finger projecting above the plate to

engage the fork of the rafter. The two main posts [*pouhana*] are then raised, and it is under one of these that the human sacrifice was placed in a chief's house. The ridge-pole [*kaupaku*] was bound by cord to the notches in the top of the pouhana, and the halekea or upright posts inside the house were set up, if it was large or required partitions. The rafters were put up and carefully marked for length, then taken down and at the top hewn into a knob, at the bottom where it met the post into a fork. When trimmed these were carefully bound to the ridge-pole and the side posts, and then the [*kuaiiole*] or upper ridge-pole was fastened above. Then the whole building was drawn tightly together by ropes until the *ahu* or small lath-like sticks were tied on over the whole house. The frame was then ready for the thatch, which might be grass—*pili*, *ki-lai*, or cane leaf—*lau ko* according to the taste of the owner; the grass was more durable. There were no windows and the plank door was usually very low, seldom more than five feet, more commonly three feet high. A light fence around the outside completed the dwelling but the owner might not move into it with his family until the priest had uttered the Kuwa or prayer at the cutting of the grass over the door.

Within there was little enough in the way of furniture. A raised portion of the gravel floor, the *hikie*, was covered with mats and was the bed. A small circle of stones in the floor marked the fire place, if the house was in a cool situation, but there was no chimney except sometimes a small hole at one gable. A few calabashes to hold food and clothing, some dishes for pig, dog or fish some *huewai* or water-bottles, a few rolls of mats and bundles of *kapa*. That is essentially all the furniture of the ancient Hawaiian. Great pity for him! says David Malo.

In ancient times while the Kapu was still the supreme law of the land, an Hawaiian establishment consisted of at least six distinct houses:—

1. Heiau or house where the family gods resided; women could not enter.
2. Kua or house for beating Kapa. This was the women's workroom.
3. Pea or house where females could retire during their infirmity.
4. Kua or men's eating house; women could not enter.

5. Aina or women's eating house; men could enter, except priests.

6. Noa or common sleeping house, where guests were received.

The abolition of the Kapu and Idolatry, and the extinction of kapa-making did away with this multifarious abode, and bringing all together made the house more comfortable even if the promiscuous herding of men, women and children in one room was not conducive to morality.

A new grass house is cool and comfortable, but it soon gets full of vermin, and from its poor ventilation musty and unwholesome. There are still some "Hale pili" left in out of the way places, but like the kapa-making they belong to a past that can never return.

4235 Small model of Hale pili 30, *MR.
4236 " " " covered with fern. 30, *MR.

Of household implements the Calabash takes first place. The Hawaiians like the Tahitians, Maoris and other Polynesians knew not the art of pottery. They had the clay but not the knowledge, and it is worthy of remark if they truly came from the Asiatic continent, where pottery has been practised from time immemorial, and has attained in ages prior to their supposed emigration a remarkable perfection, they should remember nothing of this important art of their father-land, while the black races of Fiji and the New Hebrides make pots of fair quality and complicated form.

Hawaiians had, however, a substitute for bowls in the immense fruit of *Cucurbita maxima*, a gourd not native to the Islands, but found cultivated here when the Group was discovered; it was not known on the other groups, nor is its native country known. The hard, woody rind of this gourd was light and durable, serving for containers of food or clothes. A pair of the gourds suspended from the auamo or carrying stick of the Hawaiian served, not thirty years ago, for travelers' trunks, one containing food, the other clothing. They were dried and carefully cleaned, furnished with a cover, which also served as a dish, and a net or koko to hold the cover close and to form handles. For the common people these koko were simple nets of coconut fibre or olona, but the chiefs indulged their fancy with kokos of most complicated knotting, many of which are in this collection. The wood of various trees also furnished material for their most valuable containers. The Bottle gourd [*Lagenaria vul-*

garis] was found on this and other Polynesian Groups. It serves for bottles, and the larger specimens for hula drums. On Niihau the art of decorating the surface of the gourd was much practised. A water-proof glaze was put all over the gourd and the portions that it was desired to stain black were scraped bare, and the gourd sunk in the mud of a kalo-patch.

The large umekes of wood were wonderfully well made, and of good form; by far the best specimens of Hawaiian handicraft. They were nearly as round as if turned, but in making no centre was struck. The block was selected, roughly trimmed and soaked for months before working, the outside was finished first and polished, and then the interior dug out, leaving walls sometimes an inch thick, but often reduced to an eighth. Specimens of these in various stages will be seen in Case 27, MR. Kou [*Cordia subcordata*] is the wood most used; Kamani [*Calophyllum Inophyllum*] is also a favorite, and a single specimen of coconut wood appears in the collection.

408 Pa kii.—Dish for roast pig, with carved figures of Kahahani and Kekuapoi his wife from the collection of H. R. H. Keelikolani. Carved dishes are at present very rare, but in the olden time not uncommon. In the British Museum are several curiously carved, and many other specimens are in foreign collections. Such curious forms would naturally be carried away by curiosity seekers. Among the Maori articles in this Museum is a dish or bowl [1532, Case 39, MR.] supported, by two similar figures, which are peculiar in that they both face in same direction. In the present example the mouths of the figures are large and used to contain salt. 6, MR.

		Circumference. Inches.	Height. Inches.	
409	Umeke poi, kou wood, old.	89½	18½	A. 14, *MR.
410	" kou, modern cover. QE.	83¾	14	F. 34, *MR.
411	" " QE.	82	10½	B. 8, MR.
412	" "	74	20	A. 6, *MR.
413	" "	72	14½	F. 7, *MR.
414	" " Paki's.	72	9½	B. 26, *MR.
415	" kamani with cover.	70½	10	B. 5, MR.
416	" kou. HG.	70	9½	B. 9, *MR.

*Indicates that the objects are outside or on top the case numbered. The letter refers to the diagram of form to be found below.

			Circumference. Inches.	Height. Inches.		
417	Umeke kou.		69½	17	F.	31, *MR.
418	" "	flat bottom. QE.	69½	6¼	H.	9, MR.
419	" "		68	10	H.	4, *MR.
420	" "	with ipu cover.	61	14	A.	4, MR.
421	" "	" kou "	58¾	7½	H.	5, MR.
422	"	coconut wood. HG.	58½	12	B.	30, *MR.
423	"	kou, very old.	58½	11½	A.	5, *MR.
424	"		54½	9½	H.	7, MR.
425	"	old. QE.	53½	14	A.	5, MR.
426	"	" with cover.	53½	12¼	A.	7, MR.
427	"		51½	8¼	B.	6, MR.
428	"	turned.	48½	4¾	H.	4, MR.
429	"	old.	48	11	A.	5, *MR.
430	"	JSE.	47¾	8	B.	6, MR.
431	"		47¼	8¾	H.	6, *MR.
432	"		46½	4	B.	4, MR.
433	"	turned.	45¾	5	H.	5, MR.
434	"	QE.	45½	5¼	H.	4, MR.
435	"	old.	44½	6¾	B.	9, *MR.
436	"	kamani turned.	42	4½	B.	5, MR.
437	"	kou. QE.	40¾	13½	A.	5, MR.
438	"	turned.	40½	6	B.	5, MR.
439	"		37	7¾	F.	7, MR.
440	"	old, polygonal. QE.	33¾	9¾	A.	4, MR.
441	"	Kau, Hawaii. JSE.	48½	6	B.	30, *MR.
442	"		46½	8	H.	4, MR.
443	"		50	6	H.	6, MR.
444	"		45	5½	H.	5, MR.
445	"	QE.	42¼	4½	B.	6, MR.
446	"	QE.	44¼	3¾	B.	4, MR.
447	"	with cover.	40¾	5	C.	4, MR.
448	"	old, unpolished.	41¾	6½	H.	12, *MR.
449	"	" "	39¾	7½	F.	D.
450	"	" "	42	7¾	F.	8, *MR.
451	"	" "	35½	4¾	B.	22, MR.
452	"	" "	39½	4½	B.	D.
453	"	" "	34¼	9½	A.	10, *MR.
454	"	ohia wood. Punaluu, Kau. JSE.	30	9	A.	4, *MR.

			Circumference. Inches.	Height. Inches.	
455	Umeke kou, old, unpolished.		31 $\frac{1}{4}$	4 $\frac{1}{2}$	B. 5, *MR.
456	" " " turned.		38 $\frac{1}{2}$	4 $\frac{3}{4}$	H. 9, MR.
457	" " " "		35	3 $\frac{1}{4}$	D. 7, MR.
458	" " " "		34 $\frac{1}{2}$	4	D. 9, MR.
459	" " " "		35 $\frac{1}{2}$	5 $\frac{1}{4}$	B. 11, *MR.
460	" " " JSE.		34 $\frac{1}{2}$	5	B. D.
461	" " melia, turned.		36 $\frac{3}{4}$	5 $\frac{1}{2}$	H. 5, MR.
462	" " " "		35 $\frac{1}{2}$	4	4, MR.
463	" " eleven-sided.		31	7	4, MR.
464	" "		30 $\frac{1}{2}$	5	B. 7, MR.
465	" "		27 $\frac{1}{2}$	7	A. 9, MR.
466	" "		32 $\frac{3}{4}$	3 $\frac{3}{4}$	D. 7, MR.
467	" " olo.		34	3	D. 4, MR.
468	" " turned.		30 $\frac{1}{2}$	3 $\frac{1}{2}$	D.
469	" old, decahedral.		28 $\frac{1}{2}$	3 $\frac{1}{2}$	B. 4, MR.
470	" " unpolished.		31 $\frac{1}{2}$	6 $\frac{1}{2}$	A. 7, MR.
471	" " "		29	7 $\frac{1}{2}$	A. 11, *MR.
472	" " unfinished.		27 $\frac{1}{2}$	7 $\frac{1}{2}$	A. 6, MR.
473	" " ohia, rough, burial cave.		24	7	D.
474	" " kou, Kanupa eave. JSE.		25 $\frac{3}{4}$	6 $\frac{3}{4}$	D.
475	" " olo. QE.		40 $\frac{1}{2}$	11 $\frac{1}{2}$	L. 4, MR.
476	" "		31 $\frac{3}{4}$	7 $\frac{1}{2}$	G. 7, MR.
477	" "		23 $\frac{3}{4}$	6 $\frac{3}{4}$	A. 7, MR.
478	" " turned.		23 $\frac{3}{4}$	6 $\frac{1}{4}$	A. 7, MR.
479	" "		22 $\frac{1}{2}$	5 $\frac{1}{2}$	F. 7, MR.
480	" "		23	6 $\frac{1}{4}$	D. 6, MR.
481	" " decahedral.		25 $\frac{1}{4}$	5 $\frac{3}{4}$	5, MR.
482	" "		24	7	D. 6, MR.
483	" old, unpolished.		24	4 $\frac{3}{4}$	A. 5, MR.
484	" "		25 $\frac{1}{2}$	4 $\frac{1}{4}$	5, MR.
485	" " Kanupa cave. JSE.		15 $\frac{1}{2}$	6 $\frac{1}{2}$	L. D.
486	" old, rough. JSE.		22 $\frac{1}{2}$	7	D.
487	" " "		35 $\frac{1}{4}$	5	H. D.
488	" " hexahedral.		28 $\frac{1}{2}$	4 $\frac{1}{4}$	B. 4, MR.
489	" "		29 $\frac{1}{2}$	4	B. 8, MR.
490	" " with base, turned.		29 $\frac{1}{2}$	4	D. D.
491	" "		34	3 $\frac{1}{2}$	D. 4, MR.

			Circumference. Inches.	Height. Inches.		
492	Umeke kou, cover of kamani.		34 1/4	3 1/2	D.	6, MR.
493	" " rough.		33	3 3/4	G.	7, MR.
494	" "		33 1/2	2 3/4	B.	7, MR.
495	" " grooved.		30	4	B.	4, MR.
496	" " turned, with base.		29 3/4	4	H.	7, MR.
497	" "		23	4 2/3	F.	7, MR.
498	" "		25 1/4	3	H.	6, MR.
499	" "		25 1/2	4	F.	4, MR.
500	" "		29	3 3/4		
501	" "		24 1/2	4	K.	4, MR.
502	" "		25	4 1/2	H.	32, *MR.
503	" "		26 1/2	3 1/2	H.	6, MR.
504	" "		26 1/2	2 1/3		
505	" pithecolobium, varnished.			26 3/4	3 1/2	H. 4, MR.
506	" kou.		26	3 1/4		
507	" "		27 1/2	4 1/4	B.	6, MR.
508	" " turned with base.		28 1/2	3	H.	5, MR.
509	" "		20 1/4	4 1/4	F.	9, MR.
510	" "		21 3/4	3	B.	7, MR.
511	" "		23 3/4	2 3/4	H.	9, MR.
512	" turned.		19 1/4	3 1/4	A.	8, MR.
513	" "		19	3 3/4	F.	9, MR.
514	" "		18 1/4	3 1/2	F.	9, MR.
515	" QE.		19 1/2	3 3/4	B.	4, MR.
516	" flat bottom, peculiar shape.		18 1/2	4 1/4		4, MR
517	" JSE. Heavy bottom.			16 1/4	5 1/4	A. 5, MR.
518	" "		19 1/4	3 3/4	O.	6, MR.
519	" flat bottom.		20 1/4	3		4, MR.
520	" turned with base.		21 3/4	3	B.	D.
521	" "		22	2 1/4	H.	D.
522	" " eaten.		22	2 1/2	D.	D.
523	" decahedral		23 1/2	2 1/2	D.	4, MR.
524	" "		24 3/4	2 1/2	D.	9, MR.
525	" "		24 3/4	2 1/4	D.	D.
526	" turned, perhaps a cover.		22	1 3/4	D.	9, MR.

			Circumference. Inches.	Height. Inches.	
527	Umeke"kou, turned.		22 $\frac{1}{4}$	2 $\frac{1}{2}$	D.
528	" " "		22	2 $\frac{1}{4}$	B. 9, MR.
529	" " " QE.		22 $\frac{1}{4}$	2 $\frac{3}{4}$	D. 6, MR.
530	"		20	2 $\frac{1}{4}$	F. D.
531	" "		17 $\frac{1}{2}$	2 $\frac{1}{4}$	B. 9, MR.
532	" "		18 $\frac{1}{4}$	2 $\frac{3}{4}$	B. 9, MR.
533	" "		17 $\frac{3}{4}$	2 $\frac{1}{2}$	B. D.
534	" "		16 $\frac{1}{2}$	2 $\frac{3}{4}$	B. 5, MR.
535	" " polished.		17 $\frac{3}{4}$	2 $\frac{1}{2}$	H. 5, MR.
536	" "		18 $\frac{3}{4}$	1 $\frac{3}{4}$	B. 7, MR.
537	" "		18 $\frac{1}{2}$	3 $\frac{1}{4}$	H. 5, MR.
538	" "		20	4 $\frac{1}{2}$	H. 4, MR.
539	" pithecolobium. QE.		22	2 $\frac{3}{4}$	B. 8, MR.
540	" old, burial cave.		22 $\frac{1}{2}$	3 $\frac{1}{2}$	A. D.
541	" kou with gourd cover. QE.	15 $\frac{1}{4}$		4	D.
542	" old burial cave.	25 $\frac{1}{4}$		5 $\frac{1}{4}$	D.
543	" " Kanupa cave. JSE.	25 $\frac{1}{4}$		4 $\frac{1}{4}$	B. D.
544	" " " JSE.	30 $\frac{1}{2}$		4 $\frac{3}{4}$	H. D.
545	" " burial		3 $\frac{1}{4}$	4	D.
546	" " "		28 $\frac{1}{4}$	4 $\frac{1}{2}$	D.
547	" " "		27 $\frac{1}{4}$	4 $\frac{1}{2}$	D.
548	" " hemispherical, flat bottom.		28 $\frac{1}{4}$	4 $\frac{1}{4}$	D.
549	" " " JSE.		24 $\frac{3}{4}$	2 $\frac{1}{2}$	D.
550	" " " JSE. hemi- spherical.		26 $\frac{1}{2}$	3 $\frac{3}{4}$	D.
551	" old, burial. JSE.	22		2 $\frac{1}{2}$	D.
552	" rosewood. QE.		24 $\frac{1}{4}$	4 $\frac{1}{4}$	B. 7, MR.
553	" ohia, rough, thick.		34 $\frac{1}{4}$	3 $\frac{1}{4}$	D.
554	" or ipukai, calabash cover. Honoapu, Hawaii.				
	JSE.				
560	" kou.		34 $\frac{1}{4}$	4 $\frac{1}{4}$	B. 8, MR.
561	" "		29 $\frac{1}{4}$	3	B. 7, MR.
562	" "		30 $\frac{1}{2}$	3 $\frac{1}{4}$	B. 7, MR.
563	" "		28 $\frac{3}{4}$	2 $\frac{1}{4}$	B. 7, MR.
564	" "		29 $\frac{3}{4}$	3	B. 4, MR.
565	" kamani.		25 $\frac{3}{4}$	2 $\frac{1}{2}$	D.
			28	3	E. 4, MR.

		Circumference. Inches	Height. Inches.	
566	Umeke kou.	23 1/4	2 1/2	E. D.
567	" "	21 3/4	2 3/4	E. D.
568	" "	22 1/2	3	E. 6, MR.
569	" "	22 1/4	2 3/4	E. 7, MR.
570	" "	23 1/2	3	E. D.
571	" "	22	3	E. 7, MR.
572	" "	22 1/2	2 1/2	E. 8, MR.
573	" "	22 1/4	2 3/4	E. D.
574	" "	22 1/2	2 3/4	E. 6, MR.
575	" "	19	2 3/4	E. 32, MR.
576	" "	19 1/4	2 3/4	E. D.
577	" "	19 1/2	2 1/2	E. 20, MR.
578	" "	19 1/4	2 3/4	E. 32, MR.
579	" "	19 3/4	2 1/3	E. 32, MR.
580	" "	19 1/2	2 3/4	E. D.
581	" "	19 3/4	2 1/4	E. D.
582	" "	23	2 3/4	D. 14, MR.
583	" "	22	2	D. 8, MR.
584	" " turned with foot.	26	2 3/4	H. 8, MR.
585	" " with cover, turned.	28 3/4	2 1/2	E. 9, MR.
586	" " " "	22 1/4	2 1/2	E. D.
587	" " " "	22 1/2	2 1/2	E. 8, MR.
588	" " " "	22 3/4	2 1/2	E. 8, MR.
589	" " " "	22 1/2	2 1/2	E. D.
590	" " " "	22	2 1/2	E. 8, MR.
591	" " " "	22 1/2	2 1/2	E. D.
592	" " goblet-shaped. H.R. H. Keelikolani.	15 1/2	5 1/4	6, MR.
593	" " with cover, turned.			8, MR.
594	" " " " of kamani.			9, MR.
595	" " octahedral. QE.			4, MR.
596	" " goblet-shaped.			4, MR.
597	" " with cover.			8, MR.
598	" " goblet-shaped.			5, MR.
599	" " "			8, MR.
600	" " "			9, MR.
601	" " "			9, MR.
602	" " "			9, MR.
603	" " "			7, MR.

			Circumference. Inches.	Height. Inches.	
604	Umeke pithecolobium, with cover varnished.				8, MR.
605	" "	" "			8, MR.
606	" "	" "	and carved.		8, MR.
607	" "	" "	" "		8, MR.
608	" "	" "			8, MR.
609	" kou; flat goblet-shaped.				4, MR.
1049	" corrugated.	HG. 23	14 1/4		4, *MR.
1050	" "	HG. 20	18 1/4		5, *MR.
1051	" nenelaau. H. R. H. Ke- elikolani.		43 3/4	4	8, MR.
1052	" "		44 1/4	4 1/4	B. 9, MR.
1053	" kamani.		11 1/2	4	9, MR.
1054	" kou HG.			4	D.
1055	" HG.			3 3/4	D.
1143	" laau HG. old.				*MR.
2290	" kou. "Kapea" Kameha- meha I.	53	8 1/4	H. 32,	*MR.
2291	" " "Aia iluna" Kame- hameha I.	57	8 1/2	H. 32,	*MR.
2292	" " "Aloha kou"Kame- hameha I.	46 3/4	7 1/4	H. 32,	*MR.
3898	" kou awa. HG.	30	3	B. 4,	MR.
4004	" kou.	23 1/2	5 1/2	A.	D.
4005	" "	30	5 1/3	B.	D.
4006	" "	38	6 1/4	B.	D.
3899	" " Gourd cover. Formerly used to contain soft poi for weaned infants or little children.			S. Kona, Hawaii. JSE.	D.

4678 Ipu kou. Bowl with 4 handles. JSE. 8, MR

Na Ipu holoi lima.—Finger-bowls were always used by the chiefs at meals. The sticky nature of the poi and the greasy nature of roast pig, as they used neither fork nor spoon rendered this very needful after eating, and the community of dishes into which each dipped the hand or at least the finger, made it a desirable custom before partaking of food. The forms of these finger-bowls are various, but most of them have ridges or projections inside to aid in clearing the tenacious poi from between the fingers. Some are

large and might serve for wash-bowls, while others are of complex pattern and indicate much refinement in their owners. Fragrant leaves were used as napkins, and sometimes had a compartment of the bowl to contain them.

			Diameter inches.	
610	Ipu hoi lima, kou.		15	6, MR.
611	" "	"	14 1/2	6, MR.
612	" "	" decahedral.	16	7, MR.
613	" "	"	13 3/4	7, MR.
614	" "	" mended with ea.	13 3/4	7, MR.
615	" "	"	12 1/4	6, MR.
616	" "	" old.	13 3/4	5, MR.
617	" "	"	16 1/2	D.
618	" "	" oval.	13 x 11	6, MR.
619	" "	" deep, old.	10	4, MR.
620	" "	" with two ridges.	11 1/4	4, MR.
621	" "	" oval. QE.	12 3/4 x 10	4, MR.
622	" "	"	10 3/4 x 8	6, MR.
623	" "	"	11 3/4 x 8 3/4	D.
624	" "	"	9 3/4 x 7	5, MR.
625	" "	"	10 1/4	5, MR.
626	" "	"	10	6, MR.
627	" "	" octahedral.	9 3/4	7, MR.
628	" "	" double bowl.	14 1/2	6, MR.
629	" "	" large modern bowl.	18	4, MR.
630	" "	" heavy with handle.	12	9, MR.
631	" "	" heavy with handle.	9 3/4	7, MR.
632	" "	" lute-shaped.	17 x 10 3/4	5, MR.
633	" "	" "	15 x 9 1/4	5, MR.
4002	" "	" HG.		D.
4003	" "	"		D.

Na Ipu aina. Slop-Basins.—Used to receive the refuse of the food, as fish-bones, banana skins, etc. They were much thicker and heavier than the umeke poi, and those of high chiefs often were inlaid with the teeth or bones of slain enemies. While it was deemed

honorable to have one's bones attached to a kahili or a food dish, it was a deep disgrace to the unfortunate man whose solid parts decorated what was looked upon as a vessel of dishonor. The use of human bone was more extensive than is usually supposed, and it arose not from the need of a hard material, since many of the Hawaiian woods would meet all the requirements, but it was a device to gratify the natural feelings of revenge, or in some cases to preserve the memory of a friend or renowned warrior much in the same way that more civilized peoples preserve the hair of a deceased person. Examples of these inlaid bowls are seen in Case 32, MR.

			Diameter. Inches.	Height. Inches.	
663	Ipu aina, kou.	H. R. H. Keelikolani.	11 1/4	5 1/2	9, MR.
635	"	old, mended.	13 1/4	7 3/4	8, MR.
636	"	QE.	10	5	9, MR.
637	"	one tooth inserted.	9 3/4	4 1/4	32, MR.
	"	many teeth inserted.			
		HG.	19 3/4	3	32, MR.
	"	bones and teeth inserted.			
		QE.	28 1/4	4 1/2	32, MR.
639	"	QE.	12 1/2		7 MR.

Na Pa.—Dishes of wood were made both round and elliptical or elongated. The former served for dried fish, fruits, shell-fish, etc., or as covers for the umeke poi; the long dishes were for fish or roasted dog or pig.

			Diameter. Inches.	Height. Inches.	
640	Pa kou elliptical.	Curiously divided into six compartments.	27	x 19 1/2	4, MR.
641	"	circular.	18		7, MR.
642	"	"	14 1/2		6, MR.
643	"	"	14		6, MR.
644	"	" JSE.	12 3/4		7, MR.
645	"	"	12 1/2		7, MR.
646	"	" burial cave.	11		7, MR.
647	"	" old.	10 1/2		7, MR.
648	"	" turned.	10 1/4		7, MR.
649	"	" old.	10 1/2		6, MR.
650	"	" turned.	10		8, MR.

		Circumference. Inches.	
651	Pa kou circular, burial cave.	8 $\frac{1}{4}$	D.
652	" " Kanupa cave.	7 $\frac{1}{2}$	D.
653	" " rosewood, turned. QE.	8	4, MR.
654	" " " QE.	6 $\frac{1}{4}$	5, MR.
655	" "	5	4, MR.
656	" oval, old.	27 $\frac{3}{4}$ x 15	D.
657	" " " rough. JSE.	26 $\frac{1}{2}$ x 13 $\frac{1}{2}$ 7,	MR.
658	" "	24 x 14 $\frac{1}{4}$ 7,	MR.
659	" "	21 $\frac{1}{4}$ x 13 $\frac{3}{4}$ 7,	MR.
660	" "	16 $\frac{3}{4}$ x 12 $\frac{1}{2}$ 5,	MR.
661	" "	14 $\frac{3}{4}$ x 11 $\frac{3}{4}$ 4,	MR.
662	" " old, cracked.	29 x 9	D.
663	" " koa. JSE.	26 x 9 $\frac{1}{2}$	D.
664	" "	19 $\frac{3}{4}$ x 7 $\frac{1}{2}$ 6,	MR.
665	Pa koa. elliptical.	19 $\frac{1}{4}$ x 7 $\frac{1}{2}$ 6,	MR.
666	Pa kou. " JSE.	17 $\frac{1}{4}$ x 8	D.
667	" " old, rough.	14 $\frac{1}{4}$ x 7 $\frac{1}{4}$ 7,	MR.
668	" " fine. QE.	18 x 7 $\frac{3}{4}$ 4,	MR.
669	" " " thick.	10 $\frac{3}{4}$ x 6 $\frac{1}{4}$ 7,	MR.
670	" " "	10 $\frac{1}{2}$ x 5 $\frac{3}{4}$ 4,	MR.
2293	" circular. Kamehameha I.	15 $\frac{1}{2}$	32, *MR.
2294	" " "	14	32, *MR.
2295	" " "	12	32, *MR.
4007	" Kanupa cave. JSE.	11 $\frac{1}{2}$	D.
4008	" HG.	10 $\frac{3}{4}$	D.
4009	" rough.	12 $\frac{1}{2}$	D.
729	" inamona. Sauce dish.	7	4, MR.
1213	Oval wooden bowl with four legs.	24 $\frac{3}{4}$ x 18	10, MR.
1214	" " " " "	31 x 24 $\frac{1}{2}$	8, *MR.
1215	" " " " "	40 $\frac{1}{2}$ x 20 $\frac{1}{2}$	15, *MR.
1216	" " " " "	32 $\frac{1}{4}$ x 19 $\frac{3}{4}$	12, *MR.
728	Pa. Meat dsh with attachment for salt. QE.	6,	MR.

Kanoa Awa.—Awa bowls of the Hawaiians departed from the form with four legs common in the southern groups [Example in Case 19, MR.] and were little different from the umeko poi. In fact awa drinking, although common on these Islands, never was attended by the formalities always observed in Samoa and Fiji.

Circumference.
Inches. Height.
Inches.

555 Kanoa awa, kou H. R. H. Keelikolani.

556	"	"	41	4	8,	MR.
557	"	"	42 $\frac{3}{4}$	4 $\frac{1}{2}$	8,	MR.
558	"	"	49	4 $\frac{3}{4}$	7,	MR.
559	"	"	47 $\frac{3}{4}$	5 $\frac{1}{4}$	5,	MR.
			31 $\frac{1}{2}$	4	7,	MR.

4142 Kanana awa. Gourd strainer to remove the fibre from the chewed awa root. 8, MR.

Less expensive than the elaborate wooden umekes were those of gourd, *ipu*, from which the later wooden utensil takes its form and one of its names. Two members of the gourd family were utilized, the bottle gourd, *Lagenaria vulgaris*, and the larger gourd, *Cucurbita maxima*. The former is found in most tropical countries cultivated or naturalized, while the latter was not known to the other Polynesians before the advent of white men, both being found on this group at the time of the discovery by Cook. Many of the bottle gourds whether used for umekes or bottles [*Huewai*] were decorated by figures in the orange color of the fruit brought out by a black ground. The fruit of the large gourd was use as a receptacle for clothes perhaps more frequently than for poi.

Diameter.
Inches. Height.
Inches.

1063 Umeke pawehē. Decorated gourd.

1063	"	"	14 $\frac{1}{2}$	10,	MR.
1064	"	"	14 $\frac{1}{4}$	10,	MR.
1065	"	"	12 $\frac{3}{4}$	11,	MR.
1066	"	"	13	11,	MR.
1067	"	" HG.	12 $\frac{3}{4}$	10,	MR.
1068	"	" QE.	10 $\frac{3}{4}$	10,	MR.
1069	"	" QE.	12 $\frac{3}{4}$	10,	MR.
1070	"	"	11 $\frac{1}{2}$	10,	MR.
1071	"	"	10 $\frac{1}{2}$	10,	MR.
1072	"	" N. Kona, Hawaii. JSE.	9 $\frac{1}{4}$	10,	MR.
1073	"	" Niihau. JSE.	7 $\frac{3}{4}$	10,	MR.
1074	"	" JSE.	7 $\frac{1}{2}$	10,	MR.
1084	"	"	10 $\frac{1}{4}$	7	11, MR.
1075	"	plain with cover and koko.	13	9	11, MR.
1076	"	" goblet-shaped.	11	9 $\frac{1}{2}$	11, MR.
1092	"	"	8	8 $\frac{1}{2}$	11, MR.

3923	Umeke, plain, cover and koko.	HG.	D.
3924	"	HG.	D.
3925	"	ipu, cover and koko.	D.
3926	"	" " "	D.
3927	"	" smaller, with peculiar koko.	D.
3928	"	" "	D.
3956	Ipu. Gourd bowl.		D.
3957	"	" "	D.
3958	"	" "	D.
3959	"	" "	D.
3960	"	" "	D.
3961	"	" "	D.
3962	"	" "	D.
3863	"	" "	D.
3864	"	" "	D.
3965	"	" "	D.
3966	" bowl.		9, MR.
3967	"	"	D.
3968	"	"	D.
3971	"	"	D.
3972	"	"	12, MR.
8973	"	"	12, MR.
3974	"	"	12, MR.
3975	"	"	12, MR.
3976	"	"	12, MR.
3977	"	"	12, MR.
3969	Calabash bowl (not ipu)		
3970	" cut lengthwise.		12, MR.
1085	Ipu. Gourd cover or dish.	Diameter. Inches.	
1086	"	16	11, MR.
1087	"	15½	11, MR.
1088	"	14½	11, MR.
1089	JSE.	14½	11, MR.
1090	"	15	11, MR.
1091	"	12¼	11, MR.
		10½	11, MR.
Other covers are on the calabashes for which they were made.			
3978	Gourd covers or dishes.		D.
3979	" "		D.

3980	Gourd cover.	D.
3981	" "	D.
3082	" "	D.
3083	" "	9, MR.
3984	" "	D.
3985	" "	D.
3986	" "	D.
3987	" "	D.
3988	" "	D.
3989	" "	D.
3990	" "	D.
3991	" " JSE.	8, MR.
3992	" " JSE.	9, MR.
3993	" " JSE.	

Na Huewai or gourd water-bottles were formerly in universal use. Those with a long neck, or of unusual size were for home use, while the short-necked, globular ones were for the use of travelers. There were still other forms used by fishermen. For stopples a Terebra shell or a neatly folded palm or hala leaf served well.

1093	Huewai. JSE.	12, MR.
1094	" HG.	13, MR.
1095	"	14, MR.
1096	"	13, MR.
1097	"	12, MR.
1098	"	14, MR.
1099	"	12, MR.
1100	" short neck. HG.	14, MR.
1101	" JSE.	11, MR.
1102	" Puna, Hawaii. JSE.	11, MR.
1103	" JSE.	12, MR.
1104	" short neck, koko.	12, MR.
1105	" Kanupa cave. JSE.	13, MR.
1106	" " " JSE.	13, MR.
1107	" small, no neck.	13, MR.
1108	" Kanupa cave. JSE.	12, MR.
1109	" " " JSE.	12, MR.
1110	"	10, MR.
1111	" pueo. Hawaii. JSE.	12, MR.

1112	Hueawai pueo.	D.
1113	" "	D.
1114	" "	D.
1115	" " small. QE.	9, MR.
1116	" conical. JSE.	12, MR.
1117	" H. R. H. Keelikolani.	11, MR.
1118	" "	D.
1119	" " large.	15, MR.
1139	" small.	12, MR.
1264	" pueo, light color.	12, MR.
3929	" with koko. HG.	D.
3930	" Kanupa cave. JSE.	D.
3931	"	D.
3932	"	D.
3933	" with koko. HG.	D.
3934	" " "	D.
3935	" short neck.	12, MR.
3936	" " " HG.	D.
3939	" " "	D.
3940	" with koko. HG.	D.
3941	" mua. HG.	D.
3942	" pueo.	D.
3943	" " and koko.	D.
3944	" "	D.
3945	" "	D.
3946	" "	D.
3947	" side orifice. HG.	D.
3996	" pueo with koko.	D.
1120	" pawehe, decorated. QE.	11, MR.
1121	" "	13, MR.
1122	" "	12, MR.
1123	" "	12, MR.
1124	" " QE.	12, MR.
1125	" " QE.	12, MR.
1126	" " conical.	12, MR.
1127	" " QE.	14, MR.
1128	" " HG.	14, MR.
1129	" " H. R. H. Keelikolani.	14, MR.
1130	" " " "	14, MR.
1131	" " QE.	13, MR.

			Diameter Inches.	Height Inches.	
1132	Huewai pawehe. QE.			12,	MR.
1133	" " JSE. Niihau.			13,	MR.
1134	" " HG.			13,	MR.
1135	" " pueo.			9,	MR.
1136	" " "			11,	MR.
1137	" " flat.			9,	MR.
1138	" " made by Naaumokohi of Kapaalaea. JSE.			12,	MR.
1078	Ipu for carrying food or clothing, with covers.	18	17	10,	MR.
1079	"	17	15	10,	MR.
1080	"	15½	11½	11,	MR.
1081	"	15	14	13,	MR.
1082	"	17	16½	13,	MR.
1083	" without cover.	19½	7	15,	MR.

To carry these gourds [or other similar burden] poles were used made of some tough wood, slightly curved and notched at the end. The section was generally, if not always circular, and not well fitted to rest easily on the shoulder: hence a bearer was known by the callus formed at the point of contact.

- 144 Auamo, Aumaka or Mamaka kii of kauila wood carved with two human heads at each end. Made by Kipola during the reign of Kamehameha III. JSE.

			Inches Long.	
145	Auamo kii. Two heads at each end. QE.	97½	5, *MR.	
146	" " A head and three teeth at each end JSE.	69	13, *MR.	
147	" ulei wood South Kona, Hawaii. JSE. Three notches.	41	9, *MR.	D.
148	" kauila, one notch. JSE.	45	12,	MR.
149	" koa ancient. JSE.	49		D.
150	" guava, made by Kapela of Keauhou, Kona Hawaii, JSE.	37½		D.
151	" ulei. Two notches at each end. JSE.	62	12,	MR.
152	" kauila. QE.	61½	15,	MR.
153	" ulei. Kau, Hawaii. JSE.	44½	15,	MR.
154	" JSE.	43½		D.
4164	Hook of wood, used to hang ipus on. JSE.	8,	MR.	

671 Oleole kau ipu. There was no such thing as a meat-safe in the economy of an ancient Hawaiian house, and to preserve food from pigs, dogs and rats it was necessary to suspend the ipus that contained it beyond their reach. Usually a pole was fixed in the floor of the lanai and to the top was fitted a notched cross bar from which a number of ipus might be hung. QE. 11, MR.

672 Oleole kau ipu; larger and very old. JSE. 11, MR.

673 Club of kawau wood; larger at each end, called by the natives from whom it was procured "laau kui kope" a coffee-huller. The ends do not seem to be sufficiently worn to support this use, but no other use is suggested. JSE. 11, MR.

1140 Ipu hokeo pawehe. A container for clothes. 12, MR.

1141 " " very thick, curious lid. HG. 13, MR.

3949 " " HG. D.

3950 " " QE. D.

These, as well as the following class were used to carry kapas on canoe voyages where they were liable to a wetting. The *Hinai poepoe* were ipus, or in some cases wooden umekes over which was closely worked a net of the aerial roots of the ieie [*Freycinetia Arnotti*]. These roots are tough, flexible and durable: they are called *ie*. So firmly are they woven, and so lasting the fibre, that often long after the ipu has been broken or has rotted away the basket remains and is often used as a fish basket.

1403 Hinai poepoe. Gourd, covered. JSE. 15, MR.

1404 " " " " JSE. 14, MR.

1405 " " " no cover. 24 in. high. 15, MR.

1406 " " " covered. Kuamoo, S. Kona Hawaii, JSE. 11, *MR.

1407 " " " " coarse texture. JSE. 12, *MR.

1408 " " No gourd 12, *MR.

1409 " " " oblate spheroid. HG. For clothes. 14, MR.

3889 " " kou, very fine, no cover. 15, MR.

3890 " " " complete. 15, MR.

1230	Ipu for filling water-bottles.	Hour-glass shape.	15	MR.
1231	" " " "	Scoop shaped, dark colored.	15	MR.
4237	" " " "	" "	15	MR.

	Item	Description	Inches	Inches
			Wide.	Long.
1218	Ipu kui	Small wooden mortar or trough.	7 3/4	24 3/4 11 MR.
			Inches	
			Diameter.	Inches
				High.
1219	" " Wooden, old and decayed.	Poho kui kope? JSE.	13 3/4	10, MR.
1220	" " large stone.	Used for drugs? Kauai. JSE.	11 1/2	7 1/2 10, MR.
1221	" " stone, well-made; found by G. H. Dole, Kauai.		7 1/4	7 1/4 10, MR.
1222	" " "	" G. H. Dole, Kauai.	6 1/4	13 1/2 11, MR.
1223	" " "	" G. H. Dole, Kauai.	8	8 10, MR.
1224	" " "	" G. H. Dole, Kauai.	7 1/4	8 1/2 11, MR.
1225	" " "	" G. H. Dole, Kauai.	7	6 1/4 10, MR.
1226	" " spherical.	G. H. Dole, Kauai.	7 1/4	4 3/4 11, MR.
1227	" " large, shapeless.	HG. 15	7 1/2	13, MR.
4078	" " for grinding awa.	The bottom worn through. H. M. Liliuokalani.	12,	MR.

These mortars were used to crush kukui nuts for the oil and in the preparation of inamona or sauce, and generally whenever a grinding process was required.

The preparation of poi, a most laborious process, fell to the lot of the men. The implements, which were an important part of the house-furnishing, were a shallow trough of some hard wood, and stone pestles of various shapes. On Kauai the perforated or ring form, and the earlier and rarer stirrup form were preferred, the conical with a knob and convex base being used on the other islands.

4079	Pohaku kui poi.	Poi pounder; weighs 10½ lbs.	36, *MR.
4080	" "	HG.	36, *MR.
4081	" "	H. R. H. Keelikolani.	36, *MR.
4082	" "		36, *MR.
4083	" "		36, *MR.
4084	" "	H. R. H. Keelikolani.	36, *MR.
4085	" "		36, *MR.
4086	" "		36, *MR.
4087	" "	JSE.	20, MR.
4088	" "		20, MR.
4089	" "	JSE.	20, MR.
4090	" "	JSE.	20, MR.
4091	" "	malu†	20, MR.
4092	" "	malu.	21, MR.
4093	" "	malu.	36, MR.
4094	" "	coral rock.	20, MR.
4095	" "		20, MR.
4096	" "	JSE.	20, MR.
4097	" "	JSE.	20, MR.
4098	" "	JSE.	20, MR.
4099	" "		20, MR.
4100	" "	malu.	20, MR.
4101	" "	"	20, MR.
4102	" "	"	20, MR.
4103	" "	"	20, MR.
4104	" "	" lime crust.	20, MR.
4105	" "	oval section.	20, MR.
4106	" "		D.
4241	" "		18, MR.
4107	" "	ivory. This was probably used to pound medicinal drugs, as ivory was preferred for that purpose.	33, MR.
4108	" "	stirrup-shaped.	G. H. Dole, Kauai.
			20, MR.
4109	" "	" "	"
4110	" "	" "	"
4111	" "	" "	"
			20, MR.

†Small pohaku kuis used to avoid betraying to the chief that food was being prepared, lest he levy a contribution. They were also carried when journeying.

4112	Pohaku kui poi.	Stirrup-shaped.	G. H. Dole, Kauai.	
				20, MR.
4113	" "	" "	two horns at top.	
		G. H. Dole.		20, MR.
4114	" "	conical-shaped.	G. H. Dole.	20, MR.
4115	" "	" "	coral rock.	20, MR.
4116	" "	stirrup-shaped.		20, MR.
4117	" "	pohaku puka, signet ring-shaped.	37, *MR.	
4118	" puka.	HG. Ring-shaped.		37, *MR.
4119	" "			37, *MR.
4120	" "	"		37, *MR.
4121	" "	"	JSE.	37, *MR.
4122	" "	"		37, *MR.
4123	" "	"		37, *MR.
4124	" "	"		37, *MR.
4125	" "	"		37, *MR.
4126	" "	"		37, *MR.
4127	" "	"	JSE.	37, *MR.
4128	" "	"		37, *MR.
4129	" "	"		37, *MR.
4130	" "	"		20, MR.
4131	" "	H. M. Liliuokalani.		20, MR.
4132	" "			20, MR.
4133	" "			20, MR.
4134	" "			20, MR.
4135	" "			20, MR.
4136	" "	signet-shaped.		20, MR.
4137	" "			20, MR.
4138	" "			20, MR.
4139	" "			20, MR.
4140	" kui.	peculiar.	G. H. Dole.	20, MR.
4239	" puka.			18, MR.
4240	" "			18, MR.
4225	Papa kui poi;	small for a single pounder.	Usually a man pounds at each end.	
			in. long.	in. wide.
			34 3/4	16 1/2 20, MR.
4226	Papa kui poi.	Double.	65	23 1/2 20, *MR.
4227	" "	"	60	24 D.
4228	" "	"	57	24 D.
4229	" "	"	48	16 D

4230 Papa kui poi, rough trough, weatherworn. 36 in. long by 6 in. wide. D.

Coconuts have furnished in their hard and durable shell capital cups or bowls and have been utilized by all people living within the range of this most useful palm. On the Hawaiian Islands, where the coconut cannot be said to thrive, it is so near its northern limit, the fruit is small and not abundant. Of late years the larger varieties of the southern islands have been introduced, and very fine bowls made from the nut. These are chiefly used at feasts to contain individual portions of poi. Coconut shells also are the orthodox cups for awa drinking all through the Pacific.

4145 Coconut cup, turned koa base, ipu cover. Dark nut.

			Umeke poi.	8, MR.
4146	"	" kou	"	" 8, MR.
4147	"	" "	" coconut cover.	" 8, MR.
4148	"	" "	" ipu "	" 8, MR.
4149	"	" "	" "	" 8, MR.
4150	"	" "	" no cover.	" 8, MR.
4151	"	" "	" "	" 8, MR.
4152	"	" "	" "	" 8, MR.
4153	"	" "	" ipu cover. Light nut.	9, MR.
4154	"	" "	" "	" 9, MR.
4155	"	" "	" "	" 9, MR.
4156	"	" "	" "	" 9, MR.
4252	"	" "	" "	" 9, MR.
4157	"	scalloped edge,	wrought coconut base and cover.	
				10, MR.

4158 Coconut cup, scalloped edge, wrought coconut base.

			10, MR.
4159	"	" "	" 10, MR.
4160	"	" "	" 10, MR.
4161	"	" "	" 10, MR.
4162	"	" "	" 10, MR.
4163	Umeke poi, coconut, ipu cover.		D.
4165	" "		D.
4166	" "		D.
4167	" "		D.
4168	" "		D.
4169	" "		D.

4170	Umeke poi, coconut.	D.
4171	" " scalloped.	D.
4172	" "	D.
4173	" "	D.
4174	" "	D.
4175	" "	D.
4176	" "	D.
4177	" "	D.
4178	" "	D.
4179	" "	D.
4180	" "	D.
4181	" " JSE.	D.
4182	" " large.	34, MR.
4183	" " pointed.	34, MR.
4184	" "	34, MR.
4185	" " light.	34, MR.
4186	" " "	34, MR.
4187	" " "	D.
4188	" " "	D.
4189	" " "	D.
4190	" " "	D.
4191	" " "	D.
4192	" " "	D.
4193	" " "	D.
4194	" " "	D.
4195	" " dark.	D.
4196	" " light.	D.
4197	" " "	D.
4198	" " "	D.
4199	" " "	D.
4200	" " " JSE.	D.
4201	" " "	D.
4202	" " dark, scalloped.	D.
4203	" " light.	D.
4243	" " dark.	D.
4244	" " "	D.
4245	" " "	D.
4250	" " "	D.
4251	" " "	D.

4204	Coconut cup, common apu niu.	D.
4205	" " "	D.
4206	" " "	D.
4207	" " "	D.
4208	" " "	D.
4209	" " "	D.
4210	" " "	D.
4211	Apu niu, polished.	12, MR.
4212	" "	12, MR.
4213	" "	12, MR.
4214	" "	12, MR.
4215	" "	12, MR.
4216	" "	12, MR.
4269	" apu awa.	8, MR.
Cups for drinking awa were of three forms; the common half nut, the end of a very small nut,—this was most used; half a nut cut lengthwise,—a form reserved for the kahunas and called <i>olo</i> .		
4217	Olo awa, Awa cup.	D.
4218	" "	D.
4219	" "	D.
4220	" "	D.
4221	" " JSE.	8, MR.
4222	" " JSE.	8, MR.
4223	" " JSE.	8, MR.
4224	" " JSE.	8, MR.
4270	" "	8, MR.
4271	" light. HG.	8, MR.
4272	" dark. HG.	8, MR.
4273	Apu awa, small awa cup. JSE.	8, MR.
4274	" " "	8, MR.
4275	" " " JSE.	D.
165	Ooma pu niu, Coconut ladle [Kiahau au loihi]. S. Kona, Hawaii. JSE. with handle.	D.
674	Ooma pu niu. Coconut ladle [Kiahau au loihi]. S. Kona, Hawaii. JSE. with handle.	6, MR.
4234	Ooma pu niu, Coconut ladle HG. S. Kona, Hawaii. JSE. with handle.	6, MR.
4276	Ooma pu niu, Coconut ladle HG. S. Kona, Hawaii. JSE. with handle.	6, MR.

Where kalo did not abound, as in Puna, Hawaii, sweet-potato was used in its place to make poi, and as the tenacity of kalo poi was wholly wanting, this substitute could not easily be eaten with the fingers and a spoon was required, simply a segment of coconut shell.

1233	Kioe palau, Coconut spoon for palau.	JSE.	14,	MR.
1234-1240	Kioe palau.	JSE.		
1241-1242	"			
1243-1246	"	JSE.		
4277-4286	"	D.		
4231	Kanana pu niu.	Coconut strainer for awa etc.		
		The "eyes" are left open.	8,	MR.
4232	Kanana pu niu.	Coconut.	8,	MR.
164	Palau kohi ai.	A stick used to cut the leaves [huli] from kalo.	14,	MR.
1178	Palau kohi ai.	uhiuhi wood.	14,	MR.
1179	"	ohia wood.	14,	MR.
1180	Laau palau, kauila.	Mixing stick for potato poi.	8,	MR.
1181	"	uhiuhi.	8,	MR.
170	"	koiae.	8,	MR.
171	"	JSE.	8,	MR.
1057	"	kou.	9,	MR.
1058	"	"	9,	MR.
1059	"	"	8,	MR.
1060	"	uhiuhi, long and narrow.	8,	MR.
1061	"	kauila.	9,	MR.
1062	"		9,	MR.
			Diameter Inches.	
1257	Pa pohaku, sandstone dish ?	from Kailua, Hawaii.	13	12, MR.
1258	Pa pohaku, lava, circular.		6	13, MR.
1259	"	poho kui poi malu ?	JSE.	12, MR.
1161	Pa inamona, sauce dish, coconut shell.	Cave at Honomalino, Hawaii.	JSE.	7, MR.
		Common sauce dishes were simply a slice from the end of a coconut.		
4287	Pa inamona, fancy, coconut basket.			8, MR.
4288	"	"		8, MR.
4289	"	"	"	HG. 8, MR.

4290 Pa inamona, plain dish. 8, MR.
 4291-95 " " 8, MR.
 4253 Bowl made of the Seychelles or twin coconut coco-de-mer.
 4254 Bowl made of the Seychelles or twin coconut [*Lodoicea Sechellarum*]

	Inches Long.	Inches Wide.	
These bowls are	11	7 $\frac{1}{4}$	HG. 14, MR.
	12	7	HG. 14, MR.

Although acquainted with the rotary drill for boring, the Hawaiians do not appear to have used the Fire-drill, but obtained fire by the Plow. A small stick, the *aulima*, is held in the hand and rubbed in a groove in a larger stick, *aunaki*. The *aulima* is of some hard wood while the *aunaki* is of hau or some soft wood. In five seconds the rubbed wood is charred, and in about a minute the dust which collects at the bottom of the groove ignites, and the flame is caught on a bit of tinder, or a *welu ahi* composed of twisted kapa or cotton cloth. The action of rubbing is called *hia*.

1158 Fire-sticks. JSE. D.
 1159 " QE. 14, MR.
 1160 " HG. 14, MR.
 1161 " JSE. 14, MR.
 1162 " JSE. D.
 4246 Welu ahi. Ball of tinder cord, Cotton cloth. JSE. 14, MR.
 4247 " " kapa JSE. 14, MR.

Rats and mice have always been a pest on the Hawaiian Islands; and the old Hawaiian, before the introduction of cats, used a bow and arrows to destroy them. It is curious that knowing the principle of the bow they never used it as a weapon of offense, nor developed it beyond a very feeble instrument only suited to the killing of "rats and mice and such small deer."

162 Pana iole and Pua iole. Bow and arrow for shooting mice. Made by Kapela of Keauhou, Hawaii. The string is olona, the arrow the flower-stalk of sugar-cane tipped with kauila. JSE. 15, MR.

163 Pana iole and Pua iole. Bow of mulberry wood. Made and used for many years by Kapulupulu of Kawaihae-uka. JSE. 15, MR.

164 Ohe puhi ahi. Bambu used by old Kapulupulu to blow his fire. JSE. 14, MR.

A curious contrivance was in use to protect the house from invasion. No locks were known and a bar would offer little protection as it could be removed from without through the thin wall. A heavy stone was suspended over the door in such a way that a person entering after the trap was set would probably be crushed by the fall.

4077 Pohaku pepehi kanaka. Door Stone. HG. 11, MR.

Of the five *Kahu alii* or personal attendants of an Hawaiian Moi the *Ipukaha* or Spittoon was the most trustworthy. The very life of the king was endangered if he should prove remiss in duty and allow even the smallest portion of the royal spittle to fall into the hands of an enemy. The instrument he carried, and from which he got his name, was a small box or bowl carved from some choice wood, and in the darkness of night he must empty the daily accumulation into the sea, or should the court be on a journey inland, he must with the utmost secrecy bury the possible danger. The clippings of the royal finger-nails went the same way. The inanimate spittoons were held in great esteem, to which their ignoble use would not entitle them in other lands and hence those belonging to Kamehameha I. and other renowned chiefs have been carefully preserved, and are in this Museum. Made of such an absorbent material they required great attention to keep them in a decent condition.

		Diameter Inches.	
678	Ipu kuha, kou.	8½	D.
679	" "	8½	14, MR.
680	" "	7	
681	" "	6¾	
682	" "	7½	D.
683	" "	7	
684	" "	8	
685	" "	8¾	
686	" "	8½	

			Diameter Inches.
687	Ipu kuha, kou,		7 $\frac{1}{4}$
688	" "		8 $\frac{1}{4}$
689	" "		8
690	" "		6 $\frac{1}{2}$
691	" "		6 $\frac{1}{4}$
692	" "	QE.	6
693	" "		6 $\frac{1}{2}$
694	" "		7
695	" "		6
696	" "		5 $\frac{1}{4}$
697	" "		6
698	" "		5 $\frac{1}{2}$
699	" "		4 $\frac{3}{4}$
700	" "		4 $\frac{1}{2}$
701	" "	QE.	5
702	" "		5
703	" "	oval.	7 $\frac{1}{2}$ x 5 $\frac{3}{4}$
704	" "		7 $\frac{1}{4}$ x 4
705	" "	square.	5 $\frac{1}{2}$
706	" "		5
707	" "	old.	5 $\frac{1}{2}$
708	"	burial cave.	D.
709	" "		D.
4000	" "	" HG.	D.
4001	" "	" HG.	D.

Quite similar in shape, although larger, were the

675	Ipu mimi.	12	14, MR.
676	"	9 $\frac{3}{4}$	D.
677	"	9 $\frac{3}{4}$	D.
3997	"	HG.	9
3998	"	HG.	D.
3999	"	HG.	D.

The Hawaiian pillow is a parallelopipedon of plaited pandanus leaves stuffed with the same material, capital accompaniment to the Hawaiian mat bed.

			Width. Inches.	Height. Inches.	Length. Inches.	
1144	Uluna—Pillow.	JSE.	6	4	10	15, MR.
1145	"	JSE.	5½	4½	21	15, MR.
1146	"	JSE.	6	3½	10½	15, MR.
1147	"	QE.	6	4	10½	15, MR.
1148	"	QE.	5	4	13	D.
1149	"	HG.	4½	4	10½	D.
1150	"		6	5	19	D.
1151	"		4½	3½	10½	D.
1152	"	JSE.	4½	3	8	D.
1153	"		3½	2½	7½	D.

It is said that wooden pillows were used in olden times, but if so there are none in this collection.

Obesity being a much desired condition among certain chiefs of either sex, the food taken was so much in excess of natural requirements that passive exercise was needful for digestion, and the delightful process of lomilomi was resorted to. Often one might wish to lomilomi the back when assistance was not at hand and for this the following sticks were contrived. Back-rubbers are a decided addition to the comfort of the inhabitant of a grass house.

1163	Laau lomilomi kua, kou, large.	HG.		15,	MR.
1164	"	"	"		D.
1165	"	"	"	15,	MR.
1166	"	"	" kauila, Kalihi, Oahu.	JSE.	15, MR.
1167	"	"	" Honaunau, Hawaii.	JSE.	15, MR.
1168	"	"	" nenelaau, Kailua, Hawaii.	JSE.	D.
1169	"	"	" Kona, Hawaii.	JSE.	D.
1170	"	"	" "	JSE.	D.
1171	"	"	" "	JSE.	D.
1172	"	"	" "	JSE.	D.
1173	"	"	" "	JSE.	D.
1174	"	"	" ulei. North Kona, Hawaii		D.
1175	"	"	" nenelaau. Kailua, Hawaii.		D.
1176	"	"	" HG.		D.
1177	"	"	" HG.		D.

For artificial light the Hawaiians burned the kernels of roasted kukui nuts strung on slender strips of palm or bambu. As the nuts burned, the remains were knocked off as soon as the next nut was

ignited. They served as time-tellers almost as well as King Alfred's candles. Invention, however, did not stop at the rude candle whose empyreumatic odor was so strong as to be long remembered by the stranger who was present at the burning. The oil was expressed from the nut and burned with a wick in stone cups. Animal fat was used as well for this purpose, and for a wick a dried rush or a welu of kapa was suitable. To a people who had no written language the light, although unsteady, was sufficient.

4138	Kukui. String of nuts for a candle.	8, MR.
		Height. Inches.
1182	Poho kukui or ipu kukui. Stone lamp. [Phallic.] JSE.	10 8, MR.
1183	" sandstone. From a cave on Niihau. [Phallic.] JSE.	11½ 8, MR.
1184	" JSE.	7¼ 8, MR.
1185	" dense lava for nuts. Nuuanu, Oahu. JSE.	8 8, MR.
1186	" 4 legs. Waimea, Hawaii. JSE.	6¼ 8, MR.
1187	" small base.	4¼ 8, MR.
1188	" fine grain lava.	6 8, MR.
1189	" dumb-bell shape. HG.	7 8, MR.
1190	" hour-glass shape, cup at each end.	5½ 8, MR.
1191	" porous lava. JSE.	7½ 8, MR.
1192	"	5¼ 8, MR.
1193	" cylindrical.	8¼ 8, MR.
1191	"	5¼ 8, MR.
1195	" large end of poi-pounder.	3 8, MR.
1196	" broken poi-pounder. Kohala, Hawaii. JSE.	3 8, MR.
1197	" broken poi-pounder. JSE.	4½ 8, MR.
1198	" JSE.	2½ 8, MR.
1199	"	4¼ 8, MR.
1200	" Kohala Hawaii. JSE.	4¾ 8, MR.
1201	" porous lava, pohowaa, cylindrical.	6¼ 9, MR.
1202	" Haiku, Maui. JSE.	6¾ 9, MR.
1203	" 2 pohos, irregular block.	5½ 8, MR.
1204	" "	5½ 9, MR.
1205	" square block.	4½ 8, MR.
1206	" spherical with large poho.	4½ 8, MR.

			Height. Inches.
1207	Poho kukui, small poho, unshaped.	JSE.	5 3/4 9, MR.
1208	" poho at each end.		5 3/4 9, MR.
1209	" large top.		6 9, MR.
1210	" oblate spheroid. Molokai.	JSE.	5 3/4 9, MR.
1211	" irregular fragment, natural poho.	JSE.	3 1/2 8, MR.
1212	" laau. Wooden lamp.	JSE.	6 9, MR.
1228	" small base, large top.	HG.	2 1/4 9, MR.
1229	" cup, round bottom.		3 1/4 9, MR.
1232	" found in 1880 at Kulookehua Plains, Oahu, 5 feet below the surface. Presented by Cecil Brown, Esq.	HG.	6 9, MR.
4330	" stone lamp.	JSE.	D.
4331	" rough block.	JSE.	D.
4332	" JSE.		D.
4333	" large poho.	JSE.	D.
4334	" JSE.		D.
4335	" old poi pounder.	JSE.	D.
4336	" natural poho.	JSE.	D.
4337	" well wrought.		8, MR.
4338	"		D.
4339	" cylindrical.		D.
4340	" "		D.
4341	" conical.		D.
4342	" hemispherical.		D.
4343	" poi pounder, cellular.		D.
4344	" " compact.		

In smoking tobacco the Hawaiian practice has been to pull a few whiffs and then pass the pipe to the next person: smoke was generally swallowed. For pipes wood was the usual material, and the old chiefs affected those of enormous size. While the stems were usually very short, some are found in the collection with quite long ones.

4300 Ipu baka. Old pipe found in Kuilani burial cave. JSE.
35, MR.

4301 Ipu baka unfinished of aaka root [*Myoporum Sandwicensis*]. JSE. 35, MR.

4302 " pua wood. JSE. 35, MR.

4303 " kauila. Old. Kailua, Hawaii. JSE. 35, MR.

4304 " kou. 13 in. long, 10 in. around the elbow. Said to have been used by the family of Kamehameha I. Kona, Hawaii. JSE. 35, MR.

4305 " guava. Made 1885. JSE. 35, MR.

4306 " orange " JSE. 35, MR.

4307 " kauila " JSE. 35, MR.

4308 " mamane " JSE. 35, MR.

4309 " given by Kamehameha V. to Hikoni widow. QE. 35, MR.

4310 " of Kamehameha II. Given by Kalama to Kaopua [w]. 32, MR.

4311 " Pipe called "Kika" belonging to Gov. M. Kekuanaaoa. 20 in. long, 16½ in. around the elbow. H. R. H. Keelikolani. 35, MR.

4312 " aaka root, short, thick. 35, MR.

4313 " seven-sided. 35, MR.

4314 " 35, MR.

4315 " orange wood, tipped with bone and bone mouthpiece. JSE. 35, MR.

4316 " He au ipu baka no Keliimaikai. Bone and ea stem. QE. 32, MR.

4317 " ulei, very old. Keaa, Kau. JSE. 35, MR.

4318 " whale's tooth. Hilo, Hawaii. JSE. 35, MR.

4319 " aaka root. Straight. Kawaihaeuka. JSE. 35, MR.

4320 " straight. 35, MR.

4321 " guava. HG. 35, MR.

4322 " tree wart. HG. 35, MR.

4323 " milo with kauila stem, octahedral. Made about 1830. JSE. 35, MR.

4324 " milo used by Kamehameha V. as a plaything. Formerly much larger. JSE. 35, MR.

4325 " orange with two bowls. A kahuna pipe JSE. 35, MR.

4326	Ipu baka kou, short.	H. R. H. Keelikolani.	35, MR.
1154	"	HG.	35, MR.
1155	"		35, MR.
1156	"	QE.	35, MR.
1157	"	carved human head. North West Coast?	35, MR.

4327	Hano baka.	Coconut used as a tobacco box.	JSE.
			35, MR.
4328	"	JSE.	35, MR.
4329	"		35, MR.
4492	"		35, MR.
4493	"		35, MR.

Chairs were not used by the Hawaiians, but the Chiefs had a rudely carved seat or chair of state, none of which have been preserved.

• 4345 Stool of ohia wood with four legs, carved from a single block. 4 *MR.

The mirrors of the ancient Hawaiians consisted of a polished piece of lava resembling basanite, cut into a circular disk, which placed in water, served their purpose tolerably well. After the advent of silvered glass, it was customary to put a strip of this [it was brought out in narrow strips for trade] in solid kou frames, often cementing it by a putty made of red ochre and kamani oil. Some of these little mirrors were so small that they were attached to the handkerchiefs of the ladies. The ring handle was in all cases noticed on the long side and often excentric.

			Diameter Inches.
181	Kilo pohaku.	Stone mirror. Waialua, Oahu. JSE.	3 1/4 12, MR.
182	"	Stone mirror. Waialua, Oahu. JSE.	3 1/4 12, MR.
1347	"	Stone mirror.	4 12, MR.
1348	"	G. H. Dole, Kauai.	2 1/2 12, MR.
1349	"	" "	1 7/8 12, MR.
1350	"	HG.	3 12, MR.
1351	"	JSE.	3 3/4 12, MR.

			Height. Inches.
1352	Kilo pohaku. JSE.		2 3/4 12, MR.
1353	" JSE.		2 1/8 12, MR.

In kahuna practice it is not unusual to rub or press a boil with the cool smooth surface of one of these stones, the original use being quite forgotten.

• 156	Frame for a small mirror, kou wood. Found in Kuilani cave, Kohala, Hawaii. The glass was secured by red ochre.	32, MR.
• 2297	Aniani nana. Looking-glass given by Vancouver to Kamehameha I. Enclosed in a native kou frame. HG.	32, MR.
4466	Aniani nana, small, in wooden frame.	32, MR.

The early voyagers speak of the baskets of the Hawaiians, perhaps referring to the Hinai poepoe. The baskets of native origin in this Museum are not remarkable for beauty of form or workmanship. They are plaited of hala or loulu leaves, the bottom is square and the sides rise to a circular rim to which a handle is attached. Another form has also a square foundation but is closed in at the top, leaving a narrow opening which is closed with a cover through which pass the cords serving the double purpose of fastening and handle.

• 4255	Hinai. Basket, of large size for storage of roots, nuts etc.	17, *MR.
4256	" " lauhala; with cover.	15, MR.
4257	" " " "	15, MR.
4258	" " " "	15, MR.
4259	" " " "	D.
4260	" " " "	D.
4261	" " " "	D.
4262	" " " no cover.	D.
4263	" " " with cover, large.	21, MR.
4264	" " loulu; with cover, small.	15, MR.
4265	" " " "	15, MR.
4266	" " " no cover.	15, MR.
4267	" " " "	15, MR.
4268	" " " "	15, MR.

Among the chiefs nets made of various complicated meshes and knots were used to carry the large ipu or umeke. While commoners must use a plain net made of coconut fibre, so commanded the all-powerful kapu, the nobility could show their quality by the complication of knots and meshes, and an addition to the material of cord made of waoke. The two fibres were often combined, and olo-na sometimes displaced waoke. Queen Emma had a fancy for collecting these curious nets, and to her the Museum owes many of the most interesting. In a genuine koko puupuu the gathering cords are always an integral part of the koko proper.

4346	Koko puupuu. Waoke, two short knots to a mesh.	D.
4347	" " and niu.	D.
4348	" "	D.
4349	" QE.	D.
4350	" "	D.
4351	" three short knots to a mesh.	D.
4352	" " long " " JSE.	D.
4353	" " short " "	D.
4354	" "	6, *MR.
4355	" one knot to mesh. [On umeke 429]	5, *MR.
4356	" looped. QE.	19, PG.
4357	" peculiar. QE.	19, PG.
4358	" QE.	19, PG.
4359	" and niu, close net.	D.
4360	" " "	D.
4361	" " "	D.
4362	" " " Hawaii. JSE.	10, *MR.
4363	" looped. On umeke 416.	9, *MR.
4364	" "	D.
4365	" and niu [aha] knotted. Kalihi, Oahu. JSE.	D.
4366	" " wound mesh.	D.
4367	" " wound mesh.	D.
4368	" " " "	HG.
4369	" " half-wound mesh	QE.
4370	" " " "	QE.
4371	" " " "	D.
4372	" " " "	D.

4373	Koko puupuu.	Waoke and niu, half-wound mesh.	D.
4374	"	" " loop between wound meshes.	D.
4375	"	" " " " " 31, MR.	
4376	"	" "	D.
4377	"	" "	D.
4378	"	" " JSE.	D.
4379	"	" " QE.	D.
4380-85	"	" "	D.
4386	"	" [on calabash 490].	*MR.
4387	"	" "	D.
4388	"	" " QE.	D.
4389-93	"	" "	D.
4394	"	" "	D.
4395-99	"	" "	D.
4400-02	"	" "	D.
4403	"	" QE.	D.
4404	"	hau, old.	D.
4405	"	waoke, thick cord.	D.
4406	"	" QE.	D.
4407	"	olona.	D.
4408	"	open meshes.	D.
4409	"	waoke.	D.
4410	"	" and niu, close mesh. JSE.	MR.
4411	"	" " small.	MR.
4412	"	" " "	D.
4413-15	"	" "	D.
4416	"	" niu and horse-hair. Koko onionio.	D.
4417	"	" "	D.
4418	"	" niu and horse-hair.	19, PG.
4419	"	" "	D.
4420	"	" " QE.	D.
4421	"	" " loose mesh.	D.
4422	"	" " "	D.
4423	"	aha, coconut, large coarse mesh.	D.
4424-32	"	" "	D.
4433	"	" QE.	D.
4434-37	"	" "	D.
4438	"	" JSE.	D.
4439-42	"	" "	D.

4443	Koko puupuu; aha, coconut.	HG.	D.
4444	" " waoke tops.	JSE.	D.
4445	" " " large.		D.
4446	" " " JSE.		D.
4447	" " " JSE.		D.
4448	" waoke, thick cord, large mesh.		D.
4449-53	"		D.
4454	" large, two cord system.		D.
4455	" woolen braid, black.		D.
4456	" puupuu, waoke, 2 cord braid.	[on 423] 5, *MR.	
4457	" " and niu.	[on 455] 5, *MR.	
4458	" " "	[on 450] 8, *MR.	
4459	" "	[on 472] 6, *MR.	
4460	" " "	[on 476] 7, *MR.	
4461	" "	[on 435] 9, *MR.	
4462	" " "	[on 471] 11, *MR.	
4463	" " "	[on 4299] 11, *MR.	
4464	" " "	[on 448] 11, *MR.	
4465	" " "	[on 559] 11, *MR.	
<hr/>			
4248	Pohaku kuai kua. Bath rubber of vesicular lava.	15, MR.	
4249	" "	15, MR.	
• 4233	Kahili or broom. Merely a bundle of coconut leaf midribs. As the Hawaiians squat down to sweep this makes a sufficiently handy tool.	8, MR.	
• 4490	Pohaku eho. Stone for cooking a bird. It was heated and placed within the bird to be cooked, which was then wrapped in ki leaves.	JSE. 15, MR.	
• 4491	" " for akekeke. Made and used by Nai-hepahee, Waimea, Hawaii.	JSE. 15, MR.	
4630-31	Pohaku eho.	JSE. 15, MR.	
4550	Stone knife. Used to cut up pig, etc.	14, MR.	
4551	" " Found on Nihoa. H. M. Liliuokalani.	18, MR.	
4632-42	Pohaku kui; short, conical pestles.	14, MR.	
4643-54	" " long, club like.	15, MR.	
4655	" " noni; long, grooved at end.	15, MR.	
4656	" " " short, ribbed.	JSE. 18, MR.	

TOOLS.

Of all the Hawaiian tools the stone adz is the chief. To the present this has not been properly studied, and very little is known of the system of cutting edges: of these the angle varies from 34° to 78°, the more acute being used for soft wood. In this Catalogue no attempt is made to classify the large and varied collection of the Museum, other than to designate a few whose use is well known.

There were several adz factories, notably one on Mauna Kea near the summit, one at Kilauea in the crater Keanakekoi, and still another in the mountains above Makaweli on Kauai. In the latter place are abundant traces of the manufacture; testing by fire the flaking qualities of the compact lava or clinkstone; shaping the flakes by well-directed blows of a hard beach pebble; polishing or sharpening on the hoana or grindstone.

The heavy work of felling trees of hard wood for idols and canoes; the hardly lighter labor of shaping and excavating canoes, ume-kes and dishes; the carving, rude at it was, on the idols, and minute as it was on the ie kuku, demanded good as well as various tools. Hence we have adzes weighing twelve pounds, and chisels weighing less than an ounce. Some cutting edges an eighth of an inch, others six inches. When iron was procurable, flat pieces not unlike a plane-iron were in some cases substituted for stone adzes, but the present writer has seen a canoe maker cut with these iron tools all the rough work of a canoe and then take the old stone *koi pahoa* to finish the work. The "Kahuna kalae waa" could raise a thin shaving from the hard koa so great was his skill.

The handles were often of hau wood [hence perhaps the name, *he au*, the handle] and a bit of kapa, hala leaf or banana leaf was inserted between the wood and stone, the two elements being then bound firmly with cord of olona or coconut. In a form much used for the interior work of a canoe, the stone is so mounted as to turn to one side or the other thus becoming, as needed, a right-or left-hand adz. This form is not peculiar to the Hawaiians [See No. 1800 in the New Guinea collection], although it was, by their traditions, invented by one of the canoe gods, Kupaaikée, who not only gave his name but also his tongue [*elelo*] to the adz. The name *koi pahoa* rightly applies to a narrow form used like a chisel, but custom has extended its use to almost all forms of stone adzes. The stone axe was not so common here as in New Zealand, Fiji, Solomon

Islands and elsewhere, but examples occur in this collection. A few non-Hawaiian stone adzes will be found with the Hawaiian for comparison, while others are with the collections from their respective localities. It will be seen that the Maori forms approach most nearly the Hawaiian, but the latter are still quite distinct from all others.

Certainly the Hawaiian workman of olden times could accomplish surprising results with very rude tools. A beach pebble sufficed, as the writer has seen, to shape a poi-pounder, and another stone to polish its curved surface. Case 18 shows fairly what was done in stone working. For wood-work they had, in addition to the all-important adzes, rude drills of *Terebra* shells or lava splinters, gouges and chisels of shells and shark's teeth, and finally the work on the great idols and the finely finished *umekes* was largely the result of friction applied by lavas and corals of various surfaces.

Religion entered largely into the mechanical work of the ancient Hawaiians, and not only did each work require prayers and ceremonies peculiar to its class, but there were tutelary divinities presiding over every part of the task. Even the bright little bird called *elepaio* was deified, doubtless because of its instinct in detecting unsound logs, a most important assistance to the canoe maker and the idol fashioner.

The rotary drill was known to the Hawaiians, as to so many other islanders of the Pacific Ocean. It is found as well in New Guinea, and seems of Malay origin. Before the advent of iron the point of a *Terebra* shell served for borer, but in more modern times a triangular file was generally used.

- 178 Hula pa. Used for boring small holes in the *pa hi* *aku*, or shell fish-hooks. The fly is of *koa*, the shaft an umbrella handle, the handle *ulei*. Laa-loa, Kona, Hawaii. JSE. 27, MR.
- 179 Hula pa. The fly is of *koa*, as is also the handle or *pauma*, the spindle or *poniuniu* is of *mamane*, the string or *kaula hoopā pauma* is of *olona*. Honomalino, Hawaii. JSE. 27, MR.
- 180 Hula pa. Made and long used by Kamahiai of Pa-hoehoe, S. Kona, Hawaii. The spindle is of *ulei*, fly of pine, strings of *ilihau* and *olona*. JSE. 27, MR.

168 Stone hammer. Used by Kapulupulu of Kawaihae uka for forty years. It was an old hammer when he came to the place and obtained it of the former owner. JSE. It is curious that the old Hawaiians had no name for hammer; the modern hamare being English. As they had no nails to drive, any heavy stone or block of wood might serve in the place of what seems to a modern a most necessary tool. 27, MR.

4467 Stone hammer. Of the form of stone hammers found in Europe. 27, MR.

4468 " Ditto. JSE. 27, MR.

4469 " These three stones are from Hawaii, with no record. JSE. 27, MR.

4480-83 Stone hammers. JSE. 27, MR.

4476 Shell gouge. 27, MR.

4485 Carving tool of iron, modern. JSE. 27, MR.

4486 " " " JSE. 27, MR.

4487 " " " JSE. 27, MR.

3101 Koi pahoa; found in an old kahuahale at Keei, Hawaii. JSE. 27, MR.

3102 " pae, used for rough work on canoes. JSE. 27, MR.

3103 " hoomaikai, for finishing canoe. JSE. 27, MR.

3104 " " JSE.

3105 " " JSE.

3106 " kalae. HG.

3107 " papa ku lauhulu. Made in the time of Kamehameha II. JSE. 27, MR.

3108 " papa ku lauhulu. Very large. 27, MR.

3109 " iron only. Pahoehoe, Hawaii. JSE.

3110 " " with handle.

3111 " " "

3112 " " "

3113 " " "

3114 " kupaaikiee, reversible for excavating canoes. JSE. 27, MR.

3115 " " in use in 1886. JSE. 27, MR.

3116 " " stone adz. JSE. 27, MR.

3117	Koi kupaaikée niu; blade of coconut to trim the soft wiliwili wood. JSE.	27, MR.
3118	" alahee. Used for soft wood. JSE.	27, MR.
3119	" pahoaa. JSE.	27, MR.
3120	" olopu.	27, MR.
3121	" pahoaa. G. H. Dole, Kauai. Broad and flat.	18, MR.
3122	" " " " Very large. Weighs 10 1/4 lbs.	18, MR.
3123	" " G. H. Dole, Kauai. Very fine. Weighs 5 1/4 lbs.	18, MR.
3124	" " G. H. Dole, Kauai. Narrow. Weighs 3 1/2 lbs.	18, MR.
3125	" " G. H. Dole, Kauai. Large, in the rough. Weighs 11 lbs.	18, MR.
3126	" " G. H. Dole, Kauai. Narrow.	18, MR.
3127	" " " " Flat.	18, MR.
3128	" " " " Broken.	D.
3129	" " " " Very small.	18, MR.
3130	" " " " "	18, MR.
3131	" " " " "	18, MR.
3132	" " " " "	18, MR.
3133	" " " " "	18, MR.
3134	" " " " "	18, MR.
3135	" " " " "	D.
3136	" long, narrow; found in a cave. HG. Weighs 8 1/4 lbs. Broken.	18, MR.
3137	" broad, flat. HG.	18, MR.
3138	" very blunt. HG.	18, MR.
3139	" rough. HG.	18, MR.
3140	" Honuapo, Kau, Hawaii. JSE.	18, MR.
3141	" double edge. H. M. Liliuokalani.	18, MR.
3142	" " " "	18, MR.
3143	" obtuse angle. " "	18, MR.
3144	" " " "	18, MR.
3145	" long, rough. " "	18, MR.
3146	" obtuse angle. " "	18, MR.
3147	" " " "	18, MR.
3148	" unfinished. " "	18, MR.
3149	" flat. " "	18, MR.

3150	Koi pahoia, large.	HG.	18, MR.
3151	" " "	rough.	18, MR.
3152	" " "	HG.	18, MR.
3153	" " "	QE.	18, MR.
3154	" " "	QE.	18, MR.
3155	" " "	obtuse angle. H. A. Widemann, 1889.	18, MR.
3156	" " "	flat.	18, MR.
3157	" " "		18, MR.
3158	" " "	H. A. Widemann, 1889.	18, MR.
3159	" " "	edge broken.	D.
3160	" " "	obtuse.	18, MR.
3161	" " "	under edge rough.	18, MR.
3162	" " "	narrow, very obtuse.	18, MR.
3163	" " "		18, MR.
3164	" " "		18, MR.
3165	" " "	edge broken.	D.
3166	" " "		18, MR.
3167	" " "Na kini mahoe."	QE.	18, MR.
3168	" " "	edge broken.	18, MR.
3169	" " "		18, MR.
3170	" " S. Kona, Hawaii.	JSE.	D.
3171	" " Kohala, Hawaii.	JSE.	18, MR.
3172	" " " "	JSE.	18, MR.
3173	" " "		18, MR.
3174	" " H. R. H. Liliuokalani.		18, MR.
3175	" " "		18, MR.
3176	" " flat.		18, MR.
3177	" " blunt edge.		18, MR.
3178	" " worn edge.		18, MR.
3179	" " " "		D.
3180	" " Kapalama.		18, MR.
3181	" " obtuse. Kona, Hawaii.	JSE.	18, MR.
3182	" " JSE.		18, MR.
3183	" " unfinished. Kona, Hawaii.	JSE.	18, MR.
3184	" " " " "	JSE.	18, MR.
3185	" " obtuse.	JSE.	18, MR.
3186	" " broken edge.	JSE.	18, MR.
3187	" " "	JSE.	18, MR.

3188	Koi pahoa.	Kohala, Hawaii.	JSE.	18, MR.
3189	"	G. H. Dole,	Kauai.	18, MR.
3190	"	"	"	18, MR.
3191	"	"	"	18, MR.
3192	"	"	"	18, MR.
3193	"	"	"	18, MR.
3194	"	"	" flat.	18, MR.
3195	"	"	" thick, broken edge.	18, MR.
3196	"	"	" :	18, MR.
3197	"	"	" narrow.	18, MR.
3198	"	"	" "	18, MR.
3199	"	"	"	18, MR.
3200	"	" unfinished.	HG. from H. Turton.	18, MR.
4028	"	G. H. Dole,	Kauai.	D.
4029	"	large, flat, broken.	HG.	D.
4030	"	"		D.
4031	"	"		D.
4032	"	"		D.
4033	"	"		D.
4034	"	"		D.
4035	"	"		D.
4036	"	G. H. Dole,	Kauai.	18, MR.
4037	"	"		D.
4038	"	"		D.
4039	"	"		D.
4556-61	"	flat.	G. H. Dole, Kauai.	D.
4562	"	"	" "	18, MR.
4563	"	"	" "	D.
4564	"	"	" "	18, MR.
4565	"	thick.	" "	18, MR.
4566-71	"	"	" "	D.
4572-73	"	"	" "	18, MR.
4574	"	"	" "	D.
4575	"	"	" "	18, MR.
4576-78	"	flat.	" "	18, MR.
4579-99	"		" "	D.
4600	"		" "	D.
4601	"		" "	18, MR.
4602	"	very small	" "	18, MR.

4603	Koi pahoa; thick, curved edge.	G. H. Dole, Kauai.	18, MR.
4604	" " " blunt edge.	HG.	D.
4605	" " " QE.		18, MR.
4606-8	" " JSE.		18, MR.
4609-19	" JSE.		D.
4620	" " JSE.		18, MR.
4621-23	" JSE.		D.
4624	" " JSE.		18, MR.
4625-39	" JSE.		D.
4552	Hoana anai koi. Ancient grindstone for sharpening adzes.	JSE.	18, MR.
4553	" " " JSE.		18, MR.
4554	" " " JSE.		27, MR.
4555	Stone chisel.	JSE.	27, MR.

In fine work the general order of rubbing material was, puna or fine coral, pohaku eleku, ana, oahi, olai, oio, lau ulu. This, however, varied greatly; but the old umekes no doubt had the whole series applied to them.

3000	Pohaku oio.	Stone for polishing canoes or ume- kes.	JSE.	27, MR.
3001	" "	Brought from Keoni Oio in Honua- ula, Maui, in the time of Kame- hameha I., by a high chief Kaho- hoinea.	JSE.	27, MR.
3002	" "			27, MR.
3003	"	pahee anai ipu laau.	Kailua, Hawaii.	JSE. 27, MR.
3004	"	" "	" "	JSE. 27, MR.
3005	"	" "		JSE. 27, MR.
3006	"	" "	Kona, Hawaii.	JSE. D.
3007	"	" "		D.
3008	"	" "	Kailua, Hawaii.	JSE. D.
3009	"	pahoa oio-anai umeke laau.		27, MR.
3010	"	oio anai.	Fine polishing stone.	HG. 27, MR.
3011	"	" oval.		D.
3012	"	" round.		D.
3014	"	"		D.
3015	"	pahee anai ipu laau.	Kailua, Hawaii.	JSE. D.
3016-19	"	oio anai.	JSE.	D.

3020	Pohaku oahi anai waa. Pumice for polishing. As it is found washed on the beach pumice is called <i>ana</i> ; after it has been baked to consolidate it is called <i>oahi</i> . In this state it is also used to scrape pigs after the bristles have been singed. JSE.	27, MR.
3021	Pohaku oio anai. JSE.	D.
3022	" " JSE.	27, MR.
3023-24	" pahee anai. JSE.	D.
3025	" oio anai waa. Kailua, Hawaii.	D.
3026	" oio anai. HG.	27, MR.
3027	" pahee anai ipu laau. JSE.	D.
3028	" " "	D.
3029	" " " JSE.	D.
3030	" oio anai. Pahoa lava. JSE.	D.
3031	" "	27, MR.
3032	" " QE.	D.
3033	" " JSE.	D.
3034	" "	D.
3035	Ana Ipu. Pumice for polishing. Kona, Hawaii. JSE.	D.
3036	Oahi anai waa. Kailua Hawaii. JSE.	D.
3037	Apuapu anai. JSE.	D.
3038	" " JSE.	D.
3039	" " JSE.	D.
3040	" " JSE.	D.
3041	Oio anai. Ilikahi, Kohala, Hawaii. JSE.	D.
3042	" Puukoae. " " JSE.	D.
3043	"	D.
3044	"	D.
3045	"	D.
3046	Ana. Pumice.	D.
3047	" "	D.
3048	Oahi anai waa. Kailua, Hawaii.	D.
3049	Oio anai. Porous lava.	D.
3050	Pumice, large block.	D.
3051	Puna. Coral. JSE.	27, MR.
3052	Pumice.	27, MR.
3053	Oio anai. JSE.	27, MR.

3054	Oio anai.	JSE.	27, MR.
3055	Apuapu anai makau.	JSE.	D.
3056	" " "	JSE.	D.
3057	" " "	JSE.	D.
3058	Oio anai.	JSE.	27, MR.
3059	"	JSE.	27, MR.
3060	Ana Pumice.		27, MR.
3061	" " small block.		27, MR.
3062	Puna, smooth white coral.		27, MR.
3063	"		27, MR.
3064	"		27, MR.
3065	Oahi. Pumice thrown by the currents upon the shore of Niihau where it was found in 1885. It was then baked in an oven.		27, MR.
3066	Oio anai. Kailua, Hawaii. JSE.		27, MR.
3067	" with knob.	JSE.	27, MR.
3068	"		27, MR.
3069	" H. M. Liliuokalani.		27, MR.
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313	Laau kahi olona. Strip of wood on which to scrape olona fibre.	JSE.	D.
314	" " " JSE.		8, *MR.
730	" " "		D.
731	" " "		4, *MR.
732	" " " Kailua, Hawaii. JSE.		D.
733	" " "		D.
734	" " "		D.
735	" " " Notched beneath.	HG.	D.
736	" " " old.		D.
737	" " " Kailua, Hawaii. JSE.		D.
738	" " " Hookena, Hawaii. JSE.		D.
739	" " " fine, notched beneath.		4 *MR
740	" " "		D.
744	" " " 8 ft. 3 in. long $5\frac{1}{2}$ ft wide.		D.
742	" " "		D.
743	" " " broad, curved.	JSE.	D.
744	Flat slab of kauila wood used for cleaning fibres of waoke, etc.		D.

4496 Uhi kahiolona. A scraper for olona fibre, made of the shell of the papaua [*Meleagrina marginifera*]. Usually these scrapers were made of a plate of bone from the back of a turtle. In use the bark is fastened to the small end of the laau kahiolona which is placed between the legs of the operator, who with the scraper removes the outer bark and leaves the fibre ready for spinning. Specimens both of bark and prepared fibre are in Case 35, MR. 27, MR.

4497 Uhi kahiolona papaua. JSE. 4, *MR.

4498 " " " H. M. Liliuokalani. 27, MR.

4499 " " " JSE. 27, MR.

4500 " " " QE. 27, MR.

4501 " " " 27, MR.

4502 " " kuahonu 27, MR.

4503-7 " " " 27, MR.

4508 " " " QE. 27, MR.

4509 " " " QE. D.

4510-18 " " " JSE. D.

4519 Scraper of tortoise shell. 27, MR.

169 Paniani. An instrument for twisting hair for ropes. JSE. 27, MR.

183 Hia aho ka upena, of whale's tooth. Shuttle for netting. JSE. 27, MR.

134 " " Shuttle for netting. JSE. 27, MR.

176 Hia aho ka upena; iwi kanaka. Made of the shin bone of Kuliakalanaia of Kohala. He was also a man without hair on his body, and therefore his bones were desired for fish hooks, etc. He was murdered for his bones, and Lualauoho of Kamakahelei secured the right shin bone and made this ka, which he greatly prized for the good luck it brought to his nets. On his death it passed to his son Kama, who died at Hoopuloa April 10, 1886, over a hundred years old, leaving the ka to his grandson Kealiikulu, who sold it the next year to JSE. 27, MR.

4520-21	Hia aho ka upena kauila wood.	27, MR.
4522	" " bambu.	27, MR.
4523	" " wood.	27, MR.
4524	" " " H. M. Liliuokalani.	27, MR.
4525	" " bone.	27, MR.
4526-29	" " pine.	27, MR.
185	Haha ka upena. Mesh-stick for netting. These sizes are used: Nukunukuaulu, makahi, malua, makolu, mahai. JSE.	27, MR.
3915	Haha ka upena; bone. JSE.	27, MR.
3916	" "	27, MR.
3917	" " makolu of whale rib. Waipio, Hawaii.	27, MR.
3918	" " bone. QE.	27, MR.
3919	" " "	27, MR.
3920	" " bambu.	27, MR.
3921	" " ea. H. M. Liliuokalani.	27, MR.
3022	" " " JSE.	27, MR.

In all old canoes the moo or edge-piece was sewed to the body of the canoe, and to hold the parts together during the sewing simple clamps called variously kuamoo, kauli, wae waa, were used.

3590	Kuamoo.	JSE.	27, MR.
3591	" kawau wood.	JSE.	27, MR.
3592	" ahakea wood.	JSE.	27, MR.
3593	" melia wood, pair.	S. Kona, Hawaii. JSE.	27, MR.
3594	" pair.		27, MR.
3595	Wedge and braided cord used in canoe-making.		27, MR.
3589	Oo, or digger. Ulei wood. The principal agricultural tool of the Hawaiians; used with considerable effect. JSE.		15, *MR.
5178-79	Ivory tools for netting kokos, etc.	QE.	27, MR.
4748	Aha hoa waa. Coconut cord braided, to bind iako to the canoe.		27, MR.
4749	" " "		D.
4750	Aha holo i ka laau o ka waa. Braid used to bind the moo to the manu in canoe building.		27, MR.
4751-54	Aha holo i ka laau o ka waa.		D.
4755-56	" coarser.	JSE.	D.

4757 Aha, or coconut cord; for fastening parts of a house together. JSE. 27, MR.

4758 Aha, or coconut cord; finer. 27, MR.

4759 Aha, or coconut cord; coarser; used to mark kapa and for other needs. 27, MR.

4742 Umeke kou, in process of formation; very old, Waikiki. 27, MR.

4743-4 Umeke kou, in process of formation; very old. 27, MR.

4745-47 Ipu kuha kou, in process of formation; very old. 27, MR.

These six specimens show well the earlier stages of bowl-making. They were buried in the sand many years ago perhaps for concealment, and have recently been disinterred.

AMUSEMENTS.

While the ancient Hawaiian were a hard-worked people, they certainly had a full share of games and amusements. The most general relaxation was the hula or dance, and although in later days the hula became the handmaid of licentiousness, it was not always so. Many of the chief women took an active part in the exercise, and even the proud Kaahumanu was, in her youth, renowned as a hula dancer. This is not the place to enlarge upon the kinds of hula nor other games and sports except so far as is needful to explain the collections in the Museum. It may be said, however, that in the half century preceding the reign of Kamehameha I., coincident with a general decline in the strict observance of religious rites, came in the custom of betting to the utmost extent on the result of all games. It is not asserted that this practice was not at all in vogue before, for in the time of Umi a chief staked his very bones, but it certainly gathered great strength and exercised a malign influence on the Hawaiian at this period. So with the licentious adjuncts of many games so often deprecated by historians of this people. The bone and sinew of the Hawaiian race could not have been what it was in the time of Kalaniopuu if the practices of the early part of the present century had long existed.

The athletic games as the ulumaika, moku, hakookoo, kukini, etc., fell largely into the hands of professionals, owing to the betting

which became an important preliminary to every contest, and which was carried to such a pitch of excitement that a man would stake his goods, his wife, children, even his own body on the uncertain result.

With the introduction of letters and a new religion the interest in learning became so great that all public athletic games as well as the worst of those merely lascivious were generally given up, not so much because forbidden by the Misionaries as because there was no time left for them; the fine and healthful games of the old Hawaiians passed away, and the present generation does not know even the names of the former playthings.

They had contests of running, boxing, wrestling of many kinds, throwing the spear or stick, rolling maika, sliding on the holua, surf-swimming, canoe racing; they had cock fights quite like those of Spanish America; they had fox-and-geese, cup and ball, tops, cat's cradle, tag, hide-the-button, kite-flying, stilt-walking; and they had as many "counting out" formulas as the children of Europe ever knew.

Music they did not have. Its softening or irritating influence they never experienced. There were several instruments serving to make a noise or mark time for the dances, and that is all. Conch shells served for trumpets, hollowed logs or gourds for drums, bambu for nose "flutes" and clappers, even two stones were beaten together to increase the din, and pebbles were shaken in gourd rattles. Although they had the bambu they did not know the arrangement of Pandean pipes, an instrument quite common on the islands to the west. Such a thing as a tune had not been invented by the Hawaiians to the time of the discovery by Europeans.

Hee nalu; Surf-swimming.—The surf-board was usually of koa, flat with slightly convex surfaces, rounded at one end, slightly narrowing toward the stern, where it was cut square. Sometimes the papas were made of the very light wiliwili, and then were narrow [olo]. In size they varied from 3 to 18 ft. in length, and from 8 to 20 in. in breadth, but some of the ancient boards are said to have been four fathoms long! The largest in this Museum are so heavy that they require two men to move them. The surf-riders swam out to sea to the kulana or place where the high rollers follow each other in quick succession, and there mounted a high wave and rode on it until near

the beach in the hua where the water was smoother; the first one arriving at the hua won the race. The riders sometimes raced also to the kulana nalu or starting points. Standing on the boards as they shot in was by no means uncommon. Men and women both took part in this delightful pastime, which is now almost a lost art.

			Width. inches.	Length. feet.	
293	Papa hee nalu, koa.	Kailua, Hawaii.	14 $\frac{3}{4}$	6 $\frac{1}{2}$	D.
294	" " "	" JSE.	14 $\frac{3}{4}$	5 $\frac{3}{4}$	26, *MR.
295	" " "	Kalihi, S. Kona, Hawaii.	14	5 $\frac{3}{4}$	26, *MR.
296	" " "	Lucy Peabody.	12 $\frac{1}{2}$	4 $\frac{1}{2}$	22, *MR.
297	" " "	very large. Paki.	20 $\frac{1}{4}$	14 $\frac{1}{2}$	EH.
298	" " "	large. Paki.	18 $\frac{1}{2}$	15 $\frac{1}{2}$	EH.
4684	" " "		20	11 $\frac{1}{2}$	*MR.

Hee holua.—A most dangerous but fascinating sport of sliding down hill on a sled made for the purpose. The holua or track was built with great care on a hill-side, and the remains of one are plainly seen on the hill mauka of the Museum. Constructed of stone when a hollow in the track needed filling, the holua was covered with earth well beaten down, and dry grass was spread over all, and a very slippery surface resulted. The sled, *Papa holua* was made of mamane [*Edwardsia chrysophylla*] or of uhiuhi [*Caesalpinia Kauaiensis*]. Two long runners resembling skate irons were bound firmly to the upper stage 2 $\frac{1}{2}$ inches apart from centres, the whole sled being some 11 $\frac{1}{4}$ ft. long. This papa was carefully oiled with kukui oil and the rider ran with the sled to gather impetus, and then threw himself headlong down the course. This was an eminently aristocratic game.

320	Papa holua	said to have belonged to the hero Lo-noikamakahiki.	HG.	16, *MR.
321	" " "	runners only.	HG.	D.

Maika was a game played with the ulu or olohu. The first name was current on Hawaii and Kauai while the latter was known on Maui and Oahu. A smooth alley or kahua was required, and three

forms of the game were common. The first was a trial of strength in throwing or rather bowling to the greatest distance; the second required more skill to drive the ulu between two sticks near the end of the kahua; the third was rather a trial of the ulus than the players, as they were rolled against each other and the toughest won the game for its owner. There is a famous kahua near Kalae on Molokai, where may be seen hundreds of broken ulus. The players trained carefully and developed great strength. Various kinds of stone were used, but a heavy compact coral rock was the favorite; the ulu was sometimes spherical, but usually a thin cylinder with slightly convex ends. The largest ulu of the first form in this collection has a diameter of $7\frac{1}{2}$ in. and weighs 22lbs. Of the second and more common form the largest is 5 inches in diameter, 3 in. thick and weighs 44 oz. The smallest has a diameter of $1\frac{7}{8}$ in. and weighs $3\frac{1}{2}$ oz. Rough and unfinished ulus were used by children for practise. The average weight was a little over a pound. Choice ones were carefully oiled and kept in kapa. Ulus are in Case 26, MR.

898	Ulumaika, coral.	QE.	15 oz.
899	" lava.	QE.	$14\frac{1}{2}$
900	" breccia. Hawaii.	JSE.	$22\frac{3}{4}$
901	" coral.	H. R. H. Keelikolani.	$18\frac{3}{4}$
902	" wood.	H. R. H. Keelikolani.	$11\frac{1}{4}$
903	" lava. 'Hilo, Hawaii.	JSE.	$15\frac{3}{4}$
904	" conglomerate.	G. H. Dole, Kauai.	7
905	" lava, rough.	G. H. Dole, Kauai.	$16\frac{1}{4}$
906	" coral. Kona, Hawaii.	JSE.	8
907	" " Kailua, Hawaii.	JSE.	$26\frac{1}{4}$
908	" lava. N. K., Hawaii.	JSE.	14
909	" breccia. [Sinker.]	JSE.	$11\frac{3}{4}$
910	" coral.		$19\frac{1}{2}$
911	" "		$7\frac{1}{2}$
912	" grey coral.		$9\frac{1}{2}$
913	" lava.		$11\frac{1}{4}$
914	" "		12
915	" coral.		$11\frac{3}{4}$
916	" lava.		$13\frac{1}{4}$
917	" "		$14\frac{3}{4}$
918	" "		13

919	Ulumaika, lava; small and rough.	4 oz.
920	" coral. " " JSE.	4 $\frac{1}{2}$
921	" lava. Kauai. G. H. Dole.	14 $\frac{3}{4}$
922	" limestone, rough. Kauai. G. H. Dole.	14 $\frac{3}{4}$
923	" breccia. S. Kona. JSE.	21 $\frac{1}{4}$
924	" lava, very large.	44
925	" limestone.	17 $\frac{3}{4}$
926	" rough. G. H. Dole, Kauai.	11 $\frac{1}{2}$
927	" yellow breccia. JSE.	11 $\frac{1}{4}$
928	" coral. JSE.	14 $\frac{3}{4}$
929	" sandstone. Kailua. JSE.	12 $\frac{1}{2}$
930	" lava.	18 $\frac{1}{4}$
931	"	18 $\frac{1}{4}$
932	" S. Kona, Hawaii. JSE.	19
933	" coral. S. Kona. JSE.	21 $\frac{1}{4}$
934	" Kailua. JSE.	20 $\frac{1}{4}$
935	" lava.	16 $\frac{1}{4}$
936	" coral.	6 $\frac{1}{4}$
937	" lava.	11 $\frac{3}{4}$
938	"	19
939	" olivine, spherical. JSE. Kohala, Hawaii.	80
3588	" lava, very smooth. 22 lbs; diam. 7 $\frac{1}{2}$ in.	
4661	" coral. HG.	22
4662	" HG.	23
4663	" lava. H. R. H. Keelikolani.	3 $\frac{1}{2}$
4664	" coral H. M. Liliuokalani.	14
4665	" breccia. "	9 $\frac{3}{4}$
4666	" coral. "	24 $\frac{3}{4}$
4667	" "	12 $\frac{1}{2}$
4668	" "	5 $\frac{1}{2}$
4669	" lava	12 $\frac{1}{2}$
4670	" "	13 $\frac{3}{4}$
4671	" HG.	16 $\frac{1}{4}$
4672	" HG.	11 $\frac{1}{2}$
4673	" coral. JSE.	24
4674	" QE.	
4675	" QE.	
4676	" "	

D.
D.

4677	Ulumaika, lava.	HG.	
4686-93	" "	JSE.	D.
4694	" "	15 $\frac{1}{4}$ oz.	26, MR.
4695	" "	13 $\frac{3}{4}$	D.
4696	" "	24 $\frac{3}{4}$	D.
4697	" "	31	26, MR.
4698	ochre.	JSE.	5 $\frac{1}{4}$
4699	" "	JSE.	11 $\frac{1}{4}$
4700	lava.	JSE.	16 $\frac{1}{2}$
4701	" "	JSE.	23
4702	" "		12 $\frac{1}{4}$
4703	" "		26
4704-10	" "	JSE.	D.
4711	" "		29 $\frac{1}{4}$
4712-13	" "		D.
4714	coral conglomerate.	JSE.	15
4715	" stem.		6 $\frac{1}{2}$
4716	lava.		11 $\frac{1}{4}$
4717-20	" Kauai. G. H. Dole.		D.
4721	" " " thin.	2.8x1.1 in.	
		7 $\frac{3}{4}$ oz.	26, MR.
4722-28	" " "		D.
4729-32	coral.	JSE.	D.
4733-34	lava.	JSE.	D.
4735	" almost spherical.	JSE.	3.8x3 in.
			40 oz.
4736	" thick.	3.6x2.6 in.	30 $\frac{1}{2}$
4737	" "		12 $\frac{1}{2}$
4738	" "	JSE.	12
4739	" "		8 $\frac{1}{4}$
4740	Ulumaika, lava.		16 $\frac{1}{4}$
4741	" olivine.		10 $\frac{1}{4}$

36 others broken, irregular or of little value.

Closely allied to the Maika and played on the same kahua were the games called *Pahee* and *Moa*. The former was played with a pahee or slender club, much larger near one end where it terminates in a blunt point, being quite sharp at the other. It could be and was used as a weapon,—ihe pahee. The material was always kauila or

uhiuhi wood. The object was to throw or rather slide the pahee as far as possible along the kahua. Each contestant had ten trials. The moa sticks were quite like the pahee but much shorter. In either game there was no exact rule for weight or length of stick, but each player suited his own want.

		Inches. Long.	Weighs. Pounds.	
3586	Ihe pahee, kauila wood.	$57\frac{1}{2}$	2	26, *MR.
3587	" "	$56\frac{1}{2}$	$1\frac{3}{4}$	26, *MR.
		Inches. Long.	Weighs. Ounces	
945	Moa pahee, kauila wood.	$14\frac{1}{4}$	$24\frac{1}{2}$	26, MR.
946	" "	13	$17\frac{1}{2}$	26, MR.
947	" "	$15\frac{1}{4}$	$8\frac{1}{4}$	26, MR.
948	" "	16	$22\frac{1}{2}$	26, MR.
3596	" "	$19\frac{1}{2}$	26, MR.	
3597	" "	14	26, MR.	
3598	" "	$11\frac{1}{2}$	26, MR.	
3599	" "	JSE.	10	26, MR.
4865	" "	HG.		26, MR.

Konane was played on a flat surface of stone or wood, and somewhat resembled "Fox and Geese," or the Japanese Gobang. Positions on the papamu were marked by a slight depression on stone, and often by the insertion of bone, usually chicken [sometimes human], in wood. There seems no definite number of places or arrangement. Beachworn pebbles, coral for white, lava for black completed the equipment.

866	Papamu for Konane, wood.	83 places.	26, MR.
867	" " "	" very old and worm-eaten. 180 places.	HG. 26, MR.
5313	Papamu, for konane, stone.	C. M. Cooke.	26, *MR.
885	Palaie. Ring and Ball.	Hawaiian "Cup and Ball." H. M. Liliuokalani.	26, MR.
886	"	HG.	26, MR.

Puhenehene was a game of guessing, aided by very close observation. It was played in a house or lanai, the players, ten in number, sitting cross-legged in two opposite rows. Between them were five pieces of different colored kapa loosely crumpled up but with

the edges overlapping. These puu were named kahi, pili, kau, pilipuka and kihipuka. The player selected from one side must have his arm bare to the shoulder that the experts on the opposite side might watch the play of his muscles as he passed his right hand containing the noa or stone to be left under one of the piles or puu. He of course made various fumbling gestures to mislead his opponents, and after passing once or twice through the row of kapas withdrew his empty hand. Each player had a polished wand, called maile, several feet long, usually armed at the end with a bit of dog's skin or a ki leaf. When the noa had been deposited the five piles were carefully separated and the guessing began. The side whose turn it is to guess have, during the hiding, keenly watched the process, and now as they point with their rods to the heap under which they suppose the stone to be, they watch the countenance of the hider who of course sits opposite and endeavors to conceal his expression. One of their number has been selected to make the first guess, and he strikes the selected heap of kapa which is lifted, and if the noa is really there his side wins that inning with one guess. The same side hide the stone until each of the five players has had one or two trials. The game is sometimes to avoid striking the heap concealing the stone.

881 Noa stone of Kalanikupule, the last King of Oahu.
He had a large house at Waimanalo where he
played this and other games. JSE. 26, MR.

882 Noa stone. Kauai. G. H. Dole. 26, MR.

3013 " JSE. 26, MR.

4866 Noa wood. It is doubtful whether this is a noa. 26, MR.

Hula.—The practice of the hula required a variety of pulsatile instruments, generally of a rude character, but serving well enough to mark the intervals of time. The large drums were made of the stem of a coconut tree hollowed out, and to some extent carved. Shark skin was used for the head, and was stretched in the usual way with olona cord. A large drum of this class, of great antiquity and historical interest, was in the government collection, but it has not yet come to this Museum where it lawfully belongs.

856	Pahu hula. Coconut hula drum.		26, MR.
857	" " "		26, MR.
858	" " "		26, MR.
859	" " " without head. From G. D. Gilman.		26, MR.
4849	Pahu hula. Coconut hula drum. HG.		26, MR.
4860	" " " HG.		26, MR.
860	" Carved wood, small. HG.		26, MR.
861	" " " HG.		26, MR.
862	" " " HG.		D.
889	Pahu hula. A cylinder of some light wood with skin heads fastened with hoops at each end. A poor imitation of a foreign drum. HG.		D.
893	Hula drum. HG.		26, MR.
2304	Pahu of wood, hour glass shape, no head.		26, *MR.
863	Puniuhula. Coconut shell drums, pair. These were bound to the knee.		26, MR.
863a	Puniuhula. Coconut shell drum. QE.		26, MR.
864	" " " HG.		26, MR.
865	" " " JSE.		26, MR.
865a	" " "		26, MR.
891	" " " H. M. Liliuokalani.		26, MR.
949	Hula ka laau. Kauila sticks for beating time in the dance so-called. HG.		26, MR.
950	Hula ka laau. Kauila sticks. QE.		26, MR.
895	Clappers of haematite [3]. G. H. Dole, Kauai. Four in a set.		26, MR.
4041	Pahu hula of gourds. HG.		26, MR.
4042	" " "		26, MR.
		Inches. High.	
4843	" " "	24	26, MR.
4844	" " "	18	26, MR.
4845	" " "		26, MR.
4846	" " " JSE.		26, MR.
4847	" " " large.	31½	26, MR.
4848	" " "		26, MR.

868	Uliuli hula. Hula rattle; gourd, with cock's feathers.	JSE.	26, MR.
869	" "		26, MR.
870	" " coconut rattle. HG.		26, MR.
871-2	" " gourd. HG.		D.
873	" " without feathers. Uliuli are made in pairs.		26, MR.
874	Uliuli hula. Calabash top, for making a whirring noise. JSE.		26, MR.
875	" " JSE.		26, MR.
876	Conch shell trumpet. Used formerly to call the people to church. JSE.		26, MR.
887	Conch shell trumpet, smaller.		26, MR.
883	Ohe hula puili. Bambu noise-maker, pair. H. R. H. Keelikolani.		26, MR.
884	Ohe hula puili. 13 pair. [12 pair. D.]		26, MR.
877	Ohe hano ihu. Nose flute. HG.		26, MR.
878	" " JSE.		26, MR.
879	" "		29, MR.
880	" " QE.		26, MR.
4851	Ohe keeke. A closed joint of bambu which the player strikes on a large stone. Holding one in each hand he drops them on the stone alternately. JSE.		26, MR.
4852	Ohe keeke.		26, MR.
4853	" " A set of four. JSE.		26, MR.
894	" " JSE.		26, MR.
4854	Niaukani. Hawaiian Jewsharp. HG.		26, MR.
4755	Ipu hokiokio. Lovers' whistle. A small gourd, pierced with from two to five holes, from which the initiated could make signals.		26, MR.
4856	Ipu hokiokio.		26, MR.
4857	" " of Queen Kamamalu. QE.		32, MR.
4858	" " given by Queen Kalama to Kaopua (w). QE.		32, MR.
4859	" " of Princess Nahienaena. QE.		32, MR.
4860	Ukeke. A thin strip of wood, on which were strung three or four strings. In playing, one end was held in the teeth and the strings were		

		struck either with the fingers or with a plectrum.	
		It was used much as the hokiokio, and never	
		as the harp, sackbut and dulcimer. JSE.	26, MR.
4861	Ukeke.	JSE.	26, MR.
4862	"	JSE.	26, MR.
4863	"	JSE.	26, MR.
4864	"	JSE.	26, MR.
892	Kukui hu.	Top made from a kukui nut. H. M. Liliuokalani.	26, MR.
887	Kupee niho ilio.	Anklets of dog's teeth, used in the hula. The selected canine teeth are bored and neatly inserted on olona netting. This pair weighs 9½ lbs., and contains 1,900 teeth.	26, MR.
888	Kupee niho ilio.	A single anklet of poor quality. HG.	26, MR.
890	Anklet made of corn husks.	JSE.	26, MR.
896	Kilu.	A game played by spinning a light gourd top in such a way that it would light on an upright stick placed for the purpose. The upper half of a huewai with a short neck made a good kilu.	26, MR.

IMPLEMENTS OF WAR.

Of war among the ancient Hawaiians, how declared and how carried on, we have nothing to do here; the weapons used alone concern us. The Hawaiians were a warlike people, and peace seldom existed all over the Group at the same time. So it is strange that the weapons were by no means well elaborated. They had no shields and no armor, if we except the feather helmets of the chiefs and the calabash masks of the rowers, and these were for ornament rather than defence. It will be remembered that when they first experienced the murderous fire of Cook's guns they covered themselves with mats dipped in the sea to avoid the "burning sand." Generally warriors fought naked to the malo. They had no bows and arrows for battle. They threw stones like the monkeys, but they improved on the method of the quadrumanous animals they had never seen, by shaping

the stones and hurling them with a sling. These slings, as they have come down to us are of the simplest structure, but the stones were often worked with considerable care to the form of a double cone. The range of slinging of course was not great, and hardly surpassed that of the light hurling spears.

Spears were generally made of kauila, with plain points, sometimes, but not commonly barbed, and seldom, if ever, armed with shark's teeth, as in Micronesia. Not infrequently the spear had to serve as food bearer to the battle, and corpse bearer from the fatal field. Huge spears were also made to set up as standards before the house of a chief. While the chiefs were skillful in throwing they were not less so in avoiding these weapons, and it was common for a chief to catch the first spear and use it to parry succeeding ones. For close combat they had the pahoa or dagger, the ihe pahee or sword-club, the newa or short club, the piikoi [used like the South American bola to entangle an opponent], and different forms of the leiomano a weapon of wood or bone armed with shark's teeth. The list is not a long one, nor was there any great variety in the forms of weapons. None of the weapons were poisoned, although poison was used to stupefy fish, and kill men. The use of iron, and the introduction of muskets at once relegated the former native weapons to the class of relics.

- 4766 Newa, kauila. Found by Keawehookino in a lua huna before 1854, near Kailua, Hawaii. JSE. 36, MR.
- 4767 " uhihi. Kailua, Hawaii. JSE. 36, MR.
- 4768 Newa, uhihi. Long used by Kawaimaka and his followers at Kohanaiki, Hawaii, as a club to kill ahi and other fish. Originally a war club. JSE. 36, MR.
- 4769 Newa, pua wood. From Kapukui, Kailua, Hawaii. JSE. 36, MR.
- 4770 Newa, kauila. From Piimauna, Kailua, Hawaii. JSE. 36, MR.
- 4771 Newa, From Mary Kapolena of Kamoiliili, Oahu. Bequeathed to her by her grandfather. Three persons have been done to death with it. JSE. 36, MR.
- 4772 Newa, uhihi. Short club for murder. Kailua, Hawaii. JSE. 36, MR.
- 4773 " Kauila. Long and slim. 36, MR.
- 4774 " " 36, MR.
- 4775 " " Thick; has been used as a hohoa. JSE. 36, MR.

4776 Newa, uhiuhi. From Naenelua of Kapalama, Oahu.

The log from which this was made was thrown upon the shore of Nuu, Kaupu, Maui, in the time of Kamehameha I., and carried by the people to the heiau of Punahoa at Mokulau near Nuu. Everything of value found upon the beach belonged to the king, who gave bits of this log to his aikanes among whom was Hema the grandfather of Naenelua. Hema had this newa made of his share, and once, when on his way from Kawaihae to Waimea on Hawaii, at mid-day seven robbers attacked him. Armed only with his newa he slew them all. So his grandson declares. JSE. 36, MR.

4777 Newa, kauila. Kailua, Hawaii. Crooked handle. JSE. 36, MR.

4778 " uhiuhi. " Hammer-shaped. JSE. 36, MR.

4779 " Curious knot, weatherworn. 36, MR.

4780 " pua wood knot with braided cord attached. QE. 36, MR.

4781 " light colored wood, smooth, modern. 36, MR.

4782 " kauila, 7-leaved head. 36, MR.

4783 " light-colored wood, rude. 36, MR.

4784 " kauila, human head carved on the edge. QE. 36, MR.

4799 " Kekaha, N. Kona, Hawaii. JSE. 36, MR.

4811 " bone of whale. Ancient. JSE. 36, MR.

4785 " stone, 4-leaved head. Waimea, Hawaii. JSE. 36, MR.

4786 " " smooth, well-made, elliptical section. JSE. 36, MR.

4787 " " flat. Koloa, Kauai. JSE. 36, MR.

4788 " " fish-shaped. JSE. 36, MR.

4789 Newa, stone head only. Formerly fitted to a wooden handle to which it was firmly bound with cords. JSE. A complete specimen of this form is in the British Museum. 36, MR.

4790 Newa, stone head only: similar to last. 36, MR.

4796 " " large and heavy. 36, MR.

4797 " " " " 36, MR.

4798 " " " " 36, MR.

4657 " " dark, compact lava, fine finish, 18, MR.

4791 Piikoi, wood with braided cord. Used in the lua to entangle the legs of an antagonist. HG. 36, MR.

4792	Newa, wood; found in a stream on Kauai after a freshet. Eight fathoms of aha were attached to it. JSE.	36, MR.
4793	Newa, stone. Waimea, Kauai. JSE.	36, MR.
4794	" " smooth.	36, MR.
4795	" " simply a beach-worn bit of lava. JSE.	36, MR.
4810	" " flat stone slung in aha cord.	36, MR.
4800	Pahoa, or Dagger, with aha braid to attach it to the waist. QE.	36, MR.
4801	Pahoa, or Dagger, with aha cord. QE.	36, MR.
4802	" uhiuhu wood, flat.	36, MR.
4803	" " pointed. M. P. Ailau.	36, MR.
4804	" " " Waimea, Kauai. JSE.	36, MR.
4805	" " "	36, MR.
4806	" " " with a barb. JSE.	36, MR.
4807	Leiomano, kauila handle in which is inserted a tooth of the niuhi shark. Kealia, South Kona, Hawaii. JSE. A concealed weapon used to rip open the bowels of an enemy.	36, MR.
4808	Leiomano, bone handle with two teeth.	36, MR.
4809	Leiomano, wood handle with single tooth and ring to be concealed in the hand. H. R. H. Keelikolani.	36, MR.

Small weapons armed with shark's teeth were quite common among the old Hawaiians, and are to be seen in many foreign museums, but are rarely seen here.

		Diameter Inches.	Weights. Ounces.	
4812	Maa, sling and stone. QE.	2.4 x 1.8	6	36, MR.
4813-19	" pohaku. G. H. Dole, Kauai.			36, MR.
4820	" " HG.	3.3 x 1.9	10	36, MR.
4821	" clay HG.	2.8 x 1.6	4½	36, MR.
4822-23	" "			36, MR.
4824-25	" " JSE.			36, MR.
4826-30	" lava JSE.			36, MR.
4831-41	" " Found at Kalihi on the School grounds in one pocket.			36, MR.
4842	Maa, laua; round. H. R. H. Keelikolani.			36, MR.

The average size of these sling stones when fashioned into the usual form, pointed at the ends, is 2.4 inches on the axis, and 1.7 inches transverse diameter. The weight averages 5 oz. with a range from 10 to 2½ oz. The slingers are said to have thrown with force and accuracy. The care in shaping the stones indicates the favor in which this weapon was held.

		Ft. long
4881	Ihe laumaki, uhiuhi wood. JSE.	8½ 36, *MR.
4882	" pahee, kauila, slender. H.R.H. Keelikolani.	5½ 36, *MR.
4883	" kauila, carved, model only. JSE.	8½ 36, *MR.
4884	" laumaki, kauila, carved model only. JSE.	6½ 36, *MR.
4885	" niu. Belonged to Hanakeawe, a warrior.	JSE. 6¾ 19, *MR.
4886	" plain, flat point.	19, *MR.
4887	" kuia, ohia kumakua. JSE.	6¼ 18, *MR.
4888	" " plain.	18, *MR.
4889	" " "	5¾ 18, *MR.
4890	" carved handle, flat point. QE.	8¾ 18, *MR.
4891	" laumaki, ohia kumakua. Kailua. JSE.	6¼ 18, *MR.
4892	" mamane, model only. JSE.	6¼ 18, *MR.
4893	" laumaki, kauila. Waimanalo, Oahu. JSE.	6½ 18, *MR.
4894	Ihe. Olaa, Hawaii. This spear, whose previous history is unknown, was found on a hill near this village where with a Pu puhi [Case 17] it was regarded with veneration. No one dared to discharge either spittle or urine in the neighborhood without first turning away from the sacred objects.	
	JSE. Length 6½ ft.	18, *MR.
4895	Ihe, with a round point. JSE.	" 7½ ft. 18, *MR.
4905-11	Ihe kauila. Small, resembling ihe pahee.	EH.

The *ihe* seldom exceeded 8 feet in length and was usually sharp pointed and well finished; the *kuia* was also rather short, with one end blunt, and served as a staff in walking; the *pololu* was a very long stick, with the butt carved in various patterns, the shaft often not smoothed, and the point hardly sharpened. It was also sometimes made of great length, and very heavy, to set up before a chief's house as a mark of his rank; in this case the butt was usually squared to fit a socket sunk in the ground. Old *pololus* were often made to

do service as kahili sticks. Yet again when they became obsolete as weapons they were cut up for oos or spades.

800	Pololu kauila, square butt, very heavy. Chief's standard. 17 $\frac{1}{4}$ ft. long.	EH.
801	Pololu kauila; slender. QE.	EH.
802	" " square butt.	EH.
803	" " round "	EH.
804	Pololu kauila, square butt. JSE. The tree grew at Puukapele, Kauai, from which this spear was made for Kamehameha I., who gave it to his soldier and aikane Hema just before the battle of Mukuhai against Kiwalao. Hema also used it in six other important battles, viz., at Laupahoehoe against Keoua Kuahuula, in a sea fight in the Moana o Alanuihaha against Kahekili and Kaeo; at the battle of Iao against Kahekili and Kaleikapule; in the battle of Kanaawa at Hilo, Hawaii against Namakeha; at Keaau, Puna, in the excursion of Kaleleiki; at Kaunakakai, Molokai, against Kaleikupule. In the peace that followed the old spear was trimmed into an auamo aipuupuu and used to carry the calabashes of the chiefs.	EH.
805	Pololu kauila, square butt. QE.	EH.
806	" " " "	EH.
807	" " round butt. QE.	EH.
808	" " octahedral butt. QE.	EH.
809	" " square butt. QE.	EH.
810	" " rough stick	EH.
811	" slender, flat point; rather an ihe.	EH.
812	" clumsy, thick. QE.	EH.
813	" used as an auamo. QE.	EH.
814	" octahedral butt. QE.	EH.
815	Pololu kauila, plain, round.	EH.
816	" " square butt. JSE.	EH.
817	Pololu kauila, round. JSE. Originally from Kauai, this spear has been in the same family for seven generations, viz., Kuelupai, father of	

	Aama, father of Mohonoho, father of Kuahui-kala, father of Kamai, father of Kalimakahi, father of Hoopai from whom the spear was purchased. These men were iwikuamoo of the Kings of Maui, and used the weapon in the battles of Kulaokamaomao and Kapaniwai at Iao, against Kamehameha I.	EH.
818	Pololu kauila, round butt.	EH.
819	" " octahedral butt. HG.	EH.
820	" " round butt, flat point.	EH.
821	Pololu kauila, round butt. JSE. The tree grew at N. Kona, Hawaii. Kanapua, with a stone axe, cut down the tree and fashioned the spear about the time of the arrival of Cook. Kanapua was a body servant of Hinai of Waimea, Hawaii. The spear was used in the battle of Kapaniwai. Kanapua died in 1843, and the spear passed to his son Kaneakua, who took it to Waialua, Oahu in 1846, and after thirty years brought it to Honolulu.	EH.
822	Pololu kauila.	EH.
823	" "	EH.
824	" " square butt, long and heavy. HG.	EH.
825	" " heavy.	EH.
842	" " QE. Hourglass handle.	EH.
843	" " thick, clumsy. QE.	EH.
844	" " auamo.	EH.
845	" " plain round. JSE.	EH.
846	" " " QE.	EH.
847	" " QE. Auamo.	EH.
848	" " QE.	EH.
849	" "	EH.
850	" " QE.	EH.
851	" " Laaloa, Kona, Hawaii. Probably an auamo. JSE.	EH.
852	" " plain, rough and heavy. QE.	EH.
853	Pololu kauila. JSE. Bought of Keaka of Puueo, Hilo. It was made by his father Keawe, a soldier and aikane of Kahekili King of Maui, and has often been used in battle.	EH.

854	Pololu kauila, round.	EH.
855	" " has been used as an auamo. QE.	EH.
2305	" " rough.	EH.
2306	" " "	EH.
2307	" " "	EH.
2308	" " "	EH.
2309	" " "	EH.

Other spears may be seen in the Kahili Room, used as Kahili handles. Placed with the deadly weapons, although not used in warfare, are the cords with which the Mu killed the victims for a sacrifice. As it was important that the victim should not be bloody, he was either killed by a blow on the head, or a noose of strong cord was thrown over his head and tightened until suffocation ensued. The cord in the Museum specimens of these implements is of olona, and braided in the manner of the hair leis; the knobs are of ivory.

4868-79	Strangler's Cords. [Four only on exhibition.]	36, MR.
4880	" " kauila handle or knob.	36, MR.
4685	Model of ancient mask of gourd; for rowers in a war canoe. W.T.B.	8, KR.

WORSHIP.

A lengthy account of the ancient Hawaiian theology would be needful for a full understanding of the figures and fetishes in this Museum, and this of course cannot be given here. Unfortunately the idols were generally destroyed at the time of the abolition of the Kapu system, and the very few that escaped, hidden by the devotees who were by no means sure of the permanence of the new régime, are now mostly in foreign lands. Boston, London and Berlin have more Hawaiian idols than can be found on the Group where once men bowed in fear or reverence before them. And yet the number of graven images was very great. Heiaus or temples were so numerous in the thickly settled district near the shore that from the walls of one the next was plainly seen. From Kailua to Kealakeakua on Hawaii there was at least one heiau to every half mile along the road. There were two forms of heiau; the more ancient

was a truncated pyramid of stone, oblong in plan and approached by terraces; on the top stood the sacred house sheltering the especial idols, the altar of offerings and the oracle; while around the edge stood a row of large and grotesquely carved images of wood. The later form of heiau was the same in ground plan but the pyramid was hollow; in other words there were four high walls enclosing the holy place, and from which even the eyes of the *profanum vulgus* could be excluded. As in the older pattern, the upper wall bristled with images, always frightful, often obscene. It is interesting to note in passing that the older heiau closely resembled the teocalli of the aboriginal Americans; the same pyramidal form, the grass house on top, the terraced ascent.

Not only were there these general heiaus, dedicated to some one of the chief gods, but also a multitude of fisherman's heiaus marked every highland along shore. The images were dressed by their worshipers, and many a piece of red kapa was devoted to this purpose. No wonder that the Hawaiian spoke of the 40,000 gods, for their images must have numbered many thousands.

Of the fence images, as they may be called, two are in this Museum; and of the more elaborate figures of the interior, one 6 ft. 8 in. high is in Boston, another is in Salem, while a third is in the British Museum. Photographs of all these are in the Picture Gallery.

In cutting the *Haku ohia*, as the idol was at first called, many prayers were uttered and a human sacrifice was offered with a hog. The latter was eaten and the former buried near the stump that had furnished the log. The long prayers and tedious ceremonies lasting several days or even weeks if the omens were unpropitious, ended by the installation of the new "Moi" on the *lananuu* or stage in the holy house.

While Ku, Kane, Lono and Kanaloa were the supreme gods, almost every man had his own deity while his wives had others. So the hula dancers worshiped Laka, robbers Kuialua, fishermen Kuula, their wives Hina. Laamaomao was god of the winds, Kahakuo of the mountains, Kaheholopali of precipices, Keaokiai of the east, Keaohalo of the west, and so on through the forty thousand. Very few of the images extant can be indentified with this or that god, and it is quite probable that the same log had to personify several deities during its existence. Any peculiar stone was sure to be sanctified as the earthly residence of some potent spirit, and certain woods

as kauila, iliahi, lama, mapele and ohia were the favorite abode of deity. In the early days of the Hawaiian Mission the natives were very loth to speak of the doings of the heathen cult, and seemed heartily ashamed of their *naaupo*; of later years the repugnance to heathen customs has largely disappeared, but the knowledge of the former days has gone also.

As in most countries the early religion was distinctly phallic, the visible origin of life naturally preceding the invisible. Importation of foreign gods followed, and the Spanish immigrants of the sixteenth century seem to have left traces of Hebrew legends adopted by Christians in the Old Testament. Certainly the ancient gods interested themselves in the affairs of men in a very practical way, for they collected the taxes and surveyed the land in the days of makahiki; they marched to battle with the chiefs, and by their terrible visages put the enemy to rout, unless indeed his gods were uglier; in fine all events of life saw their intervention, and from the conception of the child until his final burial, prayers to the gods were almost unceasing. These prayers, if they ever meant anything, are now quite unintelligible, and seem mainly "vain repetitions."

132 Kalaipaho. Poison God. The story of the original Kalaipaho has been so often told that it need not be repeated here. The present image is of black ohia a yard tall and a foot broad. Dog's teeth were inserted in his gums, and his head was adorned with human hair fastened into holes with flat pegs. Teeth and hair have gone through his great age or some unknown cause. It was found with a broken arm and leg in the year 1852, at Hauula, Oahu, at the foot of a cliff, having apparently endeavored, with the help of a goat, to get out of the cave in which it had been hidden. The injured god was at once taken by the natives to their pastor, Rev. John S. Emerson. In his house it remained some time but as its physical condition did not improve, it was sent to Mr. Emerson's classmate Rev. Caleb Kimball of Medway, Mass. After Mr. Kimball's death his heirs sold the idol and it returned to its native shores in 1886. In the

back of the image may be seen a cavity to which a cover was formerly fitted; in this small images or fetishes were placed to receive *mana* or divinity through the worship rendered to this marsupial god. JSE.

17, *MR.

133 Kaoa pao. A large round stone said to have been brought by Paoa the priest or kahuna from Kahiki. Dr. Edw. Arning, the collector, says:—"I was informed by A. Fornander of the location of these two celebrated stones. He had seen them in 1870. They were then hidden again in the makai wall of the heiau Mookini, Puuepa, Kohala, Hawaii. I succeeded in obtaining the stones in August, 1885. The very morning I went down to Mookini the native, Koa, living near the heiau had got them out of their hiding place to send them to the king [Kalakaua]. I persuaded him to let me have one of them. He made it a condition that I should send the other to the king, which I did. This stone is Kaoa pao, and was looked upon by ~~Kaoa~~ as a powerful fish-god. A small bay and boat-landing near Mookini was pointed out to me by Koa as the place where the canoe containing the two stones arrived from Kahiki." JSE. The shape of this stone ball as well as its substance does not at all correspond with "Na Ulu a Pao," seen and described by Judge Fornander [Polynesian Race, II., 37].

17, MR.

134 A red handkerchief containing awa, etc. an offering to Pele the goddess of the volcano. Found on the still warm lava of the Flow of 1887, near the road, by JSE. Doubtless intended to appease the goddess.

17, MR.

135 Laau Kalaipahoa, of sandal-wood; formerly used by Kaahia, a kahuna anaana of Kawaihae-uka, Hawaii, who by scrapings of this block could send an "aumakua ino" to afflict or even destroy his victim.

17, MR.

136 Laau Kalaipaho, of kauila; used by Niheu of Waipio, Hawaii, to secure aid from his aumakua Kalaipaho. Scrapings from it not only could ward evil from Niheu, but bring distress or even death upon his foes. JSE. 17, MR.

137 Laau Kalaipaho, of kauila; long kept by a kahuna in Puna, Hawaii. JSE. 17, MR.

4057 Laau Kalaipaho, worshiped as the poison god in Honolulu. Presented by Rev. James Bicknell together with the following: 17, MR.

4062 Kii, the wife of Kalaipaho; a block of wood. 17, MR.

4058 Laau aumakua, kauila. Obtained by Waiahinalo from Puna, Hawaii, where it had long been used by a kahuna for anaana. JSE. 17, MR.

330 Laau aumakua, nioi wood. Very ancient family fetishes. Scrapings were used to protect from evil, either by sprinkling or drinking the infusion. Especially useful before a journey. JSE. 17, MR.

332 Laau aumakua odd bits of wood long preserved in the family of Kanaloa as charms. JSE. 17, MR.

4063 Pohaku aumakua no Kumuheha he elemakule lolo. The family god of an old fisherman who prayed to it for an abundant supply of akule fish. It was always kept wrapped in kapa. Kailua, Hawaii. JSE. 17, MR.

4067 Pohaku aumakua Kalaipaho. In a casket. QE. 17, MR.

328 Pohaku o Keawehoopohaku, one of the aumakuas. Obtained from a native lady of Honolulu who was with difficulty persuaded to give up this charm. JSE. 17, MR.

4044 Kealoewa, goddess of rain. Curiously carved from kauila wood and carrying on its back a socket with two figures on the rim; dog teeth and human hair; red puakui kapa malo. In the possession of Mrs. Whitney of Kauai for fifty years, and at the sale of her effects it came to W. T. Brigham of Boston, and was finally purchased for this Museum. 17, MR.

4045 Akua pohaku. A small stone god, corrugated, beach worn. 17, MR.

4046 Akua pohaku. Stone similar to last, but in the natural condition. 17, MR.

4047 Pohaku melomelo. JSE. This smooth beach pebble weighing 2 lbs., and $9\frac{3}{4}$ in. in circumference, was anciently used in a curious manner, and a tolerably full history of its adventures is preserved. The kahuna who owned it breathed over it a prayer and then threw the stone at his intended victim. The obedient stone passed through the alimentary canal in a direction opposite to that followed by the food, and returned to the kahuna after the fashion of a boomerang, leaving the poor fellow at whom it was thrown, and through whom it passed, in a very disorganized condition. It is not mentioned whether the stone brought back the man's teeth on its return journey. 17, MR.

4048 Pohaku aumakua, "Onohi o ka la;" smooth pebble. 17, MR.

4049 " " "Lilihi o ka la" " " 17, MR.

4051 " " QE. Perhaps a noa stone. 17, MR.

4053 Kahakahi. Owl-god. A dark green stone, beach-worn. HG. 17, MR.

159 Idol of ohia, most rudely fashioned and apparently quite recent. It was brought by Rev. J. M. Alexander from the Anakii, a natural temple in Keauhou. This cave is at the head of a ravine in an ancient lava stream. Its dimensions are about 30 x 35 ft., and 30 ft. high. The neatly paved floor had in the middle a circular fireplace around which formerly stood perhaps twenty images, of which this was the last. JSE. I cannot believe in the genuineness of this log in its character of idol. W. T. B. 17, MR.

315 Akua lawaia. Fisherman's god of kawau [?] wood. Found in an upright position in a pao or small pit prepared for its reception in the stones at the east end of the kahua of the "Hale ili maia" in the old fort at Kailua, Hawaii, a little way west

of the small cape called "ka waha o ka kii". Rev. S. E. Bishop states that in his childhood he used to see six large wickerwork images standing in a row on long poles at the entrance of this large house of the Kamehamehas. JSE. 17, MR.

316 Kuula. Fisherman's god. Koloa, Kauai. JSE. 17, MR.

317 Papa kahuli. The stone altar on which the god No. 316 was placed with offerings of ia ula, awa and five leaves of the grass called puaa lau or kukaepuua [*Panicum pruriens*] that the fish might be drawn towards shore. The grass is a substitute for a live pig. JSE. 17, MR.

4056 Kaakau. A female akua oopu. In the time of Kahekili, king of Maui, it was the akua of Kuahine the konohiki of Waihee used to bring the oopu on to the ha or fish rack. The process consisted in anointing the stone with coconut oil and uttering suitable prayers. It could also attract the nau birds to the net. From Kuahine this passed to Kanihoa, a chief; from him to Kaanai, Kealiilawaia of Waihee, and Kanui who sold it to JSE. 17, MR.

4064 Mahiole pohaku. Stone helmet from an idol. 17, MR.

4065 Akua, rude. 17, MR.

4066 Akua pohaku, dug out of the mud of an old kalo patch on the premises of C. Afong, Nuuanu St., and presented by Mrs. Afong. 17, MR.

4068 Akua; of wood, much injured by fire and decay; found in a dam on Kauai. It was one of the images on the outer wall of the heiau. HG. EH.

4055 Akua pohaku. JSE. 17, MR.

4059 " " Rude image. Maui. H. M. Liliu-
okalani. 17, MR.

4060 Akua pohaku. Rude image. Maui. H. M. Liliu-
okalani. 17, MR.

4061 Akua pohaku. Fish god. JSE. 17, MR.

319 Akua pohaku. Fish god. JSE. 17, MR.

325 " " Kuula ia. Fish god, fish shape, from Halawa, Molokai. R. W. Meyer. 17, MR.

326 Akua pohaku. Kuula 3-pointed stone, from Halawa, Molokai. R. W. Meyer. 17, MR.

327 Akua pohaku. Plaster cast of a head in the possession of R. W. Meyer. 17, MR.

324 Kuula ia. A small double headed image of shell. Kailua, Hawaii. JSE. 17, MR.

• 1260 He akua o ka poe mahiai. God of Husbandry. Rudely carved from a block of lava. Honokua, Hawaii. JSE. 17, MR.

• 1358 Akua, of wood, neatly carved. From the heiau at Kawaihae. 14½ inches high. S. M. Damon. 17, MR.

1359 Akua of wood, 5 inches high. 17, MR.

1360 " " 11½ inches high. 17, MR.

1361 " " 8½ " " 17, MR.

1362 " " 9 " " 17, MR.

1363 " of kauila, male. HG. 22¼ inches high. 17, MR.

1364 " of ohia, much decayed. Presented by the Trustees of Oahu College. 42 inches high. 17, MR.

• 1366 Akua pohaku. Stone image in the attitude of prayer. HG. 7 inches high. 17, MR.

3900 Kukailimoku the feather war-god of Kamehameha, entrusted to his care by Kalaniopuu at his death. To this god the Conqueror built the fine heiau Puukohola, at Kawaihae, in 1791. Several of these images still exist, the best one being in Boston. They were made with considerable skill from netting, to which was attached red and yellow feathers in the same way as to the beautiful cloaks. In the present specimen the hair is human, and the immense mouth is armed with dog's teeth. In 1865 it was still in good preservation, but it has now become much dilapidated and few feathers remain. Presented by the Trustees of Oahu College. 17, MR.

4896 Akua kahiko ohia. A fine remnant of the large mouthed deities who guarded sacred places, such as the Hale o Keawe at Honaunau, Hawaii, or the Kamehameha house at Kailua. Although charred by fire and weather-worn it still presents

all the traits with which it was originally endowed. Presented by the Trustees of Oahu College. 8½ feet high.

EH.

4897 Akua kahiko ohia. A very rude image of peculiar form. QE.

EH.

4898 Akua kahiko. Stone image cut on the edge of a slab of lava. Found in a cave at Kailua when blasting for a road.

17, MR.

4899 Stone slab from the pavement of a fisherman's heiau on a hill at Kapoho, Puna, Hawaii. The area about the altar was paved with such stones.

EH.

4076 Echo pohaku. Phallus very large and definite. G. H. Dole, Kauai. 16 inches high.

17, MR.

4069 Echo pohaku. Phallus. JSE.

17, MR.

167 " " " JSE. Found in the platform of a house, Kawaihae uka.

17, MR.

172 Echo pohaku. Phallus. JSE. Kau.

17, MR.

173 " " " JSE. Kau.

17, MR.

4900 " " "

17, MR.

4901 " " "

17, MR.

4902 " " "

17, MR.

4903 " " "

17, MR.

4904 " " "

17, MR.

The people of the present day know nothing of the origin of these ancient idols, and call them stones to cook birds with; but apart from the fact that their shape is unsuitable for that purpose, the lava of which many of them are made will fly to pieces when heated. Others have undoubtedly been used as cooking stones.

A number of finely wrought stone cups are in this Museum and their use and purpose is still much of a mystery. Some say they are lamps, and they may have been so used; others, that they were to hold ink for the tatauer; certainly they have been used in the hula dance to make disgusting noises by pressing the wetted edges against some soft part of the body; the kahunas claim them as blistering cups, and finally, what has led to their insertion in this place, they were used by the kahuna anaana as a furnace in which to burn some part of his intended victim. For this last purpose it sufficed to collect a few hairs, nail-parings or spittle of the person whose death was sought,

burn them in this cup and scatter the ashes in the water he was accustomed to drink.

940 Kapuahi kuni anaana. Stone cup for sorcerers' use. 17, MR.
 941 " " " JSE. Kahuku, Oahu. Oliv-
 ine lava. 17, MR.
 942 Kapuahi kuni anaana. JSE. Waimanalo, Oahu. 17, MR.
 943 " " " G. H. Dole, Kauai. 17, MR.
 944 " " " " " 17, MR.

4071 Kauila cane from the "Hale naua;" presented by
 Rev. J. Bicknell. 17, MR.
 4072-75 Batons of kauila. "Hale naua;" presented by
 Rev. J. Bicknell. 17, MR.
 638 Covered calabash of kou, used by the members of
 the "Hale Naua" to contain certain relics, as a
 bit of kapa, olona cord, fish work, ulumaika, etc.
 4973 Pu puhi. A cassis shell trumpet from Olaa, Hawaii, where it was regarded as a very sacred object. Perhaps it was one of the conchs which the gods blew every night at Pueohulunui to bother King Liloa. JSE. 17, MR.
 186 Akua mano. Shark god from a cave on Hawaii. 17, MR.
 187 " " Found in the aa near the shore at
 Alae, S. Kona, Hawaii. JSE. 17, MR.

ORNAMENTS.

Flowers have always been a favorite ornament of the Hawaiians of both sexes, and although the supply of beautiful flowers, before foreign importations, was very limited, still attractive leis were woven of the ohia lehua, maile and other native blossoms, while the fruit of the hala furnished, and still furnishes, necklaces both showy and odoriferous. All these, however, were perishable. More permanent were the marks of the tatauers, although this practice was neither so general, nor were the designs so artistic as on the southern islands or in New Zealand. Goats, lizards, crescents and triangles were sparingly scattered over the face and body.

Kupees and leis of shells were both durable and beautiful, especially those made on Niihau of a small white columbella. Boar's tusks, seeds and dried fruits also contributed to personal decoration. Most characteristic of all were the necklaces of many strands of human hair finely braided in a square braid, to which was suspended the cherished ornament carved from a whale's tooth. These were kapu to all below the rank of chief.

In modern times, since hats have been worn, bands of feathers of various imported birds, have been made, and the braid of these hats may fairly be classed with the ornaments.

1268	Lei palaoa. Necklace of whale's ivory, 16 polyhedral beads. HG.	30, MR.
1269	Lei palaoa. 12 fusiform ivory beads, no niho.	30, MR.
1270	" 4 " " alternating with red glass beads.	30, MR.
1271	Lei palaoa, like preceding.	30, MR.
1272	" 7 polyhedral ivory beads alternating with red glass beads.	30, MR.
1273	Lei palaoa. 4 fusiform ivory beads strung on 11 strands of black glass beads. Found in a cave at Kalapana, Hawaii, with the bones of Keani-ani, an old chief. JSE.	30, MR.
1274	Lei palaoa. 12 ivory beads alternating large and small.	30, MR.
1275	Lei palaoa. 4 fusiform ivory beads, with red glass beads.	30, MR.
1276	Lei palaoa, like preceding.	30, MR.
1277	" 5 fusiform ivory beads. Time of Vancouver. HG.	30, MR.
1293	Lei palaoa. 5 fusiform ivory beads, with red glass beads. JSE.	30, MR.
1294	Lei palaoa, 4 fusiform ivory beads, slender.	30, MR.
1295	" 7 " " " JSE.	30, MR.
1296	" 2 " and 10 oval ivory beads. JSE.	30, MR.
1308	Lei niho palaoa. Strands of human hair and ivory hook. QE.	30, MR.

1309	Lei niho palaoa. QE.	30, MR.
1310	" " HG.	30, MR.
1311	" "	30, MR.
1313	" " QE.	30, MR.
1314	" "	30, MR.
1315	" " QE.	30, MR.
1316	" " small.	30, MR.
1317	" " JSE. Kona, Hawaii.	30, MR.
1318	" " JSE. " "	30, MR.
1320	" " JSE.	30, MR.
1321	" "	30, MR.
1322	" "	D.
1323	" " small.	D.
1324	" " "	30, MR.
1325	" " H.R.H. Keelikolani. Large and fine.	30, MR.
1326	Lei niho palaoa, large and fine.	30, MR.
1327	" " fine braid.	30, MR.
1328	" " "	30, MR.
1329	" "	D.
1330	" " JSE.	D.
1331	Lei niho palaoa. JSE.	D.
1332	" " " fine braid.	D.
1333	" " " little hair.	D.
1334	" " " QE.	D.
1335	" " " QE. Small, and with a small niho.	D.
1336	" " " hole through niho, front to back.	30, MR.
1337	" " "	D.
1338	" " "	D.
1339	" " "	D.
1340	" " "	D.
1341	" " " coarse braid.	D.
1342	" " "	D.
1343	" " "	D.
1344	" " " fine braid.	D.
4965	" " "	D.
1287	Niho palaoa. Ivory, very large. HG.	30, MR.
4920	" " "	30, MR.
4921	" " HG.	30, MR.

4922	Niho palaoa.	JSE.	Wahiawa, Kauai.	30, MR.
4923	"	"	short.	30, MR.
4924	"	"	JSE. Keaa, Kahuku, Kau, Hawaii.	30, MR.
4925	"	"	small, with sections of tortoise-shell.	
			The only one known of this composite structure.	30, MR.
4926	Niho palaoa.	JSE.		30, MR.
4927	"	"	JSE.	30, MR.
4928	"	"	very small.	30, MR.
4930	"	"	JSE. Ponahawai, Hilo, Hawaii.	30, MR.
4931-37	Niho palaoa.	JSE.		D.
4938	"	"	JSE. Bone.	30, MR.
4939	"	"	JSE.	D.
4940-48	"	"		D.
4950-54	"	"	rich color.	D.
4955-62	"	"	" "	30, MR.
4963-64	"	"	JSE.	D.
1278	Leholei of Cypraea helveola.	13	on black-ribbon.	30, MR.
1279	"	"	moneta.	15.
1280	"	"	"	14.
1281	"	"	"	30.
1282	"	"	"	34. Very small.
1283	"	"	"	19.
1284	"	"	"	16.
1289	"	"	"	14 on black ribbon.
1290	"	"	"	9 with glass beads.
1346	"	"	JSE.	30, MR.
1291	Lei pipipi.	Nerita polita.	17.	JSE.
1292	"	"	43.	JSE.
4966	"	"	"	JSE.
2281	"	"	"	JSE.
2239	Lei of the seeds of Coix lachryma,	"Jobs tears;"		
	several stands braided.	H. R. H. Keelikolani.		31, MR.
2280	Lei of the seeds of Coix lachryma and glass beads.	HG.		31, MR.
2253	Lei of the seeds of Abrus precatoria.	13 ft. long.		
	H. R. H. Keelikolani.			31, MR.
2254	Lei Columbella and Abrus precatoria.	19½ ft.		
	long. H. R. H. Keelikolani.			31, MR.

2255	Lei Columbella and Abrus precatoria. H. R. H. Keelikolani.	31, MR.
2256	Lei of seeds of Leucaena glauca. H. R. H. Keelikolani.	31, MR.
4967	Lei of seeds of Inga. H. R. H. Keelikolani.	31, MR.
2279	" kukui, nuts fluted, M. P. Ailau.	30, MR.
1345	" pupu, Columbella shells. HG.	31, MR.
1297	Charm of 7 dog's teeth, worn to keep off evil spirits. H. M. Liliuokalani.	30, MR.
1298	Charm; dog's and whale's teeth. Keelikolani.	30, MR.
1299	Ivory comb, once worn by Queen Kamamalu. JSE.	30, MR.
1300	" " ancient.	30, MR.
1302	Kupee palaoa. Ivory bracelet, 13 joints.	30, MR.
1303	" tortoise-shell and carved human bone.	30, MR.
1304	" " " " " larger.	30, MR.
1305	" hoakalakala. Boar's teeth cut, 23. QE.	30, MR.
1306	" of 10 pipipi shells [<i>Nerita picea</i>].	30, MR.
1307	" of 8 " " with a bead and tooth.	30, MR.

A favorite bracelet consisted of one or more shells of pipipi fastened about the wrist by a string, the black species, *N. picea*, was often ground to show white spots or lines, and the colored species, *N. polita*, was also polished or cut. Dozens of these shells are uncatalogued in the collection. Another favorite bracelet was composed of bosses of whale's ivory attached to the arm in the same way. These, like the other ivory ornaments the Hawaiians preferred to color by wrapping in ki leaves and then exposing to the smoke of sugar-cane. Boar's tusks were also often strung with the concavity outwards for bracelets.

4912	Kupee palaoa, 5 elliptical beads. JSE.	30, MR.
4913	" " 6 round beads. JSE.	30, MR.
4914	" " fine boss and 9 beads, all round. JSE.	30, MR.
4915	" " large boss, 7 rectangular beads. JSE.	30, MR.
4916	" " carved in imitation of pipipi shells. JSE.	30, MR.
4917	Kupee palaoa, 3 grooved beads. Waiohinu, Kau, Hawaii.	30, MR.
4918	Kupee palaoa, 2 conical bosses. QE.	30, MR.

There is nothing to indicate that the use of finger-rings was ancient, or that they were known before the advent of foreigners. They probably came in with the more barbarous ear-rings of the strangers.

4968	Komo lima, ivory finger-ring.	30, MR.
4969	" " " ancestral. JSE.	30, MR.
4970	" " coconut.	30, MR.
4971	" " kukui nut, with stone inserted.	30, MR.
4972	" " " [4]. JSE.	30, MR.
1288	Breast ornament [?] of copper. G. H. Dole, Kauai.	30, MR.

The following collection is composed entirely of foreign bead ornaments, and is in no way Hawaiian, except so far as the taste involved in the selection of these ornaments is truly indigenous. They were the property of H. R. H. Keelikolani, and are all in Case 31, MR.

1301	Lei, of round white glass beads.	
2233	" coral-like red beads.	
2234	" small, round and conical yellow glass beads.	
2235	" red and black beads.	
2236	" imitation pearl beads.	
2237	" green and brown oval beads.	
2238	"	
2256	" small black beads, braided.	
2257	" black beads knotted like black-berries.	
2258	" " " with larger ones at intervals.	
2259	" " " and yellow, braided.	
2260	" green and yellow beads.	
2261	" " " " small.	
2262	" pink and dark blue beads, braided.	
2263	" heavy red beads.	
2264	" heavy pink oval and round beads.	
2265	" imitation coral chain.	
2266	" red, transparent, polygonal glass beads.	
2267	" " " " " graduated.	
2268	" green and red. " " "	
2269	" light green. " " "	
2270	" " " " "	

2271 Lei; round, red glass, pair.
 2272 " " black glass.
 2273 " " red opaque glass.
 2274 " " red and white glass.
 2275 " " red and pink oval glass.
 2276 " " red and pink hollow glass.
 2277 " oval, red, green and yellow, small.
 2278 " round, pink, translucent.

Also belonging to the Keelikolani collection, but of native origin, are the following. They are in the same case.

2243 Lei leho. A long string of Conus shells.
 2244 " " "
 2245-47 " " "
 2248 Kupee of 5 hemispherical ivories.
 2251-52 Kupee of Cypraea moneta.
 2249-50 Lei of " "

A few other leis and kupees are in the collection of relics of the chief in Case 32, MR. The feather leis have already been described. Part I., p. 20.

DRESS.

The principal articles of dress of the ancient Hawaiian have already been catalogued under mats and kapas in the First Part. Besides the malo, kihei and pa'u there was in olden time but the sandals, and these could hardly be called a regular part of the national costume as they were only worn to protect the feet in journeys over the rough lava beds. The old Hawaiian was uncovered at either end; bare feet and bare head was the rule. With the arrival of foreigners came the extended use of hats, of which a large variety is in this Museum.

4535	Na kamaa lauhala.	JSE.	20, MR.
4536	" "	JSE.	20, MR.
4537	" "	QE.	20, MR.

4538	Na kamaa, poaaha.	JSE.	20, MR.
4539	" "	JSE.	20, MR.
4540	" maia.	JSE.	20, MR.
4541	" "	JSE.	20, MR.
4542	" malina, aloe.	JSE.	20, MR.
4543	" ilihau, bark of hau tree.	JSE.	20, MR.
4544	" lai ki.	JSE.	20, MR.
4545	" " small.		20, MR.
4546	" "		20, MR.
4547	" "		20, MR.
4548	" " QE.		20, MR.
4549	" malina.	JSE. These sandals were simply braided cushions attached by cords [often of the same material] over the toes and around the ankle.	20, MR.
5039	Papale.	Hat made of shavings from the new palace.	29, MR.
5040	" Pua,	sugar-cane blossom stem, lei of corn husks. HG.	29, MR.
5041	Papale.	Loulu, native palm [<i>Pritchardia gaudi-chandii</i>], broad brim.	29, MR.
5042	Papale loulu,	plain braid.	29, MR.
5043	" "	ornamental brim.	29, MR.
5044	" "	" braid.	29, MR.
5045	" "	" "	29, MR.
5056-8	" "	" "	29, MR.
5049	" Date palm.		29, MR.
5050	" Niu,	coconut, fine.	29, MR.
5051-52	" "	coarse braid.	29, MR.
5053	" "	very coarse, looped braid.	29, MR.
5054	" Ohe,	bambu.	29, MR.
5055	" loulu	with same colored with kalo patch mud.	29, MR.
5056	" iwaiwa,	fern and horsehair, open.	29, MR.
5057	" "	coarse braid.	29, MR.
5058	" "	cap shape.	29, MR.
5059	" "	crown only, unfinished.	29, MR.
5060	" "	and pua, angular braid.	29, MR.
5061	" "	" looped braid.	29, MR.
5062	" lauhala	and banana, black.	29, MR.

5063	Papale; lauhala and banana, knotted braid.	29, MR.
5064	" " " ?	29, MR.
5065	" banana and pua dyed purple.	29, MR.
5066	" pua, fancy open braid.	29, MR.
5067	" " open work, small.	29, MR.
5068	" " looped braid and lei.	29, MR.
5069	" " " "	29, MR.
5070	" koa pods, two colors.	29, MR.
5071-72	" pua, looped braid, lei, narrow brim.	29, MR.
5073	" " two colors.	29, MR.
5074	" "	29, MR.
5081	" " dyed magenta, unfinished.	29, MR.
5082	" " looped braid, narrow brim.	29, MR.
5083	" lauki and lauhala.	29, MR.
5084	"	29, MR.
5085	"	29, MR.
5086	"	29, MR.
5087	" rush from Micronesia. These hats were at one time quite popular.	29, *MR.
4010	Hat block; coconut, for hat sewing.	27, MR.
4011	" wiliwili.	27, MR.
4012	" "	27, MR.
5088-89	Lei, Hat-band, iwaiwa.	29, MR.
5090-91	" " pua, two colors.	29, MR.
5092	Braid, pua and iwaiwa.	29, MR.
5093-98	Braid, ha ko; resembling fine straw.	D.
5099	Lei, flat for hat-band, yellow feathers, dyed.	8, KR.
5100	" " " and red feathers dyed.	8, KR.
5101	" " " " " "	8, KR.
5102	" " " white hen's and pheasant's feathers.	8, KR.
5103	Lei, flat for hat-band, blue peacock's feathers.	8, KR.
5104	" " " peacock's and pheasant's feathers.	8, KR.
5105	" " " pheasant's feathers.	8, KR.
5106	Feather covered box, yellow and magenta, dyed.	8, KR.
5109	Peahi niu. Fan of coconut leaves. QE.	34, MR.
5110	" " large. QE.	34, MR.
5111-16	Peahi niu, small.	34, MR.
5117	Peahi, date palm leaf, colored stripes of iwa. Honolulu. JSE.	34, MR.

The iwa or iwaiwa used in these hats and fans is the very durable stem of several species of fern. The pua is the skin of the flower stem of the sugar-cane; the younger, the finer and lighter colored. The loulu is the leaf of the native fan palm [*Pritchardia gaudichaudii*]. Dark shades of all these light materials are obtained by soaking for some time in the mud of a kalo patch.

311-312 Ahu lai. Cloaks of ki leaves made by Kalihi of Laiewai, Oahu, and worn in the "Historical Procession" 1886, by men representing Pakaa and Kuapakaa. JSE. 7, MR.

5151 Umbrella of silk; Chinese make, of immense size. yellow. D.

5152 Umbrella of silk; Chinese make, of immense size, red. HG. D.

4760 Kookoo kauila. Cane from Kealia, Kona, Hawaii. JSE. 34, *MR.

4761 Kookoo palaoa. Cane of bone. JSE. 34, *MR.

4762 " kii. Cane of wood, with a human head for handle. 34, *MR.

4763 Kookoo ebony, with ivory head. Kamehameha V. 32, MR.

4764 " of John Young. HG. 32, MR.

4765 " hala wood. HG. 32, MR.

MEDICINE.

Very little is now known of the medical practice of the ancient Hawaiians, but it probably closely resembled the kahuna practice of the present day. No such knowledge of medicinal herbs as was possessed by the Indians of both Americas existed on these Islands. Evil spirits were at the bottom of physical as well as moral troubles and disturbances, and must be exorcised by the help of other aumakua more powerful or better disposed to suffering humanity. Charms and incantations usurped the place of simples, and a study of the effects of the trees and plants of the mountains seemed out of place when the scrapings of a beach pebble could kill or cure. Where medicinal plants were used they have not generally been identified.

The use of the calabash vine in very large doses as a cathartic is well known. One might have hoped that the late Dr. Hillebrand, in his published Flora of these Islands, would not only give the native names of plants but also such information of their supposed medicinal virtues as he must have gathered in the many years of his practice here; but not only are the native names often wanting, but those given are not always correctly applied, and medical information is sadly deficient. The curator has endeavored to supply this deficiency from the notes of the late Horace Mann, but the field is so extensive and ill-defined, that it has seemed best, as the collection of the Museum in this department is at present small, to give simply the meagre list of the articles on the shelves, leaving to a more favorable opportunity a discussion of Hawaiian medical knowledge.

In surgery there was little to be described. Cutting the umbilical cord was a religious rather than surgical operation, while the universal circumcision or rather incision was purely sanitary and had nothing religious about it. Abortion was practised in various ways. The operations of minor surgery were attended to rudely but with tolerable success, and so far as known there was nothing peculiar in their methods, if we except the administration of clysters when the patient was placed on his knees with his head to the ground. But without illustrations it will be hardly worth while to enlarge upon Hawaiian surgery. The entire collection is at present in or upon Case 33, MR.

174 Hano kiwi pipi. Syringe made from a cow's horn to inject *wale hau*, which is simply an infusion of hau bark in hot water. JSE.

175 Hahano ohe. Syringe of bambu. JSE.

4974 Ipu hano. Gourd syringe.

4975 " " dark colored.

4976 " " short.

4977 " " small, dark.

4978 " " HG.

4979 " " unfinished, from Kanupa cave. JSE.

4107 Ivory pounder; for crushing drugs.

4980 He ohe hapai i ke keiki. Pointed bambu for abortion. From a burial cave. JSE.

4981 Ana. Pumice to remove the fur from the tongue of a patient. JSE.

4982 Apu niu. Cup for medicines. Kanupa cave. JSE.

177 Cup made from the vertebra of a whale. *Found in a cave in Kona, Hawaii. JSE.

4983 Laau lapaau. Bark of undetermined origin. The kahuna bites a portion of this sacred bark and blows it on the patient, thus compelling the aumakua bewitching the patient to reveal its name and nature so that the kahuna can take suitable means to expel it. JSE.

4984 Laau lapaau. Same nature and use as the last. JSE.

4985 Laau lapaau. Nioi wood. Laau aumakua. JSE.

4986-87 Laau lapaau. Nioi wood. Laau aumakua.

4988 Laau lapaau. Twigs of maia pilo wood [*Coprosma, sp.*] In any great trouble these were to be used to cook the luau ordered by the kahuna. JSE.

4989 Laau lapaau. Kealia wood [*Elaeocarpus bifidus*]. A "mea ola." JSE.

4990 Laau lapaau. Section of a limb.

4991 Laau lapaau. Kauila [?], a fragment. JSE.

4992 Laau lapaau. Kauila. Niheu of Waipio, Hawaii, used this charm. JSE.

4993 Laau lapaau. Akia manalo, *Wikstroemia foetida*. HG.

4994 " " Ohia ai, *Eugenia malaccensis*. HG.

4995 " " Uhaloa, *Waltheria americana*. HG.

4996 " " Pamakani, *Phyllanthus sandwicensis*. HG.

4997 " " Kaunoa pehu, *Cassytha filiformis*. HG.

4998 " " Alaalawainui, *Peperomia sp.* HG.

4999 " " Kokoolau, *Campylotheca sp.* HG.

5000 " " Hinahina.

5001 " " Awikiwiki, *Canavalia galeata*. HG.

5002 " " HG.

5003 " " Maunaloa, *Dioclea violacea*. HG.

* Bone and ivory were considered especially suited for the preparation and administration of remedial agents.

5004 Laau lapaau. [Kalaipahoa.] HG.
 5005 " " " HG.
 5075 " " Puakala, *Argemone mexicana*.
 5076 " " Noni, *Morinda citrifolia*.
 5077 " " Ahuhu, *Tephrosia piscatoria*.
 5078 " " Kuahulu, *Ipomoea tuberculata*.
 5079 " " Ilieo, *Plumbago zeylanica*.
 5080 " " Koko, *Euphorbia lorifolia*.
 5314 Laau lapaau. Koali, *Ipomoea insularis*.

FISHERIES AND CANOES.

It is but right to say that the present is the most complete collection of hooks, nets and other implements used in Hawaiian fishing to be found in any museum. Of canoe models, this Museum possesses several dozen, fairly representing the navigation of the Pacific Islanders; and it is intended, when the addition to the present building is completed, to show as complete a series as possible; in the crowded condition of the Museum it has been impossible to arrange or catalogue these models.

407 Waa or canoe; from a single log of koa, fast model; ama or outrigger of wiliwili wood, iako or connecting bars of hau, moo or gunwale of ulu.* The favorite deep-sea fishing canoe of Kamehameha V., who was exceedingly fond of fishing. Presented by Samuel M. Damon. *MR.

Hawaiian paddles are usually of koa or kauila wood, rather heavy and with broad blades, pointed and tipped on one face with a slight projection called *io* or *upe*. This *io*, however, was not always present. The average length of a paddle was $5\frac{1}{2}$ ft., but the size of the blade ranged from 17 to 26 inches in length, and from 8 to $15\frac{1}{2}$ inches in breadth. While the steering paddles were much larger than these, the paddle used by women was much smaller, almost a toy.

* The dimensions of this canoe are as follows: Length over all, $32\frac{1}{4}$ ft.; Depth outside, 27 in.; Width outside, 23 in.; Depth inside $23\frac{1}{2}$ in.; Width inside, $17\frac{1}{2}$ in.; Centre of canoe to centre of out-rigger, $10\frac{1}{4}$ ft.

Blade: Inches.

299	Hoe, paddle, kauwila wood.	HG.	12 $\frac{1}{8}$ x21 $\frac{1}{2}$	22, *MR.
300	" " "	HG.		
301	" " koa, for a woman.	QE.	7 x 11	22, *MR.
302-6	Hoe, paddle, koa.	Dr. T. C. B. Cooke.		
	QE. All with io.			21, *MR.
307	Hoe, paddle, koa, Kamehameha IV.	QE.	15 $\frac{3}{4}$ x25 $\frac{3}{4}$	21, *MR.
308	Hoe, paddle, koa, Kamehameha IV.	Polished to show wood.	QE.	21, MR.
309	Hoe, paddle, koa, old and mended.	HG.		D.
310	Hoe, paddle, koa, for a woman.	Kai-lua, Hawaii.	JSE.	21, *MR.
794	Hoe, paddle, koa, for steering, very large and heavy.		16 x 38	37, *MR.
795	Hoe, paddle, kauila, model to show the io or projection on the blade.	JSE.		22, *MR.
5138	Hoe, paddle, koa.			37, *MR.
5139	" " "			37, *MR.
5140	" " "			36, *MR.
5141	" " "			38, *MR.
5142-44	Hoe, paddle, koa, in canoe 407.			
5145	Hoe, paddle, koa, *small blade,		17 x 8	21-22, *MR.
3891	Waa, canoe model, double.	H. M.		
	Liliuokalani.			22, MR.
3892	Waa, canoe, model, double.			22, MR.
3893	Waa, canoe model, single.	Rigged.		
	with sail.			22, *MR.
3894	Waa, canoe model, single.			22, MR.
3895	" " " "			22, MR.
3896	" " " "	sandal-wood.		22, MR.
3897	" " " "	double.		21, *MR.
3901-2	" " " "	QE.		22, MR.
3903	" " " "	single, small, rude.		22, MR.

* From Dr. N. B. Emerson, who has made a special study of the Hawaiian canoe, and who is by far the best authority on the subject, we learn that the handle of a paddle, was called *kuau*; the blade, *laulau*; the base of the blade next the handle, *puukele*; and the projection at the point, *upe*.

3912	Wae waa. Cross brace of a canoe.	22, MR.
3913	" " " "	22, MR.
3914	" " " "	22, MR.
3905	Rack for fish-poles, figure-carved on end. These were lashed to the iako or arm connecting the outrigger to the canoe. Kau.	22, MR.
3906	Rack for fish-poles [Ihu waa], two heads carved. HG.	22, MR.
3907	Rack for fish-poles, two heads.	22, MR.
3908	" " plain.	22, MR.
3909	" " "	22, MR.
3910	" " "	22, MR.
3911	Rack for fish-poles; plain, flat.	22, MR.

Nets were made, by preference, of the cord of olona, which was not only exceedingly durable but also strong and flexible. In some cases aha or coconut cord was used, but though durable, it lacked the flexibility of olona. The shuttles and mesh-sticks used in net making are in case 27, MR. Where floats were needed they were of wiliwili wood; the sinkers of stone.

756	Upéna nae, used to catch nehu, iau, piha, etc.	21, MR.
757	" "	21, MR.
758	" kuu, 7 ft. wide, 82 ft. long.	21, MR.
759	" " 12 ft. wide.	22, MR.
760	" makahi, used for ocean fishing for opelu, etc.	22, MR.
761	" paoo or iau.	21, MR.
792	" papai, for crabs.	21, MR.
763	" ahuulu, used with pula or broom. Upena pani.	22, MR.
764	Upena, ahuulu.	22, MR.
765	" paoo for opae, used generally by women and at night. Also called kaee paoo.	22, MR.
766	Upena akiikii to catch pahuhu. Stick and 2 stone sinkers.	22, MR.
767-8	Upena uhu. With 2 sticks.	22, MR.
5175	" olona. S. Kona, Hawaii. JSE.	21, *MR.
5176	" scoop-net, large.	21, *MR.
5310	" large. HG.	D.

769	Kao or fish spear. Wooden prongs for manini and kumu. Maui. JSE.	21, *MR.
770	Kao or fish-spear. Iron prongs. HG.	21, *MR.
796	Kao, or fish-spear. Kauila, with a single iron prong. JSE.	22, *MR.
773	Hinai hooluu ia. Fish-trap basket of ie.	21, MR.
774	Hinai hooluu ia. Fish-trap basket of ie. Honomaiño, Kona, Hawaii, JSE.	MR.
3839	Hinai hooluu ia. Fish-trap. JSE.	21, MR.
3840	Hinai hooluu ia. Fish-trap, Hinalea. H. M. Liliuokalani.	21, MR.
3841	Hinai hooluu ia. Funnel-shaped basket.	21, MR.
3846	" " " " "	21, MR.
3847	" " " Long, bottle-shaped.	22, MR.
3842	Hinai hoomoe ia. Made of ie. A fish, perhaps <i>uhu</i> , <i>opule</i> or <i>moano</i> is kept in this basket immersed in the sea until wanted as a decoy when a string is passed through its snout, and it is allowed to swim around the net. JSE.	21, MR.
3843	Hinai hoomoe ia.	21, MR.
3844	Hinai hoomoe ia; well made.	22, MR.
3845	Hinai hoomoe ia; well made, small.	22, MR.

On the coast of Hawaii Fishing-sticks, Laau melomelo, are used to attract the fishes. The sticks are smeared with bait and left in the water to draw fish to the fisherman. The palu or bait is prepared in various ways, each fisherman having his own recipe, which is better than all others. The base is always *alaala hee*, the ink bag of the common squid roasted in ki leaves on the coals until well cooked. As this palu is generally used as bait it may be well to give here a list of recipes collected by Mr. Emerson.

A.—Pound up a little *alaalapuloa* root in the mortar, throw away the fibre, leaving only a few drops of juice, then mix in the *alaala hee*, working it thoroughly with the pestle. [For these mortars and pestles see below, page 103.]

B.—Crush a chili, throwing seeds and pulp away, and add the *alaala hee*.

C.—Take the juice of puakala seeds [*Argemone mexicana*], add the alaala hee.

D.—To the alaala hee add ilima flowers [*Sida Meyeniana*] and salt, always using an exact number of flowers, as four or eight.

E.—The same with salt and young leaves of noni [*Morinda citrifolia*] slightly roasted.

F.—Alaala hee with salt and maile kaluhea [*Alyxia olivaeformis*].

G.—Alaala hee with salt and poha [*Physalis Peruviana*].

H.—Alaala hee, salt and very young leaves of koko [*Euphorbia lorifolia*].

I.—Alaala hee, salt and bark from the root of pilo [*Coprosma sp.*].

J.—Alaala hee, salt and root bark of naunau,

K.—Kukui nuts well roasted and crushed, then add the alaala hee.

L.—Mix with old, hard coconut roasted to a crisp and crushed, a little slightly cooked coconut with salt and alaala hee.

M.—Flavor the alaala hee with cinnamon.

N.—Flavor with the fruit of mokihana [*Pelea anisata*].

O.—Add a few drops of brandy, gin or other intoxicant.

P.—Squid ink and Perry Davis' Painkiller.

Q.—Squid ink and kerosene oil.

R.—Squid ink and tobacco juice.

S.—Squid ink and juice of the seeds of auhola [*Tephrosia pectoratoria*]. This plant is regularly used to poison or stupify fish in ponds.

T.—Mix the alaala hee with salt and charcoal from mahuna kapa.

U.—Mix the alaala hee with salt and burnt sugar cane.

V.—Salt the alaala hee before roasting.

The fish caught with this bait spread on the tip of the hook are: Kole, Kolenukuhau, maiii, manini, maikoiko, aloiloi, hinalea, naenae, pakuikui, pakolekole, uhu, onihoniho, laipala, palani, walu, umaumalei; all of them small fish caught near the shore.

5119-22	Laau melomelo.	Fishing sticks.	[4]	JSE.	
	Kona, Hawaii.				21, *MR.
5123-26	Laau melomelo.	Fishing sticks.	[4]	JSE.	
	Kona, Hawaii.				22, *MR.
5127	Laau melomelo.	Fishing stick.			21, MR.
5128-30	" " "	" " "		Kona, Hawaii.	22, MR.
5133-37	" " "	" " "		" "	D.
157-158	Na papa kupalupalu mano o Alapai nui.	Two curious double-edged wooden platters of elliptical form used as bait dishes by King Alapainui of Hawaii. A human victim, usually a slave, was cut up and left to decompose for several days, then put on these platters and carried to sea on the pola of a double canoe. The hinu or oil which was allowed to drip into the water attracted the sharks, and the trail thus laid drew them into deep water where the king and alii fought them with great skill and courage. Alapainui is supposed to have died in 1754, and at that time these platters were placed with other relics in a puoa at Puuanahulu, N. Kona, where they were carefully guarded by successive generations of kahus until 1868, when the lava flow threatened to cover the hiding-place, and they were removed to a house in Kaupulehu. Here they were kept until the last of the kahus died in April, 1883. They were then purchased for this collection.			
	JSE.				21, MR
775	Makau ia hapuupuu.	Curious hooks with barb of human bone.			21, MR.
3658	Makau ia hapuupuu,	on card in the special collection of fish-hooks.			20, PG.
3659	Makau ia hapuupuu.	HG.			21, MR.
777	Makau mano, Kiholo.	A very large hook of wood, always baited with human flesh. HG. For shark fishing.			21, MR.
3461	Makau mano.	Smaller wooden hook.			21, MR.
3462	" " "	" " "			21, MR.

3822	Pokaa aho. Reel for fish-line. Portion of the neck of a huawai.	22, MR.
3823	Pokaa aho and olona line. Kekuanaoa and Ka- mehameha V.	22, MR.
3824	Pokaa aho and olona line. Kekuanaoa.	22, MR.
3825	" " " Fragment of gourd.	22, MR.
771	Aho lawaia olona. Fish-line for kalekale, oio, ulua, weke, etc. Very old.	21, MR.
771	Aho lawaia olona. Fish-line, larger: for ahi, kahelo, etc. JSE.	21, MR.
3884	Aho lawaia niu. Fish-line, Kalihi, Oahu. JSE.	21, MR.
3885	" olona. " HG	22, MR.
3886	" " " 200 fathoms. HG.	22, MR.
5146-47	Stone sinkers.	21, MR.
5288-89	Coral sinkers. HG.	22, MR.
3861	Poho aho. Gourd for fish-line, coconut cover, olo- na line.	22, MR.
3870	Poho aho.	21, MR.
3871	" JSE.	21, MR.
3872	" coconut cover, olona line.	21, MR.
3873	" HG.	21, MR.
3874	" HG.	22, MR.
3875	" coconut cover, fine olona line.	21, MR.
3876	" small. HG.	21, MR.
3904	" no cover. HG.	D.

While the poho aho of gourd were used to hold the olona fish-line, another form of container called ipule'i, of which the small body was of wood and the much larger cover of gourd, was used for the hooks, and sometimes for hooks and line both.

3849	Ipu le'i, kou, small cover of gourd. JSE.	21, MR.
3850	" " large " "	21, MR.
3851	" " " " " JSE.	22, MR.
3852	" " " " " JSE.	22, MR.
3853	" hahao makau.	21, MR.
3854	" Honaunau, S. Kona, Hawaii. JSE.	21, MR.
3855	" no cover.	21, MR.
3856	" kou. HG.	21, MR.

3857-58	Ipu le'i, kou.	HG.	21, MR.
3859-60	Ipu le'i, kou.	HG.	21, MR.
3869	Ipu le'i, both part ipu, small.	[Similar one among the relics. 32, MR.]	21, MR.
3994	Ipu le'i, both parts ipu, small.	Kamehameha IV. HG.	21, MR.
3882	Hinai.	Basket for fish.	22, MR.
3883	Hinai of lauhala	for bait and hooks. With side pocket for hooks.	22, MR.
3887	Hinai.	HG. Coarse.	22, MR.
3888	"	JSE.	21, MR.
3877	Ipu olowai.	Fisher's water gourd.	21, MR.
3878	"	HG.	22, MR.
3879	"	" fine specimen.	21, MR.
3880	"	" "	21, MR.
3881	"	" large.	22, MR.
3995	"	"	21, MR.

Fish-hooks were made of ea (tortoise-shell), ivory, shell and bone, before the introduction of metal. With the nails obtained from the early visitors the Hawaiians made hooks of a shape similar to that of their earlier hooks, but without a barb; it is true that all the early bone hooks did not have a barb. The hooks were filed with bits of lava of cylindrical form, and the finish is often of the most perfect kind. To each hook when ready for use, is attached a cord called kaa, bound permanently to the shank, and usually whipped with a thread of olona. This, which may be from a few inches to a yard in length, is tied to the aho or long line when used. The space between the point and the shank determines the kind of fish to which the hook is presented.

3862	Makau ea.	Fish-hook of tortoise-shell.	With kaa.	21, MR.
3863	"	" with kaa.		21, MR.
3864	"	" without kaa.		21, MR.
3680-42	"	" 43 with kaa.	H. R. H. Keelikolani.	22, MR.
3643-49	"	" 7 without kaa.	"	22, MR.
3652-70	"	" 19 with kaa.		22, MR.
3671	"	" without kaa.		21, MR.
3672-76	"	" 5 "	JSE. Kona, Hawaii.	22, MR.

3677-88	Makau ea; without kaa.	22, MR.
3741-44	Makau ea; 4 without kaa, on card in the special fish-hook collection.	20, PG.
3745	Makau ea. Without kaa, very large; special fish-hook collection.	20, PG.
5031-37	Makau ea. 7 with kaa. Kamehameha IV.	22, MR.
3650-51	Makau palaoa, ivory hook with kaa. Shape like preceding. H. R. H. Keelikolani.	21, MR.
3692-99	Makau palaoa, ivory hook with kaa. JSE.	21, MR.
3700	" " " " JSE.	21, MR.
3689-91	" " " without kaa.	21, MR.
3746-49	" " without kaa, on card in special collection of hooks.	20, PG.
5285	Makau iwi kanaka. Human bone hook. HG.	21, MR.
3753	Makau papaua. Kauai. JSE.	
3754	" " Hawaii. JSE.	
3755	" " Kauai. JSE.	
3756	" " " JSE.	
3757	" " " JSE	

The five shell-hooks catalogued above are without kaas, and are solid shell the last is one of the smallest hooks used. All are on card in the special collection of fish-hooks. Quite different in form and construction are the following, the first three of which are in the special collection. There is a shank of papaua or pearl-shell, to which is attached, by fibres passed through drilled holes, a barb or point of bone, often human, or ea. From their use to catch aku, they take their name.

3750-52	Pa hi aku, shell and bone hook, no kaa. Special collection.	20, PG.
3701	Pa hi aku. Bone barb and olona kaa.	21, MR.
3702-7	Pa hi aku, with kaa. JSE.	21, MR.
3708-9	" " " H. M. Liliuokalani.	21, MR.
3710-14	" " " JSE. Kona, Hawaii.	21, MR.
3715	" " " Tortoise-shell barb.	21, MR.
3716-17	" " " JSE.	21, MR.
3718-20	" " " " quite new.	21, MR.
3723-37	" " " quite new.	21, MR.

3738-49	Pa hi aku; no kaa.	21, MR.
5286-87	Pa hi aku. HG.	21, MR.
3721	Pearl-shell shanks for pa hi aku, 13. JSE.	21, MR.
3740	" " HG.	21, MR.
3722	" " 2 unbored. H. M. Liliuokalani.	21, MR.
787	Pa hi aku, kauaula of bone, pearl-shell and tortoise	
799	" " HG.	21, MR.

The six following specimens of metal hooks are on cards in the special collection. They are among the earliest hooks made from iron and copper.

3760	Makau. Iron, of foreign shape; South Kona, Hawaii. JSE.	20, PG.
3761	Makau. Iron, old form.	20, PG.
3762-65	" Copper, old form.	20, PG.
3766-68	" Iron, no barb, with kaa.	21, MR.
3769	" Copper, with kaa.	21, MR.
3770	" Iron, with kaa.	21, MR.
3771-72	" Iron; no kaa.	21, MR.
3773-74	Makau. Iron, Makau ahi; South Kona, Hawaii. JSE.	21, MR.
3775-76	Makau. Iron.	21, MR.
3777	" Copper. S. Kona, Hawaii. JSE.	21, MR.
3778	" Brass, with kaa. H. R. H. Keelikolani.	21, MR.
3779-82	" Iron, " " Makau lauhulu. South Kona, Hawaii. JSE.	21, MR.
3783	Makau. Iron, with kaa. Makau kahala. S. Kona, Hawaii. JSE.	21, MR.
3784	Makau. Iron, with kaa. JSE.	21, MR.
3785-87	Makau. Iron, with kaa. Makau ulua. S. Kona, Hawaii. JSE.	21, MR.
3788-89	Makau. Iron.	21, MR.
3813	Makau, 2 small iron hooks on a lead bar, with line. S. Kona, Hawaii. JSE.	21, MR.
3814	Makau, iron, with line.	21, MR.
3815	" 6 iron with kaa, in hala leaf. M. Kekuanaoa.	21, MR.
3816	" 4 foreign hooks with kaa in coconut fibre.	21, MR.

3817	Makau; 3 iron and kaa in coconut fibre.	21, M.
3818	" 3 " "	D.
3819	" 2 " "	D.
3820	" 10 " "	D.
3821	" 1 " " large.	21, MR.
3826	Makau kaka. Set of 8 old iron hooks for catching ulaula, kalekale, kahala, oholehole, opakapaka, kaapeape, hapuupuu, opelu and mohokoae. For bait bits of opelu are tied to each hook, and a stone sinker is loosely fastened by lai ki to the end of the line so as to rest on the bottom. With each bite the line is jerked a little to secure the fish, and when the hooks seem filled the sinker is detached with a stronger jerk and the line hauled in steadily. Fishing in very deep water off the coast of Hawaii. JSE.	21, MR.
3827	Makau kaka, similar to last.	21, MR.
3828	" " " " but with 9 hooks, one foreign.	21, MR.
3829	Makau mano, shark-hook, foreign. JSE.	22, MR.
3830	" iron, 7 on sticks.	22, MR.
3831	" " "	22, MR.
3832	" " large foreign, with line.	22, MR.
3833	" hauliuli, 2 with kaa. JSE.	22, MR.
3838	" on stick. QE.	22, MR.
3835	" iron and lead sinker. QE.	22, MR.
3836-37	Makau, iron.	D.
779	Makau kakala hoolou honu. For turtle, 2 iron hooks and iron sinker. JSE.	21, MR.
3790	Makau kakala hoolou honu, iron hook.	21, MR.
3791	" " " " bone hook. JSE.	21, MR.
3792	" " " " iron hook. HG.	21, MR.
3793	" " " " " JSE.	21, MR.
3794	Makau lu hee. Squid hook. A shell of <i>Cypraea mauritanica</i> serves as bait; to this is attached a stone sinker of similar shape and of some odd stone, and between shell and sinker is a stick to which is attached the hook or hooks of iron or	

bone. The hook is usually concealed in a tuft of leaves attached to the stick. The sinker of course keeps the shell bait above. In this specimen the hook is of bone.

3795	Makau lu hee, granite sinker, bone hook.	21, MR.
3796	" " bone hook.	21, MR.
3797-98	" " " "	21, MR.
3799	" " poor specimen bone hook. JSE.	21, MR.
3800	" " 2 shells, 2 iron hooks.	21, MR.
3801-2	" " " 1 " hook.	21, MR.
3803	" " 1 shell, 2 iron hooks, hematite sinker.	21, MR.
3804	" " " 2 copper hooks, lead sinker.	21, MR.
3805	" " " 2 " " " "	21, MR.
	H. M. Liliuokalani.	21, MR.
3806	Makau lu hee, 1 shell " "	21, MR.
3807	" " <i>Cypraea carneola</i> , copper hooks.	21, MR.
3808	" " no shell, 2 hooks, lead sinker.	D.
3809	" " bits of shell, no hook. HG.	21, MR.
3810-11	" " shell and line only. QE.	21, MR.
3812	" " " " "	D.
3838	" " 2 shells, 1 hook.	21, MR.
3866-67	" " papaua. Pearl-shell hooks, small.	21, MR.
5182-5273	Stone sinkers [91] for squid hooks.	D.
5148	Newa pohaku. Stone club used to kill fish.	22, MR.
5149	" "	22, MR.
5151-59	Laau kui palu. Kauila pestles to grind bait or palu. JSE.	22, MR.
5160	Laau kui palu. Large. JSE.	22, MR.
5161	Poho kui palu. Stone mortar for grinding palu.	22, MR.
5162-64	Poho kui palu. Stone mortars.	22, MR.
5165-74	Poho kui palu. Coconut cups for mixing palu. Hawaii. JSE.	22, MR.

The collections in the two cases, 21 and 22, are liable to be interchanged from time to time as the arrangement is not complete, but together the two cases contain the fisheries collection, and if a specimen is not found in one it will be in the other case.

RELICS OF CHIEFS.

The authenticity of these relics seems assured, but there are many other articles, once the property of and used by chiefs and kings, not separated from the general collection. All the kahilis, most of the umekes, the feather capes, leis and other articles, belonged to the ancient nobility. So, too, the weapons were generally associated with chiefly warriors, but the various matters catalogued here are of special interest in connection with the memory of their former owners. They are in Case 32, MR.

1285 Strings of *Cypraea moneta* once belonging to Namahana the mother of Kaahumanu. Given by Kalama to Kaopua. H. M. Liliuokalani.

1286 Pa hi aku or pearl shell hook of Kamehameha I. The bristles at the juncture of the point with the shank are of the indigenous black hog. QE.

1319 Lei niho palaoa. Of Keliimaikai. QE. The label reads as follows:—No Keliimaikai keia lei palaoa. He makana o ke hanau ana o Kaoanaeha ia Kekelaokulani, a o kona inoa i kahea ai no ka moopuna o Kekuiapoiwa o ka makuahine o laua me Kamehameha.

1354 Mahiole of wickerwork, covered with human hair; a line of hair on the crest is bleached with lime, a favorite fashion among the ancient Hawaiians as well as with the Fijians and other Islanders. This belonged to Queen Emma's mother. QE.

1355 Ipu molowaa. A umeke poi used by Kamehameha I. when in a canoe. It is of kou, of good form, 10 in. diameter, 19 $\frac{3}{4}$ in. height. HG.

1356 Ipu molowaa of Kamehameha I. Odd shape, used for fish. HG.

1357 Ipu molowaa of Kamehameha I. Lute-shaped. HG.

2297 Mirror in native kou frame, given by Vancouver to Kamehameha I.

2298 Portion of the court dress made in London for the presentation of Queen Kamamalu in 1824. White silk embroidered with silver floral designs.