PONAPE: SOUTHSEA EXPEDITION

BY DR. PAUL HAMBRUCH

VOLUME II

SOCIETY AND INTELLECTUAL CULTURE.
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coconut leaf has been inserted. According to the collector, Vice-governor Berg, the top is spun between one's hands, caught in the palm of the hand and tossed into the bend of the elbow. They also let it run down on the arm.

ECONOMY AND MATERIAL CULTURE.

I. Standard of Living and Sustenance.

1. Distribution of work.

In olden times, the Nigurtdid nearly all the work for the nobles. In particular they tilled the soil for their masters and fished. Where nobleman fished, they did it only as a pastime. Only in war did they paddle the canoes themselves. Besides they received the agricultural products which the free tenants owed them as a tribute for their tenure (copyhold). Nevertheless certain kinds of work were considered honorable: house and canoe building, the making of ornaments, the twining of coconut fiber, the obtaining of banana fiber and manufacture of the various colors.

The women look after the household. Where the men themselves clear the land, metomot, and till it—generally together with their kinsmen—the women help outside, too, when the man wants them to. The cooking was once done by the nigurts. Now the women do it. Moreover they once made the fibre cloth. Then as now they do basketing. Weaving is forgotten. Baskets, grass skirts, belts, sailing clothes, roof mats are the products of their industry. A special task for them is the production of the highly valued fish perfume. They also have the duty of filling the water calabashes and building and maintaining the earth ovens.

2. Sustenance. (Nutrition.)

Food is abundant. The dense settling of the coastal strips forces the natives to lead a sedentary life and to stay in the immediate neighborhood of their dwelling houses. Yams, breadfruit, bananas and coconut are so abundant, and especially the superabundance of the first two is so great, that a comfortable life is assured them. When planting the two plants, kava and yams, get the greatest care. They observe abstinence from women and from meat of all kind, and also preceded it (VNM; planting) by a general
fasting. With reference to the tilling of the soil the native relates:

P. 256/ Of the Tilling of the Soil. (Native text VMM; is omitted, here 159).

Early in the morning the land around the house and also the bush, as far as necessary, are cleared. A yam is dug and cut into pieces; the soil is cleared and the pieces of the yam (the tops) are planted. As soon as the yams grows upward, they go forth and cut Hibiscus. The Hibiscus must be dry. Now the Hibiscus is cut into pieces and the yams shoots are drawn up on it. When the yam has ripened, it is fetched, cooked and eaten.

When the people of Ponape plant bananas, they fetch the shoots of banana shrubs, carry them to the fields, make holes and plant them there and let them grow until they are ripe. Then they are picked, carried home and hung up for three days for additional ripening. Then they are cooked and eaten.

Coconut palms are planted in the following manner. Ripe, old nuts are fetched, carried on the field and allowed to bud, then they are planted. The place is kept weeded (sauber), until the palm bears fruit. Now they climb the palm to get nuts for eating, and let the ripe nuts drop to the ground. (The ripe coconuts are cut up for copra, sold to the whites, and money is received with which to buy beautiful things.)

In general they eat only light food and even this only in small quantities. The chief meal is taken in the evening. Meat is a festival food and then only a minor dish. The dishes are prepared in cookhouses and then cooked in earth ovens. There are special circumstances connected with the fire hearth, the um. He who has no um is not valued highly, esteemed, in the circle of his companions. With every tenure which has to was handed down from the time of the ancestors, the right must be connected as well with title, of possessing a fireplace in the community house, or at least to use one man the connected. The liege lord for his part, measures his authority by the number of fireplaces. Um tapa? "How many fireplaces are here or do you call your own, is a common question. The higher the nobleman ranks, the greater the honor of the um. 1 There are

1 Hahl, Eth. Notizblatt p.96
two descriptions of the preparation of food;

Of the Earthoven (VMM; Native text 91, omitted here.)
(To typist; start 169 here as separate note and continued to).

This is the way food is cooked on Ponape. First we fetch firewood, then we pile it up in the pit. When it is breadfruit season, we get a long stick and go to pick breadfruit, until there is enough for the meal. We also gather leaves of bananas and breadfruit trees and put them in a pile. When everything is cooked, we open the oven. Then we take the fruit to our wife and our children, so that they can eat. The next morning we do not cook; only when little food is left, do we cook again, but when there is food we do not cook. When there is no breadfruit, when it is insol, we still prepare our oven. Then we cut a mangrove cudgel, go to the field with it and dig yams. We always get the one which /p.258/ is ripe for cooking; with this we prepare our food. Now there is a yam meal which is called itiz. We get firewood, put it down, and then get a yam which is suitable for itiz.

When we have it in the right place, we put it into water and peel the skin off with a knife. Then we put it into a basket; next we get ripe coconuts. We put them down; then we prepare the oven; one man grates the coconut and another grinds the yam. When they have finished, we sprinkle the grated coconut over the yam; then we add water to the grated coconut and wring it out over the itiz. When this is done, we fetch young taro leaves, wrap the itiz cakes in them and tie them with hibiscus fibre threads. Next we spread the charcoal logs in the earth oven and cover them (together with the cakes) with leaves. When the cakes are done, we open the oven. We take the cakes home. We give them to our wives and children and eat some ourselves, too.

The Earth Oven. (Native text is omitted here, 361)

This is how an earth oven was made on Manape'i. Some fetch wood, others arrange the hearth stones. When they come again, they split wood. When there is a lot of wood, it is kindled on the hearth stones. Now the pile of wood is built up and covered with stones. Leaves (for the oven) are
sought for the oven, and about a hundred breadfruits are gathered. A pig, (p. 259) weighing 128 lbs., is also killed. The skin is scaled; now the food is placed around the oven and all the breadfruit wrapped in leaves. Then the standard\textsuperscript{1} is fetched. It is fastened. Poles are fetched for stoking, the oven is pulled down and the stones are spread out. All the breadfruit is cut into pieces and put into the earth oven. Stones are put over the food with fire tongs. Some take stoking poles and distribute the pieces of breadfruit evenly. The pig is fetched and put on the oven. Now the whole is covered, first with breadfruit, then with banana leaves; then dry grass and leaves are added and large stones are put on top. Some people bring palm fronds, cut them into pieces and make approximately 80 baskets of them.

Now they sit down and wait until the dishes are done, then they break the oven open. The pig is put into three baskets and carried to the gallery of the assembly house, where the nobles sit. The whole contents of the oven and all the baskets are also taken to the gallery. Now they take the pig and cut it up, a little piece of it is hung up with Hiciscus fibre at the seat of the nobles.\textsuperscript{2} Then the pig is distributed. The baskets with breadfruit are distributed. Then the baskets with bananas are distributed about (p. 260) 80 baskets. Here when this is finished, the festival drink is brought in; about 100 kava shrubs are distributed on six stone pounding tables. Now they pound. The final strokes are beaten and the first beakers\textsuperscript{3} are filled to be taken to the gallery. After this has been done four times, they begin to sing. All people feast and drink until the evening; some go to the Lap's house with him and go on drinking kava there until midnight. We do not know when it ended.

The people are especially fond of breadfruit dishes. When the fruit ripens faster than it can be eaten fresh, it is gathered, sliced, and buried in the earth. But first the shell and stones have to be removed.

\textsuperscript{1}This standard of the superior chief consists of two taro leaves, which are always tied to the post where the head chief sits. Cf. fig. 8, p. 19.

\textsuperscript{2}For the ghost Isobau.

\textsuperscript{3}Lap en Palikir had to drink the first beaker at each pounding table.
It keeps here for several months, turns sour and in this state is preferred to fresh breadfruit. There are two native descriptions for this:

The Preparing of the Fermented Breadfruit (Native text omitted)

The earth oven is prepared; a portion of the fermented breadfruit is fetched from the pit. Then it is kneaded on flat stones until it is smooth. We then fetch grated ripe coconut and add it; then we take fermented breadfruit and banana leaves and wrap it in them, and also make some flat cakes. Next we level the cooking stones of the oven; then we put the dish in and cover it. When it is done, we open the oven. We put the dish into baskets and carry it home. Then we eat it. (p. 261)

Preparation of the Fermented Breadfruit (Native text p. 362.)

This is how fermented breadfruit is made on Ponape. In the breadfruit harvesting season we pick many breadfruits, one or two hundred. We gather them, tie them together with Hibiscus fibre and take them to the place where the fermented breadfruit is to be made. The place is called Kalip. We remove the receptacle and the fruit. Then it is covered. The next day we get banana leaves. We also pour water into wooden bowls. Now we peel the fruits, wash them and put them down until we are ready. Now the leaves for the fermented dish (Sauerspeisblatter) are fetched and the fermentation pit is cleaned. The leaves are put into the fermentation pit. Now the breadfruits are cut into pieces. Then we pour them into the pit and roll large stones on top. For two weeks we continue thus to pick breadfruits. They are taken to the place, the receptacle is taken out, they are pricked and also counted. The next day we fetch water, and banana leaves and peel them. We get fermented breadfruit from the pits, cut the fruits into pieces and add them to the others. When this is finished, they are put into the pit and stones are rolled over them.

Another breadfruit dish whose preparation and eating is associated with great ceremony is the lili dish, a gift of tribute from the people to the chiefs. p. 262

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1 Fermentation pit.
2 O'Connell Chapter 16
The Preparation of the lili-dish. (Native text omitted)

We make lili, a dish made from breadfruit, in the following manner. Today we soften the breadfruit, and tomorrow we make lili of it. In the morning of the next day, we gather firewood and put the oven in order, but it is not kindled yet. We put all the breadfruit on the oven. Several people get ripe coconuts and others water; others plan-ten leaves; one fetches palm fronds. The Sau lili rises, spreads the fronds and cuts them. Then they are braided and are called "puats" (ilail). Others grate the ripe coconuts. Then the oven is lit. Now leaves are spread in the places where the stones are to lit. The stones are washed and put in their places. The Sau lili sits down near a stone and has his pounder and a dish with water with him. Water is also kept at hand when the lili is prepared. Now we girdle ourselves with banana leaves, put on an ornament of coconut fronds, which is called setei. All who take part in the preparation of lili wear the setei ornament on their heads, their shoulders, their arms, and banana leaves at the loin-cloth. In the meantime the breadfruits are done. Two men take them and peel them, then they give them to the Sau lili. Then they are pounded. When they are mashed, one takes two banana leaves, puts the mass in, and again hands them to the Sau lili. The Sau lili takes (p. 263) them and passes them to the Sau en piaya. He pours coconut milk over the lili and wraps it. Then he carries it to the gallery, to the chief. The chief takes it and distributes it to the surrounding followers. Two little packages are sent to the chief's wife. All the finished lili is taken to the gallery. And one man distributes it to those present.

There was something else that we did before we grated the coconuts; taro leaves were fetched and the mass of puats was put in, then a nut was broken and the water poured into this leaf beaker. Then the coconut leaves were surrounded with the mass of puats. This dish is called puta mej. It was taken to the chief; then the preparation of the lili dish was begun.

The dishes had their proper names and were counted, 1. lili-mon lili; 2. lili-karispot; 3. lili-kasilipot; 4. lili-kapaupot; etc.
Besides kava, they think much of palm wine. It seems that they enjoy it fresh and fermented. They are said to have learnt this from the people of the Gilberts in the Seventies. Palm wine is considered to be a remedy against the after-effects of kava drinking.

Preparation of the Palm Wine (Native text omitted here).

This is how palm wine is made on Ponape. A palm which is well suited for making palm wine is selected. They begin making an incision in the blossom panicle. For four days they keep on cutting it. Then it is tied up and bent every day until it is straight. A calabash is fetched and hung up on the blossom stalk. Then we wrap two pieces of coconut fibre around it, so that the rain won't spoil anything. Now it is (p. 264) cut again and again, three times a day. And thus we bring down palm juice daily. We fill many flasks with it. We also know how to make the sugar juice ferment, to make a foaming "kava" from it.

(55, 1046 / 43) Fishing, which is dealt with at greater length on p. 320, (See 157 ECP 1005 Hambruch, 820 ff.) is less favorable inside the lagoon, according to Kubary. The enclosed water is filled with slim from the numerous rivers and suitable for the coral life and sea animal life only at its outer most edge.

(1046, 1541 / 193) The plague of rats, against which they hardly did anything in O'Connell's day, is great. Occasionally they caught the very bold rodent with traps, but more for pleasure and sometimes they also ate them.

(222)III Care of the Body, Clothing and Adornment

by P. Hambruch.

1. Care of the Body

The inhabitants probably belong to the cleanest people in existence in the South Sea. (VNM. This has been true since olden time, but not through the influence of the Boston Mission, which rather has the contrary effect. Compelling them to put on European dresses only has a bad effect on hygiene and cleanliness and has, in part, had a bad result. (The sweet juice is also cooked in iron kettles. Kubary p. 131 O'Connell chapter XVI)
The wish for bodily cleanliness is inborn, and as its fulfillment is not difficult, it is carried out wherever possible. They like fresh water bathing. There is no lack of occasions for bathing because of the great number of large and small, deep and shallow water-courses. They bathe at all times of the day, preferably in rapids. Men and women have separate bathing places, as do the nobles. It is considered indecent to want to spy on people bathing. Not all articles of clothing are taken off in the water. (p. 265) Tutu means to bathe. On entering the house, care is always taken that a sponge, tim, is at hand with which to clean the body, especially the legs. (After eating, servants wash the master's mouth with a sponge.)

Nature is eased secretly, less from modesty than from the fear of somehow becoming a victim of black magic.

After the bath, they use anointing oil abundantly. Either freshly grated old coconut is used, and squeezed out over the body, or cosmetic articles are made in advance. These oils are treated as a professional secret. They appear to be not only cosmetics but, at the same time, to take the place of certain uini, medicines. There are many of them. Their odor is not always agreeable to our noses. Recipes of the production of oil could not be had, with one exception. However, after all the ingredients vary, but the main thing is the base of the ointment, in my opinion, the detailed description of an anointing oil with the addition of fish (train) oil may suffice here.

(168, 214) Preparation of Oil for Anointing (Native txt omitted here)

The people gather twenty to thirty coconuts and shell them. Then they fetch taro leaves, and put them down. They then break the meat from the fresh nuts, then take a cockle shell and grate it up. They fetch coconut fibre, put the scrapings in and wring it out into a wooden bowl. Then they kindle a pile of wood, and put stones in, until these are not, before adding the stones, they chew the heads of many fish to bits and add these. Then they throw stones in until the liquid is done, draw it out with a coconut shell, and put it into a hollow coconut or gourd calabash.
They hang it up in their houses until the season of festivals and dance (p. 266) comes; then they rub it over their heads and anoint their skins. They put on the ornaments and go to the festival. Thus they are proud of their ornaments and their beautiful appearance before the others.

Christian writes with regard to this: The manufacture begins with picking many ripe coconuts and scraping their meat. The implement used is a wooden block, which the native holds with his leg. It has a wedge-shaped piece of wood, which is dented at its broad end. A piece of nut is pressed against these teeth, and a quick twirling movement with the hands produces ships as fine as feathers. In this manner the "uninitiate" is made. It is then poured into a "kachak" or a low, longish vessel of reddish-brown wood, which is pointed at the ends and shaped like a whaler. It is then poured a number of the dried fishheads, which are put on a cord, are taken down from the hut roof, where they have been molding for weeks in clouds of flies and mosquitoes, so as to get into first class shape. The names of the fish most sought after for this purpose are pakach, toik, tomak, and wakap, names which sound as sweet as they smell. Without any sign of discomfort those venerable ladies chew these ghastly remnants of fish carefully little by little, and spit (VMN: them) into the vessel with the coco' chips. They sit solemnly chewing, peacefully like cows ruminating in a pasture, and the gruesome mass of decaying fish heads grows and grows.

When the difficult work of reducing them to little bits is finished, the whole unappetizing mass is squeezed and kneaded so that the scraped nuts and granulated fish heads will be most effective. The mass is taken out and put into the sun for a few days before the oil coming out is squeezed into small gourds or glass bottles, where it is kept ready for use. It need not be said that many hungry dogs, birds, and cats follow all these events with deep interest (Christian, p. 195). But not one little bit of the fragrant
stockfish, not one silvery coconut flake reaches their hungry mouths. The workers watch over their disgusting mixture like witches. For the fish oil of Kiti, like the mats of Chokach, the mushrooms of Palikar, and the yams of Matolenim, is a too valuable produce of the country to be wasted lightheartedly. According to Pereiro², the touch of a native anointed with it is sufficient to induce a white man to change his clothes and take a bath. (p. 267)

2. Toilet (Korpertracht)

Coiffure. The native is civilized. The old coiffure has been abolished. The priests kept it longest. For the old coiffure was the same for both sexes; long and flowing. Already in the Fifties and Sixties they began to cut their hair, (VHM a style) which then became prevalent for both parties. Hair combs and hair ornaments (Hairpfeile) seem to have been unknown on Ponape. They were never observed or reported.

Body hair. Body hair is not valued. Where it shows, it is destroyed. They pull it out either with the finger tips, with tweezers of tortoise-shell, small, sharp shells (cardium) or fish scales. Not until the last fifty years, under the influence of the missions, was the attempt made to grow beards in imitation of Europeans. Usually they are only pitiful products.

Body painting was once usual. On festive occasions, especially in heathen Palikir, it can still be found at times, and by chance. An orange-red preparation of ginger root, the reng of the Central Carolines, kis en iori on Ponape, was used as the coloring matter which was mixed with coconut oil. It was either rubbed uniformly over the body, or it was laid on in stripes and patches like a paste. Similarly bark fibre cloth, aprons and so on were dyed with this stuff as depicted, for example, in table 12 in Hernsheim's book, Südseeerinnerungen.

Mutilation of the body. We must add the increasingly fashionable custom, among young people of both

²Pereiro, p. 119.
sexes of having themselves tattooed with ugly European designs of song and letter of the alphabet and also of taking pleasure in scarification, Kitel, which is burnt in with little glowing pieces of wood or carved in with knives.

3. Tattooing.

We have received from O'Connell few but unambiguous expositions, concerning tattooing, which is still flourishing on Ponape, inspite of the contrary influence of the Boston mission. The native speaks unwillingly of it although he is very proud of the adornment itself. It is of divine origin. A demon (Nalik a rak en lah) thought out tattooing in order to preserve tradition. Some people were informed of it. (p. 268) In particular, the powerful and oft-mentioned sorcerer Laponi learned of it; he judged it good and spread it. Whether the ceremony, which formerly began with the fourth year, ended with the eleventh or twelfth year is a matter of which I have no certain knowledge. Reports about it vary. In olden times tattooing could be practiced only after war; it was then customary to tattoo the glabella."

"Cabezay Pereiro writes on p. 128 of his book: "As this operation is rather painful, it is carried out over a period of two or three weeks with interruptions of several days. In the case of the women, usually a little is done every year; in the case of the men, because there are fewer drawings, it is quicker. While the operation is being carried out the people do not bathe.

If the pattern becomes colorless in time, color is put on anew in the same lines. (Probably this is an error of Cabezay as a neat execution is technically impossible and moreover, the tattooing never fades). They begin tattooing boys at the age of eight and girls at the age of ten to eleven. In the case of the girls, it must be finished before the beginning of menstruation, otherwise they would be ashamed to appear before their companions. As the patterns have take made from time to time and enlarged according to the body's growth in length and breadth, and some parts fade in the course of time (?see above) they must be renewed; therefore it may be said that tattooing is done throughout the whole life."
Such tattooing appears similar and little varied to the usual glance of an uninitiated person. This is not the case. (VMM: tattooing) It varies according to sibs, families, sub-divisions, according to rank and class, and had to vary. (Furthermore, tattooing, like singing, is necessary to get to the other world, to Faset.) (Formerly the old people, ol laut, ol likei lap, were tattooed at a very old age on the inside of their limbs:

- **nuku men in auia** on the lower leg
- **peli an kapir** on the upper leg
- **uniue** on the upper arm

(In order to record the tattooing completely, it would have been necessary to get representatives of both sexes, of all sibs, to copy and explain the drawings. It was very difficult to hire three individuals, even at high pay, and with all possible precautionary measures. The sense of shame has rarely been more prudish than under the Protestant missionary influence. My own interpreter refused very energetically. I owe it only to the persuasions of Catholic missionaries that I finally had a small measure of success.)

(The persons won over were Aunepon en Tamara φ, also called Cecilia of the sib of Tip en man tontol; Limuar, of the sib of Tip u lap (oldest sib of Ponape); Japetan φ, old priest in Tsokes, of the sib of Tip en pepe.)

Tattooing, (Native text omitted here)

This is how the people of Ponape used to tattoo. First they prepared the (p. 269) color. Then thorns were fetched and a tattooing rake was made; the thorns were put one next to the other; then we put a little resin at the end of the reed stalk, and tie them fast to it. The hammer is made from the node action of sugar cane. When somebody is to be tattooed, we put the color into a coconut shell, add water and stir it until it is right. Then we fetch the ribs of the coconut leaves. Now the drawing begins. First the man to be tattooed bathes. When he returns, he lies down. The Katin inti (female tattoo expert) sits on him, and two women stretch the skin. Then the hammering is begun. When they have finished

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¹To draw the patterns.
they repeat it twice; then it is finished. Two tattoo patterns are made first: takatoka sou and par antei kil. The next day the other side of the penis is tattooed, the next day the pattern per o tak; the day afterwards, the other half. Then the tattooing of the man is finished. Also formerly the pelikomuts was done. And the next day the other half. And the next day the other half. Here too, they hammered. The shoulders were tattooed with a small pattern. That was done. And when a long time had passed, they also thought about tattooing rings, luon, on the body.

The color (VTM for tattooing) was made in the following manner. Fruits of the tsakon tree (p. 270) fall to the ground. When the flesh has disappeared, they are gathered in a basket and roasted in the earth oven. Then they are mixed with water. (Tattooing is begun on the right side of the body.)

The Tattooing Implements.

(215, 172) For the various patterns, corresponding rakes, kaliz, are used. For the most part, they are made fresh from citron thorns as they are needed, fastened on reed sections, alek, or pieces of wood with thin threads, or fibres of pandanus roots. In addition, rakes carved from bones are in use. For hammering, kai, fresh sections of sugar-cane, tseu, are used. Tattooing color, leneir, is obtained from the oil-containing nuts of Aleurites triloba, tsakon, whose soot is wrought and mixed with coconut oil to a fine paste, or is roasted and ground, thus giving a coarser ink. It is put on the skin with thin, sticklike ribs of cocoa palm feathers, nok, and put on the skin by means of hammers and rakes.

(215 starts here) The tattooing of the men (In his book, W. Joest has an original report by J. S. Kubary with many pictures: Tattooing in Micronesia, in particular on the Carolines. p. 27-90 is given over to tattooing on Ponape. Unfortunately Kubary did not put down the names of the family members whose tattoo he recorded and presented on p. 88-90.) At first glance
it may seem to be a uniform tattooing. A closer inspection reveals the differences. Even the patterns of the single limbs differ from each other.

For the man, tattooing is limited to the upper and lower arms, upper and lower legs. Occasionally arbitrary patterns, which are for example, from writings, catalogues, cotton patterns, and are distributed over arm and breast, can be seen on man and women. The tattooing of the woman is richer. Besides the limbs, also the body, hips and seat are ornamented with patterns. (p. 271)

Japetan's hands. (WWM for photo see: 215 ECP 1005 Hambruch 272) The right and left hands have different patterns. The left hand has a special tattooing of the fingers consisting of single short strokes, which are arranged in groups of three, pel sen. Up to the wrist the surface of the hand is divided into seven fields, which are separated from each other by narrow, untattooed strips. The first patterns, near the fingers, begin with indented strip, nini, then follow partly filled striped patterns, then strips, komu tsin pei; these are common to both hands. The following four patterns, however, are different. The right hand shows a zigzag pattern, kis en tsin, then a striped pattern, kom tsin pei, then a pattern of little lines, kan en us en uot, and, further, a stripe pattern like the second. The left hand, however, has stripe patterns like the second, then a mirror pattern of the same, a zigzag pattern and a pattern with thick stripes. Both hand patterns end with an ornamental stripe, popu tsik on the little finger side of the palm. In the right hand there is an indented strip, under it a stripe pattern with stripes of the same breadth as those of the back of the hand in the shape of a broad ladder, maneman. In the left hand, however, next to the indented strip, (WWM then is one) in the shape of a zigzag pattern. Around the wrist is a broad strip (p. 273) luou, whose field is divided by a pattern. The outside is formed by an indented strip, nini, its inside either by a thick strip, or two thin lines, lep in nok. The tattooing continues to the lower arm, at the ulnar side. (? Ellen-und Speichenseite) (visible in fig. 49 and 51)

1 rung (ring?)
2 coconut frond rib
On the ulnar side there extends upward two long stretched out ornamental patterns, al e pe, which separate widely on the underside of the arm and on the upper side are decorated with rings, luou, with the ornamental hoops already known from the hand patterns, but which are different from both arms and hands.

Japetan's leg. (VMM for photo see: 215 ECP 1605 Hambruch 275)
The legs are tattooed. On the outside the drawing covers the upper and lower legs; and on the inner side it is carried up only to just over the hollow of the knees. The lower, hoopshaped termination, obligatory in the tattooing of women, is not always found in the tattooing of men. This tattooing is always divided into four fields. The outer line of all four is drawn up to the upper legs and terminates on top with a broad ornamental border. But while the first, front field is only completely filled out up to below the knee, fields no. 2 and 3 are filled out right up to and including the upper leg, and the fourth field up to the middle of the bend of the knee. These tattooings are called: first field (in front): taketake sou; second field: por intoi kil; third field (the broadest): por i lek; fourth field: par c ak.

Field 2 is terminated above with an indented strip, nini; field 3, is terminated with a line strip with parts of an indented strip above it. This strip is called salan, ear. All four fields are crowned with a termination; two lined ornamental bands, papu tsik, having between them a broad strip which is divided into rectangular fields by vertical lines. Every second field is filled with a dainty zigzag line. The field is called kanyn uan 'os, the zigzag line, lap en pa'n uot, (taroleaf stem). Over the upper papu tsik strip rise four pairs of flamelike aok en pon teo, consisting of vertical lines with zigzag lines between them reaching only half way up.

The names of these fields, even when the filling patterns vary, are always the same.

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Kubary's names in Joest: tattooing of the fields 1. par en takataka jou. 2. par en coy kil. 3. par a lik. 4. par cak.
The tattooing of women is incomparably more common than that of men, although many ornamental patterns are common to both sexes in type and execution. "A girl without tattooing would lack her chief decoration and become an object of mockery." (J. Kubary) Thus tattooing was still practiced in 1910, although the Protestant missionaries vigorously opposed it. Inspite of this "Christian parents" let their children, especially when they were girls, submit to the painful tattooing process.

Limuar's hand. (VMM for photo see 215 ECP 1005 Hambruch 274)

This young girl had originally offered to let all her tattooing be drawn. The presence of some members of her sex, which could not be avoided, aroused such a sense of shame in the candidate that she only permitted copying of one hand! The upper surface of the hand is divided into four separate, ornamental patterned strips up to the wrist. The opening indented strip is lacking. The first strip has a broad zigzag band, whose teeth touch the bordering field line and thereby, at times cut off little triangles which are filled out evenly with four short lines: karinekim. The second patterned strip consists of big, "s" shaped letters, whose empty fields are covered with short ornamental stripes: tu. The third ornamental patterned strip repeats the pattern of the first without the filling of the triangles: manaman. The fourth ornamental striped pattern has lozenges which touch each other and have small lozenges at the connecting angles: kapinanuas. The wrist joint is surrounded by broad rings, luou, and in the middle has the fields of the lep in nok together with both the flanking indented strips, nani, which however, are not filled out. The termination (of ornamental patterns on the ulnar side (Ellen and Speichen-Zibmuster) which cannot be seen here) are formed by both the luou which embrace another ornamental pattern, a striped pattern: kanenuanot. Underneath the little finger, ornamental pattern no. 3 becomes visible as the terminating pattern: manaman.

The right arm of Aunepo Tomara (VMM photo Hambruch 274)-- the comparison of figs.

An "s" Has slipped beneath the thumb.
54 and 55 reveals how fundamentally different the tattoo patterns are in detail and in the articulation of the whole. The upper side is covered with innumerable single patterns, called collectively pel un pe. They consist of single ornaments, in particular "crosses," stars and points, which owe their existence, not to the inventiveness of the natives, but to chance. Here the "collection" is put together from catalogues, particularly from patterns of coconut matting as the owner proudly informed me. The left upper arm, in addition, is "beautified" in the same way with similar patterns. It has not been reproduced. Up to the wrist no differences are revealed in the male and female tattooing if one neglects the single patterns. In the direction of the fingers, there comes first the indented strip, nini, then follows an ornamental band of triangles that bos each other in, sin serak, (triangular sails?) and then an ornamental band of triangles with narrow apexes, sin sin serak, and following this, an ornamental band in a zigzag line with solid triangles, ki sin tin, then an ornamental band like no. 2. A sixth band, consisting simply of oblique lines, komu tsin en pe, concludes the ornamental surface of the upper side of the hand. A broad ring, luou, which surrounds the wrist extends the tattooing upwards. In its fields it has the already familiar lep in nok pattern with accompanying indented strips, nini. The ornamental band pattern with oblique lines, komu tsin, concludes the broad ring on the upper side, and constitutes at the same time the lower termination of the tattooing that extends over the whole lower arm. It is composed—here they are closed, but in many tattooings the ornamental bands are open—of the two large ornamental bands running the length of the arm, el e pe (broad) and ko u pe (narrow) and the arm rings luou crossing them at right angles, the two middle rings being called lupe pe. The horizontal upper ornamental bands consist of the ornamental patterns nini, sin serak and kar in ekim. The names of the vertical ornamental bands can be gathered from what has already been said.

The left arm of Aunepon en Tomara—The arrangement of the pattern
tattooed on the arm is the same, but in the ornamental patterns themselves one band differs from the other in pattern. Not that they are entirely different, but symmetrical repetitions for the two arms are impossible. The indented strip ending at the finger side is lacking which otherwise terminates the ornamental bands. In the luou of the wrist, the lep en nok pattern is very broad. It should be noted that the fingers—like those of Japetan's left hand—bear the pattern of fine lines pel i sen arranged in groups of three.

The tattooing of the abdomen, buttocks and upper leg of Aunepon en Tomara (VMM photo Hambruch p. 277) Appearing like a delicate, dark-blue, openwork silken fabric, a peculiar tattooing covers the women's body from the navel down to the ankles. With its symmetrical disposition, and brought, by the limbs themselves, into a rhythm that pleases our taste, too, this tattooing satisfies our aesthetic sensibility as well as that of the natives. From inborn vanity the woman does not, therefore, luckily abandon tattooing.

The tattooing of the abdomen is divided into three chief parts: the trapeze-like shield with various ornamental patterns from the navel down to the mons Veneris, the triangular mons Veneris itself and the bipartite tattooing of hips, waist and buttocks.

The trapezoidal abdominal shield, au tu nun, is terminated above by the indented stripe, nini; next is an ornamental band consisting of a zigzag line with completely filled-in triangular fields, kar in kim; joined to this is a broader ornamental band (p. 277) of smooth and indented lines that cross each other irregularly, nok a lap, and (VMM: the whole) is concluded below by an indented stripe, nini. An ornamental band of separate continuous lines, kanek in lap in uot, separates the shield part (1-fig. 56, 57 tattooing of Aunepon) of the tattooing from the other part which is divided into three equally large bands, mon in puar, and into delicate wavy lines, nok a lap, which are rhythmically articulated and interrupted by similar wavy lines running diagonally. On the two long sides this tattooing is marked off from the bipartite waist, hip and buttocks tattooing by the diagonally, separate, running line, mono mon en men puar (p. 278).
It has a dark blue shine and gives the effect of a belt, owing to a narrow, bright strip of skin that has been left free. The hip tattooing is called men in katsekats, the buttocks tattooing men in katsekats en pa. The waist tattooing is named pualintia. The mons Veneris is adorned with a full, dark triangle, retit paune, which is limited on both sides by a broad ornamental band, mon o mon en men in puar.

The tattooing of the upper legs is magnificent. It is marked off into various divisions: the outer side likintab, with the large fields that look like woven strips; the long strips, each consisting of two finely streaked bands, puk, with their middle mass of two double wavy lines, kan en nok a lap, while the separation of the fields represented as in linen binding is formed by corresponding ornamental bands of a wavy line, nok a lap. The inner side puk u puk, consists, similarly, of ornamental stripes like linen binding that may be compared to woven strips, which form separate fields autepe. Each field is filled in the five wavy lines that run parallel. Like a garter, a circular band, monemon, separates the tattooing of the upper and lower leg.

The leg tattooing of Anepon en Tomara (VII photo Hambruch 278) A part of this tattooing has been described in the patterning of the upper leg. To be added is the dark blue tattooing placed above the "garter" beneath the likintab, in the corner, as far as the puk en puk, and reaching to the hollow of the knee. The tattooing of the lower leg offers a very varied spectacle according to the point of view, whether from the front, the side or the back. Seen from the front, the broad tattooed stripes fall right and left of the kneecap, men in likin nia. They begin at the ornamental band monemon and are terminated below, just above the ankle, by a hoop-like tattooing in three parts, manaman. Seen from the side, the patterning is dominated by the braidlike tattooing (p. 279) beginning at the monemon and ending at the manaman. In front of the "braid" a little towards the front of the knee, the small, narrow ornamental pattern kasikisik is visible at the monemon, while behind the "braid"
the bipartite ornamental surfaces of the tattooing at the back of the leg are recognizable. This tattooing is divided into two main parts, an upper part of two isosceles triangles and a rectangular lower part; the two are connected by two broad blue bands. The upper part is formed by the triangular ornamental band with "h" shaped ornaments, *kis en kan en puse en kitar*, whose triangular surface is filled with delicate wavy lines, *kin en salen*. An ornamental band called *poputsik* marks it off from the "braid". The bandage-like, thickly tattooed lines that connect the upper and lower parts of the lower leg tattooing are called *ten en i men*. The lower part of the tattooing, with its broad fields filled with dark blue, is referred to as *men en pan puros*. They are separated from each other by the bright *puria* band in the middle. The *puria* band has in its middle the delicate wavy line, *nok en puria*. This tattooing makes up the greatest ornament of the women. (211)(This apron or bark-cloth dress, today displaced by the calico skirt, is worn so that the lower edge of the garment coincides to a hair with the upper edge of the *men en pan puros* tattooing. Feminine coquetry demands that the tattooing should be flaunted in this way.)
Native Garb.

The male and female shirt shows no great differences. (The bark cloth appears to be used for women's garb only. Men make only forehead ornaments from it.) The decline (VMM of native dress) began with the introduction of European cotton goods. (The artistic weaving, especially of the belts and dress mats from banana fibers disappeared early. In 1910 a single old woman in Uona still knew something of weaving.) The influence of the Boston mission had a devastating effect, for the men through in blue or striped flannel shirts, later, black or white European suits; for the women through many-colored cotton, closed, hanging dresses—a disfiguring garb and one very bad for health, but beneficial to the mission's money chest. (p. 280)

The men wore the marq, the G string (I-Bindo), uaiuai loi, for everyday and work. It was chiefly woven from banana fibers, was about 20 cm. broad and somewhat longer than a meter. Occasionally bark cloth was used instead. It was wrapped round the hips, covering scrotum and penis, pulled through between the legs. The end hung down at the back like a little tail. On top of it the skirt, kaol, was worn during festivals or when at rest. This skirt, which both men and women wore finally remained alone, because it was airy and comfortable, as the only article of the garb beside the belt, tor, occasionally worn and was still generally worn in 1910. Text 347 describes how it is made from the two commonly used materials, coconut fronds and Hibiscus fibers strips, besides reeds and grass.

The making of the skirt (VMM Transcriptions Native text is ommitted here)

Occasionally the people think of making their skirts. Then they go and
fetch young coconut leaf fronds; they bring them up and cut them into four parts and split the rib. Then they put them into the cooking pit, cover them until they are all cooked. Then they put them into the ashes, between the stones, until they are dry. Then they take them out, split them\(^1\) and put them into water for a day. The next morning they spread them in the sun for drying; then they make bundles of the strips and distribute these among the women so that they may fold (plissieren) them. They(VMM: the women) finish them and bring them back again. A woman now takes the strips for braiding, fastens them on a band of Hibiscus and braids banana fibers around them, until they all gang on it. Then they buy red cotton and cover the belt: strip with it, that is called \textit{al en mots}. Now they tie the skirt around themselves and go for a walk with it. (p. 281)

The Hibiscus Skirt (VMM: Native text omitted here.)

The people set forth and cut down young Hibiscus trees. Then they peel the bark off, put it into bundles and put them into water for eight days. Then they take them out of the water. Next they scrape them off with shells until they are right and spread them in the sun for drying. When they are dry, they are knotted at the ends and braided together for aprons. Some who like them yellow fetch ginger roots. They rub them over the apron and let it dry. When it is dry they put it on. Some also seek roots of a tree called \textit{me lipul}\(^1\) and add some burnt lime to dye it red. Then they make folds in the strips, put the band on and walk about in it. (VMM: For photo see p.282 211 ECP 1005 Hambruch\(^2\)).

These five men's skirts all have different meanings. (For photo see 211 ECP 1005 Hambruch 278) Fig. 61 is the most elegant, fig. 62 yhr mody common, which, however, is nowadays often substituted by fig. 59 (cf. table I, 2) as cooking bark very quickly gives them raw materials desired for the production. The other three kaol have their special meaning. Thus the \textit{lili kaol} or \textit{losit kaol} \textit{kis in i en} at festivals, which are to be sure, beginning to die out. They have also forgotten how to make ginger color "\textit{kis in i an}". The gorgeous skirt \textit{kaol irog} is always valuable; it must be worn by the nobles

\(^{1}\)In four parts. The leaf sections of a coco frond are laid with their edges on top of each other; their ribs of the fronds are separated out with a wooden splinter and the leafs split into strips lengthwise, about 1 cm. in breadth.

\(^{2}\)\textit{Murraya citrifolia}
and is admired by many a person who may not wear it. It takes great effort to make one as every thread must be folded. All kaol are made in the same manner. The supporting bands, a twisted Hibiscus ribbon, the strips of Hibiscus rhyt/a or the prepared coconut frond ribs.

These prepared fibers are all folded around the future supporting bands, firmly pressed against it, and then drawn up to it by a double supporting cord which is thinner than the first. After that, the single strands (p. 282) are twisted around the fibers in an alternating fashion so that the band shows in front and at the back the remaining fiber can be cut off over the strands. In the case of many fiber skirts, embroidered strips are bordered with red-red coloring is always preferred—and adorned with pompoms, beads, beautiful binding cords, or in the case of the simple kaol, the ribbons in front are decorated above the Hibiscus cord with cross-stitch in red, black, white, yellow, etc., while plain binding cord suffices in the rear.

Bark (VNM: tapa) cloth no longer exists. (Fig. 65. Sketch of a servant girl (lit en u mar) Lia from Palikir. She is wearing a red calico skirt and over it the e'ien, which is still called thus by many heaten people of Ponape, (VNM It's) still still worn today and is made of calico, but was formerly beaten square from (vierwandigem) cloth and had a neck opening in the middle. The ribbons of the pe'tien are tied with red-yellow pompoms (gurugur-orange). An al en tsuka serves as a bead ornament and as a beauty ornament there is one of the kes en mata (small gold piece, really a small piece of iron), which are greatly valued and highly priced among the Ponape people. Fringed, fragrant leaves are put round the head; this is an al en kitou pitepit (of the quick coming to the tryst).

Fig. 66 Girl of Ponape (after Fr. Hernsheim: Sudsee Erinnerungen Taf.12) Girl with a likau of breadfruit dyed with kiss en ion and brown pattern (of this proves). Tattooing on the legs visible a modern sty on the upper arm. Around the neck a bead chain of dark red shells (as is usual
on Truk, for example, but adorned with the typical Ponape ornaments of short, cut out Spondylus shells. In both ears, (VMM: there are) red, wollen pompoms, tsukun; around the head, a wreath of fagraea blossoms). (p. 284) Only very old people remember how it was formerly made and what an important part it played in the native household. Only the breadfruit tree, which is very common in Ponape, is used.

Others are allegedly not used. (The island is not very rich in varieties of Ficus.) Old Saulik en Tsokola tells of what was produced, painted in many colors and also provided with patterns: the skirt, likau; the square, poncho-like upper garment, peiien, the covers, te ni puainak (consisting of three parts) which are sewn together with coconut thread, and which then played an important part as mosquito covering, te a'masul, before European goods were bought from the merchant.

The Making of the Bark Cloth (VMM Native text omitted, translation follows) This is the way in which the bark cloth of Ponape is made. First, when we wanted to make bark cloth, we got a branch of the ni-tree. We took a piece of it and gave it four sides, this is called "making it even". Then we go to the reef and look for a shell, pitika; with it we ripple the sides. Now we call it "the bark beater". Now we seek young breadfruit trees which are suitable for making bark cloth. They are obtained and left in the house for three days. Now a tree called Maratsu\textsuperscript{2} is secured. We go again to the reef and get together small mother-of-pearl shells, and take it to the land. With it, the bark of the breadfruit trees is peeled off. It is taken off the tree. It is put on a piece of wood called kaile, the anvil. It is beaten there until it is done, then it is put into fresh water and washed. Next it is beaten again until it is really right. Then it is again (p. 285) put into fresh water and the fibrous pieces are separated by beating and then hung up to dry for four

\textsuperscript{1}Metrosideros
\textsuperscript{2}Dysoxylum
days. Then they get the mangrove bark and bear it until it is fine-fibered. It is wrung out into a wooden bowl. Then the fiber cloth is put in. Then it is taken out again and hung up until it is quite dry. Now it is distributed in the family to make aprons or coats, and some only make covers of it. When one wants to make covers, one puts two to three pieces on top of each other, takes cocothread and threads it through needles which are made of the bones of hens or pigeons. Now they are sewn together and a mat is made. We use it as a cover when sleeping, and now the mosquitoes do not sting. When they are sewn together thus, they are also provided with black and yellow colored stripes.

Nothing could be learned any more about the magnificent belts, the tor. Now and then people came who had some, in order to sell them for a large amount of money (20-150 Marks); but nobody in pagan Palikir, for example, could or wanted to say anything about the significance of the patterns which were different on all belts and sometimes recalled the tattooing (VMM: for photo see 211 ECP 1005 Hambruch, 278) cf. table I, 1 and 6. Christian is the only one who gives some details, on p. 123: "The chiefs and important people of the community used to wear belts (tor, tur) of banana fiber, which were very carefully made from it and adorned with rows of fiber, which were very carefully made from it and pink, white and grey shell ornaments. There were two kinds—those of Christian are some of his impossible "inventions", the ones with the oblong Spondylus ornament, and the others, usually with the round, polished grey or white snails shells. In Ponape, just as in Hawaii, it was a serious crime for a common man to put on a belt:... "When a common man puts on the belt of a chief, he shall die for it."

(VMM: for photos see source: 1005 Hambruch, pp. 286-294).

The Leipzig collections unfortunately do not show the correct color shades. Nevertheless, they may be of value in their interesting patterns, especially in fig. 72, but on the whole the Hamburg collection is preferable as it also describes the remarkable and noteworthy differences in color. For patterns and colors belonged to individual families

1 Made from Spondylus and from white and grey, tiny, polished shells.
and were not imitated. Formerly the wearer could be recognized by it. Today all is forgotten. (VMM: pp. 286-294 contain pictures of belts with descriptions.) (p. 295)

Fig. 93 shows the single sections of which a belt is composed, and must be taken into consideration when the warp is setup. A piece is never made as a whole, but of about 1-8 or 4 parts. The number depends on the plain motives and these dyed red. Some details remind one of Kusaie, although the technic is quite different. The various warp combinations for the production of color effects, white, black, yellow are shown in figs. 75 and 82.

Today the man of Ponape is clothed completely differently, although, as the pictures in table I show, it still often happens that the old clothing is not scorned, especially in the regions where the Boston mission did not have such a great influence. Cabeaz Pereiro writes: "Since the arrival of the Methodists they wear more conventional suits, and when they go into the colony nowadays the superiors dress after European model. Some even wear socks and shoes of patent leather. In my time (1910) it was customary to dress spotlessly like an European for going to church. Even it no store was laid by it on week days. A hat, color-tie, starched linen were worn wherever possible. In addition, white or blue material of a good, blue naval cloth, khaki was worn, but more rarely. Perhaps it was difficult to get. The socks were important, and most of all boots should creak, otherwise they were refused. The Jaluit Society had to have a mechanism put into all their shoes in Hamburg, as otherwise they would not have gotten rid of any more." "The others, however, generally put on only a jacket or a vest and kept the loin-cloth without putting on pants."

Once the women wore a loin-cloth similar to that of the men, made of breadfruit bark (as in the Philippines). The only difference was that it was much longer, for it extended as far as halfway down the leg, and they wore
it crossed, fastened over one shoulder, and under the armpit of the other. Today it has disappeared, and only a few women use it when they go fishing. Nowadays they wear a piece of calico at home. It is belted at the waist and reaches to the knee. When they leave the house or pay (p. 296) visits, the most modest (in other respects, they are not a bit modest) fix themselves a piece of square calico, similar to a short chasuble, into which a hole is made in the middle, through which to put the head and to cover the breasts.

Unfortunately, the Methodists have also accustomed them to wearing a kind of ugly morning-dress, without a waist, of colored or white cloth, which is really nothing but a woman's chemise with a high neck, and with long and narrow sleeves." (VMM: Pereiro, p. 116)

5. Ornaments.

The people of Ponape do not have much in the way of ornaments. Perhaps it was different in former times, this at least is indicated by the many and large findings at Nan Matol, which was plundered by many people over a period of seventy years. The shell amulet and the ear-plugs of coconut must be counted among these old ornaments. The very young nuts in fig. 95 No. 2492 (a and b) (VMM: for illustration, see 1005 Hambruch, 296) are filled with red wool; small chains of little European glass beads lie around the upper edge. The nuts in fig. 96 have (fig. 94-96) the same purpose, the only difference being the absence of the filling. They are worn by men during the dance. (fig. 97-105, 298 pictures of ornaments, wreaths) Richer and more unique than those of Tahiti and Hawaii are the (p. 299) head wreaths, the different "al". Every al consists of specially chosen blossoms and has its meaning. In so far as I was informed of them, the meaning follows: al en botobot: For mutual allurement; the position of the knots has the effect of a sign language so that one can tell into which part of the bush the individual lovers went to retire; every single one, so to speak, meaning a special code in flower language.

7Note by Hambruch
2These pieces belong into the Godeffroy collection gathered by Kubary, where they had the numbers 315a, b, and 841 a, b.
3Pereiro p. 117: Both sexes pierce their earlobes and constantly enlarge the opening to put earring and other objects in. One of the most peculiar is a rather small coconut which they cut exactly in the middle and into whose circle they put a piece of looking-glass. The men wear cock's
feathers and also pierce the inner part of the ear and fasten tassels here and little balls of red woolen yarn. They also wear rings of silver and tortoise shell, occasionally or all fingers.
al en kokon: Worn during festivals, feasts and dances.
al en tsalepene: Gives a good smell.
al en mook: In festival times.
al en mosal: Festival wreath.
al en kitou: Wild ginger blossoms, for noblemen only.
al en kitou pitepit: Green wreath to prepare a rendezvous.
al en likau: Wreath of white, red and blue calico strips.
al en unan man: Wreath of feathers.
al en seir: Blossom wreath of fagraea. When the knot is worn in front, its position, whether right or left, indicates the place where one wants to meet to have sexual intercourse.

(p. 300: fig 108-113, ornaments for forehead and neck.) (p. 301)

The great nobles of Ponape had the custom of putting various forehead bands around their heads, which had long fringes in back. The bands consisted either of breadfruit tapa, (VNM: bark cloth) bleached to a snowy-white, with a clear red or black drawing (fig. 108), or were braided from Pandanus, variously decorated and provided with long fringes. Every forehead band belonged to a certain family. 1

III. The House 2
1. House Construction.

House building, which is considered a very honorable occupation, is the occasion for all kinds of festivals. The first takes place when the foundation is laid, the second when the posts are set up and the third when the finished building is consecrated by the priest. The house consecration lasts about three to four hours. The priest murmurs prayers, sings in a monotonous voice and carries out all sorts of conjurations. These prayers also include the following which is spoken when the posts are set up:

Charm used during the Building of a House (VNM: Native text 154 is omitted here)

1Here ends Hambruch's report.
2Cf, for this O'Connell Chapter XIV fereiro p. 123 and Christian p. 140.

(On whose reports this part is based.)
Beams here, beams there,
I try once, twice, three times,
I try four times, five times, six times,
I try seven times, eight times, nine times,
I try it the tenth time!
Mey, your foot cling firmly!
May your arm cling firmly!
Your whole body, may it cling firmly! (p. 302)

The consecration festival ends with a bava feast at which roast dog, dishes of yams and breadfruit are eaten. Frequently the district chief is present. Women, however, do not take part in it.

The builder (VMM: of a house) is called nanuoloson. The relatives, saui, and friends help with the work. Nobody may refuse his help, and everybody has the right to demand it. The employer has to feed the helpers during the period of the work, generally for ten days.

2. Kinds of Houses

From olden times different kinds of houses are distinguished; the festival house, nas, the boat house, the dwelling house, im, the cook house, para, and various additional buildings, which becomes apparent from the verbose native report.

Of House Building (VMM: Native text 289 ommitted)

When a house is built in Ponape, there is not one form but many. One form is called "Large House"; this house is inhabited by the nobles, the sub-chiefs and also by some common people.

Another house is called "King House"; only the Nanamariki may live in such a house.

And one form of house is called "Assembly House"; in this house the people give festivals for their Nanamariki. This is the place where they can always meet the Nanamariki, and hear what orders he gives them. Here too the dances take place, the heroic and drum songs are sung; here also the

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1According to Christian parra, derived from far.
and the high title bearers meet and consult together, just as they consult with their subjects here. (p. 303)

Another type of house is the cookhouse; it is the place where the men prepare and cook the dishes. Cooking is done here for the nobles and also the common people, and the hearth is called um en kaisak. In the raku period, the people prepare the food tributes in the cookhouse; first puatsa mei, then mei ani, then paini, then kamunem, then mei muatan and lili, then sakalap, then umun lou en mei; and during the isol period: ketsekep', itiz and um en pali en kep', then um en kep' un, then puke men and, then pukalopun. The feasts which were celebrated in the assembly house are called: farisimei, then irei isol, then takatak tip a nit, then um um and Kaiti sol.

Another type of house is called "Court Attendants' House." This house is always situated near the palace, for it is a house for the seat of the noble where his servants live in order to prepare first the King's meal, then to hang up the provisions baskets and also to keep up the fire with which the men cook the dishes. The common people may also enter this house.

Still another type of house is the "Boat Building House." In this house the people finish the canoe; after having felled a tree and taken it here. The stages of the work in building a boat are called, one after the other: giving the shape, hollowing out, correcting the shape, boring holes, making the edge for the hollow, examining the hollow, smoothing it, painting and (p. 304) lacquering it, making the binding for the boat, and binding the wooden outrigger pieces.

The dwelling house is described in detail in the next section. The cookhouse usually stands near the dwelling house and is a simpler building on all sides. There are blocks instead of central base purlins. Posts in the inside of the house are absent. Only the oblique, lower part of the tisak, and the longitudinal sides are covered with palm leaves like the roofs of the dwelling houses. (VMM: for photo see 1841 ECP 1005 x304)

The assembly house, nas, in which the great festivals are celebrated
was already described in detail on p. 225. (VMM: See 1843 ECP 1005-Hambruch 225) Because of the basalt slabs kept inside for the preparation of kava, it also has, according to Christian, the name "im en takai" i.e., house of the stones.


Formerly every class had exact laws concerning the dimensions allowed for its dwellings. According to O'Connell, this was twenty by forty feet for nobles, and for common people or Nigurts six feet by ten feet and even less. (Canoe houses measured one hundred by forty or fifty feet.) The house always had a rectangular, and quite often even a square shape. If possible, it was built near the water and under trees. The stone foundations are laid first. On the bottom they conform to the irregularities of the soil, above they are level. Outside they consist of great basalt or limestone blocks, on the inside of small stones. The height is roughly one meter to four feet. Above rises the superstructure, generally very carefully constructed. It begins with four-cornered beams about one foot thick, the base purlins. The upper edge is called kai muan or kai man, i.e., man, the lower kai pen upper edge女子 kai i.e., woman. At a distance of about five feet, four-cornered (p. 305) posts are set in these beams, and on these the purlins rest. For this katar, tee-fern is generally chosen or breadfruit wood or any other of the numerous good kinds of wood. To support the roof-tree some other posts are rammed in, in the middle of the house, higher than the wall posts. The steep, high roof extends about a foot beyond the walls of the house. The sides and the pediments are supported by purlins (neinei and tsaponen)

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1 one meter according to pereiro; four feet according to O'Connell
2 according to Hambruch.
and filled out with numerous rafters (ren) and laths (kuton). The lower part of the pediments juts forward in a lean-to shape, while the upper part is vertical. This projecting part is called tisek. The roof is covered with palm leaves laid over each other like tiles. According to O'Connell they are coconut palm fronds, according to Pereiro, they are from the marfil palm, which Christian declares to be the same as the sago palm. The walls are filled in with a double layer of fine twigs, which are laid horizontally between the posts, and cross-wise to the posts. According to Pereiro they take thin climbing plants for this purpose, "bajuco delgado," that is Saccharum kuninga in the thickness of the little finger. According to Christian, the layer consists of bundles of sedge or reeds of the thickness mentioned above, and they are laid beside each other with the greatest regularity and bound in rows with coconut fiber. O'Connell indicates that bamboo sticks are used as filling, and are held together with colored coconut yarn. The wrapping was most delicately executed. In his day, they also decorated the menter posts with colored coconut yarn and, as hardly any cooking was done in the dwelling houses, this wrapping lost hardly any of its splendor. By 1910 this beautiful house decoration was completely forgotten. Rare remains of this art could be observed on Yap and Kusaie. The entrance is strikingly narrow, a narrow crack in the wall of the house, through which the person entering must wriggle. About three feet high, it is a window and door at the same time.

The interior (WFM: of the house) is seldom divided. At most there is a kind of compartment for valuables. The floor, like the walls, is either covered with lianas or separated from the understructure with laths. In the middle there is a free space filled out with earth, measuring about four feet by five. Here a small fire is kept at night, which both warms one and drives off mosquitoes. In O'Connell's day, a young girl would have her sleeping place beside it and blow on it when it burned down. The smoke escaped through the cracks. Dwelling houses of this kind are used in common by the whole
family, also by grown-up children, and often those already married.

4. The House Furnishings.

The house furnishings formerly consisted of sleeping rugs, calabashes, beautifully polished coconut shells, baskets and all kinds of small equipment for handicrafts. The walls bore (p. 306) the woman's weaving equipment and the men's dance paddles and weapons. Already by the end of the last century these things had been largely displaced by imported wares. In the houses one could already see chaise-longues, simple tables, sewing machines and the beloved concertina. In 1910 old equipment could hardly be obtained. In view of this scarcity, the objects collected and reserved should better be described in connection with the technology (cp. Section VII, p. 362.)

IV. THE BOAT.

The old Ponape boats, uar, have been described in detail by O'Connell, Lütke and von Kittlitz, and these descriptions, together with pictures, were reproduced in vol. I. To complete them Pererio's account may find a place here..... "The hull (VMM: of an old-style Ponape boat) long and delicately is constructed from the trunk of a hollowed-out tree. At both bows, the war canoes have high, jutting out, notched superstructure, which give them a very pleasing appearance. In the middle they have a platform which is called "timp"/ From the right side, there projects a row of wooden strips (VMM: booms), which are all connected to each other by means of thinner strips (VMM: stringers) and reach to a longer, very light piece of wood that is parallel to the canoe and so arranged that it plays the part of a float. This complicated apparatus characterizes the "batanga", (VMM: outrigger) so utterly different from the boat of the Philippine islanders.

They build the canoes from two kinds of wood: partly from "ton" which is, I believe, Eisterocarpus polyspermus, a heavy wood, but on that floats and withstands the action of the sun very well without splitting. Others are built of the "chétat" D. Mayaois, a soft wood that floats very well. The large carved boats are called uaršhap (decorated canoe), the war vessels uarpoik and the ordinary boats uar.  

All boats have sails, some of which are of canvas and the others prepared by the natives themselves by weaving together the fibers of the kepār leaf. The oars are of breadfruit tree wood and are called "Patel". The "tiguines" (boat hooks) are called "katian" and they always carry a bail called "lēi en llar." The central platform has a covering for rainy days made of the leaves of the nipa palm.

(p. 307 - fig. 115a and b, drawing and plan of old Ponape boat.)

(p. 308 VMM: for photo, see: 2741 ECP 1005 Hambruch 307 & 308)

The war canoes are the longest and are about one meter and a half in breadth. The paddling thwart consists of some cross-beams three fingers thick. They are about one ell apart from each other. Generally, there are six of these padding thwart in each canoe. Four persons can be seated on them. The others go to the central platform. The canoes have a wash board and are painted red, black and white. The bows are shaped like swan's neck. They are decorated with rosettes, canvas or tape in various colors. Sometimes they are even provided with bells. The sides also are decorated with canvas of various colors and drawings in rectangular fields, similar to chess boards. The war canoes always carry their supply of stones, to destroy the enemy (to hurl at the enemy). They even kill fish with the stones.

All these types of vessels are extremely light. They travel at great speed and offer the least possible resistance to the water and go over shallows with ease. Their size varies a good deal. They can carry between forty and fifty men. (VMM: Pereiro, p.126)

Boats with this careful and beautiful decoration which have been described here, hardly existed until in 1910, and those depicted below are relics of better days of long ago.

(p. 309) Fig. 117, boat decorations.

According to the number of person that the vessel can hold, the natives distinguish:
The boats prepared from one trunk, which are provided with a superstructure only bow and stern, are built, according to Hambruch, of the following woods:

- **ton** - according to Pereiro, *Dipterocarpus polyspermus* and *D. Mayapis*
- **satak** - according to Christian, *Elaeocarpus*
- **ueinal** - according to Christian, *Lumnitsera*
- **mai** - breadfruit
- **pulok** - according to Christian, *Carapa Moluccensis*
- **kemar** - unknown wood
- **pinepin** - according to Christian, the same as *pilak*, belonging to the gourd family and providing the natives with calabashes. It must therefore be supposed that there is a mistake here.
- **kalau** - according to Christian, *Hibiscus*. According to Hambruch, the paddles are carved from this wood, but this is certainly a mistake. They are generally of breadfruit wood.
- **kyup** - the wood which, according to O'Connell, was preferred, and belongs to the lily plants, according to Christian. Here also, one or the other must have made a slip.

O'Connell's account of boat building is completely confirmed by the narratives of the natives. At the instigation of the chiefs and after the (p. 310) Nanamariki had given them permission, roughly every two years a community building of new canoes was undertaken. The building was inaugurated by certain festivals and ceremonies, *open sarau*, which are said to have taken place in the now-ruined city of Nan Matol. The leader was the *sau pal* and he also supervised the work. In later times, these festivals had only local significance left, and the chiefs of the neighboring districts...
were invited. (Five to six men saw to the felling of the big trees, fig. 119, drawing of a canoe superstructure. VMM: see 2741 ECP 1005 Hambruch 310.) They were hollowed out where they fell in order to reduce their weight. For large boats, the trunk was left whole. For small boats, it was divided. It was then dragged to the nearest waterway and brought to the boathouse. The Niguarts formerly had to perform all these tasks. Not till now did the real boatbuilders, often chiefs, or at least people of the two upper classes, set about their honorable work. Four to five were busy at it for about a week. Accompanied by singing, as many people as possible lent their aid. First the outside was treated and then the inside. Seats and outrigger were not fixed until the canoe had received the coat of red, the lacquer overcoat (p. 311) and the polish. All the fastenings were, as they still are, of coconut yarn. But formerly the paddling thwarts were also delicately bound with it. For caulking, coconut oil, lime and Calophyllum resin (galip-nut) are used. (fig. 120, drawing of a canoe. VMM: see 2741 ECP 1005 Hambruch 311)

The Hollowing out of the Canoe (VMM: Native text omitted here.)

The boat is dragged down (from the bush). First the tops are taken off, then the branches are removed, until all branches are off. Now it is hollowed out (p. 312) roughly. After the hollowing out, the outside is carved. Then one hollows it out again and shapes the canoe. After shaping, the boat is smoothed, and after the smoothing, the float and the pieces of wood for the canoe are prepared. After that it is painted and lacquered. Now the boat is finished. It is then tested and it is taken to the water for the first fishing expedition. This fishing expedition is called katapeik.

Charm for boat building - Native text no. 275.

(When first hollowing out the body of the boat.)

My spirit rises with the hatchet,
My spirit strikes down with the hatchet,
Hasten, make the canoe fly.
Oh, quick, quick, oh, my canoe.
Then slowly, and now quickly.
My two small children,  
The one is called Sipe rou,  
The other is called Sape rou,  
My flyer live, Main Tau Katar, Nan Selan.

During the felling of the tree still another charm is said, which however, is never betrayed, for then the person telling it would be killed.

The boat building festivals of olden times, as O'Connell witnessed them, were not quite forgotten in 1910. Natives could still relate the following about them:

Boat Building. (VMM: Native text omitted here.)

In olden times the chiefs arranged the sacred boat building festival. It was a holy festival, a trivial festival. Then they informed all their (p. 313) sub-leaders that they should meet to decide when they wanted to begin building. The nobles ordered the sub-chiefs, the Naneken and all sub-leaders to go home and make preparations and to build for the boat building festival. They then went away. And every place built only one boat, then the maintsap for the Nanamariki and his chiefs and sub-leaders in the districts. They built their maintsap for the chiefs in their districts. All went into the bush to build, nobody was allowed to remain at home and do nothing. They worked diligently and were not lazy. An unfinished festival canoe was abandoned and not finished. During the time of the canoe building they took them to the Nanamariki, took them before the chiefs and also began to prepare for the game. When the game was over, they gave all the canoes to the Nanamariki. The Nanamarikis took the canoes and chose three canoes to give them to the other Nanamarikis. The rest was given to the other title-bearers. Then they sat down in the assembly house, celebrated with a feast and drank kava until they were drunk. Then all returned home and slept. (p. 314)

A canoe that was not finished at this time.
There was a sacred ceremony in Ponape, held during the building of the canoes, called epen sarau. When they wanted to build canoes, one tribe conferred with the other about what time they wanted to begin building. Then they felled trees and worked simultaneously until they had finished. Then they made preparations, put their ornaments in order and took care to have beautiful paddles. At a certain day, called ran en puek uar, they launched the canoe. And when someone had not yet finished his canoe, he would launch it on that day so that it would be consecrated and no canoe in the district be forgotten. It is left in the water to float. They called it pus on epen, when the canoe is not yet finished. They make preparations on another day, called ran en pitakpene. They go out with all the danoes and assemble in a small place. They prepare for the day, which is called ran en epen lap'. When the day of the ran en epen lap is there, they assemble in a small place in Matolenim called Nan Le'n mox. They assemble at that place, conduct sacred ceremonies in Pankat'ra and arrange paddle dances for many places. When the sacred paddle dances are ended, they hand all the boats over to the Nanamariki. Then the Nanamariki distributes all the canoes among the (p. 315) people. So the people then get new boats. Then they all return home and keep their boats. Thus canoes were made in olden times, and a canoe was made at no other time, for they waited for an epen, when canoes were made.

The life of the boats was short, in spite of the trouble taken over them. Generally they lasted only a few years. Older chiefs' boats were given to the Nigurts as work boats. On the whole their canoes were build much worse and were smaller in size. The old kings' boats, so to speak the state canoes, were never destroyed, but were kept in the festival houses. Ordinary boats lay on the beach when they were not used, often in the water.—They say a charm for protection: (VMM: Native text 155.)
(Charm for Canoe Protection.)

Mother of the boat guard, father of the boat guard,
Watch and protect the boat!
Here my canoe.
Thorns outside, thorns inside,
Thorns inside, thorns outside,
Remain a magic under mine,
Over everything loom my magic,
Mother of the boat guard, father of the boat guard,
Watch and protect and protect the boat!

Boat accessories are sails, paddles and bails. The knowledge of the sail is connected with a legend. It is related:

The History of the Sail. (VMM: Native text omitted here.)

This is what is thought about the sail. In very ancient times, Nan Dzapue married two women in heaven. The two began to make a sail. They gathered many pandanus leaves and filled a house with them. But Nan Dzapue was dissatisfied with the storing up. He took the pandanus leaves and threw them out of the house. Some pandanus leaves fell down from heaven on a small place in the state of U, called Selate. The women were angry about this and wept. They went away from heaven, they were three sisters. As they roamed about, they came to Selate and found their things there. One of them took here things and went to Langar, and the two others took their things and went to Na. The two who went to Na finished the sail.

This is what the people of Ponape think about sails. For before the two women appeared from heaven and made sails in Ponape, there were no sails. The sails are called lepiti. These were formerly used by the people of Ponape until there was an abundance of cloth in Ponape. Then no lepiti were made any more, but the sails were made from cotton cloth.
The sails are woven by the women from pandanus leaves. This work, too, is carried on during the observation of ceremonies and makes the people taboo while they are occupied with it.

About the Making of the Sail. (VMM: Native text omitted.)

A sacred sail was made, too, which is called zeu kopun. The women assemble and set a day, the raah en pits sarauu. When the day comes, all the men and women, traveling in many canoes, go to the island of Na in Matolenam. They assemble on Na. There they carry out a sacred (p. 317) ceremony which is called Se'ippen. Then they begin with the flactiing of the sails. Leaves called te'ip are used for this. The sails are made from this tree. When a sail is finished, it is taken to the Nanamariki; the Nanamariki keep it. Then all the people who participated in making the sail are no longer taboo, for the sacred sail is finished.

The two long edges of the triangular sail are tied to a vertical boom and a horizontal boom. There is no mast. Its place is taken by a pole (VMM: shore) which supports the corner of the sail which sticks up into the air. The sail in fig. 121 and Lutke's sketch are different from each other in this respect. In the former, this pole is somewhat below the beginning of the last third of the vertical boom. This pole, which takes the place of the mast is held by a man and erected on the one or the other end of the boat according to the direction in which the boat is to travel. They say a charm when they hoist the sail: (VMM: Native text ommitted here.)

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O'Connell The sails are triangular, such as are called in the sailor's vernacular, shoulder-of-mutton sails, and are platted by the women of split fushes. A yard, and a boom at the foot, secures two sides of the sail, and the third side has no leach rope, the strength of the material endering it unnecessary. In putting about, it is only necessary to shift the craft end for end, and make that her bow which was before the stern, as the outrigger must of course always be kept on the windward side.... Cf. Lutke II p. 27.... (Quotation in French) The longer side BC and the hypotenuse BD are attached to poles bound at B but in such a way that they can move freely. Besides CD is free. To direct the sail, the corner is attached to the end of the boat when one wishes to go forward; the corner C is raised in the air by means of a long pole to which it is attached; the corner D is also held by a pole. The sail is folded in the twinkling of an eye by rolling it on the poles. To turn about, one also folds the sail and the corner A is shifted to the other end of the canoe. All that is done very quickly. They generally show a great deal of skill and
rapidity in maneuvering their canoes. Because of the shape and the arrangement of the sail, it is impossible to make it bigger, and that is probably the reason why the canoes of the Ponape people do not travel with the same speed as the canoes of the inhabitants of the low islands.
Charm During the Hoisting of the Sail (Native text 142.)

I tie the yards in Kapin solap,
I make a loop, I make the loop on top,
I make a loop, I make a loop at the bottom
I put the yards in at Tauak, (p. 318)
the float goes up,
Yards and mast, remain strong, yard and mast,
Remain strong, yes strong! (Fig. 12la sail of the Ponape boat)

The paddles to-be used, patil en uar, were also painted red, according to O'Connell. Otherwise they were simple, in contrast to the dance paddles. Those shown here are of various shapes. The Hamburg paddles, has a broader blade, which puts out almost at right angles to the boat's side. The Stuttgart paddle, moreover, shows cord ornament and a thickened point. A comparison with the dance paddles shows a great uniformity in the shape with the Hamburg piece.

The bails are either longish vessels crudely carved from wood, or only coconut shells. The former are called pinale, the latter limerikerik. (p. 319)

Names for the Canoe and its Parts. According to Hambruch.

1. Space inside the canoe liulongies
2. float li en tamara
3. bow tip en mo
4. stern tip en mur
5. keel kapin uar
6. gunwals' au en uar
7. seat (thwart) lo en uar
8. seat board(platform?) parisamet
9. stringer(langitudinal board of the outrigger.) kiai en luk
10. diagonal outrigger tak uar
11. straight spars kiai
12. straight connecting boards to the platform (outrigger bridge) aubat
V. FISHING AND HUNTING.

1. Fishing

The sea supplies a very substantial part of the food, and the natives are eager and efficient fishers. (A successful fisherman has also the certain hope of a good marriage and is taken into every family with pleasure.) (Formerly the Nigurs supplied the amount of fish necessary for the table of their masters. They were amazingly skillful in treading water. Nobles practiced spear fishing only as a sport.) The shark was also killed in this manner; it was partly eaten. Nowadays everybody fishes. (The women too, catch small fish on beach and reef.)

(The most important kinds of fish for the natives are the following:

The names of the Fish.\(^1\) (VNM: Native text 3429 giving a list of the most important kinds of fish is omitted here.)

These are fish names (Names in native text follow. (p. 321)

(From time to time they arrange great, common fishing expeditions, which end with tributary gifts to the chiefs and with a popular festival.)

(Native text omitted) And the following nopui is arranged for the chiefs on the occasion of the consecrations of fishing instruments,

\(^1\)Christian p. 126, in chapter X.

\(^2\)Connell gives a detailed account of fishing

\(^3\)Cf. Christian enumeration a.-op. 352 as well as the enumerations of Kramer in Palau IV and Truk p. 435.
The people made drag-nets or head-nets, and for four days give their catch to the chiefs. Then it is finished; and they are allowed to fish for themselves, and eat. In this manner, the Ponape people show their respect to their chiefs; there are some fish in the sea which nobody is allowed to eat before the chiefs have eaten of them; and they give some to the common people, so that they may then eat with them. Such fish are: tortoise, flying fish, bonito, merer, \(^1\) the great flying fish called mauot, dipuirip and tikila. These fish must not be eaten by the common man, for he would die, through the "long distance" magic (magic taking effect at a distance) of the chief.

Eating Festival (from gifts of the land and the Seas)/Native text./

When the people of Ponape want to fish, they finish their small drag-nets. The day is set when they will go to the reef. Then they assemble. The nets are tried out. When this is done, the people who are to go on the reef are chosen and those are to stay on the land in order to cook the meal. All the fishermen set out the others assemble and discuss what they should do. They now set the meals and also see that there is kava. They carry all of this together in the assembly house, pile it up, fetch kava and distribute it on the flat stones. They wait for the return of the fishermen, and the women grind coconuts and add ginger-root. They also prepare the ornaments, especially the flower wreaths. There they sit together in the assembly house and wait for the fishermen. At last there is high tide. Now the fishermen come back, blow the conch shell trumpet and sing songs. All people on the land pound kava. When the fisherman are near the shore, they jump out of the canoes and drag the whole catch with them to the assembly house to the nobles. These are very (glad) pleased. They put the catch down, then they sit down, then they finish kava and had it to the chief. One of the sub-chiefs takes the kava beakers and hands them to the fishmaster-general.

\(^1\) According to Christian on p. 354, a large, blue fish.
and his men. Some women and men rise and anoint all fishermen with oil and give them the ornaments which they have prepared. When they have finished, they sit down. One man, however, the Tsou e nene,\(^1\) then rises, goes to the pile of food, lifts the carrying strap (Hängeband) of a basket of food and says the Kate ria\(^2\) incantations; (VMM; omitted here.) This is the conjuration:

I take away the evil magic and bring it away the evil magic,
Evil magic down here, evil magic up here, away you evil magic,
For we want to live, we want to be well.
Evil powers go away, good powers, come here,
Over these food heaps, your small ones, your large ones,
I lay my hand on the small heap, I lay my hand on the large heap,
Thus we are satiated, satiated, well satiated in our country,
Always satiated, Mistress Ilakelok, Lord Tsamol, ue!\(^3\)

Afterwards all the baskets are lifted high and distributed to the fishermen. Then the latter rise and lift up the fish. They select the largest fish and hand them to the nobles and divide the rest among the people. Then they sit down again and continue pounding kava. Then the shore dwellers go to the reef, and the inland dwellers cook, for four days. Then it is ended.

According to Hambruch, the fishing expedition of large nets the naikalap, with a length of fifty spans, is preceded by a four day seclusion (klausur) of the men participating in it. They must also refrain from sexual intercourse and must not eat any bird's flesh. Then a charm is spoken (see text 128). (The first catch is (VMM; of fish) given to the Nanamariki, the second to his wife, the third to the Naneki. What is caught last is given to the other high title bearers. For this they arrange a great festival with an abundance of kava.

\(^1\) Master of distribution.
\(^2\) Ria means magic powers, which deny the gods, kete ria "which do not remain evil magic power."
According to another description, all districts take part in the haika-lap expedition. The Nanamariki gets only two fish, the size does not matter. This is followed by a general giving of fish between men of high and low rank.

Some fish are taboo for the common man, either completely or partly, i.e., at certain times. Sometimes they are freed for him, after the chief has tated of them. As in all important undertakings, magic and counter-magic are also exercized en connection with fishing.

Story from Mutok. (VMM; Native text 2-5, omitted here).

An indigenous (urstandig) ghost inhabited this Tol Takai; the ghost was a woman, she was called Likand Naluk. She sat on this stone house and watched the fishermen who, were fishing here according to the (manne-lait en li. The method party of fishermen always set forth in Kapinpela. Before their fishing expedition, they made sacrifices; they brought small kava gifts. Four women had to do it, they sat down around the stone-two tsopeiti women and two seriso women. Here they carried out the kava sacrifice. Thus they made the kava and wrung out the coco-fibre. They wrung it out in a stone shell. At the same time they prayed to the ghost-women. (VMM; native prayer omitted here.) Thus they prayed:

"To you I dedicate the beaker Puiniu under your bosom Likand Naluk. Likand Naluk tell it to Likand Lueteisap'. /p.325/
Likand Lueteisap' tell it to Likand Likokasap'.
Likand Likokasap' tell it to Likand Limotie."

These four ghost women are more powerful than Likand Naluk. She lived on the Tol Takai and the others on Teme. When the sacrifice had been made, the fishing expedition was begun, and which all women of Mutok took part. All the fishermen were ornaments of beautiful flowers and put them on their heads. Now when they go fishing, a woman carries a bundle of kava shrubs to the shore, the others follow her to the shore

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1 Name for the possessions of the wife of the Nanamariki in Uona.
2 (Note to native text) The words Kotslel ine pal = wring out cocoa-fibre usual instead cocoab bast.
and to the kava. They cover a stone with this kava, the Saulik en Peikan. Then the fishermen seek two kinds of fish, which we call aron, and āa. When they have caught them, they come back here again. On the way home, they visit a small place Nin Tsein, pound kava and make a sacrifice there. Then they choose two women, a tsopéiti woman and a seriö woman, who are to take the fish and the fisherwomen's ornaments to Alenia. When they arrive there, all the people who see them must hide. When they are near Alenia, at the house Ngauliu, the Nanamariki and his chiefs assemble there, and begin to celebrating, waiting for the fishermen for now they know that they are coming home. But the women do not appear at the assembly immediately. (p. 326) Both hide and first listen to a drum song which refers to their handing over of the fish and the ornaments. A priest comes, takes the ornaments and also the fish. With gifts of food, as much as they can carry, they return to Mutok. The next day they do the same, and continue for four days. Then the expedition is ended.

This fishing expedition only took place once a year, always in the same manner from ancient times to the year 1870, when it ceased.

(Charm to Disturb the Fishing-haul). (Native text, VMM; of charms concerning fishing omitted.)

(Some people have gone fishing, one has stopped at home. He says a charm, so that they should not get any fish:)

Lipali kiti, Li kai pela
Go, go, dive under with stones,
Come up with corals,
Like the mountains, the mountains, the mountains aaaaa hūhūhūhū!

Charm during Fishing. (Native text 144)

I tread, tread, tread, a little on the sinkers /sender ?,
I tread, tread, tread now harder on the sinkers.
May it come, may it come here,

2 Species of Bonito.
Numerous, innumerable like mangrove leaves,
Numerous, innumerable like banana leaves,
The fish into the net. /p.327/
I tread a little on the sinkers,
I now tread harder on the sinkers,
ue!

Charm while Catching with the Anchored Net (Native text. 127).

When three to four canoes fish together, the charm is said xx so that the fish should go into the net:
Here I go,
There I go,
I dive, a thousand fish come,
I come up, a thousand fish come,
To fetch a thousand fish,
To fetch still more fish,
And still more fish,
Infinitely many fish,
Still more, joho!

Charm while fishing with the Large Net. (Native text 128).
I lower the little forked wood,
I lower the large forked wood,
My foot moves, my arm moves,
My whole body moves.
Many fish were caught, caught, caught.
The tails kick, the tails kick!
Katin Kepira, Li aun Kepira,¹
There is the path of the fish.
Come, swim between the legs of Li aun Kepira,
The tails kick, the tails kick, joho!

¹ Fish goddesses of Pōnaulan.
The fishing methods usual on Ponape were described so clearly and in detail by the native L. Kehoe, that he alone will be quoted here:

Some Fishing Methods of Ponape: (VMM; Native text is omitted here 348.)


These are the main methods of fishing which the Ponape people use to catch fish.

In the following manner the large stationary net is used for three kinds of fishing. These are called:

1. Fishing at high tide. 2. Deep-sea fishing. 3. Night-fishing. The ti-method with the large stationary net is usual on several of the reefs, the kelik-method is used for fishing inside the breakers, and the kos-method is used during the night on some reefs.

These are the methods of fishing with the small stationary net.


These are the fishing methods with the large hand-net. (VMM: For photos of nets, see: 155 ECP 1005 Hambruch 340.)

1. Hand-net fishing. 2. Method of fishing in which the fish are driven (drift fishing?). 3. Fishing from the canoe. 4. Fishing in shallows. 5. Fishing by means of weirs (bow nets) and nets. 6. Hand-net fishing. These are the names of the kinds of fishing with large hand-net.

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1 Methods it are described in detail later. (VMM; Native text.)
These are the methods of fishing with the small hand-net. 1., 2., 3. At full moon on the reef. 4., 5., 6. Stoneheep fishing. These are the names of the methods of fishing with the small hand-net. This is the drag-net fishing. They go out with three or four canoes and fish at night or during the day. They get out of the canoes and put the drag-net out on the reef edge of a lagoon, then the canoes go up on the reef, then the fish are disturbed with poles and caught in the drag-net. This method is called drag-net fishing.

The pelik hand-net is a net which two people must handle; they go along the reefs at night and thus catch all kinds of fish, small ones and large ones.

The double hand-net is a net at which two pieces of wood are attached like the yards of a sail. Ten to twenty men fish with it, they go along the edge of the breakers with it.

The trammel is a kind of net. And these are the kinds of fishing which are done with it: 1. Fishing on the reef corals. 2. weir fishing. 3. Fish-beating. These are kinds of trammel fishing.

On The Fish Poison.

Up is the root of the sal plant which creeps over the ground, which is pounded by the people, then taken and carried into the reef water. Now when large fish creep into the holes under the stones, the people pound the root and put it under the stones, then the fish are stunned like people who are drunk from kava, and come out from under the stones and die.

Weir-basket fishing.

The Senkreuse (VMI: "Weir-basket" used under water) is a net which looks like a pouch; they go into the mangroves with it, climb up to a high location. Then some food is put into the Senkreuse and it is lowered into the water. Many (fish) gather in it and eat of the food in the Senkreuse, and when the Senkreuse is full, is pulled up, filled with forty to fifty fish.

Fishing with Torches.

Torch fishing is a method for which dry coconut fronds
page 331
To typist:

Please copy and insert sketches on page 331, with the following text:

mai - the dots stand for men with their arms outstretched, at ebbing tide.
mai en tol - fishig out the inner space

to typist: also include the native terms (mai, mai en tol and pin). and substitute "catching bonito" for "Bonitofang".
or leaves of the ivory-palm are used. They are tied together and the people go to the reef at night. Then they light it (VMM; the bundle of frouda) until it burns very brightly, and hold it over the water. The fish are stirred up and blinded by the bright gleam. Then the people catch them with nets, /p.331/ spear them or slay them with knives. A hundred fish at a time and still more are caught.

Weir Fishing.

They go on the reef build long walls of stones, they also make numerous openings for about twenty to thirty men. Then they go home and remain there until it is dark; then they go again to the weir and sit down at the openings which they watch and close with the liem net. Then many fish are caught in the net pouch. Then the weir is filled with fish, one to two hundred (100-200). At times up to a (1000) thousand fish are caught thus. (The sketches on this page. (fig. (125)). To typist see attached blue sheet.

Surf-fishing.

Surf fishing is a method in which they go out in the canoe and take five to six stationary nets out. A net is tied together so that it looks like a bag, then they go into the surf and put the anchoring nets out near the deep places. The bag net is in the middle of all the other nets. Now the people pull the nets by their ends up close to the breakers. They sing, blow conch shell horns and throw stones, until the tide goes out; then they take the nets in and find in the net bag, which is full of fish, fifty to sixty and up to a hundred fish.

Drag-net Fishing in the Deep Water.

The drag-net fishing in the deep water is a fine method. They take two or three nets. Then they put the nets out in a small lagoon which is surrounded on all sides by reefs. Then they put the nets in a line. Now they pull the nets up, first from the one side, then from the other. Then they find the nets are filled with a hundred to two
hundred fish. Then they take small hand-nets and spears, and extract the fish from the nets with these.

Thus there are many, many kinds of fishing in Ponape. The varieties of fishing are called:

1. Stationary net fishing.
2. Stationary net fishing from the canoe.
3. Fishing by hand with a large net.
4. Fishing by hand with a small net.
5. Drift fishing from the canoe.
6. Reef fishing.
7. Reef channel fishing.
9. Mangrove fishing.
10. Sulfur fishing.
12. Weir fishing.
15. ?
16. Full moon fishing.
17. Night fishing.
20. ?

21. Fishing with weir-baskets and nets.
22. Spear fishing.
23. Lowered net fishing.
24. Eel fishing.
25. Trammel fishing.
26. Fish poison.
27. Fish-catching.
28. ?
29. ?
30. Stone garth fishing.
31. Channel fishing.
32. Reef fishing in deep places.
33. Pitch fork fishing.
34. Fishing with three stationary nets.
35. Fish seeking in the marsh.
36. Fish beating (treiben).
37. Stationary net fishing with four nets.
38. Mangrove fishing.
40. Cuttle-fish catching.

On Fish Beating.

Fish beating is a beautiful method with which many fish are caught. No large ones can be caught, to be sure, by only small ones. When there is fish beating, about twenty people do it. About dawn they go into the sea, to the surf at high tide and make two or three heaps of stones. Then they put trammels around the stone heaps and two to three anchored nets around the trammels. From both sides of the anchored net the people form two lines to the spot where the breakers thunder. They carry cudgels and stones, beat the water with them and
and throw stones so that the fish won't get through between the people. For when the sun rises, the water flows off from the reef. Two people run along the edge of the reef, call, shout, and stir up the water. Then all people stir the water up, huzze and blow a conch shell. Thus they approach each other and pull the net together which they then find full of fish, as are the trammels and the stone heaps. They seize the fish here. Afterwards the canoes are filled with fish. At times more than a thousand fish are caught like this. This fish beating is also called pinepes.

Many kinds of fish are caught in this manner, small ones and large ones. They are: 1 - 8 (enumeration, to typist please copy from source.) These are the kinds of fish which are caught by fish beating.

The Weir-Basket.

One kind of fishing is called weir-basket fishing. The people fetch branches and threads, tie them, together and make a weir-basket out of them. A weir-basket is like a house or a cupboard. They tie until they have finished. It is taken to a canoe and they go out on the reef. Then it is lowered into a reef hole which is not deep, but about two to three fathoms. They anchor it and go home until the next day. The fish swim in to settle down as in a house. But they do not know how to get out again; it is difficult to get out again. The people go out early in the morning and find the weir-basket filled with fish. Two kinds of fish, in particular are caught in the weir-basket: mañer and murajena.

Fishing for Cuttle-fish.

Fishing for cuttle fish is a kind of fishing. The cuttle-fish is caught by this method. They set out in a canoe and paddle over the reefs to find cuttle-fish. They paddle until they notice cuttle-fish, which usually sit in holes. They spear them and catch them like that, but some are difficult to spear. Then they take a sea cucumber which is very better. The cuttle-fish notices the bitterness and comes out of the hole. Then it is caught. At time ten are caught like this.
Description of the sapuik method of catching. (VMM: native text, omitted 112).

In the sapuik, a catching implement is used which looks like a net. The fishing implement is made; then two cudgels are tied to the two edges of the net. Then it is rolled up like a canoe sail and two ropes are pulled through the edges of the net, they are called rop'. Then they set forth in two or three canoes. Many people take part in it, about twenty to thirty. Now they go near the breakers when the tide is going out. The net is put out on the shore where the breakers break (pönlik.); for here the catch is done. Two people carry the net and two the catching ropes. Some clever people go along the right side. Others carry the gathering basket (kopou en gatau / p. 336). The basket carriers remain on the left side, until the catch is over. Other people have to guard the canoes; they must not eat until the fishers return; then all eat. If, however, the canoe people eat something, the fishermen hurt their feet, and if the basket carriers take the basket to the other side, there will be only few fish. So they remain at the breakers and wait for the wave which carried the fish on the reef. When the wave rolls up, they quickly hurry up with the net and stop. The people carrying the catching rope shake the rope, those behind them do the same, and the beaters drive the fish into the net until the net is filled. Then they take up the net, draw it on to the reef and shake it filling two to three baskets. They do this two or three times, so that about ten baskets are filled. Then the fishermen go home. This method of catching cannot be carried out everywhere, but only on a sun reef.

The tsaup Method of Catching Fish (With Poison) (VMM: native text, omitted, 116.)

In the tsaup fishing the people use a net and a creeper (a kind of live rope) which is found in the bush and called up'. They get some up roots and a small net. With this they go out on the reef and seek a large stone which lies at the edge of a reef channel (lagoon), where there

1 Not the English word "rope".
are always many fish. They now take the net /p.337/ and spread it put around the stone. Then the roots are pounded and, to the accom­paniment of splashing, are shoved under the stone. In this way the fish are stirred up and dazed, like men who have drunk kava. They swim out under the stone and are caught in the net. But means of the tsaup method many fish are caught.

Description of the tapatap' method. (VMM; Native text, no.114, Omitted.)

The tapatap method also belongs to the lesser fishing of Ponape. Four to six people carry it out at night, until the water begins to recede. They take small and large nets with them and go with them to the reef. The people with the large net go to the end of the lagoon. The people with the small nets go the places on the reef that dry-out. They wait until the big net is stretched out. The people with the small nets now hunt fish in the sea-weed and drive them out into the big net; but they catch some with the small nets. This method of fishing is called tapatap.

Description of the taukol method of catching. (VMM; Native text no. 115, omitted.)

This taukol belongs to the lesser fishing, and for it one must wait for heavy rainfalls. If cloudbursts come at night, then by day there are swollen-floods, and the water flowing away then clouds the water in the reef. The fish are blinded by this and can no longer /p.338/ see. Then one takes nets, goes into the waters of the lagoon and practises taukol. The fish cannot be seen, for the water is cloudy; one moves the nets to and fro and takes them out again, and two or three have then been caught in the net. And if one has dipped the net in about ten times, one has caught ten to twenty fish. That is the taukol method.

The tiati method. (VMM; Native text no. 117, omitted.).

Tiati belongs to the lesser fishing which women like to practice on dark nights. Two to four women take small nets with them and set of in the evening, when the water is receding. They go toward the places where much salt sea-weed grass grows; until they find a lot of
olot. Now they lower the nets into the water and, by tramping with their feet, they startle the fish in the olot, and they swim away in panic and are caught in the nets. By means of this method one catches many fish, but no big ones.

Description of the pikipat method of catching. (fish) (VMM; Native text no. 113, omitted.)

Pikipat is a subordinate method of fishing in Ponape, which is practised in the mangrove swamps and cannot be carried out everywhere on the reef. Pikipat is practised on dark nights, as well as by moonlight. One waits until the water recedes, then one goes quickly to the mangroves and carries nothing with one. One looks for the pools in which residues remain. There one finds a kind of fish Sepou and also shrimps. One catches them. And this lesser fishing is called pikipat.

The Catching of Bonito is described by Nanapas en Kit in this way:

The catching of Bonito. (VMM; Native text no. 214, omitted.)

This is the way in which the people of Ponape catch bonito. First, after they had already discussed the matter in Ponape, people met on Ant in order to make preparations for the time when the bonito is to appear. Everybody stopped on Ant and watched. Even when the other people did not see anything yet the Uasa iso began to shout. Then all the people hastened there. The fishing begins. They bring up all the canoes. They go into the water in order to watch the fishing. After setting out, the canoes form a row and travel along the school that is swimming the length of the land. Thus they travel beside it, rejoicing, singing and dancing. Then, when the fish become tired and exhausted, they approach the beach. Now they (VMM; the fish) are surrounded in a semicircle by a large anchored drag-net. They catch all the fish and throw them on the beach. And when even, as many as, three hundred fish lie on the beach, they

1 shahahanāa, etc. 2 In order to tire the fish.
do not die yet, but if one was not caught with them and it is caught later and added to the others, then they all die at the same time. Now everybody takes the fish and brings them into the stone circle. The Sau en nena rises. They are /p.340, figs. 126, 127; nets./p.341/ distributed. People take their share, and go away, to arrange the hearth and to prepare the food. On the next day the oven is opened; people prepare four-corned wooden grills (grid-irons) and keep a small fire under them. If the oven has been opened, one takes some fish and puts them on the grill. On the following day, they are put in the sun. When the bonito season had arrived there was a great deal to do on Ant, for every day one had to catch bonito and to prepare them, and at night there was no sleep.

In O'Connell's time, hook fishing enjoyed only moderate popularity, because it yielded little. More recently, the old hook of bone or wood, which was attached to a mother-of-pearl lure, has been completely displaced in favor of the very much sought after European iron hook. (See vo. II, Finds in the Ruins.)

The Catching of turtles is particularly important. The flesh is due to the Nanamariki. The catcher may keep the shell. The distinguish the

- hawkbill Caretta, caretta, kalāp
- genuine turtle Chelone imbricate, sapāka
- green turtle Chelone mydas, tārtua

The Catching of Turtles. (VMM; Native text, no. 118, omitted.)

The way in which one catches turtles is called kaik. In the morning four men travel in a canoe out at the open sea, in order to find a seaweed which floats about on the sea and is called rir. In such places one finds many turtles. The man who sits in front at the bow, is called saupir; before he goes put on the sea he prepares a rope, the /p.342/ sal en pir. Such a rope is four cords long(fathoms); and they make a rope belt as well which they tie around their waist. Now they wait on the sea until a turtle is seen. When it is quite near, the saupir binds the rope around himself and orders the other men to paddle forward until they are quite close. Then the saupir rises and jumps out of the canoe. Then he tries to embrace
it, (VFM: the turtle.) with his hands and feet. Another man, the Sau en itimūr, jumps after the saupir and helps him; they both hold fast. Another man, the Sau en āpisāl, takes the rope and hauls it in. And the man sitting in the stern must take care that the canoe does not capsize. Now the Sau en apisāl draws the other men and the turtle to him and into the canoe. They make a double loop, put it round the turtle to him and into the canoe. They make a double loop, put it round the turtle flippers and draw it close. Then they let the turtle drift beside the canoe. The men get in again and rest. And the turtle is allowed to flounder in the water by the canoe until it is tired. Then it is taken into the canoe and bound fast. They travel to land, for the turtle hunt has succeeded. Now they take it to Nanamariki, for if they eat it, the Nanamariki and all the nobles are enraged, take land and destroy their property.

This method of catching is called kaik, pīr, lūs, tau and urir; there are many names for turtle catching.

/p. 343/ This is how the turtle is caught with a net. Two nets are carried in two canoes, then they go in the evening to the hunt. That is called sēpūn. During the journey, two people dip with the net under one canoe, the other canoe does the same. Then they join the nets and draw them apart. And the canoes travel apart to free the ends of the nets and then head for each other again. If a turtle was there it will try to escape and will be caught in the net. Then they take it into the canoe. In this way they also catch fish, indeed many fish. They are allowed to eat them, but they must bring the turtle to the Nanamariki. The catchers must not eat it.

The killing and the preparation of the turtle. (VFM; Native text, no. 126, is omitted.)

First of all the turtle's arms and legs are bound fast, then they cut all around the ventral shell (belly shield) and take out the entrails, the liver last. The entrails are carried out to the reef and the dirt is removed; then they are taken back again. Now they put their hands into the turtle and hunt for two bands that are in the neck of the turtle. They are torn,

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1 trachea and esophagus.
then the turtle is dead. Now the earth oven is made ready. When it is hot, the covering leaves are brought and spread out on the hearth. The turtle is put in and the oven covered. When it is cooked, it is taken out. It is brought to the nobles; then the carvers appear.

Two people squat on either side of the turtle, one fetches water, both wash their hands, then they sharpen their knives and begin to cut up the turtle. First they cut off the arms and put them on the ventral shell (belly shield), then they cut off the feet and put them on the arms. Then they separate the ventral shield and lay it down in front of the turtle's head. Then they separated two little pieces of flesh, the utukamotj; next two at the anus; then they take off the ventral (belly) muscular flesh at the side, then the two arm muscles then the two back muscles and next the pieces of meat on the back, then the two muscles between the leg muscles and dorsal shell. All is put down in front of the turtle's head; now the leg muscles are cut off, then the muscles which connect dorsal and ventral shell and finally, the meat between the first and second ribs at the back.

Then the meat of the turtle is distributed: the Nanamariki receives an arm muscle, and the Naneken too; the Likand receives the head, the Nalaim a side muscle, and the Uasai too; the Tauk receives a neck muscle and the hoz also; one connecting muscle between ventral and dorsal shell is received by the Nanapaz and the other by the Nanaua; the rest is divided among the lesser title bearers.

Bird Snaring.

By O'Connell's time the people of Ponape already had hens, which are said to have been obtained from a Spanish ship. The meat was repugnant to them, as, indeed, at that time all birds seem to have been taboo. Yet they took pleasure in cock fight. But at a later stage they build hen traps and catch pigeons. The Ponape pigeon is larger than the European. They hunt it for food. They practise bird taming much less often than many of their island neighbors. At times

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1 At the neck cartilage.
there may be seen in the huts, in cages, blue herons, kaualik, or black and white sea-birds, called chik. Pigeon snaring is carried out in this way:

Bird Snaring. (WHM; Native text, no. 349, is omitted here.).

This is the way in which the people of Ponape catch birds; particularly pigeons.

The people first go into the bush and look for the trees where pigeons feed. They look until they have found them, for here there are two trees on which pigeons feed, one is the aiau, the other is the coconut palm. When we have found an aiau, we ask five people to take part; four provide us with the implements for catching birds. Then we fetch taro leaves and cut into many breadfruit trees. The sap runs out, we collect it in leaves; then we fetch ripe coconuts, grate them and mix them with the breadfruit sap; we then fetch charcoal and add that, in order to make the mass black. We mix the whole thoroughly; then we put it in a coconut shell (p. 346) /gourd-câhabash. Then in the evening we climb the tree. We take some of the contents of the vessel and put this on the branches until the vessel is empty. Then we go back to the house. On the following morning we have a look. And if many birds are nesting on the tree, about fifty have fallen down. We collect them and take them away. In the afternoon we fetch others again, for they are even more numerous than in the morning. We take them away and divide them among the families. Towards the evening we come again to get many more pigeons again, which have fallen down. We collect them and take them away, and do this every day until no fruit is left on the tree. That is our Ponape rifle, which we call; puil (lime).

The natives are skilled at laying snares. The general name for the simple snare made of a wooden bow, a rod and tackle is "letip" or "litip", which according to Christian means "betrayal of a woman." They call other snares "katikatia mau," roughly translated as "good attack." They also transfer these names to European rat traps.

1 O'Connell, Chap. XIV.

1 The birds fly onto the lime and remain stuck; they try to fly away and, in so doing, touch the lime with their wings, which gum up their feathers, so that the birds remain sticking to the branches or fall down from the tree with gummed up wings.
The chicken-trap litip, pictured in fig. 128 No. 540 II. (VMM; See phot: 1542 ECP 1005 Hambruch 347.) works in the following manner: The rod, whāb is nearly 2 two, meters long, is stuck into the ground. It has a long cord, en sör, at the top, at the end of which is a short stick, ki. A bit after the latter it is tied to a loop, kaisok. At some distance from the rod a bent piece of wood, kōlipe, is set up. The wood had been bent by steaming over the fire. A cross-piece, kūtsen, stiffens the wood and at the same time supports the vertical piece of wood, which is loosely inserted between the bent piece of wood and the cross-bar and bends the rod downwards, creating a strong tension. The hoop is on the ground when the catching implement is in this state and has a bait. When the chicken wants to eat it, (VMM; the bait.) (p. 347 fig. 128, 129, traps p. 348) and pulls the loop, i.e. the cord, the vertical piece of wood falls out and the rod kicks up, pulling the card up at the same time. The animal hangs in it by its foot, wing, or neck and hangs in the air caught.

The rat trap, kosuk, (no. 539 on fig. 129a and b, VMM; see photo : 1541 ECP 1005 Hambruch 347.) is to crush the rat which has been lured by the bait, and falls in such a way that the bound reed grid falls on the animal with great force, partly owing to the weight of the stone laid on it, but more because of the speed. A strong stick standing vertically in the earth is forked on top and bears a moving, horizontal stick, pē en karon, of the same strength. This is provided with two strings, at the salipe en karon, at the rear end, and at the front and with one string, kia. The former carry, in their loops, the ends of the sticks, otot, that are attached to the grid and point forwards in a diagonally downward direction. The front ends of the otot sticks lie on the reed grid, tit, which is weighed down with a stone, rakai. The front string, kia, is provided with a short stick, kisikir en pauo, (Christain: kachik) of palm-frond ribs. The last end of the string (fig. 129b) forms a small loop. When the trap is to be set, this string is drawn through the grid and

1 Christian p. 125 seems to assume that the
this brings the little stick at right angles to the reed strips of the grid, so that it prevents the string passing through further. Under the grid is a peg, pan en kisik, stuck into the earth, to which the loop is very loosely attached. At the same time it is provided with a bait of fermented breadfruit and other things. Even at the lightest touch the loop is freed from the peg or drags it out and now the weight of the stone takes effect. The grid is tipped backwards by the stone's weight, the three large horizontal sticks, pē en karon and otot rise in the air at the same time. Thus the grid falls down and crushes the rat.

1 Christian, p. 125, seems to assume that the stone hits the animal directly and kills it.
About War. (VNM; Native text 284, is omitted here.) (p. 349)

This is how the people of Ponape fought each other in olden time.

The nobles informed all their leaders and subjects that they should assemble to arrange an eating festival. They then assemble. Then the nobles order them to go home and put their war equipment in order, wooden spears, ray-sting spears and stone slings, in order to fight another district. They then go home and begin to make their equipment. Some carve spears, others put the slings in order, some go to the reef and gather ray-stings, take them home and fasten them on spears. They also gather the rays and fasten these on the spears, thus they finish the equipment and then inform the Nanamariki that all is ready. He then orders them to make their war aprons. They get there ready. Now the Nanamariki orders them to assemble, for in four days the war feast is to take place. During this feast, great dances are arranged, heroic songs are sung and the drum is beaten day and night. When four days have passed, the canoes are put into the water and manned. Subjects and leaders betake themselves to the Nanamariki. The Nanamariki now chooses some great title bearers to be the leaders in the fight. During the night they set forth; they set forth to slay some people of another district. While they then fight, a chief leader orders a man to blow the conch-shell trumpet to stop the fight or to return home. Then they come again and bury the dead people or sub-leaders, and the wounded are taken to a special house, and nurses are given to them, for nobody else is allowed to enter the house. During the war great title bearers have the superior command, for they are strong and beautiful, the Uasai and the Naneken, and those low in rank, and all the others, have to obey these two. The two lead the fight, so that not all people should be taken prisoner or the nobles be slain. Now when they have returned, the other district has begun and finished their equipment, and a man is sent to inform all
leaders that they are beginning a war. The people also inform the Nanamariki of it and that they want to go to the field. And they set the day when the fight is to begin. Then the people go home; and the next day, a mighty fleet sets forth in the morning. Then the tribe-members take their arms to engage the fleet; a great fight takes place; many people and some nobles are killed. They fight day and night, until the war-leaders give the order to blow the conch-shell horn and stop the fight. Then they stop, and all withdraw, then the dead are buried and the wounded are handed over to the war-leaders. They get on with each other again, for the blood-vengeance of some families has been satisfied. (Then (WIM; after the combat.) the war-leaders choose one of their sub-leaders, who takes a kava shrub and goes to the Nanamariki of the other party with it, as an atonement in order to settle the peace. He carries it there and then goes away again. The Nanamariki of the other party also chooses somebody who also takes a kava shrub to the chief. Then peace is made.)

Then (WIM; when the preliminary peace has been made.) it is like this one of the Nanamariki has a great festival arranged and informs the other Nanamariki of it, so that the two can meet and also ask their subjects to participate in it, in order to show them, that they are friends again and do not want to fight each other any more. Then the other Nanamariki asks all his people to go to the other, together. They sit down together, tell stories to each other and joke with one another. Thus the feast is celebrated to its end, then they stand up, go home and feel well because they won't begin an evil war, again.

And it is like this, the other Nanamariki also arranges a festival in return for the other. He also sends an invitation to the other. He then closes his people to go to the other, together; they sit down together and are amiable to each other. The chief then gives canoes, sails, roping, paddles, hails to

1 Payment.
the other. And this other one also gives him some things and thus gives as gift in return \(^1\) to the Nanamariki for his present. Then they go home, there is no longer discord between them, for they have settled their quarrels.

The Boat War. (Native text, 307, VMM; is omitted here.)

The fight over boats between two states is like this. When a district wants to go to war, this is not concealed, but they inform the district (and tells the other district) that they will set forth the next day to fight it. Then the people of the other district arm themselves and put their armor out in the canoes. Then they go out on the reef, for they want to fight from the boats, at high tide, the following day. During the night they prepare, nobody sleeps, all dance when day breaks. Then they enter the canoe to go towards the hostile fleet which is approaching. Before the fight begins, two canoes are chosen and two people, who are very brave; they go into the space between the two fleets, they turn the spear.\(^2\) And when this parade is over, the fight begins. Many people are hit and fall into the water. When they are taken up and put into the boats. Thus they fight until the tide begins to recede. Then they jump \(/{p.353/}\) out of the boats, advance towards each other and begin to fight. Then the stronger party pursues the other. Many are killed, many are wounded, they are also weakened, because many are caught; then the victors blow the conch shell horn, for the fight to stop and the other party should not to be completely annihilated. Then they go home. All those slain are buried, and the wounded are taken to a special house. Some people are destined to be their helpers, for no others are allowed to enter the place.

And this is what is done by the people who are not dead but have many wounds. They take knives and cut the spear pieces out of their

\(^1\) This present is given by the Nanamariki who arranges the second festival.

\(^2\) In the middle of each canoe stands a man who turns the spear in his hands and sings.
flesh, or if there are ray-stings, they turn them until the flesh is
loosened and they can be pulled out. They help the wounded until they
are well again, then, however, they determine to go to war again, which
is called "exhibition of the wounded." Then they ask the other
district to appear again in order to begin the fight anew. They come,
and now a great fight follows in which many are killed, many are
wounded, more than the first time. Also many more are killed. Then the
conch shall horn is blown. The fight ceases. They return home, bury
the dead and give helpers to the wounded. These help until they are
well again. Then (VMM; after the combat in a "beat war".) the "kava of
peace" is brought together/p.354/ in order not to fight any more.
When peace has begun, great feasts are celebrated. They sit down toget-
er. They eat together and joke with each other. When this is ended,
all ornaments are gathered and presented to the other state. They go-
home and also arrange a festival as a compensation for the other
district. They come, again sit down together, joke with each other and
give some things in payment, things which they have received before
from the others. Now all are content, for the quarrel between them
no longer exists. The people visit each other again, for now they do
no more evil to each other.

In comparing O'Connell's description with these reports, the thin-
that strikes one most is how thoroughly the present generation has
forgotten the effect of the castes on the waging of war. In (VMM; O'C
onnell"' day, the members of the three castes fought completely
separated against the corresponding castes of the enemy. The montsap
caste, the tsopeiti, led the forces. While, otherwise, paddling was
the work of the lowest caste, the nobles paddled the war-vessels alone,
and even the chiefs lent a helping hand. The seriso caste

1, this is by no means the rule
i.e., before the first festival the conquered people have to hand
canoes, sails, paddles etc to the victors, part of which is returned
by these to the conquered people at the second festival.
followed the first one, and the Nigurts formed the rear. Every caste
had its own war canoes. Even in the hottest fray of battle nobody
laid violent hands on a member of any other caste. Nobles fought nobles,
serfs fought serfs.

Notwithstanding the cruelty of the fight in which no prisoners
were taken on either side, a chivalrous trait in the war conduct of
the people of Ponape is evident, and their wars have the character of
a honorable duel. The causes were often slight. Generally they fought
each other for the sake of honor, hardly for economic reasons. The feud
experienced by O'Connell was begun because of a breach of promise
between two head chiefs. Kubary says: "Wars which were now and then
fought for the sake of retaining their prestige (acquired respect.) were more loud cry then perilous undertakings (dangerous for life.) ..."O'Connell's day the losses were not small, which is to be
traced back to the aforesaid custom of not taking any prisoners and the
devastating effect of the weapons: he says that there were between
between three and four (300-400) hundred killed on both sides.

War is solemnly declared by messengers, after the head chief
has consulted about it with his followers. The party challenged holds
a council of war, on its part and then also informs the enemy of the
time and place of the fight by messengers who are inviolable during
the battle. Before, this fixed time they refrain from all violence. They
preferably choose an island situated conveniently for both parties. In O'Connell's case, the party attacked went to meet the attacker at
the home shore of the latter. In every case the fight is started by
the boat war which was described elsewhere (VMM; See 494 ECP 1005
Hambruch 352 and 446 ECP 1005 Hambruch 353.) Attacks on land were,
O'Connell thinks not practicable because of the fear of the animan,
which are imagined to roam about everywhere, and the habit of "stargazing" of some people.

The wars were bitter and bloody. Every one got as many men as

1 Kubary, p. 130. 2 Pereira p. 103.
he could. All were ornamented with flowers and anointed with oil and turmeric. The fight began at high tide. The chiefs danced the war dance on the platform of their canoe while the conch shell horn was blown. When the parties had approached each other until they were 30 - 40 meters apart, the stone slinging fight began. Even is this there were many dead and wounded and vessels destroyed. Then they continued the fight with spears and arrows. Finally followed the very bitter hand-to-hand combat with clubs and knives for the landing of the beach. The death of the leaders brought only a short interruption. Once landed they slew every one who still resisted. Women and children were also said to be slain. Generally they will probably have fled into the bush, saving as much of their possessions as possible. (VNM; after a "boat-war"). The victors began to plunder the dwellings, in particular they took away weapons. Houses and boats were destroyed, but fruit trees and the land was spared. To destroy and devastate was considered brutal. After the fight nobody was slain. The victors, withdrawing took their dead and wounded with them, as well as the bodies of the fallen leaders of the enemy. O'Connell reports that at the celebration of the victory the chiefs had eaten the heart of the slain Uasai, while the body was burnt. The booty was distributed according to the decision of the tsopeiti. The party who wants peace (VNM; in a "boat war") sends a messenger to the enemy, who offers a beaker of kava; when the hostile leader accepts it, the peace is considered to be made. Presents are exchanged, they invite each other and do not bear any grudge against each other. /p.356/ Once the land of the conquered was said to have been confiscated. 1 According to Christian², the women accompanied the men to war. O'Connell does not report anything of the sort, and in any case it was probably not the rule. It probably was not a going to war with the men, but a last defense in the conquered village, at which the women perhaps do not all flee, but stand.

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1 Hambruch was told this; O'Connell, however, denies this expressly.
2 Christian p. 73.
History of the War between Kiti and Matolenim. (VMM; native text 200, is omitted here.)

Naneken en Kiti ruled in the district of Kiti; he went about everywhere in the country and celebrated festivals, until he got through with all. Then he went to Uona; from there he visited a place in Matolenim called Sapuerak. There he slew a man and returned to Uona. Now the Matolenim people went to Mutok and killed three people. Thereupon the Kiti people again went to Lot and killed some people. Then the Kiti people went over the mountains to Letau and murdered a man. And the people of Letau slew a Puhipuoi man for this. Afterwards the Kiti people went to Lot and killed a man. Thereupon the Matolenim people destroyed some small islands. Then the Naneken became angry, made ready a message and sent it to Matolenim to inform the Isobau and his people that they should come to an island outside of Lot, to Nalap en Lot to fight them there. The Naneken thereupon gathered his people around him, by no means all the Kiti tribe, but only his followers. They were... (their names). Only these districts left the state of Kiti in order to fight with Matolenim.

Thus they met on Nalap en Lot. A great battle ensued. There Naneken liquated many people, and the tribe of Matolenim took to flight. He returned to Kiti; and he considered continuing the war against Matolenim. He made many preparations for war, bought many rifles from the whalers and powder, and distributed them among all the people of Kiti. Then he went to Uona to the Nanamariki. He again sent a letter to Matolenim saying they should come to fight with him. Yet the Isobau en Matolenim sent a message to inform the Naneken en Kiti that he had enough of fighting, for he had too few people. Then they refrained; no fighting has taken place again between Kiti and Matolenim to this very day.

2. Weapons.

The old weapons has been completely displaced by European in 1910, and for this the Spaniards hold the Boston mission especially
responsible. In addition, disarming had been carried out in 1905 by the German Government in a peaceful way. Formerly slings, bow and arrows, spear and club were the most important weapons. The knife, too, was used in case of need. But shields and armor were unknown to the people of Ponape.

The sling, pai, was formerly used mainly in beat fighting, when the opposing groups had come to within forty meters of each other. (VMM; See photo 171 ECP 1005 Hambruch 358) (Fig. 130 of sling and stone.) Each man was provided with a sling knotted together from Hibiscus or coconut fiber. The bottom of the canoe was covered with the missiles, elliptically chipped stones (fig. 130c). Or merely suitably shaped brood pebbles. According to O'Connell, they seldom weighed less than one English pound and were hurled with absolutely miraculous accuracy. The same remark is made by Pereiro, who saw them use the weapon as hunting equipment in bird catching. They used them in order to spare the expensive munitions, although they had many rifles. According to Christian, the preference given this weapon (VMM; the sling.) also had the result that they esteemed nothing in the Bible so much as the fight between David and Goliath, and on this account the name "Tepit" was uncommonly popular among the Protestant inhabitants.

In contrast to the sling, bow and arrow have long since ceased to be used. The people of Ponape informed Christian that this was the weapon of the aboriginal inhabitants, the dward people of Tsokolai. (VMM; For bow and arrow; see photo 171 ECP 1005 Hambruch 359, fig. 131) The bow, katis or kasik, katiu or lūkape, had a span of one cord. The bowstring, sal en kasik, was twisted of Hibiscus or of breadfruit fibers and bound fast in a notch, sorok. The arrow, kanaia en kasik, consisted of Hibiscus wood or Alek, the sedge girlis, and was unfeatered, had no notch and was armed with the spine of the ray. In shooting, the bow was held horizontally, and the arrow held with thumb and forefinger of the
The spear, os, the favorite weapon at close quarters, is preserved in two varieties. Called after the type of wood employed, the katin or katel spear was carved of spear palm or mangrove. The point, imui, was bound with coconut yarn, simpam os, and had atx the sides the spines of the ray, tin tir en os. The other kind was called kan mant, kalau, mai, according as to whether Hibiscus or breadfruit wood was used. The point was only narrowed. Spines were missing. It is striking that, according to O'Connell, the spears were not hurled, (VMM; see illustrations in source 1005 Hambruch 360) (p. 361.) but used only at close quarters. The warriors tried to seize each other, to get hold of each other's hair and to make severe flesh wounds with the weapon or to bore the through opponent. The attacker called at the same time: "uei lau el a mela!" —Aside, death strikes you!" If the thrust did not succeed, the man attacked replied: "tso men lâ, lo kokoala," i.e. "No, it goes in there!" The spears shown in figs. 132 and 133 belong to the first group; those in figs. 135, 136 and 137 to the second. The spear in fig. 134 is a special piece that is distinguished by the long, fine point from 552II, 475II and 477II.

The club, lip en uoan or lep en uok, of katiu (Ixora) or iak (mangrove) was carved round or with corners (angles.). The round clubs were also called punopun, the four-cornered pama xapag. The pyramid shaped point of the latter was called kapi, the shaft olole, the handi manile and the round knob mano. The club was carried in the belt, and they were first used in better close range fighting, when it was a matter of life or death. They were never thrown in warfare, but they were sometimes thrown by chiefs in rage at their subjects.

The axe is apparently never anything but a tool and, in addition, a symbol of power, but not a weapon. But on the other hand they have the knife kapit or lopuk, both as a tool and a weapon from olden times. Even women and young girls habitually carry one with them. O'Connell relate

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1 Katiu means the wood Ixora according to Christian, called spear palm by Hambruch.
Christian p. 136 calls the bow kachhik en katiu, witerally make shoot of katiuwood."
2. O'Connell p. 219? The club are the last resort, but are never hurled.
how the wife of a Seriso once wounded her husband with her "cidjie" to such an extent that he later died of the injury. According to Christian, the kapit consisted of split bamboo, the lopuk of the shell of the common mussel. Since the introduction of iron goods, the men, according to Pereiro, wear knives half a meter (VMM; figs. 138-9, clubs see source, 1005 Hambruch 36?)

1 katiu designates the wood, Ixora according to Christian, by Hambruch called spear palm. Christian, p. 136, calls the bow "kachhik en katiu", literally "make shoot of katiu woods.

2. O'Connell, p. 219... The clubs... are the last resort, but are never hurled.

3. O'Connell Chap. XIII

4. Christian, p. 137. For knives he gives the terms: lep en tuka, chup en tuka and ghup en pok.

p. 362/ long and three fingers broad, the women wear small bent American knives under their armpit, both of them without sheathes. The latter they call nichin naep, i.e., small knives.

The spines of the ray fish serve as daggers, of en likant en kap.

According to O'Connell, they built ramparts for defence, which were still employed in 1910.

VII. Utensils, Tools and Technique.

1. Wooden Utensils and woodwork.

In ancient times the people of Ponape were excellent woodworkers. The canoe carvings, dance paddles and clubs are witnesses of their skill, (fig. 140, wooden bowl, VMM; see source 1005 Hambruch 362.) But in 1910 wooden utensils like these on Palau or in the central Carolines were no longer found. O'Connell also says nothing about them. Yet in our time, there are still beautiful wooden bowls, kasax, which revealed great skill in technique and a good sense of form. Christian also saw in the better

1 Pereiro, p. 126. 2 Christian
30 O'Connell Chap. XII.
4 Christian, p. 137, see above.
houses chests with lids, but it is not clear if they are old or European furniture. The bowl depicted no. 495II of breadfruit wood is a vessel of the kind that Christian saw used in the preparation of fish perfume. The base, lole en kasex, is comparatively small and even inside and out. Therefore its walls, lole en paniapaña, are very slanty. The upper edge, au ue en kasax, is beveled, (slanted off.) The oval bowl is drawn out towards the ends and from the points, emuel, to the base there runs a sharp ridge.

/p. 363/ (They manufacture their water containers of gourds or coconut. According to the purpose intended, the opening is made wide or narrow. For hanging up, the vessel is surrounded by a knotted coconut yarn container, or a pair of cords are attached to the upper edge. As a universal instrument they use a strong club of heavy wood. For carrying fruit and fruit baskets they employ a staff.)

The chief tool in woodworking was formerly the shell axe (hatchet), which was also a grave present and sign of sovereignty. They distinguish three kinds: 1 zile mal, (figs. 141-2, water containers, fig. 143, knee axe, WNM; see source, 1005 Hambruch 363.) 2 zile paniapa and 3 matau. The first kind had a curved haft, the second an acute angled one. The blade of the matau hatchet could be turned. The grinding of the blade (WM; of a shell axe.) from the shell of the Tridacna gigas was extraordinarily tiresome. According to O'Connell, a man worked at it for two to three months, although with interruptions before he fastened it to the haft. Hard blows could not /p. 364/ given with this axe. (axe blades have been found in great quantities in the ruins and are depicted in vol. III. The axe shown here is of the zile paniapa variety. The steeply ground blade is bound to the support, and vertically to the haft, by

2 Christian, p. 195.
means of coconut fibre. It is bound evenly and almost ornamentally.
(the binding is carried out precisely.)

2. Stone and Shell Utensils.

"to judge by the excavations, stone and shell utensils played
a great part in bygone times. Basalt was the chief material. If they
did not simply use a suitable block just as they found it, they put
themselves to great trouble or working it, as the mortars show. (VMM;
see source, 1005 Hamburch 364, figs. 145-150, mortars, pestils, stor?)
The utensils collected in the ruins are profusely illustrated in vol.
III. In the Hamburg collection is to be found a very fine basalt mortar
(fig. 144, no. E 426.) Fig. 147 shows a scraping stone of basalt,
sacred to the goddess Kemai. It is used as described by Christian
(cf. p. 266.), to prepare anointing oil. Fig. 150 no. 529 II is a rough,
long stone which, like /p.365/ the wooden clubs is used to open
coconuts. No. I C 14206 (Stuttgart) and no. 534 II are pestles of
coral times'one. Before the abundant importation of European ironware
they used as scrapers and knives the shells of snail and mussel,
for scraping breadfruit they ground in the shell of the Cypraea
panthazina (two holes.) as is usual, in general in the Carolings.
(Fig. 148.)

3. Preparation of Fiber. Cord making and Netting. (Yarns and But-
tons.
The preparation has already been described in detail, p. 280. (VMM;
See 1625 ECP 1005 Hambruch 280H.) For making string the natives
most frequently use hibiscus and coconut fiber. They also know how to
manufacture yarn from kind of seaweed, xolot. In the following native
texts, describing the making of the string and nets the preparation
of the necessary fibers is described first. Twisting is carried out
freehand from right to left or from left to right, according to the
position of the worker, between fingers and thumbs. According to the
people's own statements the twine twisted to the right is better than
that twisted to the left. They do not seem to know any accessories for
this work. Twisting is men's work.
Preparation of Seaweed Twine. (VWM; Native text no. 356, is omitted here.)

Seaweed twine is made in this way. The people go to the reef and use their feet to tear up the ground, then they tear off the roots and afterwards they remove the leaf ribs. Then the people take them and spread them out in the sun and turn them over until they are well dried. Then we strip off the skin; we keep on in this way until we have enough. Then we take the bundles of seaweed and disentangle them, so that they can be used in making nets. Then when the separate pieces are ready, we cut ourselves net winders in order to knit the nets with them. Now when we want a really big net, we make thirty (eyes) double meshes, ten small double meshes and seven fish meshes /p.366/

We count the meshes of the net by two meshes up to ten, then in the same way up to twenty, then in the same way up to thirty. We call these the small meshes, but we count the fish meshes individually. We do it in this way, too, when we do not want to make the net larger. Then twenty double meshes are made and ten small meshes, but always seven fish meshes. Thus we make the net to the end. Then we put it in fresh water and wash out the salt water, so that it will not break or even spoil. After that we make the net frame in order to arrange the net threads on the upper and lower holding line (?5mm). The people draw these through the meshes of the net and fasten them to the net sticks, they also bind the floats on the upper holding line, so that the net will not sink, for then the fish would escape over the net and would not be caught. I always make my net in this way.

The Manufacture of Coconut Twine. (VWM; Native text, is omitted)

The people bring down more than twenty nuts. We strip off the husks and make one to two hundred strips of fiber from them. The people then make a hole on the beach and put leaves in it, then they put in the strips of fiber. They let them lie there for about a month, then they go and take them out and put them in fresh water, until
they are right. Then we spread them out in the sunshine until they are dry. We take them away and take them into the house. Then we roll /p.367/ them at every hour by day and night until they are used up. Then we wind them and make balls or little packages of them. We hang these up in the house. When we build a house we use them, also when we build a canoe, and we give away them when the people want to have them and they pay us for them.

This is a king of rotting hole (faulloch). When the fiber is not yet ready to be used, we fetch a club, the aut; and with it we beat the fiber until it is good and thereupon wash it out in water. Then we make coconut twine out of it.

This is the way in which the people twist the fiber. The people who are right-handed twist coconut twine that is called right-twisted twine, and people who are left-handed twist twine that is called left-twisted twine. Right-twisted twine is excellent, left-twisted twine is less good.

The finished twine is artistically wound in balls. (figs. 151-2, balls of yarn, WMM; source: 1005 Hambruch 367.)

/p.368/ Netting, tautau, is done in the usual way with a needle and rod. The mesh and the knots have no peculiarities. Small fish nets (figs. 153-4, net and hanbag knot, WMM; see source, 1005 Hambruch 368.) are usually made of breadfruit or hibiscus fiber, for larger nets they choose coconut twine.

The Making of Nets. (WMM; Native text, is omitted here.)

When beginning net making they say:
"I make, make, make small meshes,
I make, make make large meshes,
What shall I make? Small meshes are quickly made, yoho!"

When one wants to make a net, one first goes into the bush and fetches hibiscus fiber, a whole bundle. One puts it in salt water and lets it rot. Then one scraps it and then makes the
net. One begins two pieces and finishes each piece. Then one puts the two pieces together, and it becomes one net. The middle of the net is formed by the holding lines being twisted together, then two ropes are drawn in at the two long sides. One is called opa, the other olañ. The line is fastened to the opa, the net floats to the olañ. Some shells are /p.366/ (for the attachment of net sinkers.) bound in a row to the net sinker line and also in the middle of the net. When that is finished, one counts off the shells of the net sinker line, seventeen shells that are attached there, and in the same way one counts off from the middle of the net and fastens seventeen shells to it firmly. Then one measures, and if all distances are equal, it is good, and if one is too long, it is bad. When that is done, one fastens the nets ends. Then one rolls the net up in two balls. One pushes a canoe into the water, puts the drag-net in it, goes to the lagoon, catches fish, and then one can eat.

Technical Expressions.
Net sinker at the end of the drag-net: ilañ, with different knots that will be "discussed" individually.
Knots: sen.
Wooden float for net: us.
Shell: pelik.
Middle of the net: usaini.
Lower of the net border: imuin set.
Middle of the net bag: kapus.
Side line for sinkers: ñna (ópa?)
Side line for floats: olañ.
Wooden pôles: tiauit.
(Incantation when making a small net.)(VMM; Native text no. 131, is omitted here.)

When cutting the poles, this is uttered:
I cut for my little net, the little net,
Net to the beach, to the beach, full of fish;
I cut fish for Saukapir's¹ and Ketin Kapira's net.

¹ Guardian spirits of the net.
The two do not cut, but I cut.)

/p.370/ They not only make fish nets, but they also make carrying bags in the same way, it or lukauk. The very strong net chosen for this purpose lukauk. (VMM; for figs. 155-6, bags, see source 1005 Hambruch 370.) Of rectangular form, is folded along the middle and fastened by the long sides, opalum to a bow, kau, of kibiscus wood. The fastening is called sotohe.

/p.371/ The accompanying sketches explains the knotting of the grass skirts. (cf. pp. 280 ff. VMM; see 1625 66P 1005 Hambruch.) Over a string of strong yarn or leaf ribs, are laid the fringes of bast strips of palm leaf strips, and they are individually knotted. Often they are also stitched through afterwards. (V.M; see source 1005 Hambruch 371, fig. 157, method of knotting grass skirts.)


Basketry and sewing are women's work. Baskets and mats are the chief products, coconut and pandanus leaves the material used. As for baskets, kiak one must distinguish between those prepared for one meal or for a few days only, which are quickly plaited, and the better baskets, made with and more trouble. For both kinds, halves of coconut palm fronds are used almost exclusively. The split middle rib gives the necessary support to the basket of the first group. The "feathers" are put to one side, plaited into the cord binding (linen pattern) and knotted at the end. As far as the technique is concerned. (p.372) figs. 138-9. ("lili" di for the head chieftains (VMM; see source, 1005 Hambruch 372-373.) (p.373) figs. 110. (plate and eyeshield) the eye shield in fig 161 is belongs to plaited work of this kind. It is worn when fishing or travelling in boats.

The basket bag no. 3383 II on fig. 162 (VMM; see source 1005 Hambruch 374.) is indeed intended for a longer period of use, without attaining the delicacy of workmanship. The ornamental, four-cornered baskets kopou. Since the basketry, bags are frequent elsewhere in the Carolines and have been described several times the manufacture of the four-cornered baskets may suffice here.
One makes a box-like carrying basket in this way. One fetches palm fronds, cuts them off and divides the frond into three parts; then one makes the parts equally long and makes six parts of them. Now one splits up the fronds and removes some that are too broad. Then one makes first one, and then the other side, and plaits them together. After that, one attaches the narrow sides to them. We also attach the edge firmly to it and provide it with handles (carrying bands). Then we knot the handles and call them "holding bands."

Edge: auue'n kopou
Strap of plaeting material: pei pa'apa'ah.
Plait: pei uer.
Corner: kapuili.
Narrow side: pān tisak.

Many of these baskets are provided with firm wooden frames. The kind of plaeting is varied and often irregular as can be seen from the drawings.

The better fire fans are plaeted of bleached pandanus leaf strips and are triangular in shape.

The manufacture of the fan. (VMM; Native text no. 360, is omitted.)

One dries (the fronds) in the earth oven like the aprons and then removes all the ribs of the fronds. Then one makes them into a bundle and puts them in fresh water. On the following day, one gets them again. Then they are hung up to dry. Now we smooth them. And when we want to make a big fan, we count off one hundred strips. But when we want to make a small fan, we count off fifty or sixty strips. We make them equal in length. Then we bind them together and begin
to make the fan handle in this way. Then the plaiting begins. We make
the piece for the upper edge last. We bend down the ends of the strip
of material and stick them underneath. We cut off all the points that
remain.

There are two kinds of mats, plaited and sewn. Those compared
by O'Connell to a reeded screen seem to have been mats of the second
kind, which were hung in the open sides of the houses. (fig. 168,
sewn pandanus sleeping mat.) (VMM; see sourcd 1005 Hambruch 377.) The
plaited mats, as are those worn, are made most frequently of pandanus
leaf. They offer /p.378/ no peculiarities are found in various sizes
and have the cord binding (leinenbindig.) in a diagonal direction.

The sewn mats on the other hand, (VMM: for illustration see sourcd
1005 Hambruch 378) are valuable and demand lengthy, (figs. 168-172,
mats and pandanus leaves.;) /p.379/ tedious work. The manufacture is
described in the following text:

The manufacture of the Sleeping Mat. (VMM: Native text is omitted.
no. 359.)

One used to make sleeping mats in this way in Ponape. One went
to a pandanus grove to a place called kapilap. One collected a great
quantity of pandanus leaves. We cut off all leaf points. We bind the
leaves together. We bring them home. We then put them in the water
and moisten them; we take them back and remove the sharp points of
the leaf ribs. Then we smoothe the leaf surfaces /?Blatispreiten/. Then
we roll all up and then unroll them again. After that we spread them out again until there are many of them; we roll them
up again and make the leaf rolls. Then we untie these again and remove
the points and the leaf ribs and make the rolls of the leaves. Then
we spread them out again, that is called aiasuk; then we sort out
the short leaves from the long and put the former on this and the latter on that heap; Then we roll them up again and make two leaf
rolls, the one is called pualepits (long leaves), the other irare (small narrow leaves). We hang them up.

1 Woof strip 2 Woof strips.
Then we go the bush and fetch hibiscus. We take off the stems. We lay them in salt water. Eight days later we get them again and peel them, wash them out in fresh water and hang them up (bark and bast)/p.330/ to dry. The we look on the reef for a shell the, pelikon, and another shell, the sakir to sharpen the sewing needles, which are made out of hen's bones.

Then we start the mats; First of all we fold a strip of plaiting material; we lay the leaf strip down, spread it out and fold it in two halves. Then we fold the woof, lay it down and stick it into the beginning of the mat. One takes two strips, one on one side the other on the other side. Then we take the needle. Now we begin to sew. When the sewing is finished, we lay the warp strip down and do exactly the same on the other side. Now we takes small piece of it and stroke it smooth on one side and the other. Then we tear out a little piece of this at one end and the other. In this way we sew every day. Now when one part of the mat is ready, one cuts around the sides of the mat, until the mat is ready. For a large sleeping mat one needs twenty parts, for a small sleeping mat ten parts. When the mat is ready, one cuts around the ends of the enclosed strips. Then one rolls up the parts and cuts round the sides regularly. After this one fetches pandanus leaves, to sew them up at the ends of the sides. If we have obtained young leaves, they are put in the earth oven and afterwards spread out in the sun to dry. Then we roll/p.381/ them up too. We also remove all the spikes of the leaves and put them at the end of the sleeping mat. Before we sew them on, we put the pandanus leaves into pieces and make six pieces. Four small and two large pieces are put together. Then they are sewn firmly to the edges of the mat. One needs a great deal of time to make a sleeping mat; whoever is industrious and good at sewing needs a year for a sleeping mat, a lazy person needs two years to make the mat.
5. Weaving.

Weaving was already a forgotten art when Christian visited the island.¹ In 1910 only one old woman was still able to give information about it. Yet (fig. 173 warp frame, VNM; see photo 1624 ECP 1005 Hambruch 38) /p.382/ figs. 174-5 looms.) /p.383/ the old pieces collected earlier bear witness to the former flourishing of this skill. The loom, tantar, (VNM; for photo see 1624, ECP 1005 Hambruch 382) was set up as usual and the woman weaving stretched the warp out to the distance at which she sat from the warp beam. The cloth beam was fastened to her body by means of a broad pandanus girdle. It is a broad board provided with grips, while the warp beam consists of an ordinary, thick, round wooden bar. The sword can be distinctly seen in fig. 174, the leipzig loom. The number of auxiliary pieces of wood varies with the pattern. The warp also, (for the same reason), is knotted together from variously colored yarn. That makes it necessary, when warping, to count the separate movements and, to change the dyed yarn (e.g. black, white, reddish-white) in keeping with the latter part of the pattern.

In warping one uses a warp frame (VNM; For a photo see 1624 ECP 1005 Hambruch 381.) resting on four legs an ordinary beam, in which the (warning) sticks whittled at the lower end, are inserted (fig. 177). The stick, a represents the the warp beam, the stick b, the cloth beam, c, the headle (?schlingenstab), d, the bease rad? (cross staff) (kreuzstab) and e, the shedding stick, (separating staff) (trennstab).

The other, undented sticks are auxiliary sticks for patterning.


To prepare red lacquer, which is chiefly used as a canoe coating, the nuts of the ais tree are used. According to Christian, this is Parinierium laurinum. "It grows fairly tall and produces large circular, dough, reddish-brown fruit of the dimension of a cricket ball. A concoction of the shell serves to paint the canoes red and the core yields a good varnishing oil which is used together

¹ Christian. p. 131.
with clay to caulk the cracks of leaking boats."

According to Hambruch, a new canoe is first coated with red earthcolor and then varnished with ais. In all, it is coated six times alternating paint and varnish. (fig. 176, fruit of Parninarium laurinum.

The grated cores are kneaded into a ball, lupen, and put in this form into a coconut shell, called inipel. Then the juice is pressed out and caught in a wooden trough. By putting in hot stones, the water is evaporated. The residue forms the lacquer.

The Preparation of Lacquer. (VMM; Native text no. 350, is omitted)

This is the way lacquer is prepared on Ponape. We go into the bush and pick fruits from a tree, called ais; we fill many baskets with them; we take them home and put them down. On the next day we cut them up. Then they are grated together. We make the mass into a ball and make many balls out of it. Then we light a fire and put the shells of the ais on the stones until they have become hot; then we tear them apart. After that we put them in taro leaves, we also put all the ais balls there. Then we cover everything with leaves. Now we take off three branches and one that is crooked. We make them ready for use. Then we fetch coconut fibers and also a wooden bowl which is put underneath the pressing rods. The people then take an ais ball, put it in the coconut fibers and lay it in the bend of the crooked branch. Then we press the ball out into the bowl. After that we take the mass out of the bowl. They make a bag (of taro leaves) and make a gole in it, so that the useless moisture runs out and the good remains behind. We pour this back into a wooden bowl. Then we put in hot stones until the mass into a calabash or into a battle. It is corked. Then we put the prepared mass away.

In accordance with their own indications they obtain red, black

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Concerning Red Color. (VMM; Native text no. 331, is omitted here.)

(First of all we gather red earth. When we can not find any, we go to a piece in Matolenim, beyond Senipein. Here is the place where there is a whole with red earth. We buy it from the people who own it. Then they give it, and we take it away.) We put it in a wooden bowl and pour water on it, and knead it thoroughly until it is good. Then we paint the boats with it.

Concerning Black Color. (VMM; Native text no. 331, is omitted here.)

In this way we make the black color. First of all we fetch fruit from a tree called sōm, a tree that grows between the mangroves. We take all the fruit with us, take off the shell, wrap them in leaves and put them first in the fire: after that we take them put and squeeze them out into a coconut shell, then we throw in pieces of charcoal and stir. Then we paint the paddles with this color solution.

Concerning Orange Color. (VMM; Native text no. 353, is omitted here.)

First of all we dig out ginger roots, and then we take them to the water and clean them of earth, peel off the skin and take them away. We chew them in our mouths, spit it into our hands and rub it into everything we want to dye, even skirts.

Concerning a Method of Dying Skirts, Red. (VMM; Native text no. 354 is omitted.)

We get the roots of a tree that is called u'ipul, peel off the bark and then squeeze it out into a wooden bowl. Then we take some lime and mix it with it. After that we fetch the skirts and lay it in this for a night. On the following day we take it out. It is hung up to dry and then it has become red.

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1 According to Christian p. 330 a kind of mangrove, Lnuguie.
2 According to Christian p. 347. morinda citrifolia.