



OLD KAPA SHOWING TWO BORDER DESIGNS
COURTESY OF BERNICE PAUHI BISHOP MUSEUM, HONOLULU

PACIFIC BARK-CLOTH

A PLEASANT distant rapping first led explorers to the beating houses where the fibre cloth, protected from sun and rain, was being made. This beetling at close hand, was deafening (See Pink-ing Blocks and Malo Boards in *Antiques*): but the loud sound was often utilized for signalling. Queens and noblewomen supervised the work, for though Polynesians did not weave, they evolved an interesting technique of paper-cloth growing, stripping, pounding, graining, patching, designing, and manner of wear—just witness the royal toilet of the favorite queen Kamamalu and some customs of the nobility:

“Kamamalu, according to court ceremony, so arranged a native cloth *pa'u*, a yard wide, with ten folds, as to be enveloped round the middle with seventy thicknesses! To array herself in this unwieldy attire, the long cloth was spread out on the ground, when, beginning at one end, she laid her body across it, and rolled herself over and over till she had rolled the whole around her. Two attendants followed her, one bearing up the end of this cumbrous robe of state, the other waving over her head an elegant nodding fly-brush (*kabili*) of beautiful plumes, its long handle completely covered with little tortoise-shell rings of various colors. Her head was ornamented with a graceful yellow wreath of feathers, of great value, from the fact that after a mountain bird had been caught in a snare, but just two small feathers of rare beauty, one under each wing, could be obtained from it. A mountain vine with green leaves, small and lustrous, was the only drapery which went to deck and cover her neck and the upper part of her person. Thus this noble daughter of nature, at least six feet tall and of comely bulk in proportion, presented herself before the king and the nation, greatly to their admiration. After this presen-

tation was over, her majesty lay down again upon the ground and unrolled the cloth by reversing the process of clothing!"

"That night Kaahumanu, associated with the King in the government of Hawaii, Maui, Oahu; and Kaumualii, tributary King of Kauai, reclined side by side on a low platform, eight feet square, consisting of between twenty and thirty beautiful mats of the finest texture. Then a black *kapa* (bark-cloth) was spread over them. It pronounced the royal pair to be husband and wife!"

Unyoro (African) men and women for four days after their wedding must wear bark-cloth: but nowadays after that, turn to calico—or absolute nudity of both sexes, according to Sir Harry Johnston.

As for planting, the paper mulberry, which makes the best tapa, hails from China; though the links of its journey overseas are broken and lost. It was sent to Egypt before the days of Solomon. May Egypt once have "*kapad*" with her trees? Paper Mulberry has about disappeared from Hawaii, where the last kapa-maker, aged 76, of Oahu Island—Ala Moana Road—had difficulty intoning her workwoman's song without the automatic aid of bast to beat. Such work continued longer on Kauai—the Canyon Island—and on Molokai with its fine cliffs. Samoa—the poorest tapa producer—now alone supplies the market.

Trees destined for cloth-making have their budding branches lopped off to prevent knot holes in the inner bark. In some sections the outer bark is beaten to loosen it, then the two barks are slit down with a shell or shark's tooth. Elsewhere the outer bark is first scraped off with a shell. The soaking bast uncurls and flattens ready for beating. Plain wooden beater faces are first used, then coarsely "corduroy" ridged ones, followed by fine parallel-lined, and checkered or dotted ones. (See Brakes, Beaters, Swingles in *Antiques*.) These surfaces are planned to tear apart, to knit, and to identify or trade-mark the cloth with water-marks visible when the pretty product is held to the light. Beating takes some three or four days for an average cloth. When a hole is found in the cloth, a patch and taro (similar to arrowroot) paste, or viscid *Tou* berries or Forster says "*hibiscus esculentus*," are added and pounded into the whole. The glue is sometimes kept in a cocoon shell. Similarly, but generally by means only of natural sap, the narrow strips of bast are pieced into a huge cloth—one king's gown was one hundred and eighty feet long!

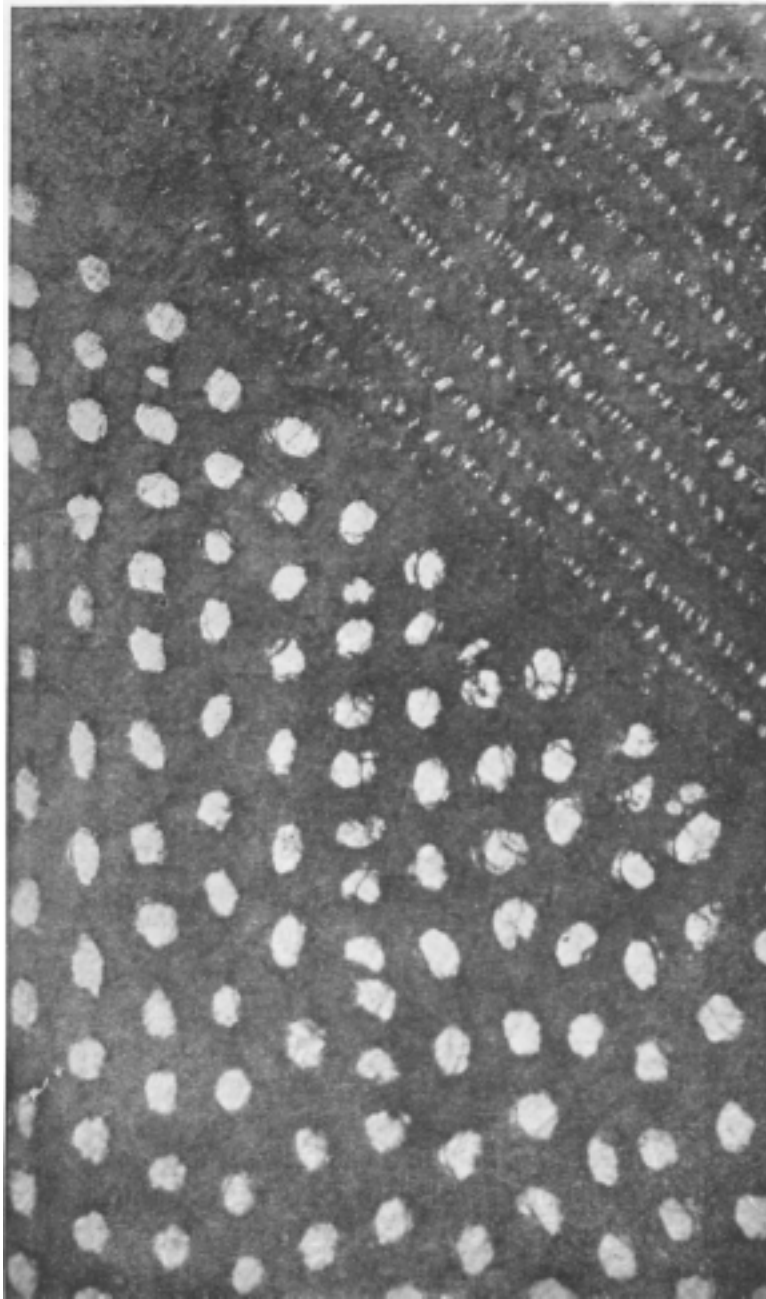
Kings reckoned their wealth by the number of their bales of *kapa*. Let us follow Sir Joseph Banks' early Tahitian account:—

“They show their greatest ingenuity in marking and dyeing cloth: in the description of these operations, especially the latter, I shall be rather diffuse, as I am not without hopes *that my countrymen may receive some advantage, either from the articles themselves, or at least by hints derived from them.* The material of which it is made is the internal bark or fibre of three sorts of trees, the Chinese paper mulberry (*Morus papyrifera* or *Broussonetia papyrifera*), the bread-fruit tree (*Sitodiuum utile* or *Artocarpus incisa*), and a tree much resembling the wild fig of the West Indies (*Ficus prolixa*).” (*Hau*, that is a tree *hibiscus*, fibre was occasionally employed while certain gods especially set apart, presided. In Hawaii also was sparingly found in deep ravines *Touchardia latifolia gaudichand*, a shrub four to eight feet high, with viscid juice. “*No more durable fibre is known.*” *Fiscus bengalensis* Linn. has been much used in East India for robes. The bark is fibrous. “Of the first—mulberry—which they name *oouta (aute)*, they make the finest and whitest cloth, which is worn chiefly by the principal people; it is likewise the most suitable for dyeing, especially with red. Of the second, which they call *ooroo (ulu)*, is made a cloth inferior to the former in whiteness and softness, worn chiefly by people of inferior degree. Of the third, which is by far the rarest, is made a coarse, harsh cloth of the colour of the deepest brown paper: it is the only one they have that at all resists water, and is much valued: most of it is perfumed and used by the very great people as a mourning dress. These three trees are cultivated with much care, especially the former, which covers the largest part of their cultivated land. Young plants of one or two years' growth only are used: their great merit is that they are thin, straight, tall and without branches; to prevent the growth of these last they pluck off with great care all the lower leaves and their germs, as often as there is any appearance of a tendency to produce branches.” Reinhold Forster, (1772) states that “this plant is carefully cultivated in good and rich soil, which the natives take care to manure and prepare for the better growth of these plants, by mixing with all kinds of shells: the ground which they desire for the nursery of the *Aouta* is commonly enclosed by deep trenches, in order to prevent men and animals from hurting the young trees. In this soil they plant the young shoots

in regular rows, at the distance of about eighteen inches, or two feet; they lop off the leaves and branches that are sprouting out, which operation increases the main shoot, and invigorates its growth."

"Their mode of manufacturing the bark is the same for all the sorts. The thin bark they make thus; when the trees are grown to a sufficient size they are drawn up, and the roots and top cut off and stripped of their leaves; the best of the *aouta* are in this state about three or four feet long and as thick as a man's finger, but the *ooroo* are considerably larger. The bark of these rods is then slit up longitudinally, and in this manner drawn off the stick; when all are stripped, the bark is carried to some brook or running water, into which it is laid to soak with stones (or a board loaded with stones) upon it, and in this situation it remains some days. When sufficiently soaked" (as Forster says, "When the water has rendered the filamentous part of the bark more flexible, dissolved the gummous substance which joins them, and softened the pulpy intermediate substance"), "the women servants go down to the river, and stripping themselves, sit down in the water and scrape the pieces of bark, holding them against a flat smooth board, with the shell called by the English shell merchants *Tiger's Tongue* (*Tellina gargadia*), dipping it continually in the water until all the outer green bark is rubbed and washed away, and nothing remains but the very fine fibres of the inner bark. This work is generally finished in the afternoon: in the evening the pieces are spread out upon plantain leaves, and in doing this I suppose there is some difficulty, as the mistress of the family generally presides over the operation. All that I could observe was that they laid them in two or three layers, and seemed very careful to make them everywhere of equal thickness, so that if any part of a piece of bark had been scraped too thin, another thin piece was laid over it, in order to render it of the same thickness as the rest. When laid out in this manner, a piece of cloth is eleven or twelve yards long, and not more than a foot broad, for as the longitudinal fibres are all laid lengthwise, they do not expect it to stretch in that direction, though they well know how considerably it will stretch in the other.

"In this state they suffer it to remain till morning, by which time a large proportion of the water with which it was thoroughly soaked has drained off or evaporated, and the fibres begin to adhere together, so that the whole may be lifted from the ground without dropping it in pieces.



HAWAIIAN BLACK LACE KAPA, DYED WITH TARO PATCH
MUD. EACH LAYER IS THIN AND WHILE STILL WET THEY
WERE PASTED AND BEATEN TOGETHER. (DETAIL)
COURTESY OF BERNICE PAUHI BISHOP MUSEUM, HONOLULU

It is then taken away by the women servants, who beat it in the following manner: they lay it upon a long piece of wood, one side of which is very even and flat, this side being put under the cloth: as many women then as they can muster, or as can work at the board together begin to beat it. Each is furnished with a baton made of the hard wood, *etoa* (*Casuarina equisetifolia*): it is about a foot long and square with a handle; on each of the four faces of the square are many small furrows, whose width differs on each face, and which cover the whole face. They begin with the coarsest side, keeping time with their strokes in the same manner as smiths¹ and continue until the cloth, which extends rapidly under these strokes, shows by the too great thinness of the grooves which are made in it that a finer side of the beater is requisite. In this manner they proceed to the finest side, with which they finish; unless the cloth is to be of that very fine soft *boboo*, which is almost as thin as muslin" (it feels like filmy Japanese tissue paper). "In making this last they double the piece several times, and beat it out again and afterwards bleach it in the sun and air, which in these climates produces whiteness in a very short time. But I believe that the finest of their *boboo* does not attain either its whiteness or softness until it has been worn some time, then washed and beaten over again with the very finest beaters."²

The Rev. William Ellis, a semi-invalid, from the Society Islands, lingering in mid-Pacific, had intimate opportunities for observation: "This morning—July 17, 1823—we perceived Keona, the governor's wife, and her female attendants, with about forty other women, under the pleasant shade of a beautiful clump of *cordia* or *kou* trees, employed in stripping off the bark from bundles of *wauti* sticks. . . . They were generally from six to ten feet long, and about an inch in diameter at the thickest end. . . . Having carefully peeled it off (sometimes as a stocking), they rolled it into small coils, the inner bark being outside. In this state it is left some time, to make it flat and smooth. Keona not only worked herself, but appeared to take the superintendence of the whole party. Whenever a fine piece of bark was found, it was shown to her, and put aside to be manufactured into *wairiirii*, or some other

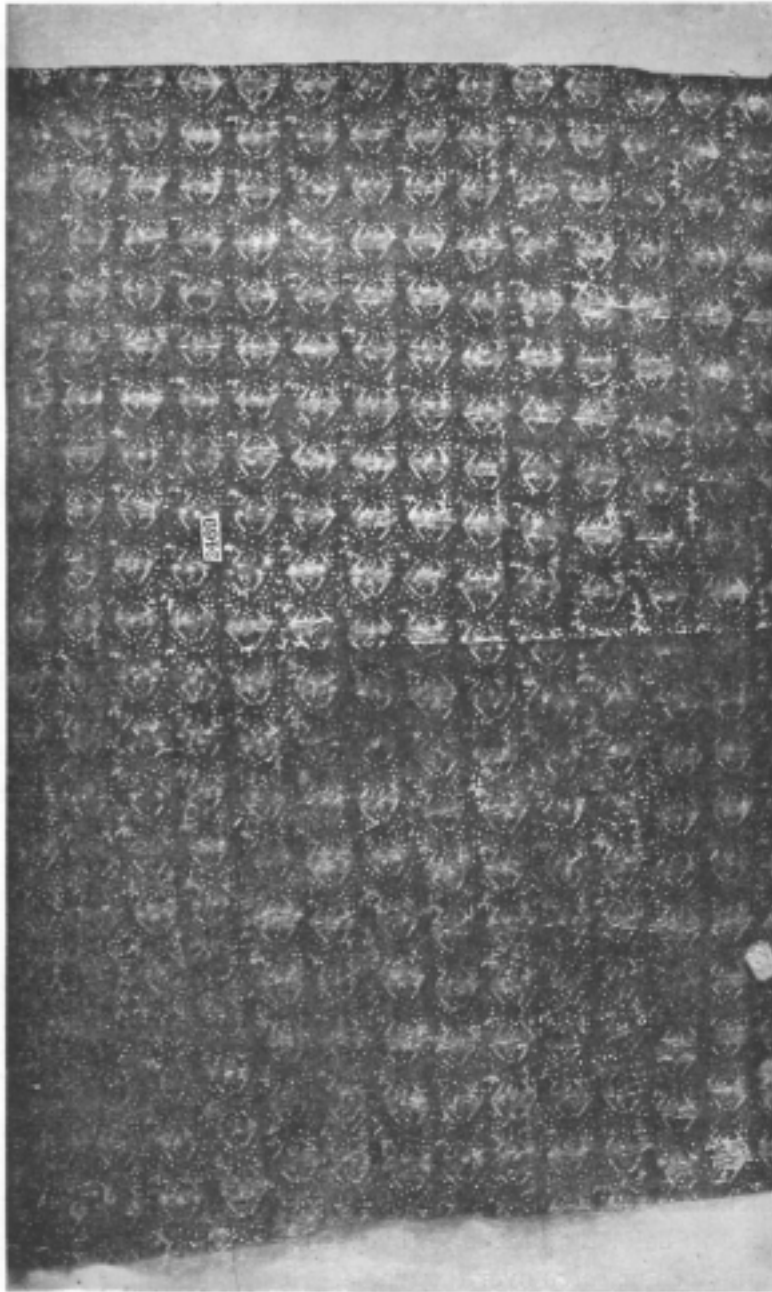
¹For old kapa chant, see *Lace Songs and Folk Tells*, E. P. Dutton & Co.

²Old kapa, soiled, subjected to the usual inefficient washing—the only kind possible, perhaps—and rebeaten with added, usually inferior bast, is generally made up as felt for bandages and other humble uses.

particular cloth. With lively chat and *cheerful song*, they appeared to beguile the hours of labor until noon, when having finished their work, they repaired to their dwellings."

Returning to the Banks description we learn that "Of this thin cloth they have almost as many different sorts as we have of linen, distinguishing it according to its fineness and the material of which it is made. Each piece is from nine to fifteen yards in length, and about two and a half broad. It serves them for clothes in the day and bedding at night. When by use, it is sufficiently worn and becomes dirty, it is carried to the river and washed, chiefly by letting it soak in a gentle stream, fastened to the bottom by a stone, or, if it is very dirty, by wringing it and squeezing it gently. Several of the pieces of cloth so washed are then laid on each other, and being beaten with the coarsest side of the beater, adhere together, and become a cloth as thick as coarse broadcloth, than which nothing can be more soft or delicious to the touch. This softness, however, is not produced immediately after the beating; it is at first stiff as if newly starched, and some parts not adhering together as well as others, it looks ragged, and also varies in thickness according to any faults in the cloth from which it is made.

"To remedy this is the business of the mistress and the principal women of the family, who seem to amuse themselves with this, and with dyeing it, as our English women do with making caps, ruffles, et cetera. In this way they spend the greater part of their time. Each woman is furnished with a knife made of a piece of bamboo cane, to which they give an edge by splitting it diagonally with their nails. This is sufficient to cut any sort of cloth or soft substance with great ease. A certain quantity of a paste made of the root of a plant which serves them also for food, and is called by them *Pea (pia)* (*Chaitea tacac* or *Tacca pinnatifida*), is also required. With the knife they cut off any ragged edges or ends which may not have been sufficiently fixed down by the beating, and with the paste they fasten down others which are less ragged, and also put patches on any part which may be thinner than the rest, generally finishing their work, if intended to be of the best kind, by pasting a complete covering of the finest thin cloth or *boboo* over the whole. They sometimes make a thick cloth also of only half-worn cloth, which, having been worn by cleanly people, is not soiled enough to require washing; the thick cloth made in



DETAIL FROM A CHARMING OLD ROSE AND MADDER KAPA
COURTESY OF DR. HERBERT E. GREGORY

either of these ways is used either for the garment called *maro*, which is a long piece passed between the legs and around the waist, and which serves instead of breeches, or as the *tebuta*, a garment used equally by both sexes instead of a coat or gown, which equally resembles that worn by the inhabitants of Peru or Chili, and is called by the Spaniards *poncho*.

“The cloth itself, both thick and thin, resembles the finest cottons, in softness especially, in which property it even exceeds them; its delicacy (for it tears by the smallest accident) makes it impossible that it can ever be used in Europe, indeed it is properly adapted to a hot climate. I used it to sleep in very often in the islands, and always found it far cooler than any English cloth.”

Dr. William T. Brigham writes: “Next in importance and much greater in size come the *Kapa Moe* or bed *kapa*, the night clothes of the old Hawaiian. These *kapa moe* from their bulk comprise the greater part of the *kapa* extant. Of the choice decorated *kapa* there is perhaps not enough in all the museums to make a surface equalling that of one-half dozen *kuina* of five sheets each. In use the owner either wrapped the *kapa* around him or shared it with one or more bedfellows on the spacious mat bed: if he had occasion to go out of the house in the night, he went with the *kapa* wrapped around him as a rude *toga*. During the ordinary summer weather along the coast the native use of the *kapa moe*” (five sheets of this are sewed together with *kapa* tape thread down one side to form a set or *kuina* of four white sheets and one colored) “in a close grass house would have been impossible to a white man, *so warm* is this covering! Sleeping in an open cave on the summit of Mauna Loa—13,675 feet—I could not bear a *kapa moe* over my ordinary clothes, although water was freezing in the *calabashes* at my feet.”—The early explorer and the research director of to-day, seem not to agree.—“In the morning the bed-making in a native house consisted in carefully folding the *kapa moe* and putting it in a safe place.”

Continuing Sir Joseph Banks' account we read that, “Having thus described their manner of making the cloth, I shall proceed to their method of dyeing. They use principally two colours, red and yellow. The first of these is most beautiful, I might venture to say a more delicate colour than any we have in Europe, approaching, however, most nearly to scarlet. The second is a good bright colour, but of no particular excel-

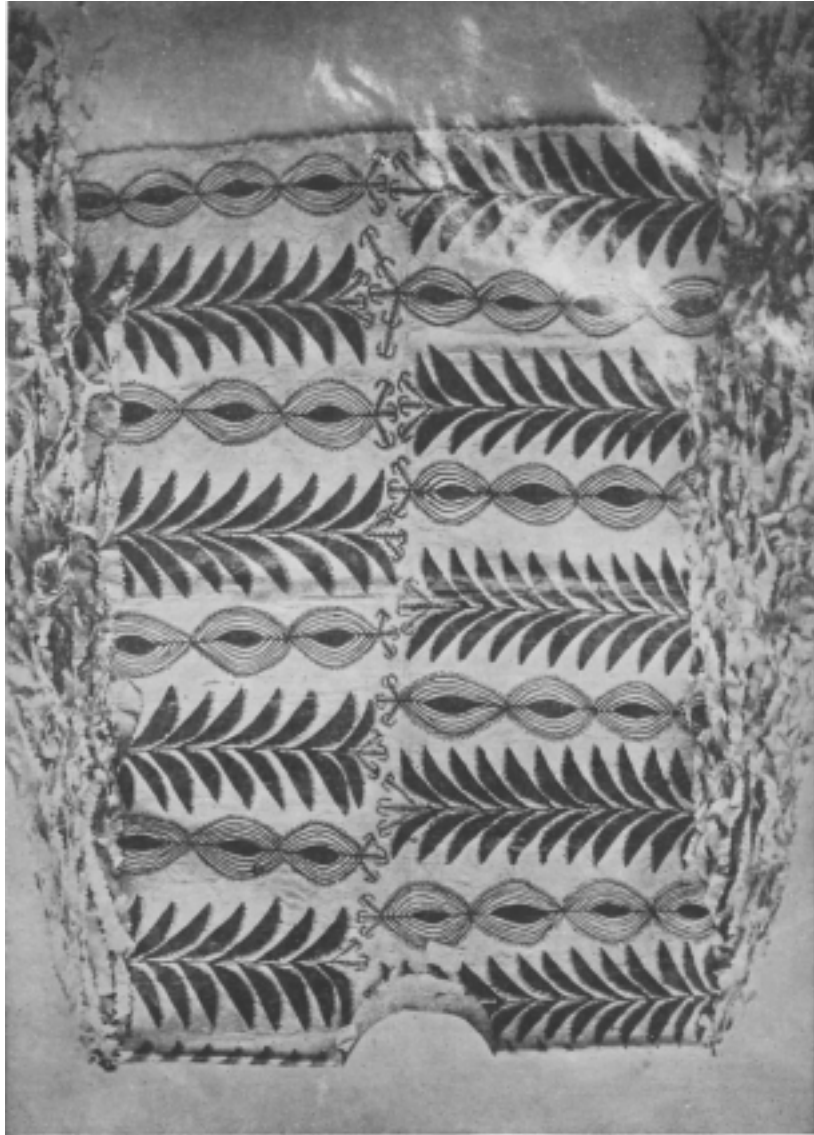
lence. They also on some occasions dye the cloth brown and black, but so seldom that I had no opportunity during my stay of seeing the method, or of learning the materials they make use of.

“ . . . For straining (dye) they have a large quantity of the fibres of a kind of *Cyperus* grass (*Cyperus stupeus*) called by them *moo*, which the boys prepare very nimbly by drawing the stalks of it through their teeth, or between two little sticks until all the green bark and the branlike substance which lies between them is gone. In a covering of these fibres, then, they envelop the (dye) leaves, and squeezing or wringing them strongly, express the dye. . . . They throw away the remaining leaves, keeping however the *moo*, which serves them instead of a brush to lay the color on the cloth.¹ The receptacle used for the liquid dye is always a plantain leaf (on the Sandwich Islands a stone cup), whether from any property it may have suitable to the colour, or the great ease with which it is always obtained, and the facility of dividing it, and making of it many small cups, in which the dye may be distributed to every one in the company, I do not know. In laying the dye upon the cloth, they take it up in the fibres of the *moo*, and rubbing it gently over the cloth, spread the outside of it with a thin coat of dye. This applies to the thick cloth: of the thin they very seldom dye more than the edges; some indeed I have seen dyed through, as if it had been soaked in the dye, but it had not nearly so elegant a color as that on which a thin coat only was laid on the outside.” Fern leaves were often used as blocks to stamp this red pleasingly on the rich yellow ground.

Banks relates that in Otahite, extreme southwestern portion of Polynesia, the Chinese paper tree was a rarity. In New Zealand where climate requires better clothing, and bark-cloth has disappeared, some of the proverbs—“A flying-kite made of paper-mulberry-bark can be made to fly fast,” et cetera—still preserve the term. New Zealanders soon used their strong native flax. In Captain Cook’s day the chiefs wore tapa fillets in their hair and through their ears, sometimes in fluffed-up pom-poms—very effective in contrast to dark skin and hair.

The naturalist—Dr. John Reinhold Forster—rambling through Tahiti, came upon women dipping the tip of circular or broken semi-circular

¹Hawaiians chewed a kernel of the pineapple-like *Pandanus* palm cone till the frayed tip became a brush.



A FRINGED TAHITIAN TIPUTA IN THE BRITISH MUSEUM

bamboo reeds into red dye, thus stamping little rings or crescents upon the beater-grained *abu* (Tahitian for bark-cloth.)

Just here, before further describing the delightful appurtenances for design, and the perfecting of the finer *tapas*, may be listed the comparative terms of the leading Pacific bast-beating groups—"Pacific," for in Africa too such cloth is produced: but by the men for their women-folk. "In Africa we reach perhaps the limit of our search for bark-cloth." Captain Richard F. Burton tells us. "'At Ujiji the people are observed . . . to make extensive use of the macerated tree-bark. . . . This article, technically known as *mbugu*, is made from the inner bark of various trees, especially the *mrimba* and *mwale* (*Raphia*). The trunk of the full-grown tree is stripped of its integument twice or thrice, and is bound with plantain leaves till a finer growth is judged fit for manipulation. The bark is carefully removed, steeped in water, macerated, kneaded and pounded with clubs and battens to the consistency of a coarse cotton. Palm-oil is then spurted upon it from the mouth and it acquires the color of chamois leather. . . . They are fond of striping it with a black vegetable mud so as to resemble the spoils of leopards and wild cats. . . . Though durable, it is never washed!'" William T. Brigham adds that a specimen in his possession seems even, thick and strong: but rough. He thinks it on a par with Papuan and New Guinean work.

Madagascar beetled too and South America also till the conquerors came, but South America used it as we should paper. So does Japan at the present day—by similar soaking, hand-beating process.

The comparative terms above referred to may be cited as follows:—in Hawaii bark-cloth is called *kapa*; in Samoa *siapo*; in Tahiti, *abu*; while *tapa*, the term with which we are familiar, comes from Rapanui. The Fijis call it *masai* or *malo gat*; and the Tongans, *ua*, *tutugu*, *gatu*, and *biapo*. The Samoan word *gatu* of old stuff used for rags and lint, suggests the French *gaté*, spoiled: as does the Easter Island *pareu*, a woman's adornment, the French *parure*.

Katudrau (Fijian) is one hundred or more fathoms of mulberry malo: *Tiniyura*—a chief's train: *soliga* (Samoa) is the astounding gift presented by a virgin—*Tibi* in Tahitian: *suluga*, the material brought by relatives to a funeral: *epa fauepa* is a stack of mats and *siapo* upon which a dead chief's

body lies in state: fauepa, his siapo bier. *Kopili* is a small white kapa for idols: *oloa*, the same as cover for a god when prayed to: *hiwa*, is a clear black kapa for images: *mabuna* soiled and used in sorcery: *ouhollowai* or *mamaki*, is of different dye on obverse and reverse—*kapeke* in Hawaiian: *bale kua* or *kuku* is a wet weather beetling house: while *laubuki* is either the girl who keeps the *kapa* moist or the god of the *kapa*-makers! *Kalukalu* is the most delicate, gauzy kapa made. Papanoanoa is lace kapa.

Bast has a disagreeable odor, so ginger, anise (*Pelea anisata*), *Rail-lardia scabra*, the root of *Kupaoa mokihana*, sandalwood and powdered heart-wood (*laau ala*) were beaten in to scent it. Some perfumes still linger! The *Flor Aroma* of the Spaniards made from the flower heads of *Acacia farnesiana Willdenow* is found here. *Calophyllum Inophyllum* is also a grateful perfume Dr. Brigham states. Vegetable oil in which seeds of the *Pandanus odoratissimus* had been steeped, like sandal-chips, was another favorite. *Eleuli* in Polynesian = perfumed: *punefu* = old and smelly.¹

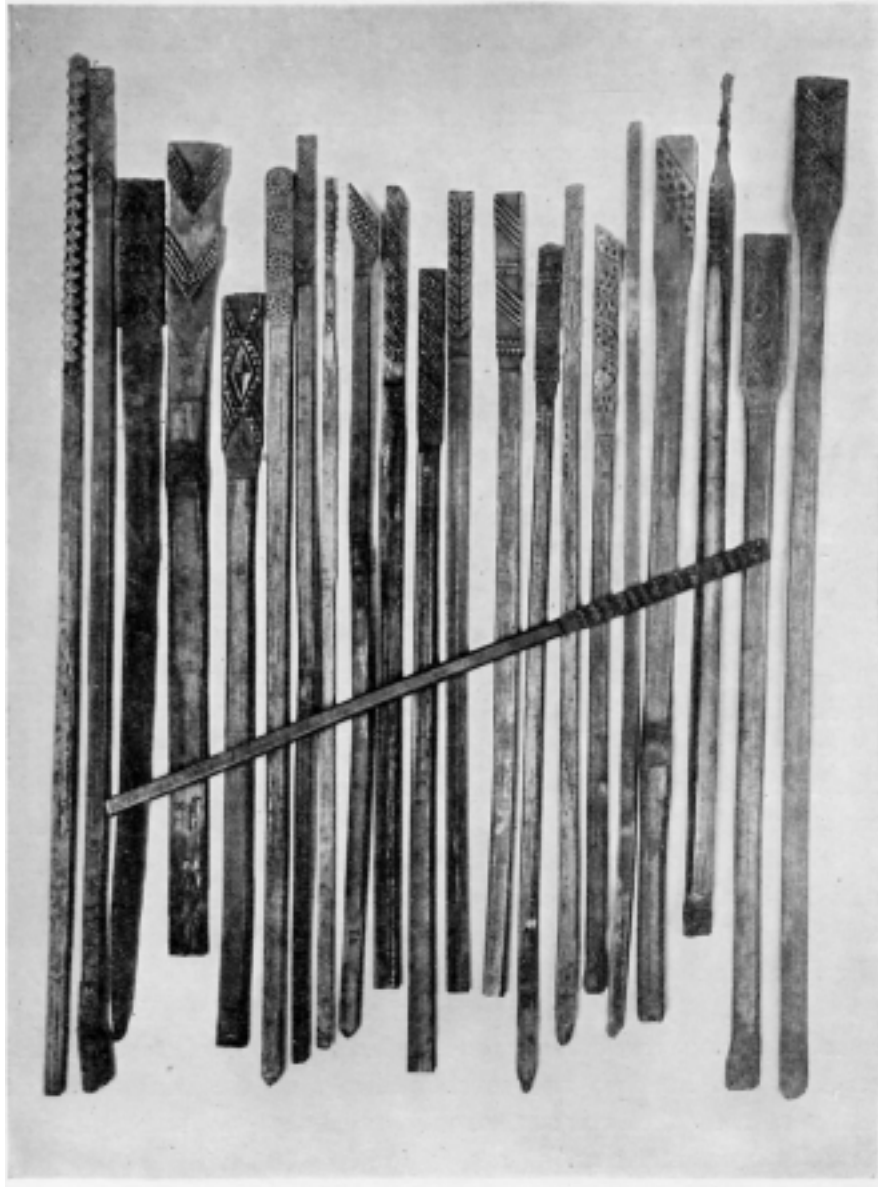
Waterproofed tapa was, I believe, set apart for the use of royalty. For this purpose cocoanut, *kamani*, and *kukui* or *tutui* tree oil was employed—the cloth saturated therein—which also rendered it washable and more durable. Despite the increased durability of waterproofed bark-cloth, even it, used steadily as clothing, could not last many moons.

The tapa sewing of bed sets was accomplished with the aid of a whale ivory stiletto for punching holes, and a bone or *kauila* wood needle. Twisted hau-bark cord as well as tapa tape has been found on thick felty materials, basting them face to face with long stitches; and smaller running ones, forming a one-quarter inch seam; overcast and beaten flat.

The Dyaks pound *Kulit Takalong* into jackets: the Muruts use *Artocarpus elastica*. "The bark being full of rents and holes this difficulty is overcome by transverse darning: one of these coats now before me has no fewer than two hundred and seventy strings on the back alone, each thread penetrates the outer surface only, and assists in working out a cross pattern for ornamentation."²

¹Those who would be interested to see the large vocabulary connected with this handicraft are referred the very excellent glossary containing hundreds of Hawaiian, Samoan and Tahitian words in the very complete *Ka Hana Kapa* by Dr. Brigham, Director Emeritus of the Pauahi Bishop Museum of Honolulu.

²From *The Gardens of the Sea*, 1880



BAMBOO STICKS FOR STAMPING TAPA CLOTH

The pre-Malay Sakai uses *Artocarpus Kunstleri*, Hook., called *terap*, as well as the deadly poisonous *Antiaris toxicaria*, Bl., with which he tips his dart; but he lets the dangerous sap soak out, which sometimes requires a month. Negritoes in this region, use the same material.

In Micronesia, however, the loom begins to outweigh the beater and block; and in Melanesia the warring races naturally are little given to cultivating mulberry, though they had it in advance of the Polynesians.

Besides the virile designs beaten into bark-cloth by the geometrically and carefully carved mallets, patterns intended not only to beautify, but also by alternated spacing of thick and thin, to render the garment more flexible, there are applied color designs, stencilled, blocked or painted. The lace-like designs too were of Sandwich Island origin—larger and smaller holes in geometric arrangement were punctured in a dark *kapa*: to this was added perhaps a reverse sheet that served as a background for the open-work pattern. The two were so meticulously welded that they seem one layer of fibre! Only damp decay detaches them, betraying their secret. In other instances a colored sheet has been sliced in ribbons and “sandwiched” in bars between two gauzy transparent *kapa* films.

But to my mind, the fern and star impressions—stars resembling crystal flakes—are the most graceful. But leaf and flower forms are dying out.

However, there are also both bold and dainty borders. Bamboo splits straight, so forms a natural ruler to guide the maker of beetles, which are incised with sharks teeth and bored by the primitive Pacific pump-drill, or perhaps by twisting a tooth. It is thought that in cutting the Lille-like net surfaces, those resembling Point de Paris and so forth, a shallow gouging along preliminary lines may have been followed by the final deeper cutting. These fine wavy mesh designs take their names from the angle-worm—*Worm track* (an undulating line), the footprints of the duck—*Duck track*, the *Backbone of the Eel* (our herring-bone), *Little teeth*, and the sharp triangular indentation dubbed Shark’s Tooth. Many variations can be made by waving the lines toward one another, apart or parallel, et cetera. Upon the arrival of the missionaries who wished to teach the Hawaiians reading, these latter were greatly puzzled, for they looked at our paper, observed the print and said our *kapa* designs were not as pretty as theirs! Once having discovered the difference, however,

they so feared dying before learning to master our art, that they studied breathlessly, resenting interruption, neglecting their own creeds that bore not even a code of symbols. Beaters sold for ten cents apiece as laundry sticks (1864)! But black kapa is still considered by old-timers the most appropriate shroud. I do not believe, however, they can obtain it. Scientists find it in sepulchral caves: but the slightest breeze is apt to blow it to powder; for the iron mud dye renders stiff and brittle, at the same time exposing the material to the chipping and crumbling of rust. Just as black stripes in our own clothes sometimes give way while the rest of the garment is good.

The Pauahi Bishop Museum, founded and endowed by an Hawaiian woman—Bernice Pauahi, who twice declined the offer of the islands to make her queen, and who married Mr. Bishop—contains, in a collection assembled by her a number of bamboo splits about one-half an inch wide. The curve of this giant grass stem would prevent its being cut into broad blocks. The sticks are some twelve inches long with only two and one-half to three and one-half inches of carving. The decorator—a woman—of a *kapa* sheet, would dip her printing stick into a stone saucer full of vegetable or mud dye, stamp it, re-dip, placing the bamboo, not side by side, but at the end of the first impression, thus gradually laying down a narrow border. Grays and blues are pounced with bags of charcoal. Allovers are made up of many tiny repeats, the background occasionally covered, while figures were in natural color, untouched. Coco and banana leaves too are used as printing tablets, and in Samoa a handsomely carved anvil block over two feet long and one wide, upon which, moist with color, a dry siapo is laid and pressed. Ruling pens that one might mistake for bamboo forks are employed for laying in parallel lines. A mahlstick support is used with this work. We are told that in early days tortoise-shell was somehow used in printing, while in later ones, cords of *hau* or coconut fibre, well twisted, were dipped in dye and twanged or snapped across a *kapa* sheet. This smacks of New England quilting! The museum lists a *malo* of blue, figured all over with animals and thunderbolts; 2.7 x 5 feet. Seale. *Kapa mole*, oiled; placed by Huki on the idol as an inner cover.

Kapa *mamaki mabuna*, used by the *kabuna* (medicine-man priest) in treatment of disease; it was thrown over the shoulders of the patient, while the *kabuna* prayed. . . . Molokai.

Kapa, oiled. From the witch Kamaipuupaa, the *kabuna wabine* of King Kamehameha V.

Kapa *kuikui*; a most beautiful form of lace kapa; black and stiffened with pia (?), then bruised, not punctured, so as to leave almost transparent oval depressions in the fibre. The collector claims that this was beaten with small stones; but, if so, it was a wonderful beating! From Koolau, Oahu.

Kites also were constructed of kapa.

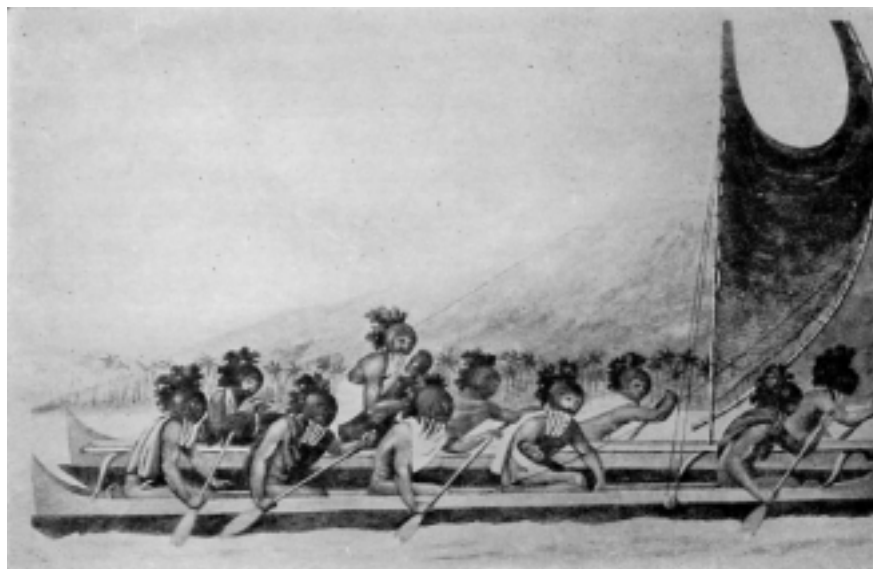
Calabashes too—great native mahogany bowls, fringed and adorned with ominous flowing beards of bark-cloth, were worn as helmets against sling-stones.

But strangest and most beautiful of all were the young maidens described by Captain James Cook, 1777 who were dressed “with a prodigious quantity of fine cloth, after a very singular fashion. The one end of each piece of cloth, of which there were a good many, was held up over the heads of the girls, while the remainder was wrapped around their bodies, under the arm-pits. Then the upper ends were let fall, and hung down in folds to the ground, over the other, so as to bear some resemblance to a circular hoop-petticoat. Afterward round the outside of all, were wrapped several pieces of differently colored cloth, which considerably increased the size; so that it was not less than five or six yards in circuit, and the weight of this singular attire was as much as the poor girls could support. To each were hung two *taames* or breast-plates, by way of enriching the whole, and giving it a rich appearance. Thus equipped, they were conducted aboard the ship, together with several hogs and a quantity of fruit, which with the cloth was a present to me from Otoo’s father. Persons of either sex dressed in this manner are called *atee*; but I believe it is never practised except when large presents of cloth are to be made.”

Primitive paper clothing and furnishing, recall recent war achievements, the clever paper substitutes—have you seen any?—of our allies

and enemies. Though I had seen our own waste lithographic paper soaked in a preparation, dyed a grass or sedge color, twisted or braided into verandah mats and "wicker" chairs; and had marveled at the varieties and effects of German paper upholstery, I nevertheless was "taken in" by a stunning Italian weave—a heavy ecru huck, bordered in deep blue, and fringed—thinking it a good sturdy peasant *runner* of unbleached tow! Certain spun, but unwoven or loosely woven Pacific silk or fibre cords and ribbons are extremely strong; so mayhap, since it is both twisted and woven, the Italian cloth may indeed be strong, a great advance upon its Oceanic forebears.

GERTRUDE WHITING.



EARLY HAWAIIAN WARRIORS WEARING CALABASH HELMETS WITH
FIERCE FRINGED KAPA CLOTH BEARDS