BARK-CLOTH MAKING IN CENTRAL CELEBES

By

H. C. RAVEN
Associate Curator, Comparative and Human Anatomy, American Museum

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Beating the Bast with a Clublike Instrument

BARK-CLOTH MAKING IN CENTRAL CELEBES

A Primitive Art From Which Paper Making Has Evolved

By H. C. RAVEN

Associate Curator, Comparative and Human Anatomy, American Museum

THE Koelawi men, women, and children arise when the day begins to break and the narrow valleys of their mountainous home are filled with white mist, and all the vegetation, as well as their thatch-roofed houses, are covered with drops of dew. They make their toilette at the nearest brook or river. The man then goes to gather his palm wine, known as *toele* or *baroeh*, that during the night has been dripping from the cut fruit stem in the top of a sugar palm and has been caught in a bamboo or gourd container, where fermentation is already under way. Meanwhile his wife prepares the morning meal, or if there is a half-grown daughter, she may do the cooking while the mother alternately beats bark-cloth and nurses a baby.

Bark-cloth making is probably the most interesting and noteworthy industry of the people of northern Central Celebes. Apparently the people of the Koelawi district make more and better bark-cloth than is to be found in any of the other districts, viz., Bada, Besoa, or Napoe.

In Koelawi the beating of the bark-cloth with its familiar "pung-pung-pung" may be heard daily throughout nearly the whole year from dawn to dusk. The principal or most commonly used bark is that of the waringan tree, a species of *Ficus*, which is known to the Koelawi people as *Noenoe*.

The waringan is common in the jungle about Koelawi. Sometimes the women and children, especially girls, cut the branches of the waringan into short pieces, tie them in bundles, and carry them on their backs to their homes in the same manner in which they carry firewood. Should the place where the waringan is

found be some distance from the kampong, the bark is first stripped or peeled from the limbs and branches and then bundled and carried to the kampong. Usually when the branches are simply cut in pieces and carried to the kampong to be peeled, the branches are afterward dried and used as firewood.

After the bark has been peeled from the limbs and branches it must again be peeled, that is, the rough outer surface is separated from the bast, the fibrous layers which are used in the making of the cloth.

The next stage is the boiling of the bark, which takes considerable time and loosens up the fiber to such an extent that it seems almost like pulp. It is then placed in a stream or brook where it remains covered by water. The action of the water continues to loosen up the fiber and wash away the sap, or at least some of it. The time usually occupied in boiling and soaking the bark amounts to three or four days. At the end of this time it is soft and very much disintegrated, although all the pieces of bark have been kept lying in one direction.

The next and most important stage consists of pounding and beating this pulpy mass, which is four or five inches in diameter and about two feet long, until it broadens and lengthens, finally measuring from five to eight feet in length and about eight to ten feet in width, doubled, or sixteen to twenty feet single width.

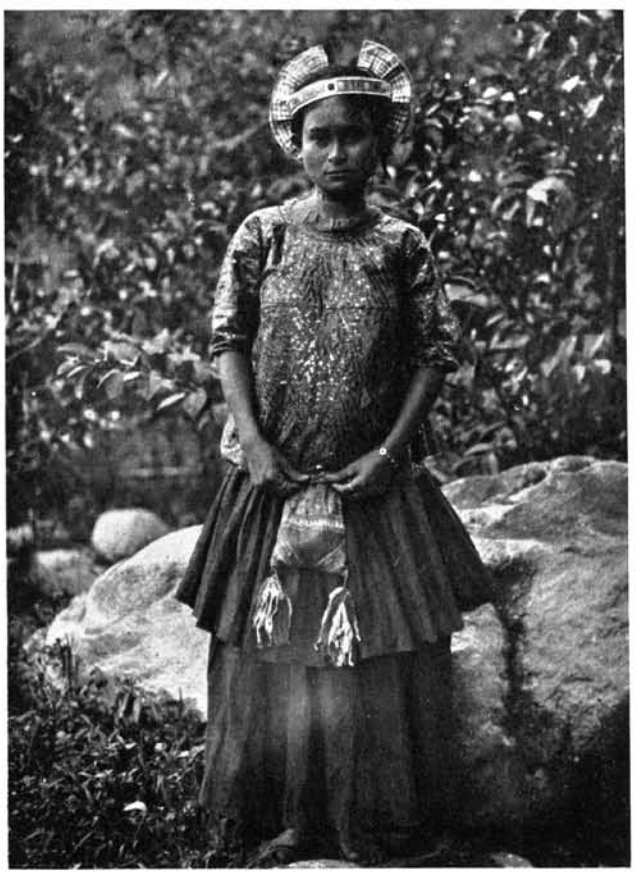
The pieces of bark-cloth used for dresses are made in cylindrical form, like a Malay sarong, but instead of being sewed up the side, the bark-cloth is

FOUR GIRLS OF THE VILLAGE OF PANGANA

More and more woven cotton cloth is available to the people of Central Celebes who readily appreciate its superiority over bark-cloth. In the above photograph two of the girls are wearing bark-cloth jackets and bark-cloth skirts, while the others are wearing woven cotton clothing

PEELING THE BARK

One of the first stages in the manufacture of bark-cloth is the separation of the outer bark from the fibrous inner layer or bast. Each woman has beside her a bundle of bark. As the rough outer part is peeled off with the aid of a large knife the fibrous bast is placed on the mats in the foreground



MAID OF THE MOUNTAINS

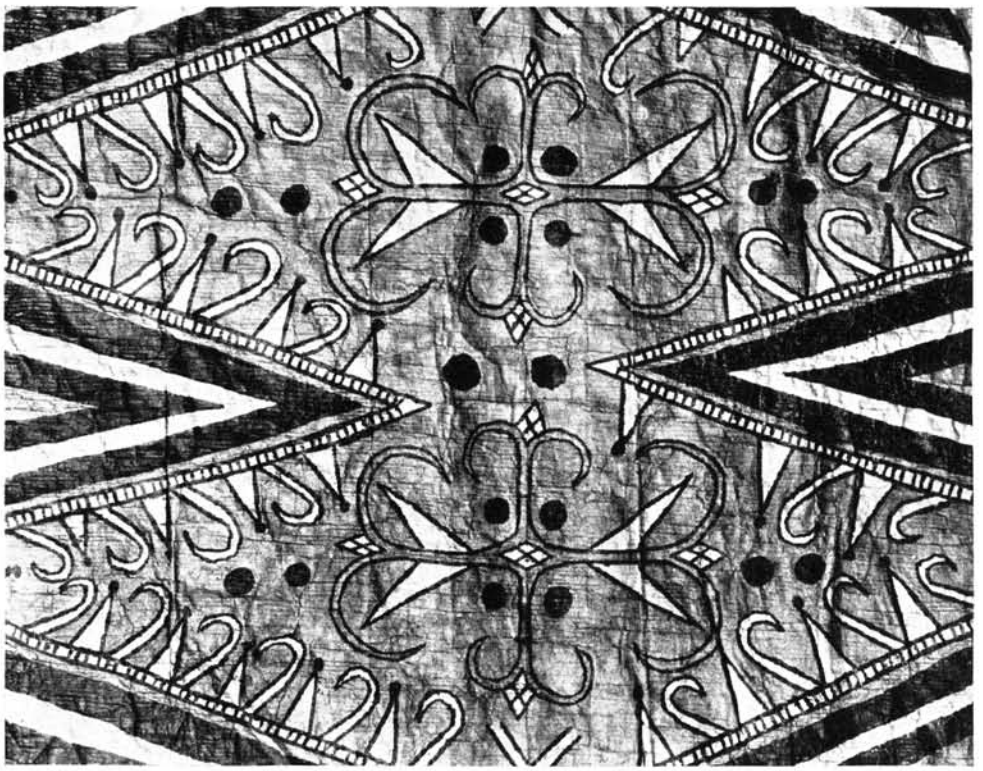
The head band is of bark-cloth, embroidered and covered with mica. The spreading part is of bark-cloth which has been folded and dyed bright colors. The jacket is of fine quality bark-cloth dyed maroon red, streaked with a sweet smelling black gum upon which have been stuck flakes of mica. The skirt is of heavy bark-cloth, dark brown in color. The hand bag is of the same material as the jacket and is decorated with a geometric design in bright colors. The necklace is of beads interspersed between bars made from a shaft of chicken feathers

THE FINAL BEATING

After the bast has been boiled and soaked in a stream, it is placed on a plank and beaten with a clublike instrument which is grooved on its flat surface. The final stages of the beating are done with instruments made of stone with rattan handles. At first stones with coarse ridges are used and later finer ones

THE FULL DRESS

The people of Central Celebes wear full dress upon the slightest occasion, and at such times the woman fastens a huge bouquet to the back of her skirt. It is always the back of the jacket that is most decorated, while often the front is left entirely plain. Perhaps this custom has something to do with the habit of these mountain people in following narrow, winding paths, single file through the forest, at which times the woman walks ahead and the man with his spear on his shoulder follows, that he may guard her and also admire her decorated dress and bouquet.



DESIGN ON A BARK-CLOTH BAG

Dr. Walter Hough has shown that these designs are conventionalized from a drawing of the head and horns of the common water-buffalo of the region. (Specimen U. S. N. M. No. 304121 collected by H. C. Raven at Toare, Bada District, Central Celebes, 1917—Courtesy United States National Museum)

pulped or felted together; therefore, for a Koelawi woman's skirt no sewing is required. The pulp or bark is first placed on a plank, which has a wooden prop under each end, and is beaten with an instrument made especially for the purpose from the very hard wood of the trunk of the sugar palm (*Arenga saccharifera*). The face or lower side of this instrument is deeply grooved. This instrument serves to flatten the pulpy mass and make ridges over the entire surface. When the pounding of the pulp begins, the mass is rather soft and contains much water. Most of this is squeezed out by the above mentioned instrument, which leaves ridges that give strength enough to keep the mass from falling apart. The use of this instrument is continued until the pulp has become quite spread out and about six millimeters in thickness. Sometimes two wooden instruments are used, one with very coarse grooves and, later, one with finer grooves.

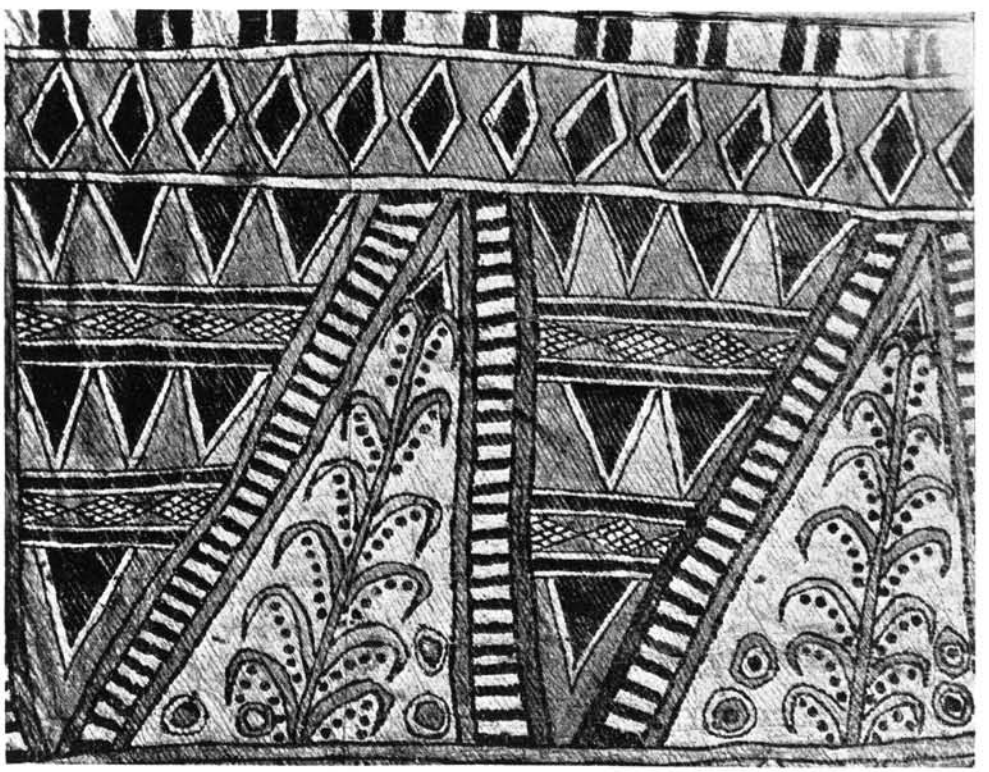
At this stage the pulp is transferred to another plank which is bolstered up at the ends with pieces of the trunk of a banana plant, for, when the mass of material is thinned, there is not sufficient to prevent a painful stinging of one's hands, as the instrument used strikes the plank with only the thin material between, and the banana trunk props are resilient. In this position the beating is continued but with another instrument consisting of a square or slightly oblong piece of stone ranging from two to three inches in width by two and one half to three and one half in

length and one to one and one half in thickness. The two greatest surfaces of these stones are covered with ridges. The largest stones have very coarse longitudinal ridges and grooves on one surface and smaller longitudinal ridges and grooves on the opposite side, while on another stone there are horizontal ridges and grooves; there are also stones on which the grooves are diagonal.

A piece of rattan is doubled around this stone, fitting into a shallow groove that has been especially ground for the reception of the rattan, which serves as a handle and is very efficient, as it is strong and limber. The Dyaks of Borneo make rattan handles for their stone hammers in this manner.

The bark pulp is beaten alternately with first one and then another of these stone instruments. The whole surface is first beaten with the instrument having the coarsest ridges, then this operation is repeated, using the instrument with the finer ridges, and so on until the instrument with the finest ridges has covered its entire surface and the former mass of pulp has spread until finally it is about as thick as corrugated cardboard; it is then dried and becomes much thinner and rather stiff. Bark-cloth is usually dried by spreading it on smooth ground about the houses.

Bark-cloth made from the bark of the waringan tree is dark brown in color, but the natives often dye it black by covering it with very black mud. Sometimes they dye black bands on the bark-cloth, mak-



BARK-CLOTH OF THE FINER VARIETY MADE IN CENTRAL CELEBES

At the present time, besides the local dyes of vegetable origin, the natives are using the imported aniline dyes. (Specimen No. 304117 collected at Toare, Bada, Central Celebes by H. C. Raven—Courtesy United States National Museum)

ing many folds, so that the mud comes only in contact with the parts which it is desired should become black.

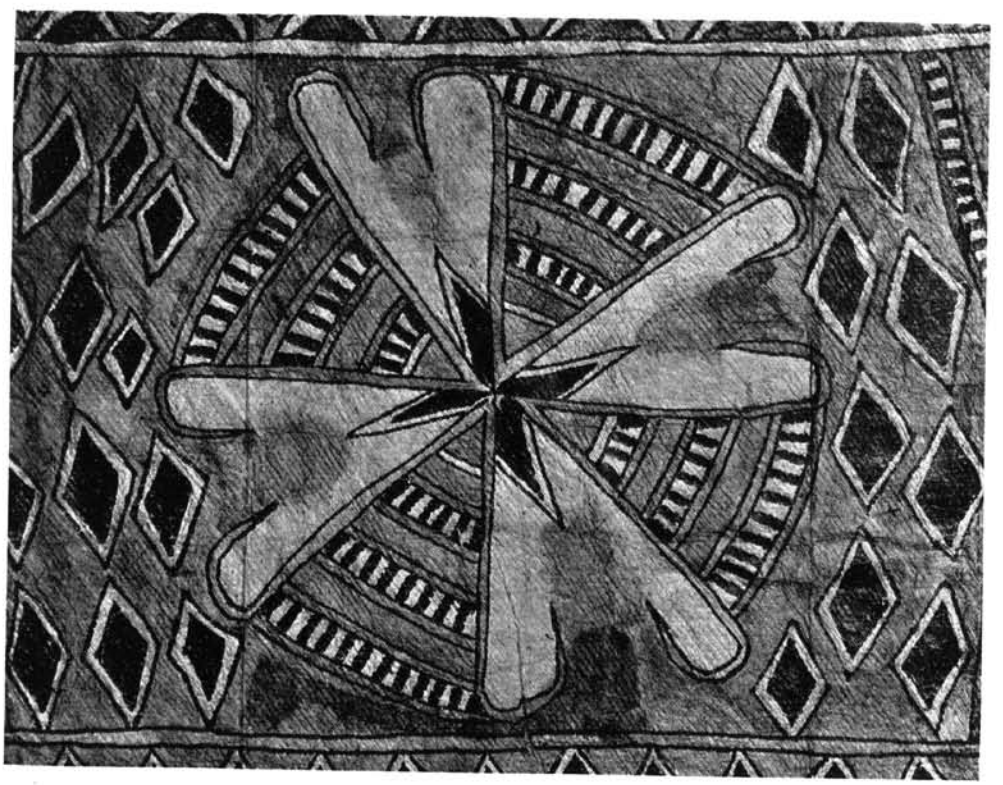
Occasionally the women induce their men to gather some branches from which they may strip the bark, but as a rule bark-cloth making in Celebes is left entirely to the women and girls.

A thin, white bark-cloth is sometimes made in various sized sheets and pieces. The white bark-cloth is made from the bark of small light-barked (mulberry) trees or saplings in some places and is called *tinoeboe*. This bark-cloth is used to make jackets and head cloths for women and girls, and scarfs and head cloths for boys and men. When used for these purposes, the white bark-cloth is, as a rule, dyed various colors and painted with many and very varied designs. The people of Bada are more skillful in decorating bark-cloth, than are the inhabitants of any of the other districts of the above mentioned region.

The bark-cloth made from the waringan and called *noenoe* is used by the women for dresses or skirts and to make jackets for daily use when working about their homes or in the fields. The Koelawi name for a skirt is *topi* and their name for jacket, *halili*.

The *halili* is sometimes dyed dull red, using red leaves as a dye, then streaked with a sweet smelling, black, resinous gum upon which many small flakes of mica are stuck, giving a very glittering effect.

In Koelawi it is customary to have a double fold in the skirt; to produce this



BARK-CLOTH SHOWING THE RIDGES ON THE MATERIAL

The texture is controlled by the manner in which the bark is beaten with ridged stone implements. (Specimen U. S. N. M. No. 304117, collected at Toare, Bada, Central Celebes, by H. C. Raven—Courtesy United States National Museum)

double fold two belt strings are used. It is very interesting to watch a Koelawi woman arrange this peculiar bark-cloth skirt, for it is supposed to be exactly the same length front and back and all the ruffles of about the same size. The men sometimes use a bark-cloth loin cloth when working in the jungle or fields and small boys seldom wear anything else.

The Koelawi women told me that a large piece of bark-cloth can be pounded out in two days, though to do it in that time would require a woman's undivided attention. As a rule they spend several days beating one piece of bark-cloth, for they will work for an hour or so, then leave it while they attend to their routine household duties.

WORKING DRESS

A cloth skirt, bark-cloth jacket, and a bead head band make up this girl's attire. In the little bark-cloth bag at her waist she carries her betel nut, pepper leaves, and chewing tobacco

During the time that the pulp is being beaten it must be sprinkled with water to prevent its becoming too dry. Usually banana leaves are used, as these are always at hand and serve very well.

The bark-cloth, or at least some of it, that is made at Bada is not so good as that from Koelawi, owing to the difference in preparation. In Bada the bark is not boiled at all, or not sufficiently boiled, and not allowed to stay long in the water, with the result that the Bada bark-cloth is much stiffer, more like paper and does not wear well.

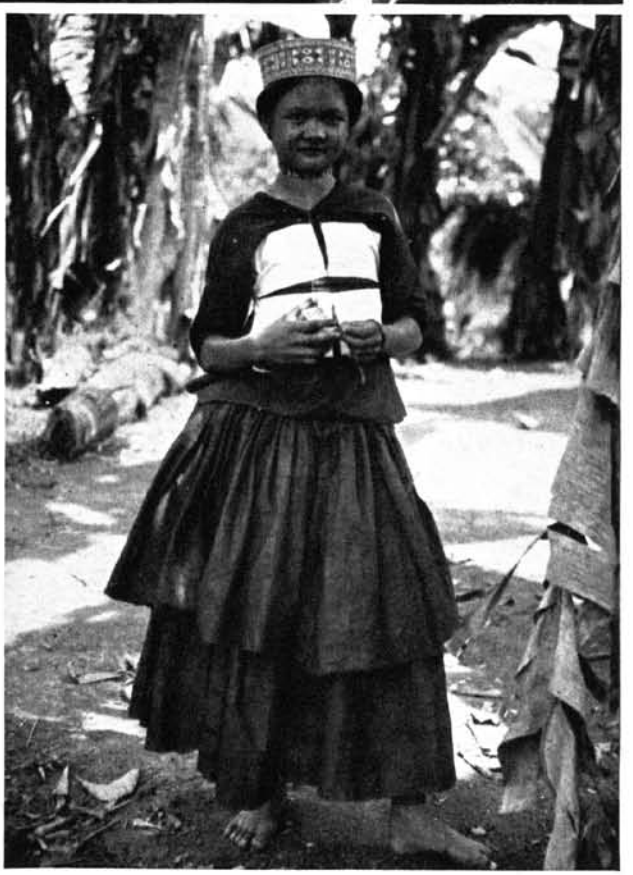
Large pieces of bark-cloth also serve as blankets and other coverings. It is used for this purpose in all the districts of Central Celebes by the people who make it. On several occasions I made use of pieces of bark-cloth as saddle pads.

Bark-cloth makes fairly good clothing, but has a very great disadvantage, namely, that it cannot be washed, for in contact with water it acts the same as paper.

During the harvesting season one seldom hears the women beating bark-cloth; at this time all their energy is devoted to pounding and otherwise taking care of the

THE DISCUSSION

At intervals during the preparation of bark-cloth, girls may gather and talk over the manner in which they intend to use this particular piece of bark-cloth and how it is to be decorated



THE PARTY DRESS OF A BESOA GIRL

The young lady's costume includes a brightly colored head band, black gum dots on her cheeks, a bead necklace, a black and white jacket, and a tightly woven grass anklet

rice. Koelawi women are hard workers and very industrious. It is difficult to say of just what their daily work consists, but it is certain that a woman with two, three, or more children to care for has no spare time on her hands, unless she be one of the more fortunate few who possess slaves.

In Borneo the Dyaks of various tribes make bark-cloth, but all I saw was beaten from single pieces of bark. One of these pieces I remember discussing with the Dyak who made it. He had made it from the bark of the "*ipoh*" or upas tree (*Antiaris*), the same tree that furnishes them with the sap with which they prepare the poison for their blowpipe darts. This particular piece of bark-cloth was about five feet long by four feet wide, rather thick, and of a bright yellow-brown color. Many of the Dyak men of the interior of Dutch Borneo wear bark-cloth wound round their heads. It is all made the same, from single pieces of bark usually not more than thirty inches wide and six or seven feet long. Most of it is made white by squeezing and rubbing the juice of a large, very sour, wild citrus fruit on the bark as it is beaten, and later bleaching it in the sun. Hose and McDougall in *Pagan Tribes of Borneo*, Volume I, page 220, state that the Dyaks of other parts of Borneo make it similarly, the men alone doing this work. Thus as now practised in Borneo, bark-cloth making is a very simple process and one that is dying out due to the importation of woven cloth.

HOME FROM THE GARDEN

This maid on her return from the rice field brings some firewood, a coconut, and some vegetables tucked in a fold of her bark-cloth skirt

In a perusal of the literature on the South Sea Islanders I was struck with the similarity of the manner of making bark-cloth in the Tonga Islands as I saw it done in Celebes and as described on pages 288–290 of Volume II of John Martin's Account of The Natives of the Tonga Islands, which he compiled from the communications of William Mariner and published in 1817. I therefore

THE DECORATED BARK-CLOTH HEAD BAND

A band is made by splitting off the hard outer surface of a piece of bamboo. The inner part is then flexible and is made into a stiff band. This is covered with a piece of bark-cloth on which various designs have been painted

quote the following from his account:

FABRICATION OF GNATOO. This substance is somewhat similar to cotton, but not woven, being rather of the texture of paper: it is prepared from the inner bark of the Chinese paper mulberry tree, and is used for dress and other purposes.

A circular incision being made round the tree near the root, with a shell deep enough to penetrate the bark, the tree is broken off at that part, which its slenderness readily admits of: when a number of them are thus laid on the ground, they are left in the sun a couple of days to become partially dry, so that the inner and outer bark may be stripped off together, without danger of leaving any of the fibers behind. The bark is then soaked in water for a day and night, and scraped carefully with shells for the purpose of removing the outer bark, or epidermis, which is thrown away. The inner bark is then rolled up lengthwise, and soaked in water for another day; it now swells, becomes tougher, and more capable of being beaten out into a firm texture; being thus far prepared, the operation of *tootoo*, or beating, commences. This part of the work is performed by means of a mallet a foot long, and two inches thick, in the form of a parallelopipedon, two opposite sides being grooved longitudinally to the depth and breadth of about a line, with intervals of a quarter of an inch. The bark, which is from two to five feet long, and one to three inches broad, is then laid upon a beam of wood about six feet long, and nine inches in breadth and thickness, which is supported about an inch from the ground by pieces of wood at each end, so as to allow of a certain degree of vibration. Two or three women generally sit at the same beam; each places her bark transversely upon the beam immediately before her, and while she beats with her right hand, with her left she moves it slowly to and fro, so that every part becomes beaten alike; the grooved side of the mallet is chiefly used first, and the smooth side afterwards. They generally beat alternately; early in the morning, when the air is calm and still, the beating of gnatoo at all the plantations about has a very pleasing effect; some sounds being near at hand, and others almost lost by the distance, some a little more acute, others more grave, and all with remarkable regularity, produce a musical variety that is very agreeable, and not a little heightened by the singing of the birds, and the cheerful influence of the scene. . . .

The account of the manufacture of bark-cloth at Tahiti in 1769 as recorded by Captain (then Lieutenant) James Cook which W. T. Brigham quotes in his monograph "*Ka Hana Kapa*, The Making of Bark-cloth in Hawaii," in the 1911 Memoirs of the Bishop Museum, is also remarkably similar to the present practise of the people of Central Celebes.

Bark-cloth making in its most highly developed form is now carried on in Polynesia. The art has also attained a high degree in Celebes.

The literature of this subject indicates that the art had its beginning somewhere in southeastern Asia and was carried to the various islands of the Pacific by the Mongoloid people ancestral to the Polynesians as they pushed eastward from the East Indian region.

The preparation of bark-cloth seems to be related to the manufacture of paper. It may be thought of as a primitive art that preceded and from which paper-making has evolved.

A beautifully decorated piece of light colored bark-cloth covers his twisted long hair.

In his lips is a big quid of tobacco, and his teeth are blackened by the use of betel

AN OLD MAN OF GIMPOE