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## RESULTS

OF THE

## SOUTH SEAS EXPEDITION

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DR. ANNELIESE EILERS: WEST CAROLINES VOLUME 2

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## WEST CAROLINES

BY

## DR. ANNELIESE EILERS

PALAU TOBI, MERIR.

## HAMBURG

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## Note to the Reader:

Note to the Reader:
Originally Dr. Eilers wrote two volumes, West Carolines 1 (covering the islands of Tobi and Ngulu), and West Carolines 2 (covering the islands of Songosor, Pur, and Merir). Since Ngulu today is politically a part of Yap and the FSM, not the Republic of Palau, the KETC committee decided to leave this island out of the printe volumes. The committee plans to donate the Ngulu volume to Yap whenever the two Yap South Sea Expedi tion volumes will be translated in the future. The Southwest Islands today consist of two states of the Republic

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of Palau, Sonsorol State (Sonsorol, Fanna, Pulo Anna and Merir), and Hatohobei State (Tobi and Helen Reef).


## TOBI.

## 1. History of Discovery

The first account of Tobi comes from Woodes Rogers, who sighted the island on April 10, 1710, as he wa voyaging from Guam to Ternate on his ship "Duke of Bristol." He gives only a very short account: April $11^{\text {th }} \ldots$. Nothing remarkable has occur'd worth noting, but that we have generally had a strong Current setting to the Northward. At Two Yesterday Afternoon we made Land, bearing S.E. distant about 5 Leagues, being a low, flat Island, all green, and full of Trees. Lat. $2^{\circ} 54^{\prime} \mathrm{N}$. This Island is not laid down in any Sea Chart; our Ship continues very leaky .....

Apparently, he thought his discovery so trivial that the island did not even receive a name. The next to notice the sland was Carteret, on his 1767 journey with the ship "Swallow." He writes:"
(Monday $28^{\text {th }}$ September $1767 \ldots$...) In the Evening, we discovered from the mast-head another island to the southward of us: the east end of it seemed to rise in a peak, and the appearance of a sail, but we did not go near enough to see any thing of it from the deck. I suppose its latitude to be about $2^{\circ} 50^{\prime} \mathrm{N}$., and its longitude, east of London, about $136^{\circ} 10^{\prime} \mathrm{E}$..
E...........


Fig. 1. An Island seen from the mast head \& this view taken there Sept. $29^{\text {th }} 1767$. S. $50^{\circ} \mathrm{W}$. (Carteret).
After this report, Tobi bears the name "Evening Island" on some maps. But as yet, no connection was made between the two discoveries. It seems that a few years later the Spaniards too "discovered" Tobi. In 1773, the ship "Nuestra Señora de Consolation," also called "Buen Fin," sailed from Manila to San Blas, Mexico. The helmsman was Felipe Tompson. ${ }^{3}$ His account is not available, but Jos. Espinosa reports that according to it, the ship was not far from the New Guinea coast on March 5. ${ }^{4}$ In a Spanish atlas ${ }^{5}$ from the last decades of the eighteenth century, there is a map on which a reef is marked between Pur, Merir and Morotay at approximately longitude $127^{\circ}$ east the date 1773 has been added, and underneath is the caption "Ba. S. Feliz." Since the longitude was presumably reckoned from the Madrid meridian, a calculation on the basis of the Greenwich meridian would give a longitude of about $131^{\circ}$. It is likely that Felipe Tompson's journey and this note go together. The reef is Helen Reef, called Osariki by the natives of Tobi.

1 Woodes Rogers: A Cruising Voyage round the World. The Seafarers Library. Ed. Manwaring. Cassel \& Co. Ltd. London, Toronto, Melbourne and Sydney. First published in 1712, reprinted 1928. P. 273. The old Dutch translation: Nieuwe Reize naa de zuidzzee, van daar naa Oost-Indien, en verder rondom de Waereld 1708-1711; gedan onder het bestier van William Dampier. Int Engels beschreven door Woodes Rogers, Kommandeur en Chef van de Schepen de Hertog en Hertoginne van Bristol. Vertaald door C.P. Amsterdam 1715 , p .342 contains a edition has a "Waereld-Kaart, aanweisende de Kors van W. Rogers reistogt rondom den Aardklot van't Jaar 1708-1711." The newly discovred little island is not indicated on it. According to Wichmann, Nova Guinea Vol. I, p. 164, the Woodes Rogers voyage is also described by nother participant: Edward Cooke: A Voyage to the South Sea, and Round the World. Performed in the Years 1708-1711. London 1712. However, he characterizes this account as "even more unsatisfactory" than that of Rogers himself.
Carteret's journey, published by John Hawkesworth: An account of the Voyages undertaken by the Order of His Present Majesty for Makgiscoveries in the Southern Hemishere and successively performed by Commodore Byron, Captain Wallis, Captain Carteret and Capt. Cook in the Dolphin, the Swallow and the Endeavour. London 1773, Vol. I, p. 389
Wichmann, Nova Guinea I , p. 219.
Jos. Espinosa, Memorias sobre las observaciones hechos por los navegag
Anonymous Spanish Atlas (1789?) with the routes of the galleon voyage


Fig. 2. Map from the "Spanish Atlas" 1789?

In 1782, Tobi was twice (in January and July) sighted by the ship "Lord North" coming from Canton under Captain William Hambly. The island was named after the ship, and its position given as $3^{\circ} 2^{3} \frac{1}{4} \mathrm{~N}$ and longitude $131^{\circ} 20^{\prime}$ east. The ship had its course set for the Strait of Makassar, but was blown off course to the Pacific Ocean by unfavorable south winds coupled with a strong northerly current. ${ }^{.}$The first detailed report about Tobi became known through the travelogue of John Meares. He was employed by a trading company he had founded which purchased two ships, "Felice" and "Iphigenia," and traded mainly furs from Canada to China. The ships usually sailed separately, alternating with each other, and the "finding" of Tobi can be credited to the captain of the Iphigenia, Douglas. His report is contained or reworked in the work of Meares:2

[^0]"As they were proceeding to the Northward and Eastward, on the 9 th of March a small island appeared, bearing East half North, at the distance of about ten or twelve leagues. They continued steering up with it till nine at night, when observing a great number of lights on the shore, Captain Douglas imagined that they were kept burning in order to induce the ship to stop. At eleven o'clock, it being considered as hazardous to run during the night, which was very dark, the ship was hove to, but no soundings could be obtained with fifty fathoms of line. At break of day on the 10th they made sail to close in with the land, when several canoes were seen approaching. They therefore again hoved to, in order to permit the natives of the island to come on board. -For some time they kept at a certain distance, holding up cocoa-nuts in their hands; but they no sooner saw the hatchets which were exposed to their view in return, than the Iphigenia was favoured with an immediate visit. From the whole of their conduct, it very evidently appeared that they had never before beheld such an object as that which now engrossed all their regard, as it called forth their utmost astonishment; and from the very great indifference with which they promiscuously received every thing that was offered to them, it seemed as if the ship alone was the object of their attention.

It was indeed that the Iphigenia should remain off this island for a day, in order to get a supply of water, of which they were informed by the natives there was great abundance. In the afternoon the canoes returned with more cocoa-nuts and taro-root, and the inhabitants seemed to have learned, since their last visit, the value of iron; as they now would take nothing but Owashee, Owashee, which is their word for that metal. They were entire strangers to fire-arms; for one of them expressing a wish to have a pistol, Captain Douglas discharged it; -which alarmed him to such a degree, that when it was held towards him, he kissed the barrel, but could not be persuaded to lay hold of it.

This island, which was now named Johnstone's Island, lies in the latitude of $3^{\circ} 11^{\prime}$ North, and in the longitude of $131^{\circ}{ }^{\prime} 2^{\prime}$ East. It consists of low land covered with verdure, and cocoa-trees, and is about a league in circumference. One tree in particular rises above the rest, and appears at a distance like a ship under sail. -What the island produces, besides cocoa-nuts and the taro-root, was not discovered, as the inhabitants brought nothing to barter but those articles. -The natives did not appear to exceed the number of two hundred and are a stout, robust people. Their canoes, which held twelve or fourteen of them, were exactly the same as those of the Sandwich Islands; and the people not only displayed the same activity in the water as the Sandwich Islanders, but made use of several expressions which Tiana (a Sandwich Islander) readily understood. A fine breeze springing up, Captain Douglas gave up his design of taking in water at this island, and continued his course to the Eastward ....."

The following year, the squadron of John Davy Foulkes was stationed in these waters. It included the ships "Asia," "Raymond," "Contractor," "Bridgewater," and "Duke of Montrose." The latter sighted Tobi on January 1, 1789 and apparently called it Neville Island. It was under the command of Captain Joseph Dorin. ${ }^{1}$

Some little-known detailed reports about Tobi were published in 1833 and 1839. The American ship "Mentor" under Captain Edward C. Barnard was shipwrecked near the Palau Islands on May 20, 1832. The crew was rescued and treated kindly by the natives. The captain could not stand it there for long and did everything in his power to get back off the island. After a futile attempt, they finally managed to leave the waters of the Palau island group and reach the open sea. Three Palauan natives had accompanied the sailors, chaperoning them, as it were, since the natives were eager to obtain ransom money for those they had rescued. A few Americans stayed behind as hostages, some voluntarily, apparently preferring the safety of the island to the uncertainties of a sea voyage in such fragile vessels.
1 Wichmann: Nova Guinea Vol. II p. 242. In his account, Wichmann refers to the information in Horsburgh's India Directory, 4th Ed. II.,
London 1836, p. 571 ; Oriental Navigator, London 1801, p. 565 ; and George Robertson: Memoir of a Chart of the China Sea, London 1791 , p. 102. In this work, Tobi is called "Navil" "sland and erroneously placed south of the equator.

The others met their fate on the open sea. In constant danger for their lives and at the end of their strength, the sailors reached Tobi and were taken on land by the natives. Two reports of this event survive: an earlier one by Captain Barnard, and a later very detailed one by two of his crew, who remained captives of the Tobi natives for many months. The two accounts differ strongly in form and especially in tone.

The captain matter-of-factly relates the events and clearly sees them as more harmless, pleasant and mild than the experience of the sailors would seem to justify. The reason for this is clear enough: Barnard got himself rescued onto a passing ship as soon as he was able, with one single companion from his crew. He did not succeed in delaying the Spanish ship that saved him from his predicament long enough to bring the rest of his crew on board. Later, too, he did nothing to bring them back. His conduct was less than comradely, since the account of the sailors makes clear how much they were counting on his help. He justifies himself by portraying the sojourn on Tobi as not at all unpleasant, and is at pains to prove he had every reason to believe that all those left behind were doing quite well. Apparently, he himself was treated well, and the miserable time that Holden and Nute were forced to survive was the result of a famine that did not set in until after his departure. ${ }^{1}$

The sailors Nute and Holden, on the other hand-the latter the author of the second account- ${ }^{2}$ are writing from the opposite point of view. As the last of the survivors and themselves at death's door, they finally arrived back home, completely pauperized, with the help of friendly traders. ${ }^{3}$ To obtain a little support for them, John Pickering ${ }^{4}$ of Boston had them give an account of their experiences. Unfortunately, the tone of the story is totally foreign: it is not the simple seaman who speaks, but his voluble publisher.

Captain Barnard begins with the departure from Babeldaob. ${ }^{5}$
"On May 18, 1832, I passed the island Mortz (Morotai) and the ship, driven by a strong south-southwest wind, took its course toward the north-northeast and was making about 7-8 knots per hour. Around noon on the $20^{\text {th }} \mathrm{I}$ sailed toward the northeast and on the following day around the same time I thought we must be to the northwest of the Palau Islands. Since our departure from Mortz I had not seen the sun at all; a strong wind was blowing from the south-southwest, it was raining in torrents, and the sea was very rough. We were now at latitude $8^{\circ} 50^{\prime}$ north and longitude $132^{\circ} 20^{\prime}$ east from London; for the rest of the day, our ship was carried away by a very powerful current. Around eleven o'clock at night it suddenly hit a cliff..."

1 In this context the judgment of Hale should also be mentioned. He writes:
"It should be mentioned that the release of the four Americans who survived (two of whom got free a short time after their capture [Captain Barnard and the seaman Rollins]) was voluntarily on the part of the natives, a fact which shows that the feelings of humanity were not tively to the condition in which the natives themselves lived, than they would have been on any other island of the Pacific. Men who were actually dying of starvation, like the people of Tobi, could not be expected to exercise that kindness towards
others which nature refused to them."
2 The title of the American original is: A Narrative of the Shipwreck, Captivity and Sufferings of Horace Holden \& Benjamin Nute. Horace
Holden, Boston, Weeks, Jordan \& Co. 1836, IVol. A copy is in the British Museum . Relation Holden, Boston, Weeks, Jordan \& Co. 1836, I Vol. A copy is in the British Museum. -Relation du Naufrage de la Captivite et des Souffrances de f. Hooden en de B.-H. Nute, qui, embarquues sur le navire A mericain Le Mentor, furent jetes sur tes iles Pelew en 1832, e, dex des Voyages et des Sciences Géographiques. Paris 1842. T. 1 and 2 (Tobi T. 2, p. 129ff.) The French publisher signs merely E-s. According to Hambruch, he is Eyriès.
3 In the end, they act no differently than Barrard, leaving the Palau native behind; at least Barrard and his rescuer, the Spanish captain, had given the Tobi natives a little iron, whereas Captain Short of the "Britannia" sails on immediately out of fear, without making an appropriate giff: cf. p. 24 .a
5 A French translation of Barnards report is printed by Domeny de Rienzi. Oceanie ou cinquième Partie du monde. Paris 1843, p. 104ff. He does not indicate where the English original was published; he merely notes: Report of Captain Edward C. Barnard, given affer his arrival in Canton.

Here follows the account of the shipwreck and the sojourn on Palau. They reached Babeldaob. The natives of this island intended to gain the same advantage from his sojourn as their countrymen on Goror had from the sojourn of Captain Wilson of the "Antelope." He then continues his account:
"...They told me that if I wished to leave (in the dinghy, which had been repaired) I would have to resign myself to leaving behind with them Mr. James Meager, my son-in-law, and two of my people, the choice of whom they would leave up to me. Horatio Davis, Calvin and Catlin from Massachusetts, who were afraid of risking a voyage in the boat, offered to stay, and on November 15 we began to ready our vessels and to bring food and other necessities on board. Since the wind was favorable, I departed Palau on the $22^{\text {nd }}$. My dinghy was guided by three members of the crew, and there were four others in the boat, as well as two chiefs and a native of the island We made about 20 miles that day. When night fell, I was not at all calm; I found myself on a frail vessel on the open sea, accompanied only by a boat carrying food and water for 20 days; and without any navigational tools. possessed only a compass and was 600 miles from Ternate, the closest land.

As soon as we were past the reefs, I steered toward the southwest. The sea was quite turbulent and we made only difficult progress. To make matters even worse, our rudder developed a problem, and we had to interrupt our progress for a whole night in order to fix it. This delay was all the more unfortunate since there was a strong breeze from the northeast which would have been quite helpful to us. It rained terribly the whole night, and the thunde was awful. The crew began to grumble, and I foresaw the moment we would have to turn back to Palau to wait for the arrival of a ship that would take us on board. This would, of course, have been the best thing to do; but when day broke, the rain stopped and the wind calmed. We repaired the rudder and voyaged on without incident until the $29^{\text {th }}$. The wind was almost always favorable. The dinghy was tight, but the boat kept filling up with water. All this time we were on a southwest course in the hopes of reaching Mortz or Gilolo.
On the evening of the $29^{\text {th }}$, the boat capsized on account of the awkwardness of one of the Palauans who wa supposed to hold the sail; the mast fell into the ocean and we spent an hour in vain trying to pull it out. Around the tenth hour, a wind came up and it began to rain. I took four men from the boat aboard the dinghy and left only three behind to sail it; but in the night it filled with water to such an extent that we found it impossible to keep it afloa and found it necessary to abandon it. We took as much food and water into the dinghy as we found advisable, as we were now eleven people. Our supplies consisted of coconuts and fresh meat, which we had roasted before our departure and sealed with fat. We carried our water in large bamboo containers. After we had taken everything we needed aboard the dinghy and lightened our load by throwing overboard everything heavy-each man kept only a change of trousers and shirt-we abandoned the boat and continued our voyage to the southwest. When it was calm, we rowed, and whenever a wind came up, we set our sail

We thus continued on until December $6^{\text {th }}$, when we spied land at daybreak about 6 miles away. A little later we noticed several boats approaching us. Flight would have been impossible even if we had thought of it, because we were running short of water and needed to replenish it at any cost. Our decision was therefore quickly taken. In any case, the boats were only a half mile distant by now. I made for the nearest one to us, and when we were only a few yards away, the natives sitting in it showed us coconuts to let us know they were willing to trade with us, and called out: "Pecio, pecio!" Meanwhile another boat approached from the opposite direction; its crew jumped aboard our dinghy, and in less than five minutes they had looted everything on board. All our possessions were divided among several boats; and two or three of my crew who resisted being robbed were thrown overboard where they nearly drowned. After these savages had taken everything it contained out of the dinghy, they placed three or four of their people in it in order to guide it to land. The boats then made for the island, which is barely $3 / 4$ mile long and $1 / 2$ mile wide and has about 300 inhabitants. As we approached land, I saw women and children
streaming onto the shore. They danced and leaped into the air and welcomed us with songs and cries. When we had disembarked, they gave us food and water. The island is low and surrounded by a reef that follows the coastline half mile out. The men were stoutly built; the women, in contrast, seemed weak and miserable to me. While I wa with them, they treated me with kindness; they demanded no work from me-just once or twice they asked me to help them pick coconuts. But their curiosity was draining, and since they do not show any consideration to age, we suffered especially from the intrusiveness of their children. It is impossible to imagine anything dirtier than thes natives. The men are more involved in the household than among any other people I know.
I spent my time exploring this small island. Often I became hungry and did not know where I was. I thought I had passed Mortz on the west and must be on the island of Maggo. Several times I determined to take possession of one of the boats lying on the shore and attempt to make the open sea. I reckoned I would come to Ternate if steered east, and that if after 24 hours I saw no land, I would change my course to southwest, where I could no miss it. The difficulty was that we did not know how we were to obtain sufficient coconuts for the voyage. Not day passed without our crafting some plan for escape.

Then, on February 3, 1833, a ship appeared making directly for the island, apparently intending to land on the eastern shore. Immediately the entire island sprang to life. Men, women and children ran instantly to the shore with coconuts to bring on board. We went as well, but were pushed out of any boat we attempted to board. They had decided to keep us on land. I turned to the chief, who told me that I was not allowed to leave. I then saw that his brother's boat was on the verge of departing, and jumped in. As soon as I was in, they demanded that I ge out again. I told them that I promised to get them iron-which they prize most highly-if they would permit m to accompany them. They would hear none of it and demanded again that I leave the boat. I resisted. Two savage had already taken hold of me to throw me into the water when an elder asserted his authority and rescued me from their hands. We immediately hoisted sail and made for the ship.

When we were past the surf, I looked back and saw that they had kept all my crew onshore with the exception of Bartlett I. Rollins from Bangor. One must have experienced circumstances similar to mine in order to imagine my excitement at approaching the ship. It was a beautiful vessel, and since I saw many blacks on board, I thought it must be a Dutch ship with a Malayan crew. I called to the ship and asked for permission to come on board A moment later, when the besom sail had been hoisted, ${ }^{1}$ I came onto the bridge and discovered that it was the Spanish ship "La Sabine" under captain Gomez from Manila, who was going from Bengal to Macao. This office welcomed me with the greatest hospitality and I am eager to convey my thanks to him in this place

We stayed only long enough to take Rollins on board. The captain told me that due to many delays during the crossing his supplies of food and water were running so low that he could not afford to lose the twenty-four hour it would take to send people to pick up the rest of my crew. He then gave me several iron rings, which I gave to the natives who had brought me to the ship, and I could see by their astonishment that they had not counted on a gift of such value. I think they would have brought us all on board the Spaniard if they had not feared our revenge for having destroyed our dinghy. The natives returned so content that they are sure to treat those remaining on the island well and bring them on board the next ship that visits their coast. These men are: Charles B. Bowkett, William Siddon, Milton Hewlitt, Horace Holden, Peter Andrews, Benjamin Nute; and the three natives from Palau: Lebac, Tet and Kaier. It was only after my arrival aboard the "Sabine" that I discovered that the island on which I had spent two months was Lord North Island."

Captain Barnard arrived in Macao on February 23 and landed in Canton on February 28
In the French text: Le perroquet d'artimon ayant eté hisse

The supplemental account of Holden is as follows:
"...At this time no objects were seen, except a few sea birds. We continued in this condition for nine days and nights with actual starvation before us as the most probable end of our activities and sufferings.
We were about settling down into a state of confirmed despair when to our inexpressible joy we discovered land apparently about 10 miles off. We exerted all our remaining strength to reach it, when within six miles we saw approaching us a fleet of 18 canoes filled with the natives of the small island we were approaching. At first the small canoes came near us for the purpose of ascertaining who and what we were. The appearance of these natives was such as to excite at once our astonishment and disgust. Like the inhabitants of the island we had left, they were entirely naked, and as our subsequent experience proved, they were more barbarous and cruel. Very soon the large canoes came up, when the wretches commenced their outrages. They attacked us with brutal ferocity, knocking us overboard with their clubs, in the meantime making the most frightful grimaces, and yelling like so many incarnate devils. They fell upon our boat, and immediately destroyed it, breaking it into splinters and taking he fragments into their canoes. While this was going on we were swimming from one canoe to another, entreating them by signs to save our lives, and permit us to get into their canoes. This, they for a long time refused, beating us most unmercifully, whenever we got hold of anything to save ourselves from sinking.

After they had demolished our boat, and kept us in that condition for some time, they allowed us to get on board They then compelled us to row towards the land. They stripped us of all our clothing immediately after we were taken in; and the reader may form some idea of our distress in this condition; under a burning sun, from the fact, that before night our shoulders were blistered, by being thus exposed to the heat. On approaching land we discovered no habitation, but after going round a point of the island, we saw near the beach a row of small and badly constructed huts. We were compelled to jump from the canoes into the water, and wade to the shore. By his time the beach was lined with women and children, who caused the air to resound with the most horrid yell and screams. Their gestures and violent contortions of countenance, resembled the frantic ravings of Bedlamites.
The reception we met with on land was no more agreeable than that upon the water. Judging from the treatment we had received from the females of the island which we had left, it was hoped that the gentler sex would extend to us some proof of their commiseration; but, in this we were sadly disappointed. If possible they were more crue than their inhuman lords and masters. We were soon separated from each other and dragged about from place to place; our brutal captors, in the meantime, contending with each other to see who should have us as his property Frequent contests of this kind occurred; in one of which, during the first day, I was knocked down. The question of ownership was at length settled, and we were retained by those into whose hands we had at first fallen. Some of us were taken to their house of worship, called by them Verre-Yarris, literally God's house, where they went through with some of their religious ceremonies, and we received a few mouthfuls of food, which was the firs we had tasted through the day

It was my good fortune to be retained by one who, compared with the other natives, was humane. His name wa Pahrahbooah; the female head of the family was called Nahkit; and they had four children. I went by the name of Teemit; and Benjamin Nute by the name of Rollo. The Captain was also fortunate in falling into the hands of a friend of my master, who treated him with comparative kindness. He was valued the more highly, also on account of being a large fleshy man-they judging of these things by the size and appearance.

It may now be proper in this place to give some account of the place where our unhappy lot was cast, and of its rude and miserable inhabitants. It will be impossible to convey a correct idea of their ignorance, poverty, and degradation; but some conception may be formed, by imagining what the condition of beings must necessarily
be, when wholly separated from the rest of their species, stripped of all the refinements of life, and deprived of all means and opportunities for improvement. We were now upon the small piece of land called by the native To 'bee, but known to navigators by the name of Lord North's island, situated between the third and fourth degree and north latitude, and in longitude one hundred and thirty one degrees twenty minutes east. It is also known by the name of Nevil's island and Johnston's island; and it has been hitherto considered by navigators and others as uninhabited. This is not surprising; as we were told by the natives, that no one white man had ever visited the place, though it seemed, from the pieces of iron in their possession, and from other circumstances, that they had had some communication with the Spaniards and Portuguese in that quarter of the world.
Like many other islands in those seas, this is surrounded by a coral reef, which is from an eighth to one and a half mile wide; but outside of the reef the water is apparently fathomless, the water being as blue as it is in the middle of the sea, and the largest vessels may in many places approach within a quarter of a mile of the beach. The whole island rises so little above the level of the sea, that the swell often rolls up to a considerable distance inland. It is about three quarters of a mile in length, and not far from half a mile in width. There were upon it three village situated on the shores, and containing in all, between three and four hundred souls at that time when we were taken there; but the number was considerably diminished by the famine and disease before we left.

The inhabitants are in a state of entire barbarism and ignorance. The men wear a sort of girdle or belt made of the bark of a tree. This is girded round the loins so as to leave one end to hang loose behind, the other is brough forward and fastened to the belt in front. This is their only clothing. The females, after arriving at the age of womanhood, wear an apron made of leaves of a plant, by them, called kurremung, split into fine stripes an plaited. This extends from the loins nearly to the knees. Some few wear rings upon their wrists, made of white shells, and some had this kind of ornament made of turtle shell. In their ears, which are always bored, they sometimes wear a leaf, and round their necks a necklace made of the shell of a cocoa nut, and a small white shel called keem shell. The children go entirely naked. The complexion of these islanders is a light copper color, much lighter than the Malays or the Pelew islanders; which last, however, they resemble in the breadth of their faces high cheek bones, and broad flattened noses. They do not color their teeth, by chewing anything, as many of these islanders do: but their teeth are so strong that they can husk a cocoa nut with them instantly.

Their principal food is cocoa nut. They occasionally succeed in procuring fish; though the supply obtained durin our residence there was exceedingly small. Their fishhooks are made of turtle shell, and not well contrived for the purpose: but we could not induce them to use our hooks, till they had heated them and altered their form so that they would not hold the fish. They did this because they said that Yarris (God) would be angry with them if they used our hooks without preparing them according to their fashion. Sometimes they are so fortunate as to obtain a sea turtle; five only were taken during the two years we were there. The turtle, I may add, had something of a sacred character with them. They also raise some quantities of a vegetable somewhat resembling the yam but while we were with them they were unsuccessful in cultivating it. These constitute the slender means of thei support, and they are thus barely kept from actual death by famine, but on the very verge of starvation. Whe nyone of them begins to fail, for want of food, so that his death is pretty certain, they inhumanly turn him off from among them to starve to death.

Their religion is such as might be expected among a people in their condition. Their place of worship is a rudely constructed building, a hut, about fifty feet long and thirty wide. In the centre suspended from the roof, is a sor of altar, into which they suppose their deity to come and hold converse with the priest. Rudely carved images 1 They occasionally wore a kind of broad hat called by them Shappo and sometimes shambararo; which are evidently derived from the Portuguese (or possibly the French Chapeau) and the Spanish Sombrero.
are placed in different parts of the building, and are supposed to personate their divinity. As nearly as could be ascertained to us, they supposed that the object of their worship was of like passions with themselves, capricious and revengeful. During the time we were with them they attributed to this displeasure their want of success in taking fish as they had done in former times, and the unfruitfulness of their bread-fruit and cocoa trees.

Their religious ceremonies are singular. In the commencement the priest walks round the altar and takes from it a mat, devoted to the purpose, which is laid upon the ground. He then seats himself upon it, and begins to hoot, in the meantime throwing himself into a variety of attitudes, for the purpose of calling down the divinity into the altar. At intervals the congregation sings, but immediately stops when the priest breaks out in his devotions. By the side of the altar is always placed a large bowl and six cocoa nuts. After the incantation is gone through, and the divinity is supposed to be present, the bowl is turned up and four of the nuts are broken and put in it, two being reserved for the exclusive use of the priest,-by them also called "Yarris". As soon as the nuts are broken, one of the company begins to shout, and rushing to the centre seized the bowl and drinks of the milk of the nuts, generally spilling a considerable quantity of it upon the ground. After this, a few pieces are thrown to the images and the remainders are eaten by the priest. This closes the ceremony, after which they indulge in any recreations hat chance to please them best.

While we were on the island several earthquakes happened, and some of them pretty severe. On those occasions the natives were much terrified, they would not let their children speak a word, and they said amongst themselves, "Zahbee'too Yarris, To'bee yet tah men", that is: "Yarris (God) is coming and To'bee will sink". They were also very much alarmed at thunder and lightning, and used to say at such times: "Yarris tee'tree", (God is talking). do not know how they would be affected by an eclipse as none happened that I noticed while we remained there will here mention some other things in respect to their customs and usages as they now occur to me.
Their implements of war are spears and clubs, they have no bows and arrows. Their spears are made of the wood of the cocoa trees; the points of them are set with rows of shark's teeth, and being at the same time very heavy and from ten to twenty feet long are formidable weapons. Their canoes are made of logs which drift to their island from other places, there being no trees large enough for that purpose, they are hollowed out with great labour and are of very clumsy workmanship; to prevent their oversetting they are fitted up with outriggers, like those of the Pelew islanders. They kindle their fires, as they informed me, by rubbing two pieces of wood together, as is common in the islands of the Pacific Ocean, and they cook their turtle or other meat (when they are so fortunate as to have any) as well as their vegetables by covering them with heated stones. I should state, however, that during the whole time we stayed among them fire was always preserved in some part of the island, so that there was no necessity for kindling it in the manner here mentioned.

Like other savage people, they reckon time by moons. I could not learn that they ever reckoned by any other period, except, indeed when speaking of two or three days. They take pride in their hair, and are particularly careful about it, washing and cleaning it almost every day. They do not color it however, as the natives of some islands are said to do; but they moisten it with the juice pressed out from the cocoa nut which gives it a very glossy appearance; and it is frequently so long as to reach down to their waist. Their mode of salutation is, to clasp each other in their arms and touch their noses together, as is practised in many other islands. We found no musical instruments of any sort among them. They sometimes, on particular occasions would sing or bawl out something ike a rude tune, but we would not understand it. We frequently tried to teach them to whistle and their awkward attempts to do it amused us but they never were able to learn how it was done.
In their names I could not find that they had anything like a family name, but only a single one, corresponding to our christian names; as is the case, I believe, throughout the islands of the Pacific. I could not learn that the names
were significant either of animals or other objects as the Indian names of America are, and I never found any two persons of the same name. The names of the members of the family with which I lived were as follows:

Pahraboo'ah
Nah'kit
Bukwur'timar
Kobaw'ut
Kobahnoo'uk
Wah'rebo

## father of the family

the mother
the eldest child, a son, ten or 12 years old
the second, a daughter
the third, a daughter
The children do not address their parents by any word corresponding to Father and Mother, but by their names Their parents treat them on the footing of equality, they are generally well behaved, and are never punished, except occasionally when impatient for their food. Their language appears to be different from those of the other islands in that quarter, we found that the three natives of the Pelew islands, that accompanied us would not understand anything they said; though I observed afterwards, occasionally a resemblance in two or three words. The reader will however be enabled to judge for himself by means of a short vocabulary of common words which will be found at the end of this narrative.' I may add that the Pelew chiefs had never heard of Lord North's island, but they are acquainted with the Caroline Islands. A detail of all that befell us would serve only to give pain to the benevolent, or at most to show how much human beings can endure. I shall attempt but little more than to describe the sufferings of a day, observing once for all, that for the term of two long years we experienced the same brutal treatment and were subjected to the same privations; life, during all that time, being no better than the constan succession of the most acute sufferings. This island unlike the Pelews is one of the most horrible and wretched on the face of the globe. The only product of its soil worth mentioning is the cocoa tree, and those are of so dwarfish and miserable growth as to bear but very few nuts. These few, however, constitute the food of the inhabitants with the exception of a species of fish caught occasionally near the shore. The only animals or creeping things known on the island are lizards and mice, and, during our stay there, scarcely a solitary seafowl was known to have alighted on the island, and but few fish were taken by the islanders.
The character of the inhabitants much resembles that of the island itself. Cowardly and servile, yet most barbarou and cruel, they combine in their habits, tempers and dispositions the most disgusting and loathsome features tha disgrace humanity. And, what may be regarded as remarkable, the female portion of the inhabitants outstrip the men in cruelty and savage depravity; so much so that we were frequently indebted to the tender mercies of the men for escapes from death at the hands of the women. The indolence of the natives which not even the fear of starvation itself can rouse to exertion, prevents their undertaking the least toil, although a little labour well applied might be made to render them infinitely more comfortable.

Strange as it may appear it is nevertheless true that notwithstanding they are in this miserable condition with no prospects of its ever being improved, they are of the opinion that they are highly favoured. This can be accounted for in no other way than by the fact that they are entirely ignorant of all that lies beyond the narrow limits of their observation. They know nothing of any other portion of the globe than the mere speck of barren land upon which by some accident they were thrown and where they remain to drag out a wretched existence. Their traditions do not extend further back than to about a hundred years, and to their simple minds, it seems like a splendid effort of mind to be able to relate with tolerable accuracy the time-hallowed stories told them by their parents. Whethe hey could in any way be improved by instruction is a question which it would be difficult to answer. They seem to be doomed to remain as one of the last links in the chain that connects our race with the mere animal part of the creation.
1 The vocabulary mentioned here is included in the word indexes under P. $=$ Pickering.

We were captured and taken to the island December $6^{\text {th }} 1832$; and on the third day of February 1833 , two month' wanting three days, Captein Barnard and Bartlet Rollins effected their escape. Compared with the remainder of our captivity, our privations and sufferings up to that time were less severe. But at no time did we have sufficient food to satisfy the cravings of hunger! The very crumbs that fall from an ordinary table would have been to us a luxury; the swine of America are better fed than we were, on the most fortunate day of our residence upon that island

It was on the day above mentioned that a ship was discovered a short distance from the island, and the natives immediately collected and prepared to go to it, in order to obtain iron, or some other article of value. Hope once more visited us. To escape was, of course, our strong desire and intention. Accordingly, when the canoes put off we attempted to go. Our savage masters interposed their authority and by menaces and blows prevented us. Many of us were severely beaten and all but two were detained by the brutal force of the savages. At length Captain Barnard and Rollins, after being severely beaten, were allowed to accompany the natives to the ship and succeeded in effecting their escape. Trusting to the humanity of the Captain and crew, we for some time confidently expected that they would contrive some way of enabling us to join them. They were in sight about three hours; at one time they were so near that we could distinctly see the hands on board; but judge of our feelings when we saw the vessel pursuing her course! Our expectations were all blasted in a moment and our minds which had been gladdened by the hope of once more enjoying the society of civilized beings, of once more reaching the shores of our beloved country sunk back into a state of despair; we wept like children. The natives when they returned from the vessel, brought with them a small quantity of iron hoops, and a few articles of some smal values, but they were highly dissatisfied with the amount received and greatly enraged. They held us accountable for the conduct of those who had left, and they quarrelled about it for several days. Those of us who remained, though innocent, were the greatest sufferers. The division of the property caused much difficulty and they vented the malignity of their unfeeling hearts on us. We were given to understand that now our doom was fixed; that we should remain with them and die the victims of our tormentors. Alas, it was but too true that such was to be the fate of all but two of our numbers. We were destined to see one after the other of our fellow-sufferers sink under the constantly increasing severity of the burdens imposed upon them, and perish either from actual starvation or by the blows of the savages.

After the departure of the captain and Rollins, we were treated with much greater severity than we had been before. Generally we were aroused from our broken slumbers about sunrise, and compelled to go to work, we were usually employed in cultivating a species of vegetable somewhat resembling the yam and called by them: "Korei". The root is raised in beds of mud which are prepared by digging out the sand and filling the place with mould. The whole of this labour was performed with hands. We were compelled day after day to stand in the mud from morning till night and to turn up the mud with our hands. Frequently we were required to do this without receiving a morsel of food till about noon and sometimes we were left without anything to eat until night. At best we could get no more than a small piece of cocoa nut, hardly a common sized mouthful at a time, and if, either from exhaustion or any other cause we neglected to perform the required amount of work, our pittance of food was withheld altogether

From this plain and unexaggerated account it will be seen that our condition at best was bad enough; but misfortune befell us which rendered it still worse. About four months from the time of our landing on that dreary spot there was a violent storm which came very near sweeping away the whole of the means of support which remained for the miserable inhabitants. The wind blew down many of our best cocoa trees and materially injured the fruit on such as were left standing. Besides this, the low places in which they raised the root by them called "Korei"" were mostly filled with sand and famine stared us all in the face. They attributed this misfortune to the
anger of their god, and did not fail to use such means as they thought best calculated to appease him; and the calamity greatly added to our sufferings. Besides subjecting us still more severe deprivations we were compelled (though hardly able to drag our limbs from place to place) to labour in repairing the damage done by the storm. We were employed for months in carrying in our arms and on our shoulders pieces of the coral rock, in order to form a sort of seawall to prevent the waves from washing away the trees, and this drudgery, considering that we were naked under a burning sun and reduced to nothing but skin and bones, was too severe to admit of anything like an adequate description. Our flesh, or to speak more properly, our skin-for flesh we had nonewas frequently so torn by the sharp corners of the rock and scorched by the sun, as to resemble more that of the rhinoceros than of human beings.

A new trail now awaited us. The barbarous beings among whom our lot had been cast, deemed it important that w should be tattooed, and we were compelled to submit to the distressing operation. We expostulated against it-we entreated-we begged to be spared that additional affliction, but our entreaties were of no use. Those savages were not to be moved and we were compelled to submit; and that the reader may form some idea of the painfuil process I here will give a brief account of it.

We were in the first place securely bound down to the ground and there held fast by our tormentors. They the proceeded to draw with a sharp stick the figures designed to be imprinted on the skin. This done, the skin was thickly punctured with a little instrument made of sharpened fish bones, and somewhat resembling a carpenters adze in miniature but having teeth, instead of a smooth, sharp edge. This instrument was held within an inch or two of the flesh and struck into it rapidly with a piece of wood, applied to it in such a manner as to cause it to rebound at every stroke. In this way our breasts and arms were prepared; and subsequently the ink, which wa made of a vegetable found on the island and called by them the "saovan" was applied. The operation caused suc an inflammation of our bodies, that only a portion could be done at a time, and as soon as the inflammation abated another portion was done as fast as we could bear it, till our bodies were covered. It was effectually done for to this day the figures remain as distinct as they were when first imprinted, and the marks will be carried by us to the grave. They were exceedingly anxious to perform the operation upon our faces, but this we would not submit to elling them that sooner than have it done we would die in resisting them. Among themselves, the oldest people had the greatest quantity of tattooing and the younger class less.
Besides this operation of tattooing, they compelled us to pluck the hair from different parts of our bodies, an to pluck our beards about every ten days, which was extremely painful, and at every successive operation th beard grew out harder and stiffer. About seventeen days after the captain and Rollins left, we saw a vessel to th windward; but the natives did not attempt to visit it. Five months afterwards another came in sight and remained for three days near the island. At one time we could distinctly see the men on board; but we were kept on shore an closely guarded. Several canoes visited the ship and brought back a few pieces of iron, fishhooks, glass bottles etc We tried, but in vain, to escape. It seemed to us that we were doomed to remain on that dreary spot, to wear out our remaining strength in hopeless bondage and to submit to the control of brutal masters, whose tender mercie were cruelties. Death, in any form, would have been a relief and often did we see moments when it would have been welcomed as the best of friends! To some of our companions it did come though dreadful in the manner, ye as a not unwelcome alternative. About a year after we first arrived at the island, William Sedon became so reduced as to deprive us of all hopes of his recovery. He looked like a skeleton and, at last was so entirely exhausted by hunger as to be unable to walk, or even to rise from the ground. He continued however to crawl from place place until all his remaining strength was nearly gone, when the inhuman monsters placed him in an old canoe and sent him adrift on the ocean. Gladly would his unhappy shipmates have extended to him the last, sad offices of friendship, that poor consolation was denied both him and us. My heart bleeds at the recollection of our separation
and his melancholy fate, when we saw him anxiously turn his languid eyes towards those who were doomed still to linger on the borders of the grave. Our sighs were breathed almost in silence and our tears were shed in vain. It may be observed here, that it is not their custom to deposit the bodies of any of their dead in the earth, except very young children. The bodies of grown people, after death, are laid in a canoe and committed to the ocean. It was soon our lot to part with another of our companions Peter Andrews. He was accused by the natives of some trifling offence and put to death.

The savages knocked him down with their clubs and then dispatched him in the most cruel and most shocking manner. I was at this at a distance from the place where he was killed. My master was absent; and upon my hearing a noise in the direction of the place where the foul business was transacted, and, suspecting that all was not right, I started to see what was going on. I was near the beach when I saw a number of the savages coming towards the spot where I stood, dragging along the lifeless and mangled body of our comrade! One of them approached me behind and knocked me down with his club. The body of Andrews was thrown into the sea, and it seemed to be their determination to destroy the whole of us. I warded off the blows aimed at me as well as could, and recovering myself ran towards the hut of my master. He had not yet returned but fortunately an old man, who had previously shown some regard for me and who was the particular friend of my master happened at that moment to be passing; and seizing the man who had pursued me, held him fast. I escaped and ran into the hut, and crawled up through an aperture in the floor into the chamber under the roof. I seized an old box and covered up the hole through which I had ascended; but this was not sufficient to detain for any length of time the wretches who were thirsting for my blood. They soon succeeded in displacing the box and one of them seized me; but just as he was pulling me from my place of refuge, my master returned with several of his friends and rescued me from the clutches of my enemies.

In the meantime Nute and the rest of our companions were at the "Tahboo," a place of public resort, where, for he only time the females rendered our people any assistance. They concealed the men under some mats and kept them there till the fury of the natives had in a measure subsided. We were next called upon to part with one of the Pelew chiefs who had come with us. He died of absolute starvation and, according to custom was committed to the waves in an old canoe. In a short time after this the Pelew private who had also come with us was detested in the crime of taking a few cocoa nuts without leave, for which offence he had his hands tied behind him and was put into a canoe and sent adrift; which was their usual method of punishment for offences of different kinds.

About a year and seven months from the commencement of our captivity, Milton Hewlet died, and, like the others was committed to the ocean. A short time afterwards Charles C. Banket, having become so reduced by his sufferings as to be unable to help himself, was (horrible to relate) placed in a canoe while still alive, and committed to the mercy of the ocean. Thus did one after another of our companions sink under the weight of their sufferings, and perish without any alleviation to their wretchedness. Nute and myself, with our friend Kobac, the other Pelew chief, were all that remained; and we were constantly expecting that the next hour would end our existence.
The idea of death, however had now become familiar; and often did we desire the release from suffering which that alone could afford. Nothing as it now appears to us, but the kind interposition of Providence could have continued our lives and have given us the power of endurance to hold out as long as we did. We were frequently so reduced as to be unable to walk, and were forced to drag ourselves on our hands and knees to some place where we could lie down under the shade of a bush and take rest. But the small comfort to be obtained in this way was greatly lessened by the annoyance of moskitos which could attack us with impunity in our helpless and feeble condition. Besides this, our flesh had so fallen away, that on lying down our bones would actually pierce through
he skin, giving us the most severe pain. After we were tattooed, the parts operated upon were, for a long time running sores; and when exposed to the sun, the pain was excruciating.

It has been already said, that the natives were indolent, filthy and degraded, but the half has not been told, an some things which we witnessed cannot be related. The intercourse of the sexes was unrestrained by any law, and the decencies of live were almost entirely neglected. Instead of taking pains to keep clean, they seemed to be no unwilling to have their heads overrun with vermin; and however incredible it may seem, it is a disgusting truth that they are accustomed to eat them; and particular care seem to be taken to keep those loathsome animals in the heads of the children. But I forbear any further particulars.

I have already said that only two of the crew of the Mentor, namely Nute and myself, remained alive, with the exception of Captain Barnard and Rollins, who had fortunately escaped. The Pelew chief had become strongly attached to us, and we take pleasure in stating the fact, that his faithfulness and affection had greatly endeared him to us. He seemed more like a brother than a Barbarian; and most gladly would we have saved him from those sufferings which, no doubt, before this time, have terminated his life. Alas! It was not in our power to administer to his relief; and when we last saw him he was but just alive.

Having thus briefly related the story of our captivity and sufferings, it only remains to give an account of ou escape from this barbarous people. We continued to survive the horrible sufferings to which we were constantly subjected, and to serve our tyrannical masters, in despite of our agonies of body and mind, till the beginning of the autumn of 1834, at which time we had become so emaciated, feeble and sickly, that we found it impossible any longer even to attempt to labour. By this time we had acquired a sufficient knowledge of their tongue to converse fluently with the natives, telling them that we informed our masters that our feeble condition rendered it impossible for us to attempt to do anything more. We also reasoned the matter with them, telling them that death was our inevitable doom, unless we were allowed to relax our labour; that if we died, we could be of no service to them, but if allowed a respite, and we lived, and could be put on board a vessel, they should be liberally rewarded

With much difficulty we at length persuaded our masters to allow us to quit labour, and obtained from them promise to be put on board the first vessel that should come to the island. But, at the same time they informed us, that if we ceased to work they should cease to furnish the miserable of cocoa nut on which we had before subsisted, and that we must either labour or starve. We deemed death as welcome in one shape as in another, and elinquished our labours and our pittance of food together. We were thus literally turned out to die! We crawled from place to place, subsisting upon leaves, and now and then begging of the natives a morsel of cocoa nut. In this way we contrived to live for about two months, when the joyful intelligence was brought to us that a vessel was in sight, and was coming near the island! Hope once more revived our despairing hearts, and seemed to inspire us with renewed strength and animation. After taxing our exhausted powers to the utmost, we persuaded the natives to prepare for visiting the vessel; and throwing our emaciated bodies into their canoes, we made for the ship with all possible despatch. The vessel proved to be the British barque: "Britannia", Captain Short, bound to Canton Our reception on board is faithfully described in the following certificate given by Captain Short, the original of which is still in my possession.

This is to certify, that on the $27^{\text {th }}$ day of November, 1834 , off the small island, commonly called Lord North's by the English, situated on latitude $3^{\circ} 3^{\prime}$ ' north and longitude $131^{\circ} 20^{\prime}$ ' east, on board the British Barque "Britannia" bound to Canton river, we observed about ten or eleven canoes, containing upwards of one hundred men, approaching the vessel in a calm, or nearly to, with the intention of coming alongside. But having the small complement of thirteen men, it was considered most prudent to keep them off, which was effected by firing a few six pound shot in a contrary direction from the boats, some of which were then with in pistol shot. At the same time hearing
cries in our own language begging to be taken on board, the boat was dispatched away to know the cause. The boat returned to the ship, and reported an American on board one of them. She was then sent back, having strict orders to act with caution, and the man got from the canoe into the sea, and was taken up by the ship's boat and brought on board. He then stated in what manner he came there, and said he had another of his countrymen in another canoe. I said, if we could get some of the boats dispersed, that every assistance should be rendered for the liberty of the other man. Accordingly they did so, all but three. The ship's boat was then dispatched in search, and soon found the other men. He was brought on board, but in a most deplorable condition with fever, from the effects of a miserable subsistence. These two poor fellows were quite naked under a burning sun. They appeared to bear all the marks of their long servitude, and I suppose, two or three days would have been the end of the las man taken on board, but from this act of Providence. It appears that these men were wrecked in the ship "Mentor" on the Pelew islands and were proceeding with their commander to some Dutch settlement, in one of the Pelew island canoes when they got to the afore mentioned island; which has been confirmed by the different masters now at the port of Lintin.

The statement given in to me by the two men runs thus. That they were wrecked May $21^{\text {st }} 1831$ on the Pelew island, and detained on Lord North's island $6^{\mathrm{h}}$ December 1831. The two men's names are Benjamin H. Nute and Horace Holden. I should thank any ship master now in port, acquainted with the circumstances, to confirm it by his signature in order to make some provision for these men, should they require it. But from the disposition and liberality of those American Gentlemen coming forward, that are already acquainted with the circumstance, perhaps it will be unnecessary. At the same time I shall be very willing to draw up any form or in any way that I may forward their views, according to the opinion of their American friends. I should hope that every vesse passing in the direction of the afore-mentioned island, passing any of their boats, will give them a trifle. I gave hem what articles those two men thought most beneficial, and should have held a closer communication with them had I been better manned and armed.

Never shall we find words to express our joy at once more finding ourselves in the company of civilized men! Nor can we be too grateful to Captain Short and his officers and crew, for their kind attentions during our passage to Lintin. Everything in their power was done to restore our health and strength, and to render us comfortable. On arriving at Lintin we found ourselves sufficiently recovered to be able to pass up the river to Canton. We remained there, at the factories, under medical treatment, until the ship Morrison of New York was ready to sail, when we took passage in her for our native country and arrived in New York on the $5^{\text {th }}$ day of May, 1835.

For many years nothing more was heard of Tobi, and it was only from 1885 on that reports appeared now and then in the "Annals of hydrography and maritime meteorology" of captains who had passed by the island. They re superficial and portray the natives as quite a dangerous people. The first report is from Captain Kraeft of the German bark "Karl:"

From the line we followed a northeast course, accompanied by a light inconsistent west wind which was frequently interrupted by strong gusts and rain showers; on December 13, 1882, we came in sight of Tobi o Lord North Island. At the time a light WSW breeze was blowing, with which we were doing an average of 4 knots. In the afternoon around 2 o'clock we saw a boat from the aforementioned island approaching us. At first I thought it might contain the crew of a boat shipwrecked in the area, and therefore steered toward it. All to soon realized my error, for the vessel approaching us was a canoe with 20 occupants, seemingly unarmed. Immediately thereafter two other canoes appeared near us and all three circled our ship accompanied by the frightful noise of the occupants, who were totally without clothing of any kind.
$\overline{1 \text { Annals of hydrography and maritime meteorology, vol. XIII, } 1885, \text { p. } 208 .}$

They finally succeeded in catching hold of the safety chain of the rudder, and we had to resign ourselves dragging along the whole horde, 63 strong, behind us. Armed well, we waited for the islanders to come aboard while they were probably intending to delay this enterprise until the evening. At 5 p.m. an unexpected lively breeze came up, we cut the lines to the canoes and quickly sailed out of their reach. An absolute howling and a few rifle shots followed us, without the bullets reaching the ship. Since I was completely unfamiliar with this area, I at first suspected nothing evil, but was soon taught otherwise by the experiences described above; I would therefore counsel no one to intentionally seek out the area around Lord North Island. As I later learned, this island is inhabited by the cruelest population of the entire East Indian archipelago."
In 1888, Captain Jost of the bark "Augusta" reports.... from the journey from Cardiff to Hong Kong: (coming from the Asia Islands) "... the wind, though not strong, remained in the center of the northeast line, even registering ESE from time to time and a little livelier now and then, so that at noon of January 15,1886 we reached $2^{\circ} 9^{\prime} \mathrm{N}$ and longitude $131^{\circ} 1^{\prime}$ ' east, when the island of Tobi registered $\mathrm{NNW} / 2 \mathrm{~W}$, according to which our longitud should have been about 4 ' east. The current was still southerly and westerly, with a velocity of about $1 / 4 \mathrm{knots}$.

Shortly after noon we saw nine large, heavily manned sailing canoes approaching us from Tobi Island. In spite of all our cries, gestures and threats, the first three pulled directly alongside, so that we saw ourselves oblige to chase them away by force and then to turn to the southeast, entirely against our wishes, in order to wait until nightfall to sail northwards again between Tobi Island and Helen Reef ,’"

Under the heading "Hostile Behavior of the Inhabitants of Tobi Island (Lord North Island)," an extract from the report of the captain of the German sailing ship "Columbus" was published ${ }^{2}$ with reference to the previous reports from the Imperial Consulate in Hong Kong. On November 19, 1890 the ship was sailing through the Gilolo Passage and due to the warning reports of the previous few years was intending to avoid Tobi. Unfavorable winds, however, brought it near the island. The captain writes
"... At daybreak on November 21, 1890 the island came into view. At 8 o'clock already two boats sighted. Because we were only lightly armed, the ship attempted to escape and turned westward. Light wind NNW. We hardly had our ship over the other bow when seven other vessels were within view, all of them now heading for us under full sail. - Since we were quite a distance from the island, we had a good head start, but several of the boats were approaching rapidly, so that by $110^{\circ}$ clock we were already able to distinguish individuals in several of the boats in the one nearest to us we counted 15 head. The boats most to leeward were now losing significant ground, though they continued to follow us, but six larger, heavily manned vessels still pursued us and had approached to within $1 / 2$ a nautical mile when the island had already disappeared from view. Only at $120^{\prime}$ 'clock, when the breeze also freshened somewhat, did all the boats turn back simultaneously and took their course back to the island If I were now to suggest that the islanders were intent on piracy, one might be tempted to answer that after all, nothing bad had as yet happened to us; but it is hardly conceivable that ten large, heavily manned sailing vessel would have pursued our ship so determinedly, until their island was out of view, merely in the hopes of barter or curiosity. Rather, there is reason to believe that this band had approached with hostile intent. A particular ground for this opinion of mine is furnished by the statement of a man presently on board my ship, who relates that while on board a German ship four years ago, he too was attacked by the islanders near this island; they were only able to defend themselves against the band by force and after killing several of the natives with shots from thei revolver

Their main help, however, was a freshening breeze which enabled them to get out of their reach. Mercy on the boat that comes near this island during a calm..."
This somber description, which reminds one of Holden's experiences-although of course no connection exists between it and that older report-would have to refer to an event from the year 1886, according to its mention of the time. There is however no reference to it in the Annals of Hydrography.

The description of the natives by Captain Walsen of the four-masted bark "Paul Rickmers"' sounds significantly more reassuring. He was the first to have closer contact with them again, was able to give a better description than his predecessors and seems to consider the dire reports exaggerated. He, too, was voyaging from Cardiff to Hong Kong and did not intend to venture near Tobi. After the Gilolo Strait had been negotiated on February 1, 1898, the following events took place:
"... seven days later (on February 7, 1898) at 5 o'clock in the morning we found ourselves about 3 nautical miles west of Tobi. The current displacement in the last 24 -hour period was however $\mathrm{S} 64^{\circ} \mathrm{E}, 9$ nautical miles, so that we unexpectedly passed nearer the island than we had intended. During the previous days the current had averaged a course straight to the south: on February $3^{\text {rd }} 21$ nautical miles, on the $4^{\text {th }} 34$ nautical miles, on the $5^{\text {th }} 15$ nautical miles and on the $6^{\text {th }} 14$ nautical miles.... To get back to Tobi: it hardly seemed believable to me in this day and age that the inhabitants of this island, lying along a heavily frequented sailing route, would still dare to approach the ships with hostile intent, as is commonly supposed, and as is also reported on p .695 of the sailing manual for the Indian Ocean published by the Sea Watch. I was therefore extremely curious to observe the behavior of the inhabitants. Our enlightenment was to come soon enough, for already at dawn, when the island was visible to us only as a dark shadow, our attention was caught by the cries resounding from the area between the island and the ship. With the night glass we then discovered a canoe fairly close by, whose occupants, accompanied by cries and lively gestures, were straining to reach the boat, which was sailing along at about 2 knots under a northeasterly wind. When day broke soon after, a further number of canoes came into view, powered partly by paddles, partly by sails. To be ready for any eventuality, I called all hands on deck to prepare for the visit; the donkey cauldron was heated so that in case of an attack the islanders could be welcomed with hot steam, which no doubt would have had a terrible effect on the naked bodies of these people In the event, however, this cautionary measure proved unnecessary, as the islanders were entirely harmless and peacefully minded; nor did they have any weapons with them, which after all would have been essential in order to wage any kind of attack with a chance of success. What they brought with them were coconuts and thin lines made of coconut fibers, which they wished to barter for clothing, biscuits and other items. They were especially eager for any kind of iron implements, knives, wire etc. As a cautionary measure, however, I did not allow any of the natives to come on board, since their number appeared dangerously large against our crew of thirty.

Little by little, thirteen large canoes had come alongside the boat with a total of 180 to 200 people, all men. However, when some of them had completed their trading and the greater part of the canoes had turned back toward the island, I permitted the islanders remaining alongside to come on board, since we were now more than a match for them. They in fact behaved calmly and modestly, marveled at everything like children and revealed through their behavior that they had the greatest respect for the white race, even signaling submission, as severa of them kissed our clothing and our hands. The first canoes had arrived at the ship before 6 in the morning, and the last ones left only at noon, when a fresh gust of rain from the northeast made it impossible for them to stay alongside any longer. At this time, the island lay 10 nautical miles S. to E. of us, and was visible only as a low line along the horizon. Two of the young people seemed to feel little yearning for their island home; they had actually

[^1]hidden themselves on the ship in order to stay with us. The elders of the last canoe remaining with us, to whose crew the abovementioned two belonged, noticed that two of their countrymen were missing and brought them out of their hiding place, welcoming them with cuffs to the head and putting them back in the canoe, which then set out on its homeward journey. These islanders were similar to the Kanaks of the Samoa Islands in appearance, but did not have such robust figures as these; the tattooing on their bodies was similar, however. They were wholly different from the inhabitants of the Asia Islands, of whom we had had a canoe full near our ship when we drifted near those islands a few days before....
The inhabitants of Tobi have straight and very attractive black hair which they either wear long and loose or tied up in a knot. They are no match for a typical European in size and strength. Among the nearly 200 men that came to our boat, most were of small, slight build; I had the impression of a degenerate race, although there were a few imposing figures among them. We took close to 1000 fresh coconuts on board; they had no other fruits. In addition, we took a fair quantity of their cordwork, which, as stated above, was made from coconut fibers, and was crafted so beautifully and evenly that a European ropemaker would have had cause for pride. Their canoes, made of a single tree trunk, were solid and well-crafted, and were equipped with an outrigger, mast and mat sail. They proved themselves quite seaworthy amidst the high northward swell and alongside the ship; the largest of them could hold several score of occupants. At $20^{\prime}$ clock in the afternoon the island had disappeared from sight...."

From all these reports it can be inferred that no landing or visit on Tobi had taken place since the time of Holden, which is not surprising considering the bad reputation of the natives. Apparently the Spaniards, too, do not seem to have bothered themselves with this small, remote island. Nowhere is any indication about any kind of exploration to be found. Thus, the German visit on April 12, 1901 "for the purpose of flag-raising" is significant even for nonpolitical reasons, and the official report about this event is the first description of Tobi we have since Holden 's publication. In all probability, no European ship had anchored there in the meantime-in any case, we have no reports whatsoever; only the possession of rifles (see Captain Kraeft's story) raises this possibility

Regional officer Senfft describes the claiming of Tobi by the German government as follows:'
"Already from a great distance a large number of large and small canoes, heavily manned, had rowed toward us; they swarmed around the ship ("Stephan") and followed it with loud cries and the constantly repeated call: "Very good, Captain, allright, Captain!" With effort, the chief was identified among a large, screaming crowd of Tobi natives and acquainted with the purpose of the visit. He proved very pleased about the intended flag-raising and led me to one of his two houses, in front of which possession was taken by the planting of a black, white, and red staff and the raising of the German flag accompanied by a threefold firearm salute of the police squad.
Tobi is a small island covered densely with healthy coconut palms; it is thickly populated by well-nourished large and strong men and well-grown, graceful women. Numerous children bespeak a healthy strain of people; I estimate the population at 500 to 600 head. By and large, they speak the same language as the inhabitants of the eastern and southern islands of the area, though with great differences in dialect, and according to a statement of the Malayan police sub-officer, they are very similar to the inhabitants of the large neighboring Molucca island Almaheira (Gilolo). A relatively large proportion of the Tobi natives was furnished with clothes; the remainder, as customary also on the southern islands, had their bodies covered only by a narrow modesty belt for the men, and for the women, by a short stiff mat. The houses are built in the same slapdash way as those on the islands of Merir, Pul and Sonsorol, and here consist only of a large gable covered with coconut fronds; the hearths are in the huts.
llag raisisg on the island of Tobi and Helen Reef. (Western Carolines). Report of Regional Officer Senfft of Yap." German Colonial Newsleter 1901, p. 559

Besides the dwellings, there are many sheds on the land which serve to protect the numerous, strongly built canoes from rain and sun. The Tobi natives make high-quality rope, wooden bowls and boxes, of which I received some in trade. They had a very lively desire for tobacco. I took a few people along to Yap; if they prove themselves as workers, Tobi would be a suitable recruitment location for smaller plantations in the Carolines, and thus significant in this way also."

In 1906 the regional officer for Saipan, Fritz, undertook an exploratory voyage to Tobi on the "Seestern."' The population, encountered five years earlier in such good health, had become totally wasted through a famine resulting from a devastating typhoon. The same kind of misery described by Holden somewhat more than seventy years ago had set in, and most likely the population had had to go through similar circumstances more than once in the meantime. Captain Walsen, too, received the impression from the people of a weakened population.
"On December 17, 1906, the "Seestern" is positioned near Tobi....Tobi, too, is a reef island, consisting of washedup sand and shell remainders on a base of coral and hard sand, glued together by living organisms. There was no spot to anchor; landing a boat, too, is difficult. During low tide, the flat-bottomed canoes can pass over the edge of the reef, while boats cannot. We had to wade through the shallow water to get to land. Numerous canoes, similarly shaped to the ones described above, came to meet us. The occupants, yelling and waving, offered their native wares for exchange: coconuts, lines and ropes made from coconut fiber, coolie hats made from thin tortoiseshell, carved figurines. The cries of "allright" and "very good" indicated to us that we had reached the military road of pidgin. Early the same day we noticed a large steamship.

The land was swarming with people. Under the assumption that the entire population was gathered there, I estimate their number at over 1000 , among which were innumerable children of all ages. But what people, what children! Such skeleton-thin poor creatures consisting literally of skin and bones; I could never have imagined such screaming, hungry misery. And along with it, dumb, ugly faces, dirt and stench. Their skin color is a dirty yellow. Many men and women were stunted and wasted like dwarfs, while the greater part was of medium stature. The black, straight hair, the wide, bony faces with their dull expressions reminded me strongly of the Indians of South America. This impression was later strengthened, when I was able to observe a larger number of these people in their apathy on board the "Seestern" for days at a time. Of course, they are not related to the Indians, but reckoning from their character and appearance they are not related to the Caroline natives either. A weak strain of Caroline blood may be present nonetheless. The language of Tobi is no longer the same as that on Sonsol and Merir; my Saipan people were not able to communicate with them. Striking, too, was the presence of a number of strong, well-nourished, even fat men, clearly of noble and wealthy status, perhaps a ruling caste of foreign lineage.
had them perform dances, in which especially the corpulent people participated. Men and women faced each othe in two rows each and moved their bodies and limbs to the rhythm of their singing, sometimes standing, sometimes squatting, without otherwise changing their position. Apparently, dance and song serve cultic purposes; for before it began, several people gathered in a large house. The crowd in front of the house kept silence. Suddenly, a man walked rapidly through the crowd, which fearfully parted for him, toward the house. His gaze was fixed on empty space, and he snorted audibly through his nose. A while after he had entered the council house, everyone came out and the dance began.

As on Sonsol, the clothing of the men consists of a narrow band; the women wear short skirts of dry leaves. Children go altogether naked. The women adorn themselves with black-and-white belts fashioned of nine rows Report of Regional Officer Fritz, Saipan: A voyage to Palau, Sonsol and Tobi. Oct.-Dec. 1906. German Colonial Newsletter 1907, p.
of small, rounded platelets of coconut wood and shells held together by crossbars of tortoiseshell, arm rings of tortoiseshell and mother-of-pearl, and necklaces of filed-down shell closures, the violet, porcelain-like limbs of the sea urchin, or peculiarly stylized tortoiseshell fishhooks such as are also worn on Oleai. The natives craft very high-quality ropes and lines of coconut leaf: a professional rope maker could do no better. Moreover, they offer peculiar white-painted figurines for barter: men with hats and pipes, a complete steamship with compass, tiller, signal horn and other details-crude works that nevertheless bear witness to keen powers of observation.

The meager huts are located on the beach and, like their surroundings, are very dirty. The island is ringed with a broad belt of numerous coconut palms. However, they grow too densely and bear only meager fruit. The interior of Tobi revealed to us extensive, carefully planted fields of taro and batata. In order to provide the taro plants with the necessary continuous ground moisture, large areas had been dug out to sea level, with the removed earth piled into hills and reinforced with rows of stones. For the rest, I noticed a type of Pandanus plant with edible fruit, beautiful Calophyllum trees, and chickens, but no dogs or sheep. All the plantings bear witness to industriousnes a certain intelligence, and overpopulation. My question of whether there was enough to eat for so many peopl was answered in the positive: they said that now there were coconuts again and enough food. I could not get any more out of them. I do not think I am wrong in supposing that the epicenter of that typhoon of 1904 passed between Merir and Tobi, stripping the coconut palms of their blossoms and fruit set as happened on Saipan in 1905, so that they have only just recovered. Thence the horrifying figures of famine, the numerous children graves we encountered in the midst of the dwellings: graves sprinkled with corals and white sand and covered over with a small low roof.

I pointed out to the people the misery in which they were living: they should come with me to Palau, Yap or Saipan. There they would receive land, and there is food in abundance for all. I particularly wished to take the poor children with me. Forty-eight men followed me; I saw that some came secretly and against the wishes of their parents or masters. No children came, and only two women; but I had to pay eight bars of tobacco for each. It is high time that as many of these decrepit people as possible be removed from Tobi. It is a rescue operation, One failed harvest, one storm that damages the coconut blossoms, the introduction of scale insects (which, by the way, I did not encounter there) would condemn the greater part of them to death by famine. These weakened bodies would surely succumb to any imported contagious disease. Therefore, I promptly asked the governor to transport as many people as possible from Tobi to Palau or Saipan on board the "Seestern." Still on the same day the "Seestern" sailed back via Sonsol, where we took on another great number of natives, so that there were finally 114 men and 73 women on board. Of the Tobi natives, 39 remained in Yap, along with natives from Sonsol. Some are working for the regional office; others were hired as workers by Europeans. 10 Tobi natives are following a Spanish colonist to Saipan on January 15, 1907 as workers.'"
2. Name

The Spaniards, who learned the names of Pur and Merir on their first visit to Songosor, did not receive any notice of Tobi at that time. ${ }^{2}$ P. Cantova is the first to mention the name Cadacopuei, without doubt the native name for Tobi, but he mistakenly applies it to the southern island of Songosor, Fana. Presumably he got this information from transplanted Oleai natives, and it remains an open question as to whether he was wrongly informed or applied the new name to the known St. Andrews Group of his own accord.
The last paragraph is from the German Colonial Newsletter 1907, p. 668 Lètres Edifinates. Paris 1723. Cantova writes Codo
he geographical handbook of Plant Leipzzig 1799II the accompanying , following Edok, Katogobui, and following Kadu, Kathegube. In Vidal write Cadocoppuey, and Keate goes even further with Cadocapuée. In the most recentici British and American sailing guides, the word has mutated to Kodgubi (see bibliography).


Fig. 3 Chart of the Carolines
In any case, the mistaken attribution made its way through many maps and sailing guides, standing its ground for very long time and increasing the confusion over the identity of this small island. Cantova's statements were so strongly relied upon that Chamisso' rejects the significantly more accurate information of the Oleai native Edok in its favor. This man had claimed that Katogobui lay 5 days' voyage southeast of Tshontil (Songosor), "but," continues Chamisso, "this man cannot really carry authority in this matter concerning islands that he himself has never visited." Now the map to which this remark refers is not at all accurate as regards the four islands Songosor Pur, Merir and Tobi. Neither the orientation nor the distances are correct, but the position of these islands relative to each other makes it perfectly clear that the natives never thought of considering Tobi a part of Songosor, but rather an island at quite some distance from it. ${ }^{2}$ Furthermore, the actual name is simply Togobue. The Co or Ka at the beginning is merely a prefix, apparently a particle indicating direction, which was mistakenly taken for part of the name by the Europeans. Even today, the natives of Merir and Songosor say "...ga toui" to describe an object imported from Tobi, i.e. thing from Tobi. The conclusion from all this is that the correct name for the island was known from the beginning, and that it was simply consistently misapplied. Chamisso's reports also indicate that it was known in the Carolines, and that the small island cannot have been entirely forgotten and removed from all traffic.
The pronunciation of this island's name is hotly debated: the American sailors on the "Mentor" heard and wrote simply Tobi, as is indicated in most of the sailing guides. The participants in the expedition heard it differently: A. Krämer: Togóbei and Tógobei; Hambruch: Touuvei; Hellwig: Tochuwui, Towui, Towin and Tobin. ${ }^{3}$ The frequently observed shifting pronunciation among the natives may play some part in the variations. Without doubt, the stress is on the first syllable, and its $o$ is long and perhaps disyllabic. At times, a weak ch or $g$ seems to be inserted. This is not noticeable when spoken or heard rapidly, and thus it is understandable that in the official

[^2]German reports, "Tobi" is regarded as a perfectly correct transcription.
It should also be mentioned that the tone on the disyllabic $o$ in the first half of the word sometimes rises and sometimes falls, according to the whim of the native speaker-which would have further confused the Europeans listening. Thus, Tochóbì exists side by side with Tóchòbi ${ }^{2}$

The various "discoverers" also endowed the island with a substantial number of foreign names: in 1782, William Hambly called it "Lord North" after his ship; in 1789, Captain Joseph Dorin of the "Duke of Montrose" called it "Neville" Island, changed to "Navil" Island by Robertson; and in 1882, Captain Douglas of the "Iphigenia" called it "Johnstone" Island. Carteret himself never gave the island a name; but following his report, later editors called Tobi "Evening" Island or even "Peakedhill Island"-the first name after the time of day of the discovery, the second after the island's main characteristic. ${ }^{3}$ Of these foreign names, "Lord North" has asserted itself mos strongly, and with some justification, since it is the first name given to the island by Europeans.

## 3. Geography

Location. The very conflicting reports about the location of the island were the reason why no one realized for so long that all the various names referred to one and the same island. ${ }^{4}$ Often, the location is given only in relation to Merir, as in the German South Sea Handbook. The last official mention is from the British sea map of 1933, which is based on a publication of the Japanese government. According to this, Tobi is located at latitude $3^{\circ} 50^{\prime}$ $00^{\prime \prime}$ north and longitude $131^{\circ} 10^{\prime} 37^{\prime \prime}$ east. The following overview gives the various measurements published over time:

| atituc | Longitude E. | Observer | Remarks |
| :---: | :---: | :---: | :---: |
| $2^{\circ} 50^{\prime}$ | $136^{\circ} 10^{\prime}$ | Carteret | Nov. 28, 1767 "SWALLOW" |
| $2^{\circ} 54^{\prime}$ |  | Woodes Rogers | Apr. 10, 1710 "DUKE". In the Dutch edition, "Breete van $2^{\circ} 24^{\prime} 24 \mathrm{~N}$ " |
| $3^{\circ} 2^{3 / 4}$ | $131^{\circ} 20^{\prime}$ | William Hambly | January 1782 "LORD NORTH" |
| $3^{\circ} 11$, | $131^{\circ} 12^{\prime}$ | Douglas-Meares | Mar. 10, 1788 "DUKE of BRISTOL" |
| $3^{\circ} 3^{\prime}$ | $131^{\circ} 4^{\prime}$ | Krusenstern 1819 | p. 114 |
| $3^{0} 2^{3 / 4}$ | $131^{\circ} 20^{\prime}$ | Horsburgh, $3^{\text {rd }}$ Ed. | 1826 "by mean of six ships' lunar observation." Capt. Seton of the ship "Helen" indicates $132^{\circ} 4^{1 / 4^{\prime}}\left(13^{3} / 4\right.$ miles west of Point Pigot). According to Wichmann, however, he only saw Helen Reef. Similarly, in 1812 the ship "DORSETSHIRE" only passed by Helen Reef, but not Tobi as Horsburgh indicates. |
| $3^{\circ} 2^{\prime}$ | $131^{\circ} 10^{\prime}$ | "DORSETSHIRE" |  |
| $3^{\circ}-4^{\circ}$ | $131^{\circ} 20^{\prime}$ | Holden 1833 |  |
| $3^{0} 2^{3 / 4}$ | $131{ }^{\circ} 4^{1 / 4}{ }^{\text {, }}$ | Rosser 1870 | According to Capt. Seton of the "HELEN". |
| $3^{\circ} 1^{\prime}$ | $131^{\circ} 7^{\prime}$ | Rosser 1870 | newer measurements |
| $3^{\circ} 8^{\prime}$ | $131^{\circ} 8^{\prime}$ | Findlay 1870 |  |

1 The South Sea Handbook V-VI, p. 62, has Tobi alongside Togobei; among other names, it also has San Carlos, a name presumably added 1The South Sea Handbook V-VI, p. 62, has Tobi alonsside Togobei; among other names, it also has San Carlos, a name presumably adde
by D. Felipe Tompson, who is also supposed to have seen Tobi ( (773). This information is apparently taken from Meinicke, op. cit. II, p . 364 , who does not quote his source.
$2 \hat{a}=$ high tone; $\bar{a}=$ low tone; $\mathrm{a}=$ middle tone. After Hambruch.
As Meinicke indicates, II, p. 438, Carteret has this name on his map. In Hawkesworth I, 1772, both in the text and on the maps, this is not confirmed. -The name "Evening Island" is found in Arrowsmith, Hydrographical Chart of the World, London 1812.
4 Thus, Burrey took the island discovered by Carteret and Woodes Rogers to be two separate islands (op. cit. V. p. 23 ff.) On the other hand
Krusenstern identifies Carteret Island with the Neville Island of Dorin from the Duke of Montrose. (According to the essay of Eyries in Nouv. Annal. des Voyages, p. 171, 1842/II. R.H. Major, in his work Early Voyages to Terra Australis, London 1859, p. XLVIII, attempts to dentify Sequeira Island with Tobi, an attempt which is thoroughly rejected by Wichmann in Nov. Guinea I , p. 17. In this controversy, the researchers generally did not pay sufficient attention to the route of the Spaniards, or to the distances covered. In any case, however, Tobi cannot be a candidate, since the Sequeira islands are explicitly described as "high islands."


Fig. 4.
Hambruch described the atoll as follows: The island is coralogenic and concave-convex in shape. It is surrounded by a reef that is narrowest on the western coast, widest in the north, less wide in the south and east. It drop off rather sharply. At low tide, one can step directly up to the steeply descending edge of the reef. The flat reef falls off to the steep reef edge via a step that is approximately $1 \frac{1}{2}-2 \mathrm{~m}$ wide and $1 / 2 \mathrm{~m}$ tall. The reef consists of cemented reef lime, which is also the basic material of the whole island. A layer of sand, deeper inland, cover he parts protruding above the water. The sand is quite coarse-grained inland, especially in the upper layers, whil on the beach it is fine. The island's elevation above the high-water mark is about $1 \frac{1}{2}$ to 2 m ; near the taro field
the elevation has been artificially increased up to 10 m . While it is possible to discern a beach embankment, it is wide and its inland depression is hardly noticeable; in some places, especially in the taboo grove getik, it is clearly recognizable. The sand beach varies in width. On the west coast it measures about $10-15 \mathrm{~m}$, at the northern tip 50 m , on the southern tip 60 m , and on the eastern side $1 / 2-5 \mathrm{~m}$. Here, the beach falls off steeply to the reef $\frac{1}{2} \mathrm{~m}$ below, while on the west coast, the beach and reef gradually merge. The currents, which move westward, have deposited very many stones on the northern and southern tip; the east side is richer in stones than the west side. At favorable times of year, it is easy to land here, while during the southwest monsoon the strong surf makes it impossible to land. In this case, it may be possible to make land on the protected eastern side
Seen from the sea, the island appears to be entirely covered with palms; in reality, only parts of it are. A belt of varying width containing settlements in the west and mixed with dense bush in the northern taboo grove encircles Tobi. Continuing inland, one finds a narrow belt of high deciduous trees, and the middle of the island is taken up by taro fields. In the north of the island there is an arid stretch of sand, poor in vegetation, covered only with meager ferns, in all probability old deteriorated taro fields. It occupies the space between the taboo grove and the current taro fields.... It should be mentioned that the block enclosures to be found everywhere on the island are artificial and originated as field markers of abandoned sites. For it is native custom to mark the boundary of individual fields with coral rocks.

This description accords very well with the ones familiar to date. The dense tree cover drew the notice of all passing ships. Tobi's trademark feature, as it were, the "sail-like tree" or "peaked hill" mentioned by Carteret and Douglas, had disappeared by 1854.' The island, which is extremely flat, is visible from a distance of about 12 nautical miles. Only Horsburgh mentions a distance of $4-4 \frac{1}{2}$ miles. The reef protrudes sharply to the east at the northernmost tip of the island. According to the 1933 reports of the British Admiralty, it juts out toward the nort about $41 / 2$ cable lengths into the sea. Holden estimated its total extent to be $1 / 8$ to $1 / 4$ mile. According to Barnard, lies at a distance of about $1 / 2$ mile from the island. According to the measurements recorded in the latest British sea chart, the depth behind the reef measures 46 and 52 fathoms at the shallow points and close to 100 fathoms at other spots. Very close by, however, depths of 200 fathoms can be found at sea. There is no anchoring ground but ships can approach to a distance of a quarter mile. The canoes of the natives are able to pass over the reef if the water conditions are favorable; this is not possible for other boats. Generally, it is necessary to wade over the reef, as Holden and Fritz discovered for themselves. The current near the island measures $1 \frac{1}{4}$ knots in a southeas direction, according to the reports of the British Admiralty

Douglas was the first to estimate the size of the island. He gives the circumference as about 1 mile. Barnard and Holden, who had plenty of time to estimate or measure it, both mention a length of ${ }^{3 / 4}$ mile and a width of $1 / 2$ mile. All the later British sailing guides agree on "an extent of 1 or $1 / 2$ miles in an ESE-WNW direction." The South Sea Handbook also quotes these measurements. Hambruch estimated the area of the island to be $1,200,000$ squar meters total. Of this, 200,000 square meters are taken up by the settlements; 250,000 are covered with brush, including the arid sand fields which measure about 20,000 square meters. 300,000 square meters are covered b coconut palms ( 4 trees per 25 square meters), and 450,000 with taro fields.

During the sojourn of the American sailors in 1833 , there were many severe earthquakes. The destructive effects of the typhoons are enumerated in detail by Holden and the regional officer Fritz. Certainly there would have been other such catastrophes visiting the island besides the two made known by these men; this would als explain the varying impressions made by the natives on the sailors: wretched and decrepit after typhoons, healthy and hale during good times.
Horsburgh, loc. cit., moves the tree to the center of the island, while the others saw it in the east. Its disappearance is apparently docu mented by the captain of the "Cordelia Beran," whom Horsburgh cites.


The fauna of Tobi is as monotonous as on all coral islands. The only native mammal is the rat. It was found there already in Holden's day, who believed himself to be the first white person on the island. Dogs, pigs and cats-Hellwig saw a few tame cats-were introduced later. The single dog found on Tobi is said to have died. No pig stalls were to be found on the island. Strong winds from any direction frequently bring in flying foxes The natives prize them as food: the flesh is baked in coconut shells. They value thei chickens highly and keep them in special huts. Apparently, wild birds are not very wel epresented. In Holden's time, only isolated examples found their way to Tobi's beaches, but Krämer was able to list several species represented: kingfisher, Phaeton, Gygis (tame around the dwellings), Anous stolidus, the black and the white noddy, and a few of uncertain zoological designation whose native names are listed in the word list. The most frequent shorebirds are plovers and snipe or godwit.


Fig. 6. Cross-section through Tobi Island, after Hambruch

In addition, the Tobi natives distinguish two birds dwelling exclusively on the land, the kohorian, which is $5-8 \mathrm{~cm}$ in length and which is "not always present," and the sauechau, which, however, does visit the beach. The reptiles seem to be represented by a species of sea snake, of which nothing could be learned except the name. Holden mentions lizards along with rats as representatives of large animals. The turtle is highly valued. It apparently is not in plentiful supply at all times, but seems to be prevalent enough so that the expedition found three houses devoted to the cooking of these animals. Among sea animals (see the word list), the octopus, flatish, ligosobir and siefaga tsairen are subject to particular culinary laws. This last is a small black or black-and-white-striped fish found in the reef lagoon and is said to be fatally poisonous even to birds. Of the remaining fauna, insects, only the names are known. The presence of scorpions is uncertain.

| Animal names. |  |  |  |
| :---: | :---: | :---: | :---: |
| pig | ${ }_{\text {peik }}$ | $\begin{aligned} & \text { dog } \\ & \text { cat } \end{aligned}$ | biris, piliz Ham. moio |
| fur | hüra | tail | oger |
| beak | iovar, iouvar, iauar Ham. | feather | ürar, ügür Ham. |
| claw | farar, kir Ham. | wing | baur, e'ir Ham. |
| chicken | gogo, goga E.K. koko Ham. | rooster | merimar, maru mar Ham. |
| hen | meri feivir, maru faifl Ham. |  | rair, batsik, rauri koko |
| kingfisher | tagasik | sea snake | rabut |
| Phaeton | sök | Gygis | giegi |
| white tern sandpiper | girkin He . girina He . | Anous stolidus <br> white seabird with long wis | kirigag, chirigach He . ngs metsekekemo |
| heron | gagao, chachaut He . | white heron | gagaubes |
| black heron | gagaitsor | plover | kirin |
| snipe/godwit | riengak, likeripoupor | land bird (general term) | miri |
| occasional bird, $5-8 \mathrm{~cm}$ long, dark plumage and light breast, comes for 2 months (He.) kohorian, kokoria migratory bird of prey that eats chicks sikip |  |  |  |
|  | mar, kar'rum P. karam = sea | gull Ha . |  |
| sea bird, also comes ashore sauechau |  |  |  |
|  |  |  |  |
| flying fox | uarik, rebolel, mesu, mieg g | otal, chaalifat, beke rau |  |
| rat | kes, gatsetsik, tum meeum P. | ketsietsi Ha . |  |
| lizard | galuf (only Yap) Ham; limai | gogo, peelel Р., На. |  |
| fish | ik, hik Ham. ee 'kah P. | scales | uörar, urara, hürar Ham. |
| fishbone | tser, tunur Ham. | gill | tsivogar |
| air bladder | ugoug | dorsal fin | ingir, ingi ni uor Ham. |
| tailfin | betsar, ingi paitar Ham. | pectoral fin | paür |
| ventral fin | sifir, ingi e far Ham. | anal fin | ingisiar |
| whale | gas A.K., kahs P., kas Ha. |  | rangit |
| large belone | mag | small belone | gafereiika |
| Mullus | sou | Caranx | ragan |
| flying fish | tor, gataf | beetle | kokorun |
| octopus | charechita | sepia | ngit |
| flatfish | libeg | unknown species | bub |
| small red fish | mataitsa | large red fish | mos |
| Exocoetus | magag | Mugil | iaak |
| shark | bagou, bochou; pocho He.; | poro Ham.; po P., Ha. |  |
| Without indication of species: bare (red) 1-2 feet, gor, geniki, kio, mar, lipau, tsepotam and nmagabu small black or striped fish in the reef lagoon, very poisonous siefaga tsairen |  |  |  |
| 1. crab, 2. edible crab | 1. gagum, 2. hakum, hagich |  |  |
| nautilus | amageber Ham. | sea cucumber | periper |
| sea urchin |  | shell | sak Ham. |
| Tridacna clam | bonitog | pearl oyster | padageïnan Ham. |
| Trochus shell, mainly on H snail | Helen Reef iogog | a kikoi of similar type that lime | they like to eat berik |
| limestone | fasinetet | butterfly | chabek, gabuek |
|  | ran, uets Ham. lahng P., lan | Ha. mosquito | ram, lahm P., Ha. |
| louse | kös, kus | scorpion | sasaribon, ero sunepon |
| 1 Unless otherwise noted, all from A. Krämer. Hambruch (Ham.) obtained several terms from a thirty-year-old Tobi native living on Yap, Iaraua me soa. The words from the seaman Holden given by Pickering (P.) are given according to the spelling of the original (Holden, appendix). $\mathrm{Ha}=\mathrm{Hale}, \mathrm{He}=$ Hellwig, E.K. $=$ Elisabeth Krämer. Hale's transcription has been adapted to the one used here, because it consisted mostly of upper- and lowercase Greek letters as well as a number of invented symbols, which would have necessitated a cumbersome explanation and made printing more difficult. Hale's very thorough differentiation of the vowels made it necessary to transcribe the a sound, not noticed by the German researchers but according to Hale like the sound in "but" and "burne," as $\alpha$. |  |  |  |


| Ham. spider | sinerisebagaga | spiderweb | lusa bagaga |
| :--- | :--- | :--- | :--- |
| millipede | lipagar, diparar | cockroach | koharu |
| taro water beetle | marikir Astraea basingek | grasshopper | manivetiri |
| dragonfly | otsapi | cricket | ngungupa (chirp) |
|  |  |  | Flora |

The flora of Tobi is no less rich than that of any other low island. Krämer was successful in recording the name
of a large number of native names. We will take up these plants in another place to the extent that they play a role in the household of the natives.

| herb | zochudat Ham.; |
| :---: | :---: |
| small plant | batsitsik iteberika; tirigät Ham.; waw'ree |
| bush | pipi iar Ham.; |
| tree | teberika; tarapa Ham.; tummutch'ee P. |
| tree trunk | tabur'rah eek'ah; tamatsi P., Ha. |
| leaf | ön, un, ün Ham. |
| seedling | sieboro |
| twig | gar, char Ham. |
| bark | kien, chin Ham. |
| root | uagag, uachagar Ham. |
| thorn | kangitsir |
| seed | bekien |
| resin ${ }^{35}$ | bun |
| Calophyllum resin | buni safan |
| shell, rind (coconut) | peian, paiian Ham. |
| blossom | tororo |
| fruit | uar |
| decayed wood | igai |
| grassy area under palms | nimeretak; uore = grass Ha. |
| forest | fariuorïor |
| taro field | bannuot |
| palm | ün e pan Ham. |
| Cycas | lui arigets Ham. |
| nipa palm | nipa gar Ham. |
| coconut palm | rög, duch Ham. |
| palm juice | ati, asi He ., boiled juice ito He . |
| breadfruit | bukeriüu, mai E.K.; ual Ham. |
| Terminalia | geisas |
| fruit | kiri |
| Thespesia | kirifoi, silivo |
| sago palm | perem Ham. |
| Ficus | kirio |
| Eugenia (Malay apple) | fariep, rebotel |
| Fagraea | gug |
| Wedelia | ietiel |
| Casuarina | dou |
| Pandanus palm | vats uits Ham. bögu (broad-leaved, whose fruits are eaten raw) man (especially suitable for mat weaving. E.K.) |
| Cerbera, poisonous plant | тоа |
| Pipturus | iegoma |
| Derris, vine | uorimag |


| Scaevola | not |
| :---: | :---: |
| Hernandia | gotsar |
| Trionfettia | gagagag (they like to use the blossoms as adornment) |
| banana | uits (is supposed to have washed up in olden times) |
| hibiscus | girifag E.K. |
| taro | uot, uod E.K., Ham.; molok Ham. |
| wild taro | pula or burago (only one type found) |
| types of taro | morig, $b a$ (term for wild taro with stem), bamogu, uota gangagan, uet enen, gugug, uote rimagau, tauakiag, uota ngingaginga, anöri, iaigimog, tokomei, bagueri, diuaigan, bagagan |
| sweet potato | tomuto, mongaueri E.K. |
| Tacca | mogemog |
| Crinum | kiop |
| grass | fatir, uati, vateri E.K., fatig Ham. |
| Pteris, bracken fern | kamagag, amagag, dzidzi E.K. |
| moss | rum |
| bamboo | baubou; sheeb P.; tsil Ha. |
| Expressions for the environment after A. Krämer. ${ }^{1}$ |  |
| open sea | metau |
| reef | ahrah'oo P.; raü На. |
| reef edge | iakiag |
| reef plateau | aurun |
| shallow water on the reef | uorimet |
| beach | votsimarinam; pi He.; rau Ham. |
| lower beach | metaripi |
| middle beach | votokorima |
| upper beach | matari baraki |
| land | igaut |
| water | tsar Ham.; tah'roo P.; taru Ha. |
| salt water | tat, dat Ham.; taht P., Ha. |
| brackish water | ielat |
| water hole | gar |
| rain rivulet | eaguei |
| fire | iaf Ham.; yah, yahf P. |
| smoke | buogorief, buochor Ham. |
| ash | uaran, faral Ham. |
| firewood | vavi, fafi |
| sky | ran |
| air | ian Ham. |
| horizon | fari kepinen |
| cloud | maniren, rain Ham.; kotcho P. katso На. |
| rain | ut, üut He.; oot P. |
| it's raining | iogeruk He . |
| rain cloud | gutsou |
| fog (over the bush) | rangerifoi |
| dew | eamokoribon |

$$
\begin{aligned}
& \text { metau } \\
& \text { ahrah'oo P.; raü Ha. } \\
& \text { iakiag } \\
& \text { aurun } \\
& \text { uorimet } \\
& \text { votsimarinam; pi He.; rau Ham. } \\
& \text { metaripi } \\
& \text { votokorima } \\
& \text { matari baraki } \\
& \text { igaut } \\
& \text { tsar Ham.; tah'roo P.; taru Ha. } \\
& \text { tat, dat Ham.; taht P., Ha. } \\
& \text { ielat } \\
& \text { gar } \\
& \text { eaguei } \\
& \text { iaf Ham.; yah, yahf P. } \\
& \text { buogorief, buochor Ham. } \\
& \text { uaran, faral Ham. } \\
& \text { vavi, fafi } \\
& \text { ran } \\
& \text { ian Ham. } \\
& \text { fari kepinen } \\
& \text { maniren, rain Ham.; kotcho P. katso Ha. } \\
& \text { ut, ü̈̈t He.; oot P. } \\
& \text { iogeruk He. } \\
& \text { gutsou } \\
& \text { rangerifoi } \\
& \text { eamokoribon }
\end{aligned}
$$

| wind | een, iiein Ham.; yang P.; ian Ha. |
| :---: | :---: |
| de wind | ean eri gotuvafen |
| monsoon | eangian |
| storm | bagasarien, fas Ham.; pee pee oot P. (much rain) |
| thunderstorm, thunder | bag, pah Р., nepa На. |
| lightning | fisier, vizik Ha. |
| rainbow | akim (rigim Yap) |
| wave | rabatut, dauï Ham. |
| breaker | rao, pungunau |
| incoming tide | bukuron |
| high tide | iekirab, bukonioitsik |
| outgoing tide, decreasing tide | eafivoi, vou, mesauoir (E.K.) |
| low tide | ietsingtsin |
| neap tide | tativocharach |
| spring tide | bukaroik |
| swell | roroparap |
| sun | ear; iaro He., E.K., Ha.; yah'ro P. |
| sunrise | morikar, iagagatek (E.K.) |
| sunset | moribon, turon (E.K.) |
| shadow | iaungar, ual Ham. |
| noonday sun | otaran E.K.; aeik iorou |
| day | nikari E.K.; lenei Ham. |
| morning | nimarier, e nemariet Ham. |
| noon | iaik E.K.; otarei Ham. |
| evening | nivagaf E.K.; tapar Ham. |
| night | ngibon, morubon E.K.; iaboin Ham.; neebo' P. |
| midnight | rükereparibon E.K. |
| darkness | klo wayzer 'ris P.; kluuaizaris Ha. |
| year | seu masirap ( $1^{\text {st }}$ year) E.K. kuou masirap (2 ${ }^{\text {nd }}$ year) sauiefen A.K. |
| month | macham |
| dry season | ienegogar E.K. |
| north | iefen |
| south | ioik, ieög Ham. |
| west | irotou, iliatau Ham. |
| east | iruk feteg E.K.; iruch Ham. |
| moon | magam E.K.; meraun E.K.; melam Ham.; muk'kum P. |
| new moon | ringetogor E.K.; eiougmelam Ham. |
| full moon | natu, manirin Ham. |
| waning moon | megem Ham. |
| waxing moon | zaneigito Ham. |
| star | vis, fis E.K.; fis Ham.; vish P., Ha. |
| ground | igaut, mesal Ham. |
| taro field soil | metsok |
| land | farik |
| taro field | nibor |
| path | iar, otatar Ham. |
| rise, hill | boba |
| island | farik, fariii Ham. |


| sand | bi, pich Ham. |
| :--- | :--- |
| stone | fas, ba E.K.; faz Ham.; vahs P., Ha. |
| black lava | fasistsor |
| sandstone | ieton |
| pumice stone | uari |
| salt | maragagau |

4. Settlements.

According to Hambruch's observations, the population lives in eleven clearly separate sites that are nevertheless considered one common village. In the time of Holden, the Tobi natives inhabited three villages. Now as in the past, the houses are densely crowded together near the beach under coconut palms.
The sites extend from the southern half around the southern tip of the island to the midpoint of the west side; the largest single site in the southwest can be considered the heart of the village. Among its numerous buildings are the two spirit houses, the houses of the head chief and the women's houses. On the side of the settlements that faces inland there are numerous wells, dzor. Hambruch counted 13 of them. They are funnel-shaped water holes, very carefully lined with stones, the center of which is formed by stone plates standing on end to form a square Behind these the deciduous forest, containing four farms belonging to the natives, begins.

The taro fields lie beyond. They lie lower due to the earth having been excavated, and are surrounded by an embankment that is 10 m high in places. Smaller berms run through the entire area, which is divided up into smaller fields. The larger berms have their own names. According to Holden's description, after the great storm flood he and his companions had to build a dam that was to protect the palms from further damage in the future Nine of them worked on this project for several months, building it up using coral blocks. One is tempted to identify the high taro berm as this work, but his remark that the berm was meant to protect the palms-which are located in front of the taro fields-from flooding by the sea does not support this. Besides the taro field dam, Hambruch mentions a beach berm that seems a bit too low for the months-long labor of the sailors, unless it wa taken down again later or destroyed by the sea over time. Hambruch writes: "a sea wall is discernible, but it is wide and its depth is hardly noticeable on the inland side; in a few places, especially in the taboo grove getek, it is clearly visible." In the area of the taro fields there are a few small houses that serve to store the harvest.

The natives distinguish sections of the island according to their orientation: the eastern part is $i$ irig, the western part metag, the northern part iefen, and the southern part iog. The eleven inhabited settlements counted by Hambruch include the following sites:
. uangito,
2. garingemog, farikir, fage
3. vanimagat, farebugik,
4. fari mekeriasarau, nugeriviripis, materi feniaro, vatoberig, siarubau, fanurigerau, rikeruvongera, matar fenieran, matari feri samag, matari fitogan, mauer, matari maripar,
5. matari ferigasafa, materi feri bugo.
6. matari gevitsi,
7. matari feri burau, beioog, legutauuamets, aperifer
8. auarei, venaigeg,
. matari kesa, mesarug
10. rukurariman

The last four sites are located on the eastern coast, which contains the most abandoned settlements; the remainder

are in the north of the island. Between the sites nateri maripar and matari feri gasafa lies the trange children's cemetery lepei. Here, infants who still lacked teeth at death are buried.

The names of the abandoned sites in the east are legusoboripi, vorikerifoi, meseoro, ogutsari, matane sirei and vorieran; on the western side and in the northern part of the sland matari betsur, dauer, matari songorogo, niere tirotsovet, ifageue and vaniborivatsa. ccording to Kramer, the eastern six and latter four in the west belong to the area of the taboo grove getek. Hambruch has them located further outh, probably due to a misunderstanding. On the sketch of the settlements they are corrected
according to Krämer's records. The abandoned sites in the east of the southern half of the island are vatanesegumar, varagabui, vatariara, farup, rikirakaman, vasugerigotuo, menetak, vatou and ranirogi. The numbers designat the place names recorded by Hambruch and Krämer. The bolded numbers indicate abandoned dwelling sites, and the sites marked with an * are indicated on the settlement maps in Fig. 9 and 10.

| after Hambruch | after Krämer |
| :--- | :--- |
| lugusuguripich | legusoboripi |
|  | vorikerifoi |
|  | meseoro |
|  | rogutsari |
|  | matane sirei |
|  | vorieran |
|  | fare mesusur |
| fari mesusur | rukurarimar |
| lugurelisa | masarug |
| mesarik | matari kesa |
| matarui gesuch | venaigeg |
| uenieg | auarei |
| unori | vatanesegumar |
| taniseiumaar | varagabui |
| uararabui | vatariara |
| metaria | farup |
| varumagimum | farup |
| uazorigotoch | vasugerigotugo |
| lugerigumaan | rikirakaman |
| menisak | menetak |
| fato | vatou |
| uori feri iuch | ranirogi |
| vori foro goeig | fare gouaiog |





Fig. 9. Settlements in the east. After a drawing by P. Hambruch.

| 32.* |  | matari feri bugos |
| :---: | :---: | :---: |
| 33.* |  | matari feri gasafa |
| 34. | azonegopis |  |
| 35.* | lepei | repei |
| 36.* |  | matari maripar |
| 37.* |  | mauer |
| 38.* |  | matari fitogan |
| 39.* |  | matari feri tsamag |



Fig. 10. Settlements in the west. After a drawing by P. Hambruch.

| 41.* | fanira | matari fenieran |
| :--- | :--- | :--- |
| 42.* | lugeruuona | rikerivongar |
| 43.* | fanügerau | fanurigerau |
| 44.* | sieruua | siarubau |
| 45. | matari feuazizich |  |
| 46.* | uatopirigis | vatoberig |
| 47.* |  | matari feniaro |
| 48.* | nugeriuiripis |  |
| 49. | animerisau | fari mekeriasarau |
| 50.* | fari buch | fari bugik |
| 51. | uanimerat | vanimagat |
| 52.* | farepi | fagep |
| 53.* | uariki | farikir |
| 54.* | aringemoch | garingemog |
| 55.* | moranugoch |  |
| 56.* | uangito | vano |
| 57. |  | matari betsur |
| 58. |  | dauer |
| 59. |  | matari songorogo |
| 60. | rinieretirotsovet |  |
| 61. | bifaneiue | ifageue |
| 62. | uaniporifat | vaniborivatsa |

The names ${ }^{1}$ in the area of taro plantations refer to the constructed dams.
fari meguch
pororimezarach
manuur
popariuarimesori
benitafei
ingetsich
fari getsouari
fari getsouari
apriubor
fari fosumach
uaterugeia
fariuirürch
ferimu
fatorïrch
boriurch
fari meganipech
fari meganugur
libonoch
sruirit
uamrioch
fari fürtich
fari magariuur
fanue
fari gezazich
Only according to Hambruch.

The paths of the natives, edged with coral rocks, circle the island, in several places forming several paralle lines; they branch out into the larger settlements and from there finally end in the taro fields, where they remain at the height of the dams. No path leads through the barren area north of the fields, whereas the taboo grove in the north is crossed by several thoroughfares.

The houses, built very close together, at first present an extremely uniform appearance. All the visitors noted their poor construction, and this impression is strengthened still more by the dirt and the slovenliness of the natives. They are simple rectangular structures: a roof covered with palm leaves and placed on the ground. With a single exception, the houses are oriented from east to west; most often, the door is located on the south side, although there is no strict rule regarding this. The natives distinguish between several functions: family living and sleeping quarters, im io mar, ${ }^{1}$ birthing houses, im maripar, ${ }^{2}$ houses for menstruation, im manuborutochob, houses for single girls, im io faifl, houses for widowers, sleeping houses for children, palarachach, and open houses for sleeping and resting. There are two spirit houses in the same settlement. Besides the numerous boathouses, im io $u a$, they have a great number of utility buildings: material sheds, imim io manifaifil; coconut sheds, im io fisua chicken houses, im io koko; and the abovementioned work houses in the taro plantations. A curiosity is the great number of cooking houses named after the food prepared in each. It seems as if the preparation of other foods is not allowed there. They have fish-cooking houses, im manu sunik, taro-cooking houses, im io uot, and turtle cooking houses. In addition, there are certain houses for preparing renga, called im merigan or im matatarigan. Hambruch counted the following buildings, totaling 673.
142 family living and sleeping houses
47 open houses for sleeping and resting
8 houses for widowers
18 sleeping houses for children
32 blood houses
80 cano rial sheds
8 coconut houses
8 chicken houses
122 taro cooking houses
22 fish cooking houses
1 birthing house
1
2
3 turtle cooking houses
72 renga houses
19 taro houses in the fields

The land, to the extent it is fertile, seems to be completely divided up. The individual fields, upeig, have specia names. The boundary, uasi $u$ torion, between neighboring plots is formed by stone edging or at least by boundary stones. Hambruch was able to ascertain the following concerning property:

| Owner | Family | Houses | Land | Palms | Fields |  | Canoes |  |
| :--- | :--- | :--- | :--- | :---: | :--- | :--- | :--- | :--- |
| Head Chief | 2 wives | 2 large living | Uorefeiuch | 20 | Taro | Ren | Yam | 2 large |
| Vitzeraun, | 7 children | houses | Nakil | 80 | 4 | 1 | - | 1 small |
| male | (6 male, | 1 large canoe | Geleneiafit | 40 |  |  |  |  |
|  | 1 female) | house | Repeiteitei | 10 |  |  |  |  |
|  |  | 1 cooking house | Farekari | 25 |  |  |  |  |
|  |  | 1 ren house | Auari | 15 |  |  |  |  |
|  |  | 1 materials | Ruiutseri | $\underline{20}$ |  |  |  |  |
|  |  | house |  | 210 |  | 4 | 9 | 1 large |
| Sisis, | 2 wives | 1 large living | Fato | 7 | - | 4 |  | 1 small |
| male | (one | house | Uatsobor | 7 |  |  |  |  |
|  | dead) | 1 large canoe | Sieruneai | $\underline{10}$ |  |  |  |  |
|  | childless | house |  |  | 24 |  |  |  |
|  |  | 1 cooking house |  |  |  |  |  |  |

Compare on Yap: dapal = blood house.
It was not possible to obtain a comprehensive listing.

\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline Begigeramar, male \& \begin{tabular}{l}
2 wives \\
8 children \\
(5 from \\
one, \\
3 from \\
the other)
\end{tabular} \& 1 living house 1 cooking house 1 canoe house 1 materials house 1 ren house \& \begin{tabular}{l}
Varub \\
Ateperik \\
Variki \\
Arinamog
\end{tabular} \& \[
\begin{gathered}
13 \\
15 \\
9 \\
\frac{10}{47}
\end{gathered}
\] \& 14 \& 5 \& \& \begin{tabular}{l}
1 large \\
1 small
\end{tabular} \\
\hline Takitokonoma, male \& 1 wife (3 wives dead) 13 boys ( \(1^{\text {st }}\) marriage 5 marriage 5 \(3^{\text {rd }}\) marriage 4 \(4^{\text {th }}\) marriage \& 2 living houses 1 cooking house 1 fish cooking house 1 ren house 1 materials house 1 canoe house \& \begin{tabular}{l}
Fariuegitsik \\
Fariachat \\
Fariferibogus \\
Lugutuuomots \\
Lugeriotseremotz \\
Lugeriomon \\
Uasiseregotuk \\
Uanimerat \\
Uatumach
\end{tabular} \& \[
\begin{aligned}
\& 10 \\
\& 12 \\
\& 9 \\
\& 10 \\
\& 5 \\
\& 5 \\
\& 10 \\
\& 8 \\
\& 10 \\
\& 7 \\
\& \hline 81
\end{aligned}
\] \& 10 \& 10 \& - \& \begin{tabular}{l}
2 large \\
1 small
\end{tabular} \\
\hline Vovitikan, male \& \begin{tabular}{l}
1) wife \\
7 children \\
(4 male, \\
3 female)
\end{tabular} \& 1 living house 1 cooking house 1 ren house 1 fish cooking house \& \begin{tabular}{l}
Fano \\
Anutseniuan
\end{tabular} \& \[
\begin{aligned}
\& 10 \\
\& \underline{20} \\
\& \hline
\end{aligned}
\] \& 14 \& 3 \& - \& 3 small, kept in another's canoe house \\
\hline Iatifa, male \& 1 wife, dead 7 children (4 male, 3 female) \& 1 living house 1 cooking house 1 fish cooking house 1 ren house 1 materials house \& \begin{tabular}{l}
Apuiuit \\
Fariuuenen \\
Lugerioman \\
Farigamanagataifil
\end{tabular} \& \[
\begin{gathered}
3 \\
4 \\
10 \\
\frac{10}{27}
\end{gathered}
\] \& 20 \& 2

6 \& - \& 2 large 1 small <br>

\hline Mochonugar, male \& | 2 wives, |
| :--- |
| the third |
| dead |
| 27 |
| children: |
| 16 male |
| 11 female |
| $1^{\text {st }}$ |
| marriage: |
| 3 male, |
| 2 female |
| $2^{\text {nd }}$ |
| marriage: |
| 4 male, |
| 3 female |
| $3^{\text {rd }}$ |
| marriage: |
| 9 male, |
| 6 female | \& | 1 living house |
| :--- |
| 1 cooking house |
| 1 fish cooking |
| house |
| 2 ren houses |
| 1 materials |
| house |
| 2 canoe houses | \& | Taua |
| :--- |
| Metaripitsu |
| Fatsuma |
| Garinemog | \& \[

$$
\begin{gathered}
10 \\
5 \\
15 \\
\frac{10}{40}
\end{gathered}
$$

\] \& 10 \& 6 \& - \& \[

$$
\begin{aligned}
& 1 \text { large } \\
& 2 \text { small }
\end{aligned}
$$
\] <br>

\hline
\end{tabular}



Fig. 11. Houses with windscreens. Sketch by E. Krämer.


Fig. 12. Houses with racks for fruit. Sketch by E. Krämer

liage road on Tobi. Glass plate scan, Hamburg Museum.


| Tsigeitsegagan, male | 1 wife, dead 4 children: 4 male, 4 female | 1 living house 1 cooking house 1 ren house | Farep <br> Fereguapitemots Farifeniier | $\begin{aligned} & 10 \\ & 10 \\ & \underline{6} \\ & 26 \end{aligned}$ | 10 | 2 | - | 1 small |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Paparatuk, male | 1 wife 6 <br> children: <br> 3 male, <br> 3 female | 1 living house <br> 2 cooking <br> houses <br> 1 fish cooking house <br> 1 ren house | Enirögi Falimeliro | $\begin{aligned} & 10 \\ & \frac{10}{20} \end{aligned}$ | 10 | 4 | - | none |
| Zriuolülemat, male | 2 wives <br> 5 <br> children: <br> 2 male, <br> 3 female | 1 living house 1 cooking house 1 fish cooking house 1 ren house 1 materials house 1 canoe house (guest house) | Uorimer <br> Faligererau <br> Farap (half) | $\begin{aligned} & 12 \\ & 12 \\ & \frac{10}{34} \end{aligned}$ | 10 | 3 | - | $\begin{aligned} & 1 \text { large } \\ & 2 \text { small } \end{aligned}$ |
| Torumar, male | 2 wives 6 boys <br> 2 froml ${ }^{\text {st }}$, 4 from $2^{\text {nd }}$ marriage | 2 living houses <br> 1 sleeping <br> house for boys <br> 1 cooking house <br> 1 ren house <br> 1 materials <br> house <br> 2 canoe houses | Luguuuripis <br> Matatsimitz <br> Faifilemangarap <br> Matariap | $\begin{aligned} & 20 \\ & 13 \\ & 10 \\ & \frac{8}{51} \end{aligned}$ | 5 | 4 | - | $\begin{aligned} & 2 \text { large } \\ & 2 \text { small } \end{aligned}$ |
| Nooreitsa, male | 1 wife 8 children | 1 living house <br> 2 cooking <br> houses <br> 1 fish cooking <br> house <br> 1 materials <br> house <br> 1 ren house <br> 1 canoe house | Falemerisera <br> Matataega <br> Varigigirech | $\begin{aligned} & 20 \\ & 15 \\ & \underline{10} \\ & \hline 45 \end{aligned}$ | 13 | 3 | - | 1 large 1 small |
| Tiseigamar, female | Husband dead 9 children: 5 male, 4 female | 1 living house 1 cooking house 2 ren houses 1 materials house | Lügeruuinar Faripitoua | $\begin{aligned} & 25 \\ & \frac{13}{38} \end{aligned}$ | 10 | 4 | - | none |
| Aueseiiar, female | Husband dead 5 children: 3 male, 2 female | 2 living houses <br> 1 cooking house <br> 1 ren house | Matarianotsetsik Uanopenech | $\begin{aligned} & 10 \\ & \frac{20}{30} \end{aligned}$ | 20 | 2 | - | none |

## 5. Population

Concerning the external appearance of the natives, the photographs taken at the time of the expedition provide a certain clarity. Of great importance, however, are the appearance-based judgements of the various visitors, some separated by long stretches of time. They demonstrate to what extent physique and psychological state depend on the external conditions of life. Douglas, the first to describe the Tobi natives, calls them stout and robust. Barnard and Holden encounter them 50 years later during a period of deprivation that intensifies during their stay. To Barnard, the men seem strong, the women weak and wretched. Holden even speaks of a "degenerate" condition, which-revealing his outlook-he ascribes not to the people's temporarily poor nutritional status, but to their isolation from the outside world and low level of culture. He provides the first detailed description of their appearance: the skin color is almost copper, but not as dark as that of the Malays or Palau natives, to whom they bear a strong resemblance due to the broadness of the face, the prominent cheekbones and the flattened nose. Their teeth are so strong that they can husk coconuts in an instant. In 1889, Captain Walsen thought these islanders resembled the Kanaks of the Samoa Islands but were less strongly built; their body tattoos, too, were similar. At any rate, he remarked that they were distinctly different from the inhabitants of the Asia Islands. They have straight, very attractive black hair.... They are no match for the typical European in height and physique. Among the approximately 200 men that approached the ship, most were of small, weak build. "I had the impression of confronting a degenerated race, although there were a few stately specimens among them..." The fact that this miserable state was due to a time of deprivation that had already ended is attested to by the fac that he was able to purchase over 1,000 fresh coconuts from the natives.

The German regional officer Fritz was able to observe the population under the aftereffects of the typhoon of 1904, which also devastated the islands Pur and Merir. In his report of 1906, he speaks of derelict people who are nothing but skin and bones, and in their filth and stench, with their stupid ugly faces, present a picture of screaming, starving misery. Some men and women are as small as dwarfs and stunted; the larger part do not attain average height, which suggests similar natural disasters before 1904. These apathetic people with their straight black hair and wide, bony faces reminded him of South American Indians. ${ }^{\text {. Like Walsen, he noticed a number of }}$ strong, well-nourished, even portly men among the victims of deprivation, which causes him to surmise that they are a sort of foreign ruling caste of nobles

Hambruch's description of appearances does not always correspond with the typical results of his anthropologica investigation. This could be due to the fact that while the number of inhabitants is close to 1,000 , he was able to thoroughly examine only 26 people; his first-hand impressions, based on appearances alone, therefore gain special significance. The people are small to medium in build; on average, they measure 1.6 m . The head is moderatel long, the forehead narrow and domed, the face broad. The cheekbones are not especially prominent. The set of the eyes is straight in some, slanted in others, and the epicanthus is present. The eyes are large, with a light to dark brown iris. The nose is of three types without transition, but is always broad and also has a broad bridge. In two cases, extreme broadness of the jaw was noted. The mouth is wide, the lips thick, the upper lip is turned up. Th hair is dark brown, straight or wavy, occasionally perhaps slightly curly. In general, the skin color corresponds to numbers $20-22$ of the Luschan color scale; there are many quite light specimens among the women, due perhaps simply to the abundant use of turmeric powder.

[^3]

Fig. 13. Types of the Tobi nose after Hambruch

On the basis of the anthropological investigation, the following picture emerges: of 18 men, 8 are fat (44.4\%), 5 are moderately well nourished ( $27.7 \%$ ), and 5 are thin ( $27.7 \%$ ). Of the 8 women examined, 5 are fat $(62.5 \%$ ), 3 are average $(37.5 \%)$, and 1 is thin $(12.5 \%)$. Thus, the observation made by Barnard that the women were particularly wretched does not apply here. But it seems as though they suffer disproportionately in times of deprivation, since Fritz too saw some well-nourished men in spite of the famine, but no such women. About half the individuals are of average build, 8 men and 5 women. 3 of the men and 2 of the women can be described as tall: $16.6 \%$ and $25 \%$, not even one-fifth of those examined. 7 men and 3 women were short: $38 \%$. The skin is soft and dry, and lighter in the face in the women than in the men. Body hair is very sparse or altogether lacking. But it should be noted here that in Holden's time, the natives carefully plucked out all their hair and forced their captives to do the same. Even now, they have a special word for this procedure: $a$ vosa (E.K.). The lack of hair is therefore probably artificial. The head hair is straight to wavy; curly, let alone kinky hair is extremely rare. The shape of the skull is generally in the range of mesocephaly ( $50 \%$ ) with a tendency toward moderate long-skulledness ( $38.4 \%$ ). Only three individuals $(11.5 \%)$ are short-skulled, and even these are on the borderline (Index not over 84). Gender plays no role in this case, but the extremes are found only among the men measured. The crown is more or les domed, the back of the head usually flat, more rarely convex, the face as a whole is moderately long and wide, in the shape of an ellipse or oval and usually narrowing at the bottom. The cheekbone protrude slightly, the jaw shows slight prognathy. The eyes are set in at a slant and have moderately wide openings. The sclera is usually yellowish, and discolored in the area of the lid opening. Almost half of the persons examined had an epicanthus; eye color corresponds to numbers 3-5 of Martin's eye table. The medium-sized, protruding broad nose for the most part possesses a straight bridge, downturned tip and flared nostrils, short septum and large openings. The moderately wide lips, whose upper edge forms a compound bow, are reddish brown, the teeth are strong, straigh and white. The arms and legs are frequently turned inward. Most individuals have small, thin hands and feet with short, broad nails. The genitals of all the men are small and short; the breasts of the women are half-spherical and later sagging, with small nipples and a well-defined edge. The women have many children during marriage, hortly after their wedding, and age rapidly

Nutritional status: fat
Health: healthy
Skin color
Forehead
Cheek
Region of sternum
Region of shoulder blades
Uegion of shoulder
Upper arm, inner
Upper arm,
Palm
Inner thigh
No. 1 Sinis, male
us membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin texture: soft, dry
Color of iris: 4
Sclera: yellowish
Conjunctiva: stained, discolored in the region of the eye opening
Hair texture: tightly curled
Head hair:
Beard hair:
27
Body hair: lacking
Head

## Forehead: high, straight, narrow, ful

Top: slightly convex
Back: flat
Face
Shape: moderately long, elliptical, narrowing at bottom; moderately broad and flat
Eye opening: slanted, moderately wide, almond-shaped, Mongolian fold
Cheekbones: moderately protruding
Nose
Bridge: medium, flat, moderately high
Ridge: medium, straigh
Tip: downturned
Flanges: thin, low, flared
Septum: short, narrow, narrowing to a wedge in front
Nostrils: lengthwise
Nostrils: lengthwise oval, large
Jaw, prognathy: 1
Lips: medium, fleshy, seamed, upper edge a compound ar
Teeth: straight, large, pincer bite
Ears: close-lying
Earlobes: small, attached
Piercing in earlobes: right and left
Hands: large
Fingers: thin, short
Calves: thick, long, firm
Calves: thick, long, firm
Feet: large, long, wide,
eet: large, long, wide, protruding big toe
Special remarks: tattooed

| Nr . | Name | ${ }^{8}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Sinis ${ }^{\text {8 }}$ |  | 167.5 | 37.1 | 178.9 | 77.5 | 190 | 154 | 112 | 135 | 112 | 30 | 109 | 41 | 61 |
| 2 | Tonimar ${ }^{\text {of }}$ | 35 | 162 | 35.7 | 159.1 | 68.7 | 187 | 154 | 119 | 139 | 119 | 24 | 99 | 43 | 59 |
| 3 | Moropetremoz ${ }^{\text {® }}$ | 20 | 165.3 | 32.4 | 159.4 | 74.5 | 191 | 143 | 133 | 123 | 133 | 22 | 99 | 53 | 57 |
| 4 | Peterixa ${ }^{\text {² }}$ | 28 | 158 | 30.8 | 163.7 | 71 | 193 | 151 | 114 | 133 | 114 | 27 | 104 | 40 | 61 |
| 5 | Sagitorinama ${ }^{\text {d }}$ | 30 | 160.2 | 33.9 | 170.8 | 72.9 | 191 | 131 | 107 | 124 | 107 | 22 | 106 | 46 | 57 |
| 6 | Tiritoxor ${ }^{\text {² }}$ | 35 | 172.1 | 35.2 | 166.1 | 74.3 | 183 | 152 | 116 | 137 | 116 | 25 | 102 | 46 | 52 |
| 7 | Moruporumar ${ }^{\text {¢ }}$ | 18 | 149,9 | 30 | 150.9 | 67.1 | 179 | 141 | 104 | 127 | 104 | 27 | 97 | 39 | 57 |
| 8 | Maroreomasox ${ }^{\text {d }}$ | -- | 167 | 30.3 | 170 | 72.7 | 179 | 140 | 104 | 126 | 104 | 30 | 94 | 40 | 57 |
| 9 | Mamubiu ${ }^{\text {or }}$ | 25 | 156.5 | 31.3 | 146.1 | 70.2 | 189 | 142 | 110 | 129 | 110 | 30 | 97 | 37 | 59 |
| 10 | Tororenumar ${ }^{\text {or }}$ | 30 | 168.6 | 35.2 | 165.3 | 73.1 | 184 | 140 | 106 | 125 | 106 | 27 | 104 | 50 | 55 |
| 11 | Logenimar \% | 30 | 167.5 | 30.7 | 167.5 | 70.2 | 186 | 147 | 99 | 130 | 99 | 23 | 98 | 46 | 60 |
| 12 | Vitzeraun 8 | 45 | 16.2 | 31.2 | 162.4 | 72.5 | 194 | 136 | 104 | 133 | 104 | 26 | 97 | 49 | 69 |
| 13 | Oveizigei ${ }^{\text {d }}$ | 30 | 167 | 32.5 | 166.6 | 69.7 | 186 | 143 | 101 | 100 | 101 | 32 | 102 | 45 | 63 |
| 14 | Amoreta ${ }^{\text {¢ }}$ | 20 | 151.9 | 30.4 | 151.9 | 68 | 191 | 138 | 103 | 130 | 103 | 31 | 95 | 43 | 60 |
| 15 | Manieietax ${ }^{\text {a }}$ | 20 | 152 |  |  | -- | 187 | 135 | 119 | 123 | 119 | 25 | 94 | 43 | 61 |
| 16 | Materenoma ${ }^{\text {of }}$ | -- | 145 | 29.6 | 149.4 | 65 | 180 | 130 | 105 | 123 | 105 | 27 | 97 | 40 | 57 |
| 17 | Maisin ठै | - | 147.3 | -- | -- | -- | 183 | 136 | 110 | 128 | 110 | 29 | 91 | 40 | 52 |
| 18 | Meras ${ }^{\text {d }}$ | 30 | 160 | 29.2 | 161.3 | 72 | 176 | 136 | 106 | 126 | 106 | 30 | 91 | 43 | 57 |
| 19 | Uauoderu f | 25 | 143.8 | 28.5 | 137.2 | 62.2 | 182 | 133 | 103 | 118 | 103 | 20 | 98 | 36 | 45 |
| 20 | Uoronaniar | 25 | 153.3 | 27.6 | 153.9 | 70.6 | 186 | 143 | 109 | 126 | 109 | 27 | 98 | 40 | 52 |
| 21 | Moroifaifi 9 | 20 | 158.4 | 28.5 | 151.2 | 73.5 | 185 | 139 | 109 | 127 | 109 | 24 | 95 | 35 | 46 |
| 22 | Hatetamitsek ㅇ | 20 | 158.1 | 25.3 | 150.7 | 73.2 | 180 | 143 | 102 | 123 | 102 | 25 | 95 | 30 | 53 |
| 23 | Aganiuor ¢ | 20 | 157 | 27.5 | 152.6 | 68.8 | 187 | 142 | 106 | 123 | 106 | 27 | 9 | 37 | 52 |
| 24 | Kanguneiumar | 20 | 142.3 | 26.6 | 137.6 | 63.2 | 169 | 134 | 103 | 123 | 103 | 23 | 84 | 36 | 53 |
| 25 | Botanaranamium | 20 | 135.3 | 24.8 | 127.9 | 59 | 175 | 137 | 102 | 122 | 102 | 25 | 93 | 36 | 51 |
| 26 | Teranigau ¢ | 18 | 137.6 | 21 | 133.7 | 63.2 | 181 | 142 | 101 | 131 | 101 | 27 | 86 | 34 | 53 |

The men 13-18 were photographed and measured on Palau.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 186 | 186 | 117 | 79 | 68 | 56 | 53 | 55 | 40 | 108 | 132 | 147 | 55.3 | 38.2 | 36.1 | 81.053 | 97.890 | 120.771 |
| 135 | 191 | 119 | 80 | 67 | 45 | 32 | 27 | 45 | 110 | 128 | 142 | 60.5 | 39.1 | 38.2 | 82.352 | 72.193 | 87.662 |
| 119 | 158 | 100 | 63 | 59 | 46 | 30 | 20 | 33 | 105 | 128 | 140 | 61.3 |  | 34.2 | 74.869 | 62.303 | 83.216 |
| 132 | 175 | 114 | 74 | 63 | 50 | 29 | 21 | 40 | 111 | 130 | 143 | 59.3 | 41.4 | 36.1 | 78.238 | 68.393 | 88.476 |
| 124 | 191 | 110 | 81 | 67 | 56 | 40 | 22 | 37 | 105 | 128 | 140 | 61.3 | -- | 36.2 | 68.586 | 64.921 | 94.656 |
| 139 | 203 | 116 | 75 | 64 | 53 | 35 | 23 | 37 | 110 | 131 | 145 | 57.7 | 39.2 | 35.1 | 83.060 | 75.956 | 91.447 |
| 141 | 167 | 102 | 68 | 56 | 43 | 33 | 27 | 41 | 105 | 126 | 133 | 56.2 | 36.9 | 33.2 | 78.771 | 78.771 | 100 |
| 121 | 176 | 115 | 70 | 62 | 51 | 35 | 22 | 45 | 105 | 133 | 150 | 56.9 | 38.5 | 34.2 | 78.212 | 67.598 | 86.429 |
| 123 | 178 | 108 | 68 | 60 | 51 | 34 | 14 | 42 | 110 | 123 | 138 |  |  |  | 75.132 | 65.079 | 86.619 |
| 129 | 203 | 121 | 75 | 64 | 54 | 35 | 20 | 41 | 107 | 125 | 144 | 54.7 | 38.3 | 32 | 76.085 | 70.108 | 92.142 |
| 128 | 190 | 118 | 75 | 62 | 53 | 37 | 22 | 45 | 109 | 132 | 146 | -- | -- | -- | 79.032 | 68.817 | 87.074 |
| 132 | 179 | 109 | 72 | 63 | 53 | 31 | -- | 40 | 97 | 126 | 139 | 56.3 | 40.6 | 35.6 | 70.103 | 68.041 | 97.058 |
| 125 | 177 | 112 | 75 | 64 | 52 | 37 | 23 | 45 | 112 | 133 | 147 | 55.1 | 37.2 | 34 | 76.881 | 67.204 | 87.412 |
| 116 | 173 | 105 | 71 | 62 | 52 | 35 | 25 | 44 | 107 | 125 | 135 | 53.5 | 35.7 | 31.4 | 72.251 | 60.732 | 84.057 |
| 122 | 168 | 102 | 71 | 60 | 50 | 35 | 24 | 45 | 100 | 130 | 138 | 53.4 | 37.7 | 31.2 | 72.192 | 65.240 | 90.370 |
| 118 | 160 | 98 | 65 | 55 | 46 | 33 | 20 | 37 | 92 | 122 | 135 | 51 | 36.9 | 30.4 | 72.222 | 65.555 | 90.769 |
| 115 | 170 | 108 | 67 | 55 | 43 | 30 | 23 | 33 | 87 | 114 | 127 | 53.2 | 38.3 | 30.6 | 74.316 | 62.841 | 84.558 |
| 117 | 183 | 120 | 75 | 66 | 53 | 32 | 21 | 45 | 93 | 126 | 148 | 52.3 | 34.3 | 32.4 | 77.272 | 66.470 | 86.029 |
| 109 | 165 | 101 | 61 | 55 | 46 | 28 | 20 | 37 | 92 | 116 | 134 | 52.5 | 36.7 | 31.6 | 73.076 | 59.890 | 81.954 |
| 127 | 167 | 107 | 70 | 60 | 53 | 34 | 23 | 40 | 105 | 114 | 123 | 58.7 | 39.7 | 34.2 | 76.881 | 68.279 | 88.811 |
| 129 | 171 | 113 | 72 | 61 | 53 | 31 | 22 | 41 | 109 | 128 | 141 | 55.5 | 39.2 | 33.7 | 75.135 | 67.027 | 92.086 |
| 122 | 171 | 105 | 62 | 55 | 41 | 28 | 27 | 36 | 103 | 112 | 123 | 52.4 | 37.5 | 31.3 | 79.444 | 67.777 | 85.314 |
| 122 | 167 | 113 | 70 | 58 | 41 | 31 | 23 | 42 | 92 | 122 | 134 | 55.9 | 39 | 31.3 | 75.935 | 65.240 | 85.915 |
| 119 | 162 | 100 | 71 | 60 | 51 | 31 | 28 | 40 | 92 | 116 | 122 | 52.3 | 38.1 | 33.1 | 79.289 | 70.414 | 88.805 |
| 132 | 154 | 98 | 65 | 55 | 45 | 27 | 25 | 39 | 97 | 122 | 135 | 70.7 | 36.3 | 30.2 | 78.285 | 75.428 | 96.350 |
| 137 | 156 | 90 | 60 | 50 | 43 | 28 | 22 | 40 | 110 | 134 | 152 | 54.3 | 37.4 | 33 | 78.453 | 75.69 | 96.478 |

Nutritional status: very fat
Health: healthy
Skin color
Skin color

| Forehead | 16 |
| :--- | :--- |
| Cheek | 16 |
| Region of sternum | 22 |
| Belly,above navel | 23 |
| Region of shoulder blades | 24 |
| Upper arm, onner | 25 |
| Upper arm, outer | 25 |
| Palm | 17 |
| Inner thigh | 26 |
| Mucous membrane, upper lip: reddish bro |  |
| Mucous membrane, lower lip: reddish bro |  |

Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown

## Skin texture: soft, dry

Color of iris: 4
Conjunctiva: stained, discolored in the region of the eye opening
Hair texture: tightly curled
Hair color:
Head

## Forehead: low, narrow, straigh <br> Top: slightly convex

Back: convex
Face
Shape: moderately long, elliptical, angular, moderately broad and flat Eye opening: slanted, wide, almond-shape
Cheekbones: moderately flat
Nose
Bridge: narrow, flat
Ridge: medium
Tip: down-turned
Flanges: thick, low, flared
Septum: narrow, narrowing to a wedge in back
Nostrils: lengthwise oval large
Nostrils: lengthwise oval, large
Jaw, prognathy: 1
Lips: medium, seamed, upper edge a compound arc
Teeth: crooked, large, pincer bite
Teeth: crooked, large, pincer bite
Ears: close-lying, top helix
Earlobes: small, attached
Piercing in earlobes: right and left
Hands: large
Fingers: thick, long
Nails: small, narrow, shor
Calves: thick, long, firm
eet: protruding big toc
Longest toe. 2 . and

Nutritional status: medium
No. 3 Moropetremoch, male, 20 years old
Health: healthy
kin color
Forehead
heek
Region of sternum
Belly,above navel
Region of shoulder blades
Upper arm, inner
Palm
Palm
Inner thigh
Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin texture: soft, dry
Color of iris: 3
Sclera: yellowish
Sclera: yellowish
Conctiva: stained, discolored in the region of the eye opening
Hair color:
Hair texture: straight
Body hair: very spars
Boad
Forehead: low, narrow, straight
Top: slightly conve
Back: convex
Face
Shape: moderately long, elliptical, moderately broad, narrowing at bottom
Eye opening: slanted, wide, almond-shaped, Mongolian fold
Cheekbones: moderately protruding
Nose
Bridge: medium flat
Ridge: narrow, wide, slightly curved
Tip: upturned
Septum: short, wide, narrowing to a wedge in back
Nostrils: narrow, large
Jaw, prognathy: 1
Lips: medium
Teeth: straight, large
Ears: close-lying, seamed upper and lower helix edge
Earlobes: attached
iercing in earlobes: right and left
fands: moderately large
Fingers: thin, long
Nails: small, wide
Calves: thin, long, loose
Feet: large, long, narrow, close-lying big toe
Longest toe: $2^{\text {nd }} \mathrm{r}$. and 1 .
Special remarks: tattooed

Nutritional status: fat
Health: health
Skin color
Forehead
Region of sternum
Belly,above navel

| Region of shoulder blades | 26 |
| :--- | :--- |



texture: soft, dry
Skin texture: soft, dry
Color of iris: 4
Sclera: yellowish
Conjunctiva: stained, discolored in the region of the eye opening
Hair color:
Hair texture: straight
Body hair: very sparse
Head
Forehead: low, narrow, straight
Top: slightly convex
Face
Shape: moderately long, elliptical, moderately broad, moderately flat
Eye opening: straight, almond-shaped
Cheekbones: moderately protruding
Nose
Bridge: medium, moderately high
Ridge: medium, slightly angled
Tip: down-turned
Flanges: thick, low, flared
Septum: short, wide, narrowing to a wedge in back
Jaw, prognathy: 1
ips: medium, fleshy, seamed, upper edge a compound arc
Teeth: crooked, large
Ears: close-lying
Earlobes: attached
Piercing in earlobes: right and left
Hands: small
Fingers: thick, short
aails: small, short, narro
Feet: small, short narrow,
eet. small, short, narrow, protruding big toe
Special remarks: tattooed.

Nutritional status: fat
Health: healthy
Skin color
Forehead
Cheek
Belly $y$ abo
Region of shoulder blades
Upper arm, inner
Upper arm, outer
Palm
Inner thigh

No. 5 Sagitorinama, male, 30 year

18
23
26
28
25
20
15
29

Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin texture: soft, dry
Color of iris: 4
Conjunctiva: stained, discolored in the region of the eye openin
Hair texture: straight
Body hair: very spars
Head

## Forehead: high, wide, straight, full Top: slightly <br> Top: slightly convex Back: flat

Face
Shape: moderately long, elliptical, moderately wide, narrowing at bottom
Eye opening: straight, wide, spindle-shaped
Cheekbones: moderately protruding
Nose
Bridge: medium, moderately high
Ridge: medium, straigh
ip: down-turned
Septum: short, wide, narrowing to a wedge in back
Nostrils: round, large
Jaw, prognathy: 1
Lips: thick, seamed, compound arc
Teeth: crooked, large
Ears: close-lying
Earlobes: attached
Piercing in earlobes: right and left
Hands: large
Fingers: thick, long
Nails: small, short, wide, fla
Calves: thin, short
Feet: small, short, wide, $2^{\text {nd }}$ toe left and right the longest
Special remarks: tattooed.
No. 6 Tiritochor, male, 35 year
Nutritional status: very fat
Health: healthy
Skin color
Cheek
Region of sternum
Belly,above navel
Region of shoulder blades
Upper arm, inner
Upper arm, oute
Palm
Inner thig
Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin texture: soft, dry
Color of iris: 5
Sclera: yellowish

## Conjunctiva: discolored in the region of the eye opening

Hair color
27
Hair texture: straight/wav
Body
Head
Forehead: low, wide, straight, full
Top: slightly convex
Back: flat
Face
Shape: moderately long, elliptical, moderately broad, narrowing at bottom
Eye opening: straight, wide, almond-shaped
Cheekbones: moderately protruding
Nose
Bridge: narrow, moderately high
Ridge: medium
Tip: down-turned
Flanges: thin, low
Septum: short, wide, narrowing to a wedge in back
Nostrils: lengthwise oval, large
Jaw, prognathy: 1
Lips: medium, seamed, upper edge: compound arc
Teeth: straight, large
Ears: close-lying, seamed upper helix edge
Earlobes: attached
Piercing in earlobes: right and left
Hands: large
Iails: small, short, narrow
Calves: thin, short, loose
Feet: long, wide, longest toes: $1^{\text {st }}$ r and 1.
Big toe close-lying

Nutritional status: fat
Health: healthy
Skin color

| Forehead | 19 |
| :--- | :---: |
| Cheek | 20 |
| Region of sternum | 22 |
| Belly,above navel | 23 |
| Region of shoulder blades | 23 |
| Upper arm, inner | 21 |
| Upper arm, outer | 23 |
| Palm | 8 |
| Inner thigh | 22 |
| Mucous membrane, upper lip: reddish brown |  |
| Mucous membrane, lower lip: reddish brown |  |

Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
kin texture: soft, oily
olor of iris: 5
clera: yellowi
Conjunctiva: discolored in the region of the eye opening
Hair color: 27
Hair texture: straight/wavy
Body hair: sparse
Head

## Forehead: low, narrow, ful <br> op: slightly convex

Back: flat
Face
Shape: moderately long, widely elliptical, narrowing at bottom
Eye opening: slanted, moderately wide, almond-shaped
Cheekbones: strongly protruding
Nose
Bidge: medium, moderately hig
Ridge: medium, straigh
Tip: down-turned
ip. down-turned
langes: thin, low, flared
Septum: short, wide
Nostrils: narrow, large
aw, prognathy:
Lips: medium, seamed, upper edge: compound arc
Lips: medium, seame
Teeth: crooked, large
Ears: close-lying, seamed upper helix edge
Earlobes: attached Piercing in earlobes: right and left
Hands: small
Fingers: thin, short
Nails: small, short, wide
Calves: thin, short
Feet: small, short, wide
Longest toe: $1^{\text {st }} \mathrm{r}$. and 1 .
Special remarks: tattooed

Nutritional status: fat
Health: healthy
Skin color
Forehead
Cheek
Region of sternum
Belly,above navel
Region of shoulder blades
Upper arm, inne
Palm arm, outer
Inner thigh
Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin texture: soft, dry
Color of iris: 2
Sclera: yellowish
Conjunctiva: stained, discolored in the region of the eye opening
Hair color:
Hair texture: corkscrew curl
Head
Forehead: high, wide, straight
Top: convex
Face
Shape: moderately long, broad and flat, elliptical, narrowing at bottom

Eye opening: slanted, moderately wide, almond-shaped, Mongolian fold, epicanthus
Cheekbones: moderately protruding
Nose
Bridge: medium, high
Ridge: medium, curved at an angle
Flanges: low, flared
Septum: short, wide, narrowing to a wedge in back
Nostrils: narrow, small, large
Jaw, prognathy: 0
Lips: medium, fleshy, seamed, upper edge a compound arc
Teeth: straight, large
Ears: close-lying
Earlobes: attached
Piercing in earlobes: right and left
Hands: small
Fingers: thin, long
Nails: small, short,
Calves: thin, short, firm
Feet: small, narrow
Longest toes: $1^{s t} \mathrm{r}$. and 1 .
No. 9 Mamubiu, male, 25 years old
Nutritional status: thin
Health: healthy
Skin color

## Forehead <br> Cheek <br> Region of sternum

Belly,above navel
Region of shoulder blad
Upper arm, inner
Palm
Palm
Inner thigh
Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin texture: soft, dry
Color of iris: 4
Sclera: yellowish
Conjunctiva: stained, discolored in the region of the eye opening
Hair color:
Hair texture: wavy
Body h
Head
Forehead: low, narrow, straight
Top: slightly convex
Face
Shape: moderately long, elliptical, moderately broad and flat, narrowing at bottom
Shape: moderately long, elliptical, moderatel
Eye opening: slanted, wide, almond-shaped
Cheekbones: moderately protruding
Nose
Bridge: medium, moderately high
Ridge: medium, slightly concave

Tip: straight
Flanges: thick, low, flared
Septum: short, wide, narrowing to a wedge in back
Nostrils: narrow, large
Jaw, prognathy: 1
Lips: medium, upper edge a compound arc
Teeth: crooked, small
Ears: close-lying
Earlobes: attached
Piercing in earlobes: right and left
Hands: small
Fingers: thin, short
Nails: thin, short, narrow, flat
Calves: thin, short, loose
Feet. small, short, narro
Special remarks: tattooed.

Nutritional status: thin
Health: healthy
Skin color
Forehead
Cheek
Region of sternum
Belly,above navel
egion of shoulder blades
Upper arm, inner
Upper arm, oute
Palm
Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Color of iris: 4
Sclera: yellowish
Conjunctiva: stained, discolored in the region of the eye opening
Hair color:
Hair texture: wavy
Head
Forehead: high, wide, straight, full
Top: slightly convex
Face
Shape: moderately long, elliptical, narrowing at bottom
Eye opening: straight, narrow, almond-shaped
Cheekbones: moderately protruding
Nose
Bridge: medium, moderately high
Ridge: narrow
Tip: straight
langes: thick, low, flared
Septum: short, narrowing to a wedge in back
Nostrils: lengthwise oval, large
Jaw, prognathy: 1
Lips: medium, seamed, upper edge a compound arc


Favorite boy Marapetake. Glass plate scan, Hamburg Museum.


Teeth: straight, large, pincer bite
Ears: close-lying
Earlobes: small, attached
Piercing in earlobes: right and left
Hands: small
Nails: small, short, wide, flat
Calves: thin, loose
Calves: thin, loose
Longest toes: $1^{\text {st }} \mathrm{r}$. and 1 . Protruding big toe
Special remarks: tattooed

Nutritional status: thin
Health: healthy
Skin color
Forehead
Cheek
Region of sternum
Regly, above nave
Region of shoulder blades
Upper arm, inner
Upper arm, outer
Palm
Inner thigh
Mucous membrane, upper lip: reddish brown
embrane, lower lip: reddish brown
Skin texture: soft,
Sclera: bluish
Conjunctiva: stained, discolored in the region of the eye opening
Hair color:
Hair texture: wavy
Body hair: very sparse
Head
Forehead: low, narrow, ful
Top: slightly convex
Face
Shape: moderately long, wide, elliptical, narrowing at bottom
Eye opening: slanted, moderately wide, almond-shaped, Mongolian fold
Cheekbones: moderately protruding
Nose
Bridge: narrow, moderately high
Ridge: medium, straigh
Tip: straight
Flanges: high, flared
Septum: shor, narrow, narrowing to a wedge in back
Jaw, prognathy: 1
Lips: medium, seamed
Lips.: medium, seamed
Teeth: crooked, large
Ears: close-lying
Hands: small
Fingers: thin, short

Nails: small, short, wide
Calves: thin, short, loose
Feet: small, short, wide
Longest toes: $1^{\text {st }} \mathrm{r}$. and 1 . Protruding big toe
Special remarks: tattooed.
No. 12 Vitzeraun, male, head chief, 45 years old
Nutritional status: thin
Health: health
Skin color
Forehea
Forehead
Cheek
Region of sternum
Belly,above navel
Region of shoulder blades
Upper arm, inner
Upper arm,
Palm
Inner thigh
mbrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin texture: soft, dry
Color of iris: 3
Sclera: yellowish
Conjunctiva: stained, discolored in the region of the eye opening
Hair color:
Hair texture: straight
Body hair: very spar
Body
Forehead: low, narrow, straight
Top: slight|y
Back: flat
Face
Shape: low, oval, moderately wide, narrowing at bottom
Eye opening: straight, narrow, spindle-shaped, Epicanthus
Cheekbones: moderately protrudin
Nose
Bridge: wide, flat
Ridge: medium, highly convex
Tip: straight
Septum: short, wide, narrowing to a wedge in back, protruding at bottom
Nostrils: narrow, lengthwise oval
Jaw, prognathy: 2
Lips: fleshy, seamed, upper edge a compound arc
Teeth: crooked, large
Ears: close-lying with seamed upper helix edge
Earlobes: attached
bes: right and left
Hands: small
Fingers: thin, sh
Nails: small, short, wide, flat
Calves: thin, short, loose
Feet: small, short, wide
Longest toes: $1^{\text {st }} \mathrm{r}$. and 1

Nutritional status: medium
Health: healthy
Skin color
Skin color

| Forehead | 14 |
| :--- | :---: |
| Cheek | 13 |
| Region of sternum | 21 |
| Belly,above navel | 23 |
| Region of shoulder blades | 23 |
| Upper arm, inner | 26 |
| Upper arm, outer | 24 |
| Palm | 4 |
| Inner thigh | 14 |
| Mucous membrane, upper lip: reddish brow |  |
| Mucous membrane, lower lip: reddish brow |  | Mucous membrane, upper lip: reddish brown

Mucous membrane, lower lip: reddish brown
kin texture: soft, dry
olor of iris:
Hair color:
Hair texture: shaved
Head
Forehead: low, narrow, straight, full
Top: slightly convex
Back: flat
Face
Shape: moderately long and wide, elliptical
Eye opening: straight, wide, spindle-shaped
Eye opening: straight, wide, spindle-
Nose
Bridge: medium, moderately high
Ridge: medium, straight
Tip: down-turned
Septum: short, wide, hourglass-shaped, protruding at bottom
Nostrils: lengthwise oval, large
Jaw, prognathy:
ips: medium, seamed, upper edge a compound arc
Teeth: crooked, large, pincer bite, white
Ears: protruding, seamed upper helix edg
Earlobes: attached
Piercing in earlobes: right and left
Hands: small
Fingers: thin, short
Nails: small, short, wide, flat
Calves: thin, short, loose
Feet: small, short, wide
Longest toes: $2^{\text {nd }} \mathrm{r}$. and 1 .
Nutritional status: medium
Health: healthy
Skin color

| Forehead | 12 |
| :--- | :--- |
| Cheek | 13 |
| Region of sternum | 18 |
| Belly,above navel | 24 |

Region of shoulder blades
Upper arm, inner
Upper arm, oute
alm
Mucous membrane, upper lip: reddish brown
rane, lower lip: reddish brown
Color of ricis: 4
Color of iris: 4
Sclera: yellowish
Conjunctiva: stained, discolored in the region of the eye opening
Hair color:
Hair texture: shaved
Body hair: spa
Head
Forehead: low, narrow, straight, conve
Top: slightly convex
Back: flat
Face
ong and wide, oval, narrowing at bottom
Eye opening: wide, almond-shaped, Mongolian fold
Cheekbones: moderately protruding
Nose
Bridge: medium, moderately high
Ridge: medium, slightly concave
Tip: down-turned
Flanges: high, flared
Septum: short, hourgla
Septum: short, hourglass-shaped, protruding at bottom
Jaw, prognathy: 1
Lips: medium, fleshy, seamed, upper edge a compound arc
Teeth: crooked, large, white, scissor bite
Ears: close-lying, seawd upper helix edg
Earlobes: attached
Piercing in earlobes: right and left
Hands: small
Fingers: thin, long
Nails: small, short, narrow, convex
Calves: thin, long, loose
Longest toes: $2^{n d} r$ and 1 .

Nutritional status: medium
Health: influenza
Skin color
Forehead
Cheek
Region of sternum
Belly,above navel
Region of shoulder blades
Upper arm, inner
pper arm, oute
Palm
Inner thigh
5
17
16
24
24
23
22
2
25

Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin texture: soft, dry
Color of iris:
Color of iris: 3
Sclera: bluish
Sclera: bluis
onjunctiva: discolored in the region of the eye opening
air color
Body hair: lacking
Head
Torehead: low, narrow, straight, full
Top: slightly convex
Face
Shape: moderately long and wide, elliptical, narrowing at bottom
Eye opening: slanted, narrow, almond-shaped, Mongolian fold
Cheekbones: moderately protruding
Nose

```
Ridge: broad, straig
    Flanges: thin, low, flared
```

    Septum: short, wide, narrowing to a wedge in back, protruding at bottom
    Nostrils: narrow, large
    Jaw, prognathy: 1
ips: medium, seamed, upper edge a compound arc
Teeth: straight, small, pincer bite, white
Ears: close-lying
Earlobes: attached
Piercing in earlobes: right and left
Piercing in earlob
Hands: small
Fingers: thin, short
Nails: small, short, wide
Calves: thin, short, loose
Feet: small, short, narrow
Longest toes: $1^{\text {st }} \mathrm{r}$. and 1 .

Nutritional status: fat
Health: healthy
Skin color
Forehead
Region of sternum
Belly,above navel
Region of shoulder blades
Upper arm, inner
Upper arm, outer
Palm
Inner thigh
Mucous membrane, upper lip: reddish brown
Mucous membrane
Skin texture: soft, dry
Color of iris: ${ }^{3}$
Sclera: bluish
Conjunctiva: discolored in the region of the eye opening

Hair texture: shaved
Body hair: very spars
Head
Forehead: low, straight, full
Top: slightly convex
Back: flat
Face
e. short, elliptical, broad, narrowing at bottom

Eye opening: narrow, almond-shaped, Mongolian fold
Cheekbones. strongly protruding
Nose

> Bridge: medium, moderately high
> Ridge: medium, slightly concave
> Tip: down-turned
> Flanges: thin, low, flared
> Septum: short, wide, hourglass-shaped, protruding at bottom

Jaw, prognathy: 1
Jaw, progick seamed
Teeth: straight, small, scissor bite, white
Ears: close-lying, seamed upper helix edge
Earlobes: attached
Piercing in earlobes: right and left
Hands: small
Fingers: thin, long
Nails:
Calves: thin, short, firm
Calves: thin, short, firm
Longest toes: $2^{\text {nd }} \mathrm{r}$. and 1 . Big toe close-lying
Special remarks: dwarf.
No. 17 Maisin, male
Nutritional status: medium
Health: healthy
Skin color

| Forehead | 6 |
| :--- | :--- |
| Cheek | 6 |
| Region of sternum | 21 |
| Belly,above navel | 24 |
| Region of shoulder blades | 23 |
| Upper arm, inner | 25 |
| Upper arm, outer | 24 |
| Palm | 4 |
| Inner thigh | 27 |
| Mucous membrane, upper lip: reddish brown |  |
| Mucous membrane, lower lip: reddish brown |  |

Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin , lower lip: reddish brow
Skin texture: soft, diy
Sclera: yellowish
Conjunctiva: discolored in the region of the eye opening
Hair color:
Hair texture: shaved
Body hair: very spars
Head

Forehead: high, narrow, straight, full
Top: slightly convex
Face
Shape: short, oval, broad, narrowing at bottom
Eye opening: slanted, moderately wide, almond-shaped, Mongolian fold
Eye opening: slanted, moderately wid
Nose: saddle nose
Bridge: broad, completely flat
Ridge: medium, straight
Tip: down-turned
Flanges: thin, low, flared
Septum: short, wide, hourglass-shaped, protruding at bottom
Nostrils: narrow, large Nostrils: narrow, large
Jaw, prognathy: 1
Lips: thick, fleshy, upper edge a compound are
eeth: crooked, small, white, irregular
Ears: close-lying; seamed upper helix edge
Earlobes. attached
Piercing in earlobes
Hands: small
Fingers: thin, short
Nails: small, short, wide
Calves: thin, short, loose
Feet: small, short, wid
Longest toes: $1^{\text {st }} \mathrm{r}$. and 1 . Protruding big toe
No. 18 Meras, male, 30 years old
Nutritional status: thin
Health: healthy
Skin color
Cheek
Region of sternum
Belly,above navel
Region of shoulder blades
Upper arm, inner
Palm
Inner thigh
Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin texture: soft, dry
Color of iris: 3
Sclera: bluish
Conjunctiva: discolored in the region of the eye opening
Hair color:
Hair texture: shave
Body
Head
Forehead: low, narrow, straight Top: slightly convex
Back: convex
Face
Shape: moderately long and broad, elliptical, narrowing at bottom

Eye opening: straight, moderately wide, spindle-shape
Cheekbones: moderately protruding
Nose
Bridge: medium, moderately high
Ridge: medium, straight
Tip: down-turned
Flanges: thin, low, flared
Nostrils: narrow, large nerowing to a wedge in back
Jaw, prognathy: 1
Lips: medium, fleshy, seamed
Teeth: small, white, pincer bite
Ears: close-lying, seamed upper helix edge
Earlobes: attached
Earlobes: attached
Piercing in earlobes: right and left
Hands: small
Fingers: thick, short
Nails: small, short, wide
Calves: thin, short, loose
Feet: small, short, wide
Longest toes: $2^{\text {nd }} \mathrm{r}$. and 1 . Protruding big toe
Special remarks: Deviates from the Tobi type and seems to have European blood mixed in.
No. 19 Uauoderu, female, 25 years old
Nutritional status: fat
Health: health
Forehead
Forehead
Cheek 10
Region of sternum
Belly,above navel
Region of shoulder blades
Upper arm, inner
Upper arm, outer
Palm
Inner thigh
Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin texture: soft, dry
Color of iris: 3
Conjunctiva: stained, discolored in the region of the eye opening
Hair color:
Hair texture: straight
Head
Forehead: low, narrow, straight Top: slightly convex
Back: flat
Face
Shape: moderately long, oval, broad, narrowing at bottom
Eye opening: slanted, moderately wide, almond-shaped, Mongolian fold Cheekbones: moderately protruding
Nose Bridge: medium, moderately hig
Ridge: medium, straight

Tip: down-turned
Flanges: thin, low, flared
Septum: short, narrow, narrowing to a wedge in back, protruding at bottom
Nostrils: narrow, large
Jaw, prognathy: 0
ips: medium, fleshy, seamed, upper edge a compound arc
Teeth: straight, small, white
Ears: close-lying
Piercing in earlobes: right and left
Hands: smal
Fingers: thin
Nails: small, short, wide
Calves: thin, short, loose
engest toes $1^{\text {st } t}$, and 1 .
Longest toes: $1^{s t}$ r. and

Nutritional status: fat
Health: healthy
kin color
Forehead
Cheek
Region of sternum
Beely,above navel
Region of shoulder blades
Upper arm, inner
Upper arm,
Palm
Inner thigh
Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin texture: soft, moist
Color of iris: 2
clera: bluish
Conjunctiva: stained, discolored in the region of the eye opening
air color:
Hair texture: straig
Body
Head
Forehead: high, narrow, straight, ful
Top: slightly convex
Back: flat
Face
Shape: moderately long and broad, oval, narrowing at bottom; moderately flat
Eye opening: slanted, moderately wide, almond-shaped
Noese
Bridge: medium, moderately high
Ridge: medium, straight
Tip: down-turned
Flanges: thin, low, flared
Septum: short, broad, narrowing to a wedge in front, protruding at bottom
Nostrils: lengthwise oval, large

Jaw, prognathy: 1
Lips: medium, fleshy, seamed, upper edge a compound aro
Teeth: straight, small
Ears: close-lying, seamed upper and rear helix edge
Earlobes attached
Earlobes: attached
Piercing in earlobes: right and left

```
        Breasts: pendulous, nipples
```

Hands: small
Fingers: thin, long
Nails: small, short, wide
Calves: thick, long, loose
Feet: small, short, narrow
Longest toes: $1^{\text {st }} \mathrm{r}$. and 1 . Big toe: close-lying
Special remarks: legs and hands tattooed.

Nutritional status: fat
Health: healthy
Skin color

| Forehead | 5 |
| :--- | :---: |
| Cheek | 5 |
| Region of sternum | 21 |
| Belly,above navel | 18 |
| Region of shoulder blades | 23 |
| Upper arm, inner | 23 |
| Upper arm, outer | 18 |
| Palm | 5 |
| Inner thigh | 26 |

Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin texture: soft, dry
Color of iris: 3
Sclera: yellowish, discolored in the region of the eye opening
Hair color:
Hair color:
Hair texture: straight
Body
Forehead: high, narrow, straight

## Top: slightly convex

Face
Shape: moderately long and broad, oval, narrowing at top
Eye opening: slanted, moderately wide, almond-shaped, Mongolian fold
Cheekbones: moderately protruding
Nose

> Bridge: medium, moderately high Ridge: medium, straight Tip: down-turned Flanges: thin, ,ow, flared Septum: short, wide, narrowing to a wedge in front, protruding at bottom Nostrils: narrow, large
Body:
Breasts: pendulous, low nipple, diameter 30 mm , edge poorly defined 1 The areola is meant.

Nails: small, short, narrow
Calves. thin, short, firm
Longest toes: $1^{\text {ts }} \mathrm{r}$. and 1 ., big toe close-lying
No. 22 Hatetamitsek, female, 20 years old
utritional status: medium
Health: healthy
Skin colo
Forehead
Cheek
Region of sternum
Belly,above navel
Region of shoulder blades
Upper arm, inner
Upper arm,
Palm
Inner thigh
Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin texture: soft, dry
Color of iris: 3
Sclera: bluish
Conjunctiva: stained, discolored in the region of the eye opening
Head
ead
Forehead: low, narrow, straight
Top: slightly convex
ace
Shape: moderately long, broad and flat, oval, narrowing at bottom
Eye opening: slanted, moderately wide, almond-shaped, Mongolian fold Cheekbones: moderately protruding

Bridge: medium, moderately high
Ridge: medium, slightly concave
Tip: down-turned
Septum: short, broad, narrowing to a wedge in front, protruding at bottom Nostrils: lengthwise oval, large
Jaw, prognathy: 1
Lips: thick, fleshy, upper edge a compound arc
Teeth: crooked, large, white
Ears: close-lying, seamed upper and rear helix edge
Earlobes: attached
Piercing in earlobes: right and left
Body:

$$
\text { Breasts: pendulous, nipple diameter } 40 \mathrm{~mm}
$$

$$
\begin{aligned}
& \text { Color: } \\
& \text {;: small }
\end{aligned}
$$

Fingers: thin, long
Nails: small, short
Calves: thin, firm

Feet: small, short
Longest toes: $2^{\text {nd }} \mathrm{r}$. and 1 .
Special remarks: hands and legs tattooed.
No. 23 Aganiuor, female, 20 years old
Nutritional status: fat
Health: health
Skin color
Forehead
Cheek
Region of sternu
Belly,above nave
Belly,above navel
Region of shoulder blades
Upper arm, inner
Upper arm, outer
Palm
Inner thigh $\longrightarrow$
Mucous membrane, upper lip: reddish brown
Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin texture: soft, dry
Color of iris: ${ }^{3}$
Sclera: bluis
Hair color:
27
Hair texture: straight
Head
Forehead: low, narrow, straight
Top: slightly convex
Back: flat
Face
Eye opening: slanted, moderately wid
Cheekbones: moderately protruding
Nose

> Bridge: medium, flat
> Ridge: medium, slightly concave
> Tip: down-turned
> Flanges: thin, low

Septum: short, broad, narrowing to a wedge in front, protruding at bottom
Jaw, prognathy: 1
Lips: thick, seamed, upper edge a compound arc
Teeth: straight, small
Ears: close-lying
Piercing in earlobes: right and left
Body:
Breasts: pendulous, nipple diameter 34 mm
Hands: small
Fingers: thin, short
Calves: thin, shot, wide
Feet: small, short, narrow
Longest toes: $1^{\text {st }} \mathrm{r}$. and l . Big toe: close-lying

Nutritional status: fat

No. 24 Kanguneiumar, female, 20 years old

```
Health: healthy
kin color
            Cheek
            Region of sternum
            Abdomen, above navel
            Region of shoulder blades
            Upper arm, inner
            Upper arm, outer
Palm
            Inner thigh
            Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish
            Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Color of iris: 3
Sclera: yellowis
Conjunctiva: stained, discolored in the region of the eye opening
Body hair: non
Head
Forehead: low, narrow, straight, full
Top: slightly convex
, fat
Face
Shape: short, very broad, moderately flat, narrowing at bottom
Eye opening: slanted, moderately wide, almond-shaped
Cheekbones: moderately protruding
Nose
Bridge: medium, moderately high
Ridge: medium, wide, straight
Tip: down-turned
Septum: short, broad, narrowing to a wedge in back, protruding at bottom, high
Jaw, prognathy: 1
Lips: medium, fleshy, seamed
Teeth: crooked, small, white, pincer bite
Ears: close-lying, seamed upper and rear helix edge
Earlobes: attached
Earlobes: attached
Piercing in earlobes: right and left
Body:
Breasts: half-spheres, nipples small, diameter 15 mm , edge well-defined
Color:
Hands: small
Fingers: thin, shor
Nails: small, short, wide
Calves: thin, short, loose
eet: pointing inward; small, short, wide
Longest toes: \(1^{\text {st }} \mathrm{r}\). and 1 . Protruding big to
pecial remarks: not yet tattooed.
No. 25 Botanaranamium, female, 20 years old
Nutritional status: medium
```

```
utritional status: medium
```

utritional status: medium
ealth: heal
ealth: heal
Forehea
Forehea
Cheek
Cheek
Region of sternum $\quad 14$

```
    Region of sternum \(\quad 14\)
```

Abdomen, above navel
Region of shoulder blades
Upper arm, inner
Upper arm, outer

| Upper arm, inner | 14 |
| :--- | :---: |
| Uper arm, outer | 13 |
| Palm | 5 |
| Inner thigh | 20 |
| Mucous membrane, upper lip: | reddish brown |

Inner thigh
Mucous membrane, upper lip. reddish $\stackrel{20}{ }$
Mucous membrane, upper lip: reddish brown
Mucous membrane, lower lip: reddish brown
Skin texture: soft, dry
Color of iris: 3
Conjunctiva: discolored in the region of the eye opening
Hair color:
Hair texture: straigh
Body hair: lacking
Head
Forehead: low, broad, full
Top: slightly convex
Face
Shape: moderately long and broad, elliptical, narrowing at bottom
Eye opening: slanted, wide, almond-shaped, Mongolian fold, epicanthus
Cheekbones: moderately protruding
Nose
Bridge: medium, flat
Ridge: medium, straigh
Tip: down-turned
Flanges: thin, low, flared
Stur: Nostrils: narrow, slanted oval, large
Jaw, prognathy: 1
ips: medium, seamed, upper edge a compound arc
Teeth: straight, small, white, scissor bite
Ears: close-lying, seamed upper helix edge
Earlobes: attached
Piercing in earlobes: right and left
Body
Breasts: half-spherical, nipples small, diameter 23 mm , edge well-defined Color:
small
Hands: small
ails: small, narrow, convex
Calves: thin, short, loose
Feet: small, short, wide
Longest toes: $1^{\text {st }} \mathrm{r}$. and 1 . Big toe: close-lying
Special remarks: not yet tattooed.
Body grooming. The natives of Tobi are considered a dirty people by the Europeans, but they have their own standards of cleanliness which are followed with great rigidity. Little care is spent on grooming of the body; thei head hair is their source of pride. They let it grow, wash it nearly every day and rub oil obtained from coconut palm juice into it to make it shine. Afterward they braid it, and some have hair down to their hips (Holden). They also maintain the vermin on the children's heads and consume the lice as a delicacy. As the American furthe reports, the body hair must be plucked out everywhere, and every ten days he was obliged to pluck out his beard hair, which grew back stiffer every time-a most painful procedure for him. According to Krämer, the underarm and pubic hair is bent over with the help of a piece of pumice stone, uar, and then plucked out with the fingers This procedure is called $a$ vosa (E.K.). On a few individuals, Krämer saw thumbnails $2-3 \mathrm{cms}$ long, but it is
claimed not to be a special custom among them. They relieve themselves on an uninhabited stretch of beach. Only children are allowed to do it anywhere. For the privy they use the word ninieripag. When the women menstruate, they catch the blood in a piece of coconut leaf sheath inserted into the vulva. They also use coconut fibers, tsagag to clean themselves.

If they have catarrh, they blow their nose into a coconut husk, which is placed tidily in front of the door of the hut after each use. They are very clean concerning their wells, $t s a v$. Because of the danger of contamination, childre are not allowed near them. If someone urinates in one anyway, the well is no longer used; nothing further happens to the perpetrator-he is merely resented.

Terms for body parts. ${ }^{1}$
tongue
mouth
upper lip
nose
septum
nostril
nose flange
eye
iris
pupil
eyelid
ear
hole in earlob
ear canal
upper edge
large indentation-helix edge
face
head
skull
eyebrows
eyelashes
head hair
tooth
incisor
canine
molar
beard
mustache
sideburns
goatee
pubic hair
armpit hair
cheek
eneseri (hesai-mein) rau; zeu Ham.
ouar; iouuei Ham.
ioarivor, triovara: drioa Ham
rioarifar: drioa zefar Ham.
auti, bautura; bold Ham .
rubaut: dala bold Ham
onibaut; dane bold Ham.
bekeribaut; dügeru bold Ham.
netai, metara; matar He.; mazai Ham.
ororimetar; baitser Ham
gar roat Ham.
baurimetar; pagariti mat Ham.
eringerai; talinar He.; darin Ham.
oi teringar; kouateri Ham.
biobiarteringar; bui iar Ham.
oni teringar; tigeri, apiti; dane teri Ham.
sevar
bogousi teringar
uoi
mongai, mongöto; moon Ham.
tsimai; uasig Ham. mitch'eemum P.; metsemam На.
tagakitsim a mar; tsil Ham.
vati; ians pineri mat Ham.
eanbekengerimat; mazai li mat Ham
eanisimai, metzimoatz, metchimoatch; ianitsin Ham. chim P., На.
ngi, mengidz, far; ni Ham.
gi metare bugotar; otor Ham.
gitsei; nitse Ham.
gitsa; nitoporuch Ham.
goomor: geïb Ham.: koosum P.; kusam На.
cheoba; eueriiau Ham
sars
.
ogori faripei
lekutabar, metabadz; zapai Ham.
ieter;; ietel Ham.
iafagar: iafa Ham.
pei, paum; pai Ham. kay'muk = arm, hand, finger P., Ha.
tseberi paur; tapiri pog Ham.
metseri paur; metari pog Ham.
abiri biri paur; bugaeri pog Ham.
kumotsi; humuets Ham.
tageri pog Ham.
rani pei; dani pog Ham.
segangir; achoechoror Ham
atripei; ateri pog Ham.
atrioune pei; ateriünop Ham.
atir; atinme Ham.
atir atinnu Ham.
atir; atuuets Ham.
atrioitsik; atriötsi Ham.
keripei, ker: krupoin Ham.
kupei, ietedz; pitser Ham • petchem P,
tsepire kupei, tsapita; tapiri pitser Ham
metsere kupei; metari pitser Ham.
tsimare bogigei; achoechorerugu Ham
siaeguuei Ham.
betsabetsar kubei; patapata logu Ham.
gиеиеі Ham.
farekub; farogu Ham
apiripinekub; chapiripi Ham.
atiri kupei; aterogu Ham.
kruegu Ham.
gegei; urutoar Ham.
ug; ulgei Ham.
taperöch; daburiügei Ham
uogan; oarangei Ham.
faripaur; faripog Ham.
hochor fari pog Ham.
bugunupa; buginipog Ham.
kirifarekotogot; fil Ham.
ubei; atau Ham.
tut, maimatare; ti, tut Ham.
matatut; mata tir Ham.
siei, meseiach; siei Ham. mish'eeum P.; mitsiam На.
ubut, moubut
iorubut
farigotogot
tageg; dachug tukkalek P.; takalek
gabik; hapini meg Ham
gogam

| outer thigh | rani tan |
| :---: | :---: |
| inner thigh | metan |
| waist | mos |
| penis | piser, gai |
| glans | megemek |
| foreskin | kein, gin |
| scrotum | sor |
| testicles | fasusor |
| semen | uet |
| vagina | bia, rene biar |
| hymen | gumugur |
| outer labia | bar |
| inner labia | fekir, fik |
| clitoris | boun |
| intercourse | fefe |
| anus | bag |
| fart | singoto; iön (E.K.) |
| burp | tagita megarat (E.K.) |
| skin | kein, gin; hin Ham. |
| bone | $t s i$ Ham. cheel P. |
| blood, menstrual blood | tsa; etafa Ham. |
| afterbirth | pes |
| artery | oag; uach Ham. |
| pulse | iangngangas |
| flesh | fiti rei |
| lung | ugsug |
| stomach | tar |
| saliva | gutuf |
| urine | garei |
| sweat | moror |
| tear | denimat; ietai Ham. |
| feces | bugor, beag |
| breath | ngas, uguk |

The first estimate of the population was undertaken by Captain Douglas in 1878. He assumes only 200 souls, and this number remained authoritative for the sailing guides for a long time. It seems very low. He did not lan at the time, however, and it is clear from later reports that at the approach of foreign ships, it is not by any means all of the inhabitants that gather, and it is always just a fraction of the men that travels out. Barnard and Holden, who lived among the people for an extended period of time, indicate 300-400 inhabitants for the time around 1832 (which is reduced by about half by the famine of the following two years!)-a number which probably had already been reached, if not far exceeded, by the time of Douglas. When Captain Walsen saw Tobi in 1898, 200 men came out to his ship alone, and thus the number of inhabitants at this time can be estimated at $900-1000$, a number that agrees quite well with Hambruch's count. On the first official visit of the Germans in 1901, regional officer Senfft encountered well-nourished, healthy people and numerous children; he estimated the population at $500-600$ people. Since Fritz still estimates the strongly weakened population after the devastating typhoon at about 1,000 heads, it is to be taken as certain that Senfft's estimate is too low. Hambruch's count in 1909 totaled

75 nubile young people of both genders
568 children.
There are a few other details about further population trends as well: six months after the visit of the "Peiho," Dr. Buse' came to Tobi on behalf of the government to examine the state of health there. What he could ascertain was rather regrettable: according to the firm belief of the general population, the Peiho had introduced a devastating epidemic that was said to have carried off around 200 men, women and children in a short time. Only a few natives showed themselves at all, and he succeeded in bringing 52 men and 1 woman to Yap, including the secondary chief of the island. For the rest, the people gave the impression of being healthy and well-nourished and denied having sick individuals on the island at the time. The last report is taken from official records of the British government, which are based on the counts of the Japanese, currently masters of the island. According to these, there were only 183 people on Tobi in 1930, including 3 Japanese: a sad testimony, indicating as it does the loss of almost 800 people in a good twenty years. From this report, incidentally, it is not clear whether this is due to a continuation of the peaceful, voluntary or forced migration to other islands that the German government strove for and began, or whether declining fertility and massive deaths are to blame.

The health of the population on Tobi must have been excellent in all periods. Through this alone, and the multitude of births, was the emergence of such a numerous people possible in spite of repeated natural disasters. Moreover the typhoons and consequent famines were the only enemies in the history of these people: wars, clan warfare, raids and epidemics-aside from the case reported by Buse - did not exist: a notable case of good luck for a South Sea island! The diseases noted among the natives were tuberculosis and influenza. The first affected only individuals; influenza may have been the epidemic supposedly imported by the Peiho. Incidentally, at the time of the expedition's visit, the Merir wife of the translator Sisis (who was a Tobi native) was ill, and he himself had a severe cold; Krämer's translator, too, was already taken ill during that time. -The fertility of the population was indestructible. In spite of famine and deprivation, visitors at all times encountered an astonishing number of children. To be sure, the children suffer terribly from the deprivations; the numerous children's graves testify to the high mortality, but the volume of births renders the gap almost imperceptible. Dr. Buse reports an average of two births per month, and on this basis foresees a better future for this strong, industrious, and abundantly reproducing people than for the Songosor natives, who are gradually dying off. This makes the Japanese report all the more tragic. - According to Hambruch's investigation, all the families would be considered large by European standards. He encountered family men with 27 children, all well-fed and cared for. Polygyny may have ontributed to this situation: men with two wives simultaneously are common, and some men were married fou times in succession, fathering children in each marriage. An abundance of children is considered desirable, and the little ones are always lovingly treated and well cared for
In good times, the island supplies enough food for all, even when the population approaches 1,000 . Even then, superabundance of coconuts exists to support the highly valued trade with passing ships. But the least disruption of the vegetation, even a single windstorm, is capable of upsetting the balance, and a famine becomes inevitable. High mortality results. The natives themselves view these conditions as inevitable and are entirely content if they are blessed with good years, suffering the times of deprivation as punishment meted out by higher powers. They never consider giving up their home and seeking a place to live that would offer them more security. Their Dr. Buse, Report on the Voyage of the Government Steamship "DELPHIN" (February 19 - March 8, 1910) to Songosor and Tobi. Geran. Colonial Newsletter 1910, p. 937.
love of homeland strongly resists any transplantation. If for one reason or another they end up somewhere else, they see this as a temporary change and are happy to return home. In this sense, Holden is doubtless correct when he reproaches them for their satisfaction with their isolated and meager home. The German government repeatedly attempted to relocate Tobi natives from their home, too small by European standards, to other island with better nutritional conditions and less danger of typhoons, and always encountered strong resistance from the people and their chiefs. Thus, they unanimously rejected the suggestion made by Krämer on behalf of the regional officer in Yap, giving as a reason "that where they were born, there they also wished to die." Finally, five young people went to Palau with the Peiho, apparently joining the Merir chief Maian, who had alread settled there. When Captain Walsen's ship was visited by natives, two young men attempted to hide on boar unnoticed by the others. They were, however, discovered by their countrymen and strongly reprimanded by the older men for their flight attempt; apparently, the Tobi natives consider every compatriot an essential member of their community who may not at any price be lost. Incidentally, a similar attitude is shown regarding their captives on the "Mentor," whom they did not want to relinquish even in the face of the famine, in which every morsel of coconut is precious. Regional officer Senfft brought a few Tobi natives to Yap on the "Stephan" in 1901, including Sisis, later Hambruch's translator. In 1907, it was only with the help of many fine words, and not without reimbursement sum, that Fritz was able to take away 48 men and 2 women.' ${ }^{1}$ Of these, he took 39 to Yap to work for the regional office or enter into the service of Europeans. 10 others came to Saipan and ended up working for Spanish settlers. At the time of the Hamburg expedition, there were also individual Tobi natives on Palau: the men Oveizigei, Amoreta, Manieietach, Materenoma, Maisin and Meras. They returned to their homeland on the Peiho. Dr. Buse, too, attempted to recruit emigrants. The approximately 200 men gathered around him claimed to be willing to go to Yap with him, but later 10-20 of them fled in boats and ran away into the bush when it wa time to go on board, and finally he was able to take away with him only 52 men and 1 woman. Most of them we young, strong men.
The other relations of Tobi natives with the outside world are due only to chance. In spite of their skill as boatsmen and the often-praised seaworthiness of their vessels, they have not been enterprising voyagers restricting themselves to "snaring" passing European ships. In doing so, they have certainly dared to go out of sight of their island, but did not generally extend their pursuits much further. It is telling that they know next to nothing about other islands: the Palau natives that were captured along with the Americans were as foreign them as the whites, and on Palau itself, Tobi was a completely unknown island. According to Krämer, the Tobi natives knew at least the names, if not much more, of the following islands: Mekieg (Merir), Bur, Songotsor, Yap, Ngoruk (Ngulu), Mogemog, Voreai (Oleai), Saiper (Saipan), Suk, and Pupua (New Guinea). According to Hambruch, however, they prefer to call Yap "Jor," the name of the Yap hero in the founding legends of that island However, all indications are that even the knowledge of these names is of quite recent vintage. They seem to fee certain connectedness with Songosor, Pur and Merir, which however appears to be cultivated more on thos islands than on Tobi.

The Tobi natives know no founding legends as developed as those that have been passed down on Merir. No being seafarers, the ocean was an insurmountable barrier to them; even in times of deprivation, when the people on Songosor sought and found help and food on neighboring islands (Davids Islands), they had to try to survive on heir own and wait it out, which probably made them into the isolationist fanaticists Holden came to know. In spite of their aversion to long voyages, individual cases of going astray did happen: at one time, three Tobi natives are said to have gone off course and ended up on Merir, and Hellwig heard that several of them had been on Manila. The only evidence the expedition found of foreigners straying onto Tobi was the abandoned house of a "Dogeran I Fritz writes: ..I saw that some of them did it secretly and that they were going against the orders of their parents and masters. No chil dren came and only two women. But I had to pay 8 bars of tobacco for each of them.
man." It had a stone foundation and a bed of masonry inside.
This man was said to have come from Menado, Ternate and to have later left the island on a British schooner. A brother of his was said to be on the island still, but he did not catch anyone's eye because of a foreign appearance probably this man is simply a guest.

European influence began early. The location of the island was very conducive: not too far from the course of the ships sailing from India to China; one can estimate the history of relations with whites at 200 years or more, for when Douglas encountered them, they already possessed bartered goods. So his vessel will not have been the first to approach the island. But in his opinion, they had never seen firearms or iron, and he believed that his ship was the first of its kind that they had had occasion to board. A few decades later, according to Holden, hey already knew the words "sombrero" and "chappo" for hat, and iron was a desirable trading item. Hale, the linguistic researcher of the United States' Exploring Expedition, sought out Holden in order to learn more from him than had been published in his book; he heard about a certain "Pita Kat" (or Peter Kart), who lived on in the traditions of the Tobi natives: "...copper-colored like themselves, who came from the island Ternate many years ago and gave them their religion and such simple arts as they possessed...."' In spite of Holden's apparent misunderstanding-the Tobi natives trace their culture back to an ancestral mother-and Hale's speculations about this Pita Kat, which surely serve only to increase the confusion, it is nevertheless probable that this man from the Spanish-Portuguese colonial territory taught the Tobi natives the value of iron and the foreign terms for "hat," for they deny ever having had any white person on their island before the Americans. -Around the end of the previous century they already possess firearms in abundance, which they do not hesitate to use against whites; and when Fritz arrived on Tobi, they knew expressions in piggin and traded not only in rope and foodstuffs, their traditional wares, but were already offering the wooden figurines carved after European models, such as steamships and other trivial items that were produced solely for the tourist industry. A certain Captain Strong was a frequent visitor; he dropped by the island on his trips to Helen Reef to catch shellfish and snails. It was said that there were Tridacna, Cassis and Trochus and Triton horns in abundance there. Perhaps the men Bukrema Guman and Ueiriiangoz, who knew the great reef from personal experience, visited it with this captain, though their knowledge of Helen Reef, which they call Osariki, must be much older. They have the same name for it as the neighboring islands, which indicate it on their sea maps.

After the transition of the Carolines from Spanish to German rule, the German flag was raised on Tobi on April 12, 1901. The location garingemog was chosen for this purpose, and the mast was erected in front of one of the chiefs' houses. No missionary effort was undertaken during German rule, or previously

The character and mental disposition of the natives is judged negatively by most witnesses. Holden is very derogatory about them. There can be no doubt that he not only applies a false measure and dismisses everything that does not conform to the culture familiar to him, or seems too foreign, as inferior, but also that his sufferings as a prisoner, and perhaps even more his grief over the deaths of his companions, bias him against the Tobi natives. Hale also received this impression, and therefore said much to rescue their honor. Holden almost cannot find the words to adequately express their baseness and detestability. For him, they are a people on the lowest mental level and cannot be surpassed in moral corruption. The general cruelty and boorishness of which he accuses them reaches a pinnacle in the "women like Furies." He calls the natives awkward and stupid, their culture wretched, their condition deplorable, in which he is correct; but he blames their isolation and indifference Barbaric, cowardly and submissive, lazy, shameless and immoral: in his eyes, they possess not one good quality. Captain Barnard's judgment is much more lenient. Holden clearly never realized that fate had placed him among a people who were driven to sheer desperation by extreme deprivation
$\frac{\text { a people who wer }}{1 \text { Hale, op. cit. p. } 78 .}$

Any people whose number famine has reduced by half would demonstrate similar conduct-hardly any better Fritz encountered the natives in a very similar desperate situation, and his impression, too, is one of great apathy Their self-sufficiency and contentment with little, strengthened by a great love of home, and their aversion to longer journeys and anything foreign are doubtless characteristic traits. But laziness, of which Holden accuses them, is certainly not the vice of the Tobi natives. According to him, one would think they hardly worked at all and, as cruel masters, forced only their poor prisoners to do so. But there can be no doubt that in good times as in bad, they tend their own little plot of earth with the greatest imaginable industriousness, skill and thoroughness, and manage to produce an astonishing amount from it. Otherwise, their very existence would not be possible The economic misery described by Holden was due to natural catastrophes, and the damage caused could only be repaired by time and long years of arduous work.

Their bad reputation among seafarers is without question due to the impetuous, excited behavior they exhibit i front of foreigners. Their loud cries and wild gestures, persistence and aggressiveness in pursuit of the trade ship made it all too easy to assume bad intentions, and it is hard to say to what extent they may have let themselves get carried away when the situation became serious. From the time of Holden to the visit of the Hamburg expedition nothing had changed in this regard: in fact, Hambruch had to show his carbine at one point to calm things down Captain Walsen is the only seaman of his time who regarded the Tobi natives as harmless and acknowledge their modesty and well-mannered behavior. The others warn of them as a horde of robbers and call them the cruelest people of the whole archipelago. There are reports of ambushes, pursuits with rifle shots and casualties The cause of all these excesses is their lust for European trade goods: tobacco, iron and cloth. This drives them to deprive themselves of necessities even in times of want in order to trade with them. On the other hand, they are extremely attached to their traditional customs and native objects, and averse to all innovation, primarily for religious reasons. In their opinion, anything foreign can all too easily bring bad luck upon them, and this conviction makes them suspicious, fearful and reticent.

Their fear of anthropological, photographic and phonographic recordings is telling. The first attempt resulted in general flight; women and children were altogether impossible to convince. Only many fine words, promise and trickery persuaded them to keep still. Records of the 20 natives living on Tobi-the other six were living on Palau-were able to be made only by luring them onto the Peiho through trickery. Only Sisis, the translator who had been on Yap, dared the phonographic experiment, notwithstanding the fact that even the women listened to the gramophone with great delight.
When they are not in the grip of fear or suspicion, they are friendly, modest, obliging and generous. They also gave Hellwig, who had many dealings with them, an impression of intelligence. For the rest, it is difficult to determine to what extent awkwardness and unwillingness to understand played a role, since all they expected from whites was the anger of the gods or other disaster. In fact, relatively little has been learned of their ideas, manners and customs.

The women behaved very reticently toward the white men, and the young girls avoided them altogether when possible. Though they were generally interested and curious about every activity of the whites, they always disappeared immediately when food was served, clearly considering it improper to watch them eat. They express their wonderment by a curious inhalation of air with a slight popping sound and pursing of the lips. During religious ceremonies, this gesture admonishes them to silence. On the other hand, it is strange that Holden was not able to teach the natives to whistle. As a prisoner, he liked to delight in their clumsy efforts.

## Special Section

## I. Society and Intellectual Culture

## 1. Origin

A long time ago, the childless woman Ramakaparek (A.K.) or Maleparu (Ham.) came from Sorol (Ihochor Ham.) near Mogemog to Tobi with her husband Ean in a canoe without a sail. Her route is also supposed to have taken her via Fais. In those days, there were neither people nor trees on the island. Everything was water. Only a single tree stood in the middle of the island on the place Fariataifo. It was a mag, and is no longer there. ${ }^{1}$ The woman was pregnant. Ten days after her arrival she bore a son, and afterwards bore ten more children. According to Hambruch's inquiry, she bore thirty boys and thirty girls: here, the old founding legend seems to have been merged with a moon myth. ${ }^{2}$ The children intermarried, and it is from them that the Tobi natives trace their origin. The sons of Maleparu first made the island as good and large as it is today. The large sea-bird Gataf (Frigate bird) brought the first taro. According to Hambruch's version, the ancestral mother brought it from Sorol. The bird dropped the taro on the beach, and Ramakaparek took it and planted it. Already after a month it sent up many shoots, in e uot. Since it was too dry for the plants, she had some earth dug out and the others (presumably the daughters!) imitated her. This is why the plantations are so extensive, the Tobi natives say. She also planted the coconuts gathered from the seashore, and as the trees grew (and bore fruit), she planted new nuts.

One day she collected pandanus leaves, vats, sewed them together and built a house out of them, the fare kikak for the spirit Sagits (Holden's Yarits?), whom she had brought with her from Sorol. The house in which Hambruch lived during his visit is said to have been built by the sons of Maleparu. She herself first lived under the single tree and gave birth on the site par, where she later erected the birthing house imeripar. In the beginning, she herself is also said to have lived in the spirit house she built, at least at times; it was finished before the birthing house. In comparison with the current one, the imeripar was very small, and Maleparu did not give birth there; only her daughters did, when there were already other houses round about. The loom, too, she brought from Sorol Furthermore, Maleparu and her husband carved the first spirit boat like the one that now hangs in every spirit house, and named it oanugeiren. ${ }^{3}$ When it was finished, they said, "Here, Rugeiren, is your canoe. Protect our children and give them fish and food!" The husband Ean is also said to have invented the coffin boxes, which he fashioned from driftwood, menima.

## 2. Government

The rule lies in the hands of a head chief, tamor, now also called king by some, who is assisted by lower chiefs. mong these is also a female chief. In 1909, according to Krämer, the names of the thirteen rulers and their erritories or homesteads were

| Vitseraun, head chief | in Votsenekabi |
| :--- | :--- |
| Begigeramar | in Fanerikeroi |
| Tokitokonoma | in Faregenitsaro |
| Mogonagir | in Garingemog |
| Tsigeitsegagen | in Vanim |
| Mogoreitsak | in Farimekenasarai |
| Torumar | in Rikerivongar |
| Vovitika | in Farigagat |
| Etive | in Vorimag |
| Truveinemar | in Matasires |
| Tubumar | in Rikerivongar and Farik |
| 1 Compare the characteristic tree of Carteret. <br> 2 Hamburch had one old man and two young people relate this legend. <br> 3 oa Rugeiren. |  |

Their power, including that of the head chief, seems rather limited. He has jurisdiction primarily over the building of the boathouse (probably the gathering place) and the rebuilding of the spirit house fare kikak. Since the people's memory is seemingly not very good, as the gaps and contradictions in the founding legend show, they can barely indicate the names of a few of the ancestors of even the head chief. ${ }^{1}$ His father's name was Senap, his grandfather's Vai tamor; the rest are already entirely in the realm of legend, and one of them has some connection with the moon which could not be clarified.

## 3. Family

When a young man wishes to marry, he first speaks to the girl. If she agrees, she herself tells her parents, and he speaks with his. If they are against the union, it is not made. On the other hand, the consent of both parties is also essential. They do not know compulsion. The discussion is generally held early in the morning. In the evening, the groom brings ten to twenty coconuts into the house of the bride; she, in turn, gives his parents basket or two of taro. A further exchange of coconuts and cake takes place, and then the marriage is considere completed. According to circumstances, the young couple then lives either with his or her parents. They merel build themselves a small sleeping house. This custom probably explains the notable closeness of the buildings in all the settlements on the island.

Divorce is easy and commonplace. If the married couple do not get along together, they separate, and in such case the children all belong to the woman. Consequently, one can posit matrilineage for Tobi, and the numerous children that Hambruch found in the households would not be the children of the man by his current and past wives, but children of the women by him or their previous husbands. This hypothesis is supported by the natives remark that the father of the wife, if she dies and he likes the son-in-law, will give him one of his younge daughters as a wife, and the children appear to remain with the widower. There are no special marriage laws, bu marrying among relatives is forbidden, and child engagements are said to be common.

Sex life. When Holden says, "Intercourse among the sexes is not bound by any law, and modesty is almos completely ignored," it is without a doubt an exaggeration or misinterpretation of the situation. He probably took offense at the freedom of premarital sex and the erotic dances. Most men have two wives, who age rapidly due to the frequency of births. After every birth, sexual intercourse ceases for a year. Each wife has her own house, and the husband sleeps with them alternately in their house. A menstruating woman goes into the blood house for three or four days; the men, of course, are never allowed inside. Coitus is called fefe; if the woman lies on the bottom and the man on top, he is called $r i$; if she sits on his thighs, fefemot. Cunnilingus is called gotsots. The expressio for whipping with a rope for sadistic purposes is tibakiri. Pederasty is apparently known to them in name only, fefe boguk. Masturbation is known only to women and is called gasegusek. Men do not practice it. If a girl is still untouched by the time of her first menses, deflowering her is undertaken with pleasure; the mother then uses medicine, sekup, for ten days both internally and externally; this is a blood-stanching preparation used also in other contexts. It is administered in coconut shavings.

Family life is peaceful. The children, who are highly desired, are treated with equal rights by the parents, a Holden says. They are handled very gently and punished only if their demands for the sparse food grow all too wild. Their importunity annoyed Barnard. Hellwig, on the other hand, found that the children were kept under strict control. They were never allowed to push themselves into the forefront, and had their places behind the row 1 Holden gives very scant information on these matters and without further explanation fixes the range of transmission at 100 years, so it would thus reach back to about 1730
of adults. If they were too noisy, greedy, or disobedient, they sometimes received blows. The men also have the right to discipline their wives, and criticism is not spared. Older men seem to possess a certain authority. Only with great effort was Krämer able to ascertain the expressions for the various family relationships. According to Holden, each person has only one proper name; family names are unknown. The parents, too, are addressed by the children with their proper names, and words corresponding to our "father" and "mother" are foreign to them. The ame name is never used for two people (cf. Hambruch's list of inhabitants and Holden). Avoidance laws have not been observed. A brother may speak to his sister in public without impediment. The greeting among them is called gobis. To greet each other, they hug and rub noses. The only insults are said to be: kire meruesin $=$ you married your mother! and boutamau, which means stink.

Vocabulary according to A . Krämer.
birth
twin birth
man
many men
parents
child
toddler
infant
infant
boy
little girl
girl
woman
many women
young woman
father
mother
brother (of brother) ${ }^{1}$
brother (of sister)
older brother
younger brother
sister (of sister)
sister of brother
older sister
older sister
younger sis
husband
wife
wife
pregnant woman
on (my
daughter
paternal grandfather
paternal grandmothe
maternal grandfather
maternal grandmothe
youth
father's brothe
father's sister
iegaiei
ribe
mar; zama, tama Не.; mah'ree mah Р.; amare На.
moiere mar
tamatsemesirats
garieits; ruas E.K.; mah P.
lah'bo P., На.
gaga; merauidz E.K.
iariued He.; gabari mar E.K.; uereuedza mare Ha
igerai uaivi He .
gabali faivil E.K.; pah'chik vay-ee-vee P.
faivil; uaivi, uaifl He.; vay-ce'vee Р., На.
moiere faivil
soer'ree-wedg-vay-ee-vee P .
temei; miiangei Ham.; sour teemum P. uatimam H .
sirei; rimar enin Ham.; mish'erum P. miseram Ha.
pisir; uesi ierau Ham.; biz'sheem P. biziam Ha.
moi engar
tamats; erab Ham.
ielimat Ham.
pisir; euueis Ham.; mee'-ang-um P. mianam На
moi engar
erabauaue Ham.
euaio Ham
gi mar
gi faivil; megiri moanai; megigch fevi itivid, tega feivil E.K.
faivil a sie E.K.
rai mar; eiar Ham.
rai faivil; eraur Ham.
tema temei; tamar sin Ham.
sinetemei; iiemar Ham.
tema sirei; famar Ham.
sine sirei
rueis, young people $=$ gabaritsiriket
pisi tamei; meian Ham.
meiangei tamei

| mother's brother | pisisirei; neida Ham. |
| :---: | :---: |
| mother's sister | meiangei sirei |
| son's child | raunei |
| daughter's child |  |
| cousin | rare busi tamei |
| wife's father | tamarikik |
| wife's mother | sine kik |
| wife's brother | oats |
| white person | maningis |
| native foreigner | uasera |
| old man | marenap, irekeri mar |
| old woman chief | irekeri faivil tamor |
| female chief | faivire tamor |
| friend | meuisi |
| enemy | tai uisi |
| people | pee'peeah mah'ree P . |
| carpenter | senap He . |
| war | maur |
| dance | vagek |
| game | gokom |
| festival | kotoragei |
| funeral celebration | gene |
| medicine man | tugutarei |
| medicine | tafei |
| disease | magakes |
| pain | gametak |
| coffin | bag |
| spirit boat | oari bugurog |
| grave (for children) | ribar |
| children's cemetery | repei |
| putrefaction | ioba |
| lament for the dead | dedan, maugar |
| soul $=$ demon | iares |
| land of souls | getek |
| dream |  |
| magic, love magic | gourobuk |
| prophecy | tsiep |
| taboo | tabu, ietap Ha . |
| shadow | iaingar |
| name | it |
| what is your name | meta itom |
| sleep (sleep sitting, sleep lying down) | masek, masek uor |
| God murder | iares $l i i$ |
| thief | geibikaf |
| property (my possessions) | gapitiki |
| penance | tangakir |
| witness | gataik |
| greeting | kimeian; kideian He. |

mother 's brother
son's child
daughter's child
cousin
wife's mother
wife's brother
white person
old man
old won
chief
female chief
enemy
people
carpenter
war
game
funeral celebration
medicine man
medicine
diseas
coffin
spirit boat
grave (for children)
children's cemetery
putrefaction
-
land of souls
magic
prophecy
taboo
what is your name
sleep (sleep sitting, sleep lying down)
God
thief
penance
witness
greeting

[^4]Birth. During the first four months of pregnancy the woman may not have intercourse; from the fifth month on it is allowed again. As soon as labor pains begin, she goes to the birth house, imeripar. The birth occurs in squatting position. The laboring woman drinks hot water, pants through her nose and has her body pressed from behind by other women. The umbilical cord, iorubut, is cut with a piece of shell. To staunch the blood, very finely scraped coconut is applied. The afterbirth is buried outside in front of the house. After the birth the mother wears a body girdle, tagari faivil (A.K.), a strip about 20 cm long made from pandanus leaf. According to E. Krämer, ther re two kinds of mothering girdle: the strip, which she heard them call unebego, and a mat woven from pandanu strips, tagari faivil, which is distinguished from other mats by a small rectangular extension that is woven on.
ffer the birth, the young mother continues living in the women's house, where she always finds companionship, for a certain period of time. The infant stays with her. If a childless woman desires a child, she takes another' small child to her breast, which they consider very good magic. The child is laid in a basket-like cradle hung fron he ceiling. The rectangular framework with low sides, fashioned out of several slats, is somewhat wider at one nd. For children who have already begun walking, they have a kind of walking fence: a framework fastened around or to a tree, which the child can grasp. Fig. 15


Fig. 15. Walking fence, meuar. After a sketch by E. Krämer.


Fig. 14. Cradle, ürarerigaga, 4839". Width of the top end 38 cm , width of the bottom end $31 \mathrm{~cm}, 1.71 \mathrm{~cm}$, h. 15 cm . Fig. 16

The women's house, imeripar, also called imega faivil, according to E . Krämer, is a very large house located on the beach with a roof reaching to the ground and a very low entrance. It is only for menstruating, pregnant and recently-delivered women, and is strictly taboo for men and other women. Only a few old women in charge of keeping order and caring for the new mothers spend time there as well. In front of the house is a spacious clearing and a cooking house. Inside, the floor is covered with many sleeping mats. The beams are decorated with phalli figures. In approximately the middle of the room, a fire is tended. Above it hangs a rectangular wooden frame with a bottom made of slats and phallic rods that are fastened to it in an upright position. It is called taum or samorungo nen im and is taboo. One of the old women keeps watch over it, being called mesin in this capacity. A part of the large room behind the frame is set aside for recently delivered women alone, and is taboo for the other women.


Fig. 21. "Children's cemetery." After a sketch by E. Krämer.


Fig. 17, 3988". Length 183 cm , height 59 cm , bottom diameter 130 cm . Coffins, bag, of mangrove wood.


Fig. 18, $4362^{\text {II }}$. Length 54 cm , width 25 cm , height 22 cm , bottom diameter 17 cm .
 height 35 cm .

Fig. 20, No. $4818^{\text {II }}$

Death and burial. If men or women are taken ill, which is always caused by the influence of spirits, they or their elatives bring a gift, gapitek, to the spirit boat in the spirit house so that healing might be granted. If the person dies nonetheless, they lay the corpse, matagori, Ham., on a coconut mat, iaso, on the ground, with the head facing inland, and men and women begin a loud wailing and intone the songs of the dead. These are apparently already a dying cultural relic, for the six people living on Palau no longer knew them. The process of mourning the death of a chief was described to Krämer as follows: "When Vitseraun (the current head chief) dies in his house one day, his friends and relatives will bring his wife presents: ropes, bowls, mats and coconut bottles. After this, his corpse will be brought into the boat house, where his widow must tie his lower jaw shut, fogorierter, with shell necklace, vatari bur. At noon, twenty-four hours after death, his face and body will be rubbed with turmeric powder and coconut oil, and his head will be turned sideways. The body, curled up tightly and wrapped in three or four mats, will be tied and laid on its side in the coffin, bag, which is shaped partly like a box (cf. p. 101, Fig. 17-20) and partly like a bowl. The pairs of handles on it will be tied fast. It is made from relouel, meli, safan, or fariep wood.

The oval coffins shown here are made from mangrove wood and consist of a tall lower part with a flat lid that rests on a ridge of the lower part. The slightly convex sides rise from an almost round bottom at nearly a right angle from an elliptical bottom, the ends have an angle of about 65 degrees. The lid, curved over its length and width, has upright pegs at the ends, which together with those carved out of the bottom half form handles that are sharp edged on the outside, rounded on the inside. It hardly seems possible that a corpse can be fit into these vessels, but the natives demonstrated this difficult task using a live body. The individual parts of the coffin are called: lid $=$ uor; handle $=$ chomor; edge $=$ notor; convexity $=$ ran; interior, bottom and apparently also the ends $=$ dugere .

Coffins, bag, of mangrove wood. On the beach it is tied onto a canoe, paddled far out to sea with another boat, and without further ceremony set adrift Only men and married women receive such coffins, however; single wome never do. The Tobi natives do not know themselves to where the corpses drift. On Palau, however, the canoes of he dead occasionally wash back up on the shore. The people then take possession of the usable boats and throw the corpses back into the sea. Concerning this custom, Hambruch further learned that they use the dead person' own canoe as his death canoe, and that they push it into the sea in the evening, along with gifts of coconuts and taro. He does not mention a coffin. It appears that the use of coffins is a privilege or a more recent custom. Holden knows nothing of it. With the prisoners, they did not even wait for death to set in but left the dying to drift off to sea in boats. It is interesting to note that the prisoner clubbed to death for stealing food was thrown into the ocean without a canoe. Holden also says that when the situation of their own sick (those who have succumbed to famine) seems hopeless, they simply chase them into the bush and allow them to perish without any aid. -According to Krämer, a funeral meal with song, gene, is held. The funeral songs, dedan, are intoned by the relatives during the preparation or setting afloat of the corpse.
An exception to this type of burial is made for the infants who die without teeth; these are buried in the ground in a special children's cemetery located near the imeripar. Among scattered palms, small funeral huts on grassy ground stand over the graves; they consist of low roofs resting on four posts. The site is strewn with small coral ocks and fenced round with stones. One finds wooden bows, necklaces, and flat, wide tortoiseshell armbands there as funeral offerings. Apparently, however, no further care or maintenance takes place.

Besides the cemetery, there also appeared to be individual graves between the dwellings. Here, too, they were covered over with a low, small roof. Several indications allow the conclusion that the somewhat older children are buried here. Otherwise, older children are committed to the sea in boats like adults, but without a coffin.


Fig. 22. Magic against theft from fruit trees, hatsinetsin. After sketches by E. Krämer.

## 4. Laws

The property, gapitik, of a man consists of his house, fields and coconut palms. The native terms for them are merimeritama, imarchapin, iserak feriafen, asaieen and iagurab. ${ }^{1}$ His wife and children are considered the the women only insofar as they, like other unmarried family members, are sustained by the family head, the oldest son. The sons inherit all the father's possessions except the taro and turmeric fields. This is also why men bring coconut palms into a marriage, while women bring taro fields. Another result of these inheritance laws is that several families share ownership of one piece of land. The yield from certain fishing expeditions is considered common property. Any man can perform the distribution. Everyone, men, women and children, is entitled to their share. These distributions are the only way they have of estimating their population; they do not know the number of dwellings, since this is irrelevant to their communal life.

They are very obliging toward one another. The owners of boat houses allow those without to use them withou payment. One repays the help of friends with one's own help or with food. They try to protect themselves agains theft through several kinds of magic. They wrap a rope around the trunk of fruit-bearing coconut palms under which they place twigs or bundles of pandanus leaves. This magic, which can replaced by woven coconut leaf pinnae, is called hatsinetsin and is supposed to protect the nuts and palm juice (for toddies)

They seem to handle criminal law in various ways according to the circumstances. Thus, in times of deprivation they punish a trifling case of food theft very severely, but in times of plenty they do not pursue the perpetrator any further; they merely harbor a grudge against him, as they say. This is the same attitude taken towards the polluter of the well. It is also possible that their punishments have become less severe in the course of time. Holden reports that for the theft of a few coconuts, they tied the hands of his fellow-sufferer, the Palau native, behind his back, hrew him into a canoe and set it adrift. He adds that this is how the natives punished offenses of various kinds.

They beat his white companion to death with clubs on account of a minor offense; this was accompanied by an outbreak of general public rage against the prisoners as a whole which probably had its roots in hunger. -They assured Krämer that there had never been a murder, $l i i$, among them. While they merely hold a grudge against a hief, geibikaf, and attempt to protect themselves from him through magic, in the case of a habitual thief they turn o his relatives in order to have them punish him. A blow with the hand is termed bikiki, and with a stick, uouti. If they get into a fight, no weapons are used.

In the case of adultery, the two men wrestle each other, beoban, and others generally immediately attempt to separate them, gamatsi. If the adulterer is caught in the act, the husband scolds him, and the guilty party pays him a fine, tangakir, that may consist of palms, land, bowls and rope. Witnesses are called gataik.

## 5. Tradition and Religion.

The kingdom of the dead is called tauoar' and no one knows where it is located. However, their souls, earusi, dwell in the holy grove, getik, in the northern part of the island, which is strictly taboo for women and children and entered infrequently, reluctantly and only at certain times even by men. They believe that the spirits wander about there, so that it is haunted. They act frightened and keep to the narrow paths, incessantly murmuring prayers and looking around; they are afraid of having coconuts thrown at their heads and do not dare to speak; and they are happy once the grove is behind them. They were most reluctant to lead the white researchers through it and entreated them urgently not to shoot there. Krämer noticed that a section of the grove consisted of Eugenias, called fariep on Tobi. -The names of the dead are not spoken.

It is extraordinarily difficult to get a clear idea of the Tobi natives' idea of divinity. Holden only heard of a cult of Yarris. Sagits is the divinity in whose honor Maleparu built the first spirit house and whom she is said to have brought with her from Sorol, her home. But even in this foundation legend, the spirit boat inside is sacred to Rugeiren. Krämer received the impression that Iares was only a kind of daemon, and that the lord of heaven Rugieren, who was considered the highest god on other islands as well, was worshipped as the sole divinity. It is notable that the natives of Yap know the word yarif for spirit. Now it is eminently possible that the cult of a founding divinity coexists with worship of the god of heaven, but it is just as likely that both refer to the same god, and that Iaris simply expresses the idea of divinity, while Rugeiren is the name. After all, Holden heard mention only of the one god, upon whose anger and grace everything depended. According to Krämer, Rugeiren rules over the sea and the typhoon, and according to Holden, during an earthquake the people say sebi too Yarris, Tobi Yet-tah men-Yarris is coming, Tobi will be devoured! During thunder and lightning, they say Yarris ti triYarris speaks! ${ }^{2}$ In the founding legend, Rugeiren is entreated for fish and food; in Holden's account, the anger of Yarris is feared if they do not retain the traditional shape of their fishhooks. All of this clearly shows how closely linked the realms of these divinities are, so that their conflation in the minds of the Tobi natives is highly likely They consider Yarris to be subject to human characteristics, and imagine that he is moody and vengeful. Any bad luck they experience is blamed on his anger. Thus, he caused the coconut and breadfruit trees to bear poorly and the fishing expeditions to yield so little. They reject the acceptance of cultural innovations etc. out of religious considerations. They would not use the American sailors' very usable fishhooks, as Holden tells it, before they had warmed them and bent them into the traditional shape, which made them ineffective at holding the fish. But Yarris would be angry at them if they used the hooks in the form they were given to them by the whites.

1 Hambruch mentions thi
Haan, oa and to think of this name according to the statement of the interpreter Sisis. One is tempted to connect the name with the word for nay not be entered by young people and must always be kept very clean. It is apparently the spot numbered 58 on the map, cf. Fig. 8 ., and part of the grove getek.
2 On Yap, dira means thunde.

The parents of Rugeiren are Arizarap and Idamariu. Inagi is a sister of Arizarap. Rugeiren has two wives, an earthly one and a heavenly one: Idamelu and Idamega. The earthly wife Idamelu is the mother of Olifat, who is also named as one of Arizarap's numerous children, and whom they denied all knowledge of to Krämer. The brothers of Rugeiren are Zorauii, Guda, Marinarelao, Zizilele and Rios; his sisters are Idazabiu, Riganan an Itariu, and a further child of Arizarap whose gender was not indicated: Rizerau. These ideas are clearly very vague. Concerning other mythic traditions of this people, it was possible to garner only fragments. They have a special guardian spirit for coconuts, Daulen, and another for palm wine, Moeilari. Female daemons includ Maredeizei, 'also called Malemale. Further, Krial, Runimar, Idazin, Idagilerain, Mezuzu, Meiuoror and Zimeizap

Religious activity is the sole province of various priests, whose power and influence are considerable. As mediators between divinity and humanity, they control it through their suggestions, inspirations and commands. In 1909, the priests of Rugeiren were Mantrüior and Veitop. The former, a fanatical and nearly blind priest who was not inclined to tolerate the whites and their work, caused the expedition great trouble by badly frightening the people, so that they tried to induce the visitors to depart by offering them many gifts. How triumphant he must have felt when the pestilence that appeared after the departure of the Peiho justified his dire predictions!

All religious rites are performed in the spirit house. In Holden's time, only one of these existed on the island; the expedition encountered two. The ancestor Maleparu is said to have built the first one, the fare kikak, which must be rebuilt at the command of the head chief whenever it becomes dilapidated. This is the house in which Krämer lived. The second spirit house, called galis, ${ }^{2}$ was assigned to Hambruch as lodging; it is said to have been built by Maleparu's sons. As their central focus, both spirit houses contain a spirit boat dedicated to Rugeiren (Fig. 23). It was not ascertainable why there were two spirit houses, and whether they served different functions. Holden calls the spirit house simply Tabhou and describes it as a crudely built hut measuring $50 \times 30$ feet. When, in another place, he speaks of a gathering house, it is possible that he is referring to the spirit house again, if not to a larg boathouse. In our time, men and women are allowed to sleep in these houses, under certain circumstances at least at any rate , this is where the whites were housed At one time, Holden and his companions were conceated there from the raging populace under mats by some women who took pity on them. According to Holden, in the middle of the spirit house there was a kind of altar that hung from the ceiling (the spirit boat!), upon which, according to the people's belief, the deity would alight to speak to the priest. Twelve fairly formless carved statues are set up in various spots to personify the deity, "as far as we could ascertain." Mrs. Krämer, too, saw wooden figures called sen in the spirit house, which, however, were said not to be sacred to Rugeiren. While Holden's description of them as "formless" should be taken with caution, these old deity statues should not be confused with the secular carvings depicted here. These are modern works created for the tourist trade. However, their similarity is not to be denied on this account.

The interior of the spirit house farekikak, which had a roof reaching to the ground and a floor of planks, wa divided into three sections by 2 cross-beams: the first section, facing inland and abutting the entrance, was empty and assigned to Krämer to live in; the other two sections were taboo. A transgression of this ban would anger the gods and call down a typhoon or illness upon the people or the foreigners. The spirit house galis, inhabited and described by Hambruch, also had a roof that reached to the ground and was covered with palm-leaf mats; it wa about 8 m high, and its sides measured 15 by 8 m . It lacked a designated entrance, and the people crept in through the corners. The roof rested on 8 large central beams and 6 side beams on each side, which are significantly shorter than the ones in the middle.
This female deity as ascertained by Hambruch is doubtless a man, Mareteizai, known from the legends of the neighboring islands, and Malemale is not identical to him, but a female deity.
2 In one place, Krämer calls Hambruch's spirit house Beitomar, ;it is located about 50 m north of the Farekik. Here, he is apparently confus ing the names of the house and place. It is very probable that Yarris, Sagits, Iares and galis are different versions of the same word.

The sides and gable areas of the roof consist of light rafters. The interior was divided into two sections, one of which was taboo and contained the spirit boat. Strangely, there was a small altar in the empty section.

The spirit boat, first built by the ancestress Maleparu, is found in every spirit house and dedicated to Rugeiren; in the farekikak it was a double boat, in the galis a simple outrigger boat hung from the ridge beam by four ropes. The watercolor in Plate 1 shows the double boat of the farekikak, painted by Mrs. Krämer from a precisely prescribed distance. The natives believe that during a wind it is moist inside. The boat in the galis was festooned with plants, bottles, tin cans and decorative necklaces: offerings in return for which the deity is supposed to bestow fish and food. The edible gifts filled the air with an awful stench. Bowls with turmeric powder and oi vessels were hanging next to the boat. Its pointed ends were painted with ren strips. As Krämer learned, a festive painting of the spirit boat takes place each year. It is called gapisingeri and is done by the chiefs, who mus provide a large feast for the populace on this occasion. While young men and women stand outside the spirit house, the chiefs take a long-necked bottle, boeg, filled with oil and mix it with turmeric powder, saying: "brei, brei." Later, a belt, tagar, is hung up as a dedicatory offering, gopita. Also, men returning from foreign parts are supposed to hang an offering there; most choose knives, apolitsek.

The worship service is held at the altar by a priest while a large part of the population is present in the spirit house; the rest wait silently outside. Inside and in front of the house one may speak only in a whisper. Holden's description in valuable in that it includes the cult of the divine statues, which have now disappeared. The priest first paces around the altar, where he takes up a mat designated for this purpose, spreads it on the ground and sits down upon it. After this, he utters cries and assumes various poses to call the divinity to the altar. Meanwhile the gathered people sing with interruptions, stopping when the priest begins to say prayers. Next to the altar is a large bowl containing six coconuts. When the invocation is complete, it is assumed that the deity is present. Four coconuts are now cracked open and thrown into the bowl, the other two are for the priest alone, who is also called Yarris (!?). As soon as the nuts are broken, one of those gathered utters cries, runs to the middle of the spirit house, takes up the bowl, and drinks the coconut milk, generally spilling a great deal onto the ground. At the same time, a little is sprinkled on the twelve statues, while the rest is consumed by the priests. With this, the ceremony is ended, and they give themselves over to entertainment... Fritz experienced such a ceremony as an audience member standing outside before the dances began: he saw the priest, clearly already in a trance-like state, hi gaze empty, striding through the crowd which drew back fearfully. A curious element is the loud snorting through he nose, which Hellwig too observed during the ceremony enacted by the priests, apparently to banish the evil influences emanating from the whites or threatening them. Accompanied by loud snorting, they enter an ecstatic state and slide toward the whites with menacing gestures.

Shortly after Hambruch had moved into his abode, the galis, the head chief and priest appeared there to commune with Rugeiren and if necessary to soothe the anger of the deity because a white man had come into his house. Afte they had commanded all to silence by means of the above mentioned "plucking sound" of their lips and asked the whites to remove their hats, they all squatted down. The chief pointed heavenward, and the priest sat down upon a large overturned bowl near the altar and began a sort of litany or alternating chant with the chief, accompanied by loud groaning, panting and hissing. The only comprehensible word was tobaco. When everything seemed to have ended, the other, nearly blind priest was led in, and the hissing began afresh. Sliding on his knees and remonstrating loudly, a third priest moved toward the whites and the Palau natives accompanying them. The chie indicated to them that Rugeiren had now occupied the priests. Meanwhile, the screaming kept getting louder and finally culminated in jerking of the muscles and snorting that lasted about three minutes, while all those present kept complete silence. Krämer learned of a ceremony called mongo: "When the deity has come, the priest asks him for many fruits and fish, turtles and whales. He places cake and breadfruit on the spirit boat. After about an
hour, these offerings are taken off again and consumed. Besides these "official" invocations, the priests and people do not perform any sort of spirit calling, and seeing spirits in any form is unknown to them. They also do no believe in dreams, tar. Prophecy, tsiep, concerning fishing and sea-voyages, is performed with the help of woven coconut. They also know of rain magic. A love magic, gaurobuk, using the bush-tree $i a g$, is known to certain individuals. A man who is now dead is said to have been proficient at it. They call their fish magic mangolil. Before and after their large communal fishing expeditions no offerings are made in the spirit house, at any rate not on the occasion of fishing for sea cucumbers, when the yield is publicly distributed.

They have great fear of thunder, lightning and earthquake. Children are not allowed to speak. According to Hambruch, the incantation for typhoons is iomokeion; according to Krämer, baga sarien, "be still!" However, ceremonies are never performed in this context. As a defensive magic against illness, the natives all together beat the side of the boat with their paddles as they distanced themselves from the whites' ship
The main festival season, iorigarat, falls in the time masirap. This is when the sun is at its zenith, and there is a abundance of fish, coconuts and taro. Large bowls are filled with taro cakes and brought to the spirit house, where men and women are allowed to sleep, and dances, vagek, and celebrations, kotoragei, are held. The dances are performed in front of the spirit house after the priest has performed an invocation with the people waiting outside.


Fig. 23. Floor plan of the spirit house galis after Hambruch a) free space b) tabu space c) altar d) post $f$ ) crossbeam on the floor $g$ ) lengthwise planks h) house and roof edge.
6. Time calculation and medicine

Time is calculated by moons, and according to Holden, they express time only in stretches of two or three days. The year consists of ten months:
Neheki Matsisik
Masirap (sun in zenith)
Touta
Sauiefan Rag sumrise end of August to September
Chuch
Ur sun in north, sunrise in March in the constellation Maur Ierier
Mar
Iits
Tumu sun in south, around November.
1 Krämer received only very vague and contradictory information about these matters. They also perhaps appear to count the Merir month Mai and Eremaus, here called Tegobor and Iekemaus, which are also called "Neheki" and bring "smooth water", in some way or another. During this time, there is said to be an abundance of breadfruit and Jambosa malaceensis (apple fruit)

A three-day-old moon is called serubon; a bright, waxing moon is seigetui i magam and fabon i magam, depending on its size. The names of the months are derived from the constellations in which the sun is located during these times: Bup is the star to the south; when the sun reaches its height, the wind swells. When the sun is to the north, in Maur, the wind is from the west. In the constellation Masirap the sun is at its zenith, and in Tumu, in the south.

The illnesses known to the people are mainly cough, fagafag, headache, gameteka tsimar, and gonorrhea, atsis. This only occurs rarely, and they know no treatment for it. They do not have yaws, tinea and syphilis. They use only botanical medicines, tafei, 'they do not know of incantations for sickness. Treatment is performed by medicine man, tugutavei. Only a few treatments were ascertained:

Terminalia: The bark and blossom, the former scraped off, the latter crushed, are both squeezed out and drunk ogether with another juice (ailrot?)
Eugenia: Used like Terminalia.
Trionfettia: The crushed blossoms, topped with whole leaves warmed in the fire, are laid on wounds. Something called situ, which could not be identified, is also used.
They also have a treatment for injuries caused by the belone.

## 7. Dance, Songs, and Games

On various occasions in the course of time, Europeans have been allowed to witness the dances of the people on Tobi. Krämer received the impression that all dances are of an erotic nature and are linked to their religion. They are always performed in front of the spirit house, and probably individual forms have an apotropaic function: thus, upon the arrival of the foreigners, they performed a welcoming dance without being asked. In connection with the "command performance" requested by Fritz, he noted that first an invocation of the deity was performed in the house by the priest.

The entire population participates in some dances, but a particular order in which the dancers must appear can always be observed. The welcoming dance, clearly performed especially for Mrs. Krämer, was performed only by old women. Standing in a stooped position, they knocked their knees together, gesticulated with their arms and performed movements that looked obscene. This characteristic is common to both the dance movements performed by each gender separately and to those performed by both together, in which the men embrace the women or make thrusting motions toward their private parts with their hands.
According to Hambruch's description of the great dances, first the men line up to the right and the women-a first, only older women participate-to the left in two disorganized groups. The song and the dance both follow a $4 / 4$ rhythm. It is only later that the young girls also join in the dance, while the men drop out. They dance partly alone, and partly with other women. The dances consisted of the following sections

1. Men and women sing together, stopping suddenly with the voices going up.
2. The dancers slowly come out from behind the spirit house and finally return to their starting position with a jerky motion. Embraces and imitations of coital movements take place
3. The mass of women is at some distance from the men. Individual women, including the leader, dance with the men. Finally, both groups approach each other and perform leaps and mutual bows.
4. The women form four circles and dance a belly dance, which is embellished by leaps, bows, and all kinds of coital movements. At the end, they disappear.
5. The men form a row in front, the women in back. While the men perform deep knee bends, the women, without moving from their position, spread their legs. They step in rhythm to the music and sing a low, monotone song. At the end, they clap their hands and twist and turn their upper body to the right and to the left. All the dancers slowly move forward, the women take positions behind each other in groups of three and five and form a circle, turning their backs on the men. Finally, the women face each other in pairs with the men flanking them.
6. Both men and women form a circle and twist and turn, constantly rhythmically lifting their hands, step in place, stand behind each other and suddenly perform the most forceful coital movements, utter ecstatic cries such as va asm va as zorou, bend their bodies and strike their breasts and hips.
7. Walking slowly forward, they form a circle.
8. After the men disappear, the women finally dance alone. For about a quarter of an hour, they perform very calm movements to a monotone song in a soporific tempo; this is followed by a pause, and then they leap from the dance arena with lively movements.

This long dance in many sections is followed by a completely new dance, a circle dance of the young girls and women. All the dancers form a circle and make coital movements, beckoning with their hands. Then they form a double line, and finally form a simple circle again at the end. During these female dances, phallus figures


Fig. 24, 4306". Wooden phallus for worship and dance. Length $291 / 2 \mathrm{~cm}$, carved out of wood are held out to the women by young boys, accompanied by aughing and lust. All the dances seem bacchanalian, wild, and full of joie de vivre. The songs and cries are very animated and loud. In singing the unison of the voices is excellent. The children have their own round dances, which they perform for their pleasure. Besides this, they participate in the dances of the adults: the great dance in front of the spirit house, according to Hellwig, was introduced by a children's round dance.

In spite of their love of music, the musical talent of the Tobi natives seems meager. Holden could not discover an sort of musical instrument among them. On the other hand, Krämer noted that they did make flutes, which they call fasafasarien, of bamboo that had drifted ashore. With much effort, Hambruch succeeded in recording a song performed by these shy people.

## Songs

## Choral song of men or boys.

## Chorgesang von Männern oder Knaben.

PR 72) $d=$ ca 92 , rubato, Intonation sehr schwankend

|  |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |



## Gesang dreier Männer.

(PR 73 a) $d=$ ca 140 , molto rubato


Song of an imbecile, which caused unbounded merriment.
Gesang eines Schwachsinnigen
vgl. S. I44), der unbändige Heiterkeit erregte.
(PR 74) Variante:
电 $9: 0$ etc.
8 Eilers I. ${ }^{p}$
Hellwig learned a children's song which is partly sung, partly spoken. It tells of a ship stranded on Helen Reef and goes as follows: Children's Song (Hellwig).
Sung: Uiti oa se ie iamen atauauoi iemeri
maura zaob mauzil ua torigi
moi iaere kobadat (kouadaud)
Said:

$$
\begin{aligned}
& \text { uitioa se ie gamem atauauoi iemeri } \\
& \text { maura zaob maud ua tarigi }{ }^{1} \\
& \text { maiiaere kounadaut }{ }^{2}
\end{aligned}
$$

all we come back, all of us see nothing but water (ship) sink down near Tarigi take all something (things) to Kobadaut

The free translation into pidgin English is by Merir chief Maian. The remaining songs, preserved partly in only fragmentary form and difficult to translate, were collected and translated by Krämer. They are pure songs or dancing songs.

| bouregoi | Song. |
| :--- | :--- |
| i ranitan | stinking penis and inner |
| Keiuog | thigh of |
| ie kukesiei i bobogoragai | Keiaog |
| i renitanga keiuog ie kukusiei | he bites the people, the people |
| birongeirantangoiai | go through under the arm |
|  | he smells the back |

Vocabulary. The man Keiuog is now dead. He was stupid, crazy, isoson; he also had long armpit hair.

| kukesiei | to break through the dorsal...tendon |
| :--- | :--- |
| birongeiran | to go in a loop |
| vaison $=$ sogi | on the hand |
| ieton | smell |
| ieuböre gataf | There flies a Frigate bird |

## metsaregamog, likeriboubor

There flies a Frigate bird

Matari beri bukos
rigore faisoueia, siuore nom
to M. (place on Tobi)
Sweetheart sees the catch full of admiration
come everyone!
(lies in the lap) I go with you.

## sweetheart

catch
woman
embrace each other in a sitting position
bonon
rigor
songek
chamagei
Song I, gom
Sung by Patakir and Arpatip.
buritexeregar asaam maribugau maniuore farik ngseabakai(k) xate seregar asaam maribugau
smooth sea, we like to $\begin{aligned} & \text { go fishing, island people decorated }\end{aligned}$ fith leaves. Let us go back to our lover $\begin{array}{lllllll}\text { tafar }(i) & \text { xatauaxeai } & \text { siai } & \text { banganga } & \text { marina } & \text { axa }\end{array}$ no one sees me with the woman, I am small like an animal, we sit and mirengar taxa faivireia simevotsamai vatoxak
chat, as if we were the same sex; a girl with stiff breasts sits on my sid chat, as if we were the same sex; a girl with stiff breasts sits on my side movi $\begin{array}{cccccc} & \text { chat, asicata } & \text { rimira } & \text { nga } & \text { sivoro } & \text { bafar }\end{array}$ gamekiretarem he would like to stick her on his head, that's how he loves her; we sit and fix our hair
baisaxa metsar(i) batin uairutoreiefan umone bairetaigafir(e) and sleep leaning on the tree that floated in from Gamakar; and take off our clothes

the woman was on the north side of the island, the man lost her skirt, he lost the knot to tie the wrap
irema refarax iketere repar(a) iketara ratsob ubetabaungarigo batiroriatauasaxar(i) from around her thighs, they tie it, he turns her toward him, they sit and sleep on the mat,
ngasoxo fabungu ngaxaba fitaton baxaro xoigar(i) she says he should return the next day, he says she should go in the forest with him early in the morning beiangixaxotox isi mesaetau exobaiexa exa tsimexa xeitsou basexas fisiuaxaiere she thinks she should be in the house. We want to make torches. They leave still by daylight.
ngaxau axaparoir(a)
tiakarimaxax

The wind blows and settles. He stands across Mebalau, and scratches his head, because he does not want to go. ngetsaumuriair xarixupau fakir Tauari mirengar farekamuriair they get the fish hooks, and go with torches, and see small and large puddles, high and low flying fish siasiari efen semire mateiatei vaiketsa biebor(o)
they forget to return to land; leaning together the lovers go hand in hand. The pair plays in the northern area bunaiegan remonekamakai uien saxatirugarei sikivor reago thick ankles spread, painted with ren, and my lover with a fat fish, my catch, white filet meat
iagagamai irorai iasaueiarimei atsieerei fagaf $i$ tumaki moigapere $i$ soborinifagafi esetsik tastes good in my insides. Coconut wine at night, for dinner the liver.

2 The ship mentioned in this song was stranded, and its more valuable parts are said to have been confiscated by an English Captain Strong from Kobadat (Cooktown?); he is said to have gone to Singapore. He took Tobi natives with him to Helen Reef from time to time. In doing so, they sometimes encountered wrecks.

| aseam $=$ Pal. samanar | desire greatly |
| :---: | :---: |
| sibobugau | put the boat in the water, ride out |
| iangiar | to put leaf decorations on one's head |
| eapakar | break (e.g. leaves) |
| songek $=$ chamagei | sweetheart |
| riai $=$ faivil | pendulous breast |
| mirengar | little place |
| tachafaivil | = female susututu |
| iesumevotsumar | to have something on one's head |
| fefe | coitus |
| vatochi | to have something on one's head, movoi |
| sivoro | to sleep |
| bafar | leaning against a tree |
| ma | washed ashore |
| gamakar | sm. tree Tourefat |
| uoriar | female bath mat |
| iep, charimar | dress mat, dress mat with ren |
| rut | fence (from house to house, so that the woman is safe) |
| bais(i) | to loosen the knot, chanimar, on the female mat = take her dress off |
| atam | crossbeam on the door |
| bugobu | knot |
| iefan | north |
| rigolaf | loop |
| sivar, sivöro | to clasp with arm and leg |
| rigou | calico |
| sesechi | to loosen |
| tsebarefir $=$ tsapitsepar $=$ faivil | her upper thigh |
| ateri | to pull something through, here her leg |
| bangiri atsevor | to entwine, sleep |
| tsob | sleeping mat |
| uarasu | tomorrow |
| tiror, titinap | two people talk together |
| uosurog, uasichari | a couple goes together |
| gofabungu | another day |
| fitatur | both |
| nigar | daylight |
| gachotog | to crawl, go hunched over |
| tou, Meetatau | the passage of a work house |
| icheach, baiegeeche | to rub, scratch (the scalp) |
| sibachasi | to go out |
| fis | torch |
| ierei | further |
| ngachau | to see |
| röi, apar | pool of water |
| tiak | to rise and |
| tsaum, nesau | sweetheart |
| riair | couple |
| Tauor | piece of land where women wash themselves |


| asiasia | piece of land |
| :--- | :--- |
| imir | to stay |
| marikech | to forget |
| bon | to go around and come back to the starting point |
| iefen | northern part |
| ielor | fat thighs |
| iebugan | ren |
| remor aiar | fish fat |
| sachat | fingers to count with |
| gugagat, seniget | two fingers, three fingers |
| gelsik | my fish catch |
| gorei? | Tobi |
| iegon | fish |
| oiki | soft skin |
| iegog | good-tasting |
| vor | the filet pieces |
| gamai | fish |
| fegif | to cut toddy in the evening |
| tumoki | to lick one's plate |
| apari | to wipe oneself off (e.g. after bath) |
| esetsik | liver |
| ietir | gall bladder |
|  |  |
|  |  |

## Song

manenge teron meuor machaker mangi e takingakin memetari choubots ueieuoriechom meroue machuou faifr e foetaki uchacha ramarama ieuochoiakutior chetemarimouai uechache maroiaron ranikotor e vats vatengiemuker bochora ebets metarimongotsongots chonoitsaniouome perimotouatur anirieriar megauetsorimem.

| Welcome-dance bon $=$ dance |  | Vocabulary. |  |
| :---: | :---: | :---: | :---: |
| goupato firakara | come here women | maio | halves of village |
| finimeio hakara | from both sides | matei | men |
| goupalo firakara |  | iep | dress mat, female |
| sibo baia | mats | sökö = sikin | stamp |
| libakafe ieieitagat | dress yourselves well | tsiketsik | hole in ear |
| uaiethek | Men, put on a good matsi! | toronga | ear adornment |
| sikier ekupei | stamp the ground |  |  |
| barier e fataiis | Men, go onto this path! |  |  |
| mouats gokik, besitsi kemam | ear adornment |  |  |
| sokifirariefan | woman from the north! | Vocabulary. |  |
| tenetsimobog | 2 heads. $\uparrow$ and $\delta^{\circ}$ bow. | Uaniog | name of a taro |
|  |  | iag | there stands a |
| Dancing song. |  | marue | someone |
| isabukok | Go home! | fafaket | run |
| marue Uaniochoue | someone goes onto the U.-hill | kus | louse |
| ueiefafahet e kus | there the lice delouse themselves | sabi | make a hole |
| tebaiesarengen | they have no holes in their ears yet | taibi $=$ tibaie | not hole |
| buna | (they are still too young) | bunom | your clitoris |

A few children's songs are included at the end, sung during games of tag and circle dances. Such games are called gokom, and they enjoy playing them by moonlight. The game gatarit is a ring-around-the-rosy. They join hands, singing in $4 / 4$ time and jumping once for the first half-measure, then resting on one foot for the second half. Text;

| ititik otsag | hanging sticks |
| :--- | :--- |
| fekire mage ketsau | the labia on both sides |
| irene ma pari firer | the inside (member) of a girl |
| taretsir ramesukubun | he breaks off the young coconut |
| terengek ia retog | the dam breaks.... |
|  | Vocabulary. |
| itititiok, itititk | hang |
| itsatsangak | to lie horizontally |
| eaunaur | to swing |
| fekir, -begal? | $?$ |
| parifirer | young girls |
| iegom | knee |
| iebong | to row with one's hands |
| tagaur | drawer |
| taretsirog | to tear off a piece |
| sukubun | very small coconut |
| bun | clitoris |
| dor iaratog | dam (of the penis) |
| teringek | to break |
| merine mapiri firer | groin |
| taretsir ramesukubur terengekiaratog | glans |

Another version of the song is as follow
Atitiko tsoag fekirem aggetsau merene ma peri firor firer taretsiru mesuku bur terenge kiaroto.
Another playing song of similar type called totepitag is as follows:

| sopisitsor..e uamam <br> gotsigenate berigau <br> fari uagare magam eia | a few friends..to me <br> girls look for their posterior loincloth <br> now under the beautiful moon... |
| :--- | :--- |
| sopis | Vocabulary: |
| tsoruat | some |
| berigauvorigar | our friends |
| uogeri magam | leaf decorations on one's bottom |
| tsigena | beautiful moonlight |
| far | to look for |
| eia | under |

In another version:
otepitog sopisistor euomam gestikena teberikau tariuagare megemeia.
Other songs of similar type begin as follows:
isabukok marueuan iegoue veietataketekith sebaiesarengan punom
bouregai irenitonga keinag iekukesiei birongoronotengoai.
boregetat mestaregmog likriboubor matribare bukor ngeigobogonikuakie gozabutoriai rigoretaiseneia nereuon

For the game called roitsim, they sit in a line and fall alternately toward the outside or the inside. For the game called nunut, they place both hands on their neighbor's shoulders and form a circle, singing:
berengeri nge e babach
They work so hard there's a slapping noise,
ie mei ogere uet imorai ie
the seed comes, they sit facing each other...

The obscene text is clear, obviously describing intercourse.

> Vocabulary:

| berengari | to ride a woman |
| :--- | :--- |
| babach | it makes a slapping noise |
| uat | seed |
| mei | from |
| imoai | front when seated |
| iog | rapid |

For ringasei, they form a long, figure-eight-shaped line; the first couple clasps hands and the others squeeze underneath, singing saugaro! (Pull!) and roitsimou! (Duck your head!).

To play maibitog, some of the children lie on the beach, forming a long line. Another child comes and pulls the arm of one of them, crying ganero, ganero, ganero!, that is, Get up!, and all the others lying down jump up and run after it. Maibitog is supposed to mean: they don't come yet, although they are called.

## 8. Art

is not a necessity for the Tobi natives. The professional production of wooden figures for passing European ship is all the more surprising. The figures shown are such sculptures. Their similarity to the works from Yap (Müller Yap I, Plate $52 / 2$ ) is unmistakable. One should not forget, however, that already in Holden's time they possessed cultic, primitive wood sculptures to whom the priests made offerings. The nature of the sculptural works painted by Mrs. Krämer in the spirit house cannot be determined. Their cultic function cannot be questioned, although A. Krämer did hear that they were not sacred to Rugieren. Presumably his question was misunderstood, or they belonged to the national deity Iaris, about whose nature more has been said above. -The profane sculptures for trade, though primitive, are nevertheless quite artful three-dimensional carvings. The head, including nose, ears, and teeth, is carved onto the torso. The arms and hands are carved out of one piece and are fastened to the body with a nail or peg. The feet are hollowed out and take up the pegs of the legs. Although the figures are quite naturalistic, they, like the related figures from Yap, lack sexual organs. No explanation for this exists. However the Yap figures are clothed with a loincloth or leaves, which perhaps should also have been done with the Tobi figures for the sake of completeness. Whatever the case, this fact presents a strong contrast in idea and execution with the carvings of the Songosor natives, who strongly emphasize the sexual parts. -The stance of the Tob figures is strictly frontal; the feet stand side by side with their soles flat on the ground. The arms are slightly bent on the figure in the Berlin collection, they came out a little too short. The faces show varying features, especially as regards the nose. Eyes and teeth are embellished with a thick white lime overlay and black paint. The one figure in Berlin is furnished with a wig-like hairpiece.

## 9. Language

The language of Tobi has elicited the strangest assessments over the course of time. Captain Douglas receives credit for noting the first word, tellingly that for iron axe-heads or iron. More detailed knowledge became available only after Holden's return. The most useful bit of information is the observation that the Palau natives had as
much difficulty understanding the language as the American sailors. But later he claims to have discovered two or hree words similar in both languages. Senfft thought the language of Tobi seemed similar to those spoken on the eastern and southern islands of the region. His Malayan police sub-officer, on the other hand, claimed it was like that of Gilolo. Fritz determined that the language was no longer the same as that on Songosor and Merir, and his Saipan natives could not make themselves understood. From all of this it can be concluded that a dialect is spoken on Tobi which differs not insignificantly from that of the neighboring islands and makes it difficult for lay people, whether white or native, to recognize the relatedness of the words.

There are already two recorded attempts to analyze the language of Tobi. Both were undertaken following the publication of Holden's book. John Pickering, president of the American Society of Arts and Sciences in Boston, met Holden when the latter was in dire financial straits and in extremely poor health. He says, "I advised him to publish his experiences in order to obtain some money. Someone helped him to write the small volume, and I saw it through and added a small vocabulary list of the native language, which I compiled as best I could from the words that Holden himself provided. The character of this seaman and the separate interview I had with one of his companions in suffering convinced me that his testimony is completely trustworthy..."

With regard to the words, Holden remarked to Pickering "that he had spared no effort, in spite of the obstacles associated with his work, to make it useful for clarifying the relationship of these natives to their neighbors, since scholars today agree that language is the best means of recognizing the interrelationship of peoples..."

Pickering considers the language of Tobi as a new dialect, previously unknown in the family of Polynesian tongues. "It was completely incomprehensible to the chiefs of Palau....Judging from the names of numbers and few other words, this dialect shows a relationship with those of the islands of the Caroline archipelago, which are only a short distance from Tobi.

In selecting the words, he mainly used Keate's index (Account of the Pelew Islands), and also added a few from the "Vocabulary of the Empress Catherine," marking all the words contained in the latter with an asterisk (*),

He also adds that his list does not contain words directly provided by the natives, and that one should take them as approximations, rather than precise examples of this language. He did believe, however, that they were just as accurate as the words of related dialects gleaned from similar sources. "Two years' sojourn on the island of Tobi horoughly engraved the language of the natives in the memory of the unfortunate captives." Horatio Hale, the second researcher of the language, was forced to acknowledge that the state of knowledge was not so good. He met with Holden two years after his return, and in several conversations received from him some information about points that had not been included in his published narrative. Furthermore, he enriched the vocabulary by the addition of a number of words "that he was able to recall from time to time." Hale had very good intentions: armed with a list of words and a series of sentences that were meant to illuminate the grammatical structure of the Tobi language, he attempted to interrogate his source. "It soon became clear, however, that this was expecting too much. The situation into which the captured seamen had come (on Tobi) was such that any motivation to obtain better knowledge of their inhuman masters' language than was necessary for communication was lost. And even if the desire had not been absent, the opportunity was lacking, since they were constantly plagued with heavy abor....They learned only the most common words and strung them together to be understood without any regard to the linguistic niceties of the language. Thus, they had no knowledge of the affixed personal pronouns, though in light of the fact that all the expressions for relations (vatimam $=$ father; miseram $=$ mother; biziam $=$ brother miangam $=$ sister ) and the names of body parts ( metsemam $=$ head; petsem $=$ foot; kusum $=$ beard; tsim $=$ hair), as indicated by Holden, end in $m$, which signifies the pronoun "your" in the other dialects of the region, we car hardly doubt that this class of affixes is indeed present in the Tobi dialect. But despite these flaws, the vocabulary
is valuable, as it shows without a doubt that this small community is a branch of that ethnographic family tha extends from Yap to the Gilbert Islands of the Kingsmill group. It is not impossible that through this, the subgroup of this family to which the Tobi natives belong will be discovered at a later date and its origin determined."

Word list (compiled by Pickering and Hale according to Holden's information)
Word Index after Pickering and Hale.

## Objects.

 ship paddlehut
fishing net
fishho
rope
cord
iron rin
copper, brass
men's belt
women's belt
fishing lin
food
knif
box
cloth
axe
remain
drink
sleep
${ }_{\text {sit }}$
${ }^{\text {speak }}$
tattoo
kill
come back
ons
d
dig
fish
go away
laugh
lie, res
see
prah-oo P., prao H.
waw'ee P ., иoue H .
vettel P., H.
chibbo P tsibo
chibbo P., tsibo H
Kah'-oo eekah P., kauorika, kau uor ika H
tah-ree P., tari H
kreel P., krel H.
pahng-ul, pishoo P., panal, pitsu H
cheepah P., tsipa H .
mullebah'dee P., molabadi H .
tappah P ., vetivet H .
vetiveti
$i a o \mathrm{H}$.
akram H .
uose H .
tovetiv H .
ligo H .
tapoi H
Verbs.
mamatidi H .
mo'rahbeeto taitu; bitu $=$ come H
lim'mah limi H .
mus'see, mummah mase H .
matitu H .
muk'kah maka H .
tee'tree titri, titinap H .
verree-verree
man'tee mate H .
batsi, bitu H .
titinap H .
gora H
kokom H .
katsap H .
vizivits a ika H
mora bitu H .
$m i m i \mathrm{H}$
retu H .
magi H

| go under, sit down | moribo H . |
| :---: | :---: |
| carry | uahogi; uohogi |
| wash | uatuti H . |
| wait | tapai H . |
| weave | rau H . |
| throw | katsivara H . |
| weep | $\tan \mathrm{H}$. |
|  | Adjectives. |
| large | yennup P., ienap H . |
| small | pah tehik P . |
| small as a grain of sand | pah tehik gitehi-gee; patsik P., H. |
| good | yissung P., isan, mapia H . |
| bad | tuhmah P., tama H . |
| white | butch'ee butch P.batsibuts H. |
| black | way zer'ris P., uaizeris, uaizaris H . |
| yellow | arrang P., aran H . |
| red | ienana H . |
| strong | yuhkayl P., iakaila H . |
| short | yuhmoat, yahmoa P., iamot H . |
| cold | makkrazm P. makrazm H. |
| warm | uabats H . |
| ill | makkah'kes P., makakes H. |
| I am not ill | nang tay makah'kes P. |
| dead | pooh'ruk |
| old (over 20 years) | mah-zoo-ee P., mazui H. |
| very old | nah-zoo-ee ahva butchee-butch P. ${ }^{1}$ |
| dead | purak H ., mazui a ve H . |
| dirty | $a b a \mathrm{H}$. |
| far | iataü H . |
| very far | iataï ve H . |
| hungry | $m a \mathrm{H}$. |
| nearby | iapateo H . |
| pregnant | iisei P . |
| absent | iatamen $Y$ |
|  | Adverbs, pronouns etc. |
| here | atid'dee, ettid'dee P., atia H. |
| there | $a-t u r-n a h$ P., etanai H . |
| close by | yah peteh 'to, petetto P . |
| tomorrow | waro'rah-zoo'rah P ., uarazura H . |
| yesterday | rollo P. ralo H. |
| in the evenings | rollo neebo P., nibo H . |
| at night $=$ night | nee bo' P . |
| yes | eelah P., ila H. |
| no | taio, tah-oo P., ta and u P.; to; tai H. |
| away | mora H . |
| and | $m a \mathrm{H}$. |

gradually
far
in
very
that one
why
I
you (singular and plural)
many, several
my
what is your name
what is this
tapai vai
iataï H.
uor H .
kloo, ve H .
мепа H .
$b a \mathrm{H}$.
nang P.
gur P., ga H .
pee-pee P .
kahrah'pah ah nang P.
verameta ga?
metamen a mena?
Hale also remarks: "sa or $z a$ is a very common verbal particle which is used in all tenses. For example, "gaza iatamen" = you were away; "nan sa bitu" = I will come; "ga a nan sa maka" = you and I eat; "ga za miagi pipi prao?" = do you see many canoes? But such sentences, as has already been mentioned, can hardly be considered reliable to show the true idiom of the language."

| Numbers. |  |
| :---: | :---: |
| Coconuts | Fish |
| $s u \mathrm{H}$. | simal H . |
| gluo H . | guimal H . |
| saru H . | srimal H . |
| vau H . | vamal H . |
| limo H . | nimal H . |
| uaru H . | uoremal H . |
| viiu H . | viiiemal H . |
| uariu H . | uaremal H . |
| $t i u \mathrm{H}$. | tiuemal H . |
| sek | $s e k$ H. |
| sekama su |  |
| sekama gluo |  |
| seka ma saru |  |
| seka ma vau etc. |  |
| 20 guek H. (guuek P.) |  |
| 30 sarik H. |  |
| 40 varik H . |  |
| 50 limek H . |  |
| 60 uorik H. |  |
| 70 viiik H . |  |
| 80 uarik |  |
| 90 tiuik H. (tiuuik P.) |  |
| 100 saba n, saban H . |  |

Pickering's completely illogical division of numbers is confusing. Ma means and. For example, the number 11 should have been written seke ma su. Furthermore, Hale already noted the difference in counting certain things like coconuts and fish: "There are three classes of names for numbers, the first of a general nature, the second used for counting coconuts, and the third only for counting fish..."



| bring | gasitog E.K. | drink | boir, borür E.K. |
| :---: | :---: | :---: | :---: |
| think | gamangimen E.K. | pick (teeth) | tibiti mabag E.K. |
| eat | manga, mongale E.K. | push away | tingaro |
| fall | iepungetu | tattoo | farifer |
| braid | fasifes | kill | lii, ieli |
| fly | eeiar | grieve | iefogog |
| rejoice | iemogotipei | drink | iorur |
| fear | metak | turn around | gobovehitog |
| yawn | iemor | weep over, lament | teten |
| give me | gariei | show | ganagaro (garo = give) |
| give him | gari | show me so that I can see it | ganagarog bei bagaba gamo |
| give birth | bukoiroior | pull | iavisi |
| go (I go) | irouro feveta E.K. |  |  |
| hit | uouti | Various ver | forms and expressions |
| hear | gasiserin |  | ding to Hellwig. |
| be hungry | isun, imag | OK, all right | gamog |
| sneeze | misi, iemusi | I don't understand |  |
| cough | fagafag | I don't hear | $i$ togonogon |
| defecate | iebag | I'm getting wet | iautour |
| chew | iemangau, iagusu | finished, done | maurigad, iratsag A.K. |
| come | patog | I'm going | girarog |
| crawl (of children) | gagoroch E.K. | Exclamation upon pointing out a mosquito bite | iacha medag |
| laugh | memer | it itches (a bite) | те а раи |
| lay | uorotu | he is going out of the rain | i sanoroch |
| lay (it) down! | itetiuh | it is falling | ie puetug |
| make | machapitek |  |  |
| mumble | machabachaparog | acco | ng to A. Kràmer. |
| sew | ietiet | I go | begirauro, i rourog |
| urinate | gareiroi | you go | goborauro |
| chat | ugochongogon | he goes | ibaro |
| whistle | ugug | we go | = keirourog |
| chirp | iakamangungu (ngungupa $=$ cricket) | I go with you | goba begiei |
| speak | ditir | I eat | nan i beu manga |
| speak loudly | kareparemom | you eat | ker beu manga |
| tell me | gobagaiei | I want to eat | igamogog mei bomanga |
| smoke | agugu | I don't want to eat | tai tipei bomanga |
| clean | irevi $\mathrm{He} .$, pirau, puraro $=$ wipe off table with hand, He. | I do want to eat | igamogog mei ibaur |
| smell | ianguog | but he goes yesterday | begiraro iberai tonai |
| row | fatir | I go | ivoifetar ivoitsik ipevabuirok |
| see | meiaki; mamase E.K. | bring me | kasitog |
| sit, be seated | mot | show me so that I can see it | = ganagarog bei bagaba gamo |
| sing | maugar | what's your name | meta itom? |
| sleep | masul; masek, masuk E.K. | what's that called | meta itar? |
| drag | daidei | I want | igamogog |
| be silent | totitir E.K. | I don't want | isongakir |
| snore | uengesipag | you want | gogam mogog |
| stand | sutag | I want to see | i bomeiaka |
| push, bump | tukuk | come here! | taito |

no fear!
where do you come from
where are you going
wait!
what's the way to $X$ ?
tell me where?
give me
later I will give you a present (the prize)
do that!
quiet!
finished
I'm going with you
you're going with me
what's your name?
what's that called?
I want
't want
bring it here
come here
go away!
where do you come from?
where are you going?
wait!
I'm coming back tomorrow
I'll see
do that!
I'm coming
in front of my house
tell me
where way to
I'm going
we're going
be seated!
get up!
throw away!
throw
yes
no
no
not
not
keiraro, tsike maitona
imarat $=$ brave; tai metag (metag $=$ fear
go pito maia
iago berairen
uetiei
iaierer (mesiberog $=$ we go) X .
gobagaiei ia
gariei mo
uetiei i bagararig ötai ferigeri....
kobo faichi
According to E. Krämer.
tokore poremam
iratsag iakat
ibebokuk
gobabagiai
meda itom
meda itar
igamogok
isongaker
gasito
taito
keiraro
kopito mai ia
ia go berairen
ue tiai
uara theira i sapito
ibomaiaki
kobofaich
ipito
nara imei
gobachaiai
iaiarär
irourog
keilorog
gariai
matotu
(sitek) basïtach
atzauaro
ngoi
naoer
tai
tai

## II. Economy and Material Culture

1. Economic life

General observations. In the past, the island of Tobi proved large and fertile enough to provide adequate sustenance, keeping the people strong and healthy, for a population of about 1,000 in normal circumstances. This required a population that was very modest in its needs, the most intensive agriculture possible, and no failed
crops. In practice, however, hurricanes or floods are unavoidable from time to time in the South Sea, and the food supply on the island is so scanty that such natural events cause the gravest famine, with severe consequences. If one takes the food situation in times of deprivation as a measure, the latest reported population count of 180 mus be considered sufficient, and the former population size of almost a thousand must be seen as much too high. The German government was quite justified in its repeated efforts to implement migration to more favorable areas.

Agriculture. The main sources of food for the inhabitants are the cultivation of coconut palms and taro, and the catching of fish. Pigs and chickens, which they know, play an altogether subordinate role. They eat the eggs Even the fish catches uncertain: there are times when there are no fish at all, or they are very scant. Turtles, too, are a rarity. If flying foxes are stranded there, they are cooked and eaten. Storm floods and hurricanes are constantly threatening the plantations. Though the palms are not always broken, they lose their buds and fruit; the cultivated fields are flooded with seawater, and the fertile soil is covered over with ocean sand or carried away by floods, which causes poor harvests for years and requires endless labor to restore to the previous state. This is the explanation for the meager nature of the taro plants found on Tobi

In order to have some protection against the floods, the natives had Holden and his companions build stone walls and carry the sand off the cultivated fields. In other spots-as is the custom even today-they had to add fertile soil back to the land. For this purpose, they use sieves made of wood in the style of the ren sieves, which are sealed with leaves. They also know how to fertilize their fields (uar, which means leaf), using rotting plants, leaves, grass, hibiscus, ficus, pipturus, cerbera and thespesia. They are industrious about weeding, usater meremer, and they are constantly mounding up fresh soil, gamoiere. They have a good understanding of the usefulness of letting the fields lie fallow for a time, and make a distinction between cultivated land, upeig, and fallow fields, eratsapa In many spots, tended wells have been located near the plantings.
The fertile land is entirely divided up. The large area in the interior of the island planted with taro is subdivide into countless small parcels of land, each with its own name, which may be shared among several families due to he laws of inheritance. While the men help in preparing the fields, the women alone, who are always the owner of the fields and can leave them to their daughters, are responsible for the planting and harvest

To work the fields, they use simple digging sticks of coconut palm wood, doudou. They cultivate the largeleaved taro, bura, and the small-leaved taro, uot, and distinguish about 14 species in all. Holden's korei, a plan similar to the yam (Dioscorea), probably also refers to taro. It seems that it is the main source of food in norma circumstances, eclipsing even the coconut palm. Besides taro, they cultivate sweet potatoes (Ipomoea batatas) yams (Dioscorea) and Manihot utilissima
They usually plant bananas between the houses and at the edges of the taro fields, when necessary protecting then from the wind with large mats set up in a circle.
The coconut palms, which are generally abundant, belong to the men. Hambruch estimated their total number about 48,000 ; of these, about 16,000 or one-third bore fruit, which they came nowhere near using up. ${ }^{2}$ Each family owns 30 palms, on average. Since 142 families were counted, there would be about 4260 palms in use, according to Hambruch. Krämer reports the number per family as varying between 1 and 100 . When the German official came to Tobi for the first time in 1901, the palms grew densely and were healthy. In 1906, as a consequence of
The confusion in the use of terms for these cultivated plants is great, and it is therefore never possible to say with certainty which plant in to a plant, but to the starch from several plants, i.e. Manihot, and is called arrowroot by others. The yam (French igname) is botanically 1 1 Dioscorea batatas or another representative of this family belonging to the lily plants. Christian (The Caroline Islands, p. 333), however, uses the word yam to refer to Arum costatum, presumably taro or another edible representative of the Arum plants. Hambruch thought half of the palms were not used, a percentage which seems very high considering the very large population at that time.
the typhoon of 1904, they bore meager fruit, but scale insects had not yet been imported. In 1910, Buse noticed a slight infestation of this pest. -The coconut palm, its role as provider of food and building material aside, has secial economic importance for the natives, since the people craft lines which are highly valued everywhere from the fiber, these are almost their only trading item, and certainly the most valuable.

Trade. In spite of their modest needs and their tenacious clinging to tradition, the desire for European goods is very strong among the people. They prefer iron and tobacco above all. Even in times of deprivation, they withhold food from themselves in order to trade it with passing ships. Day and night they keep watch for them, and the unbelievable persistence with which they pursue the ships is telling. They offer rope in all sizes and of excellen craftsmanship as well as hats of raffia and tortoiseshell, fruits and wooden carvings.
Diet. When they have enough taro, they consume only modest amounts of coconut. In times of want, when the root vegetables are scarcer than coconuts, they are forced to use them in greater amounts, but it is at just these times that the abundance of coconuts, too, tends to decrease. They do not put great stock in it as food and claim that overindulgence leads to stomach pains. They hold breadfruit in much higher esteem. They like to eat fish and enjoy a lot of it, when they can get it. There are only three meals a day, and all family members partake of them together.

Cooking is done by the women. Normally, each family has its own cooking house. When Senfft reports that their fireplaces are in the huts, he is presumably referring to the cooking houses. Those fireplaces also found frequently in the dwellings are hardly used for cooking. A small cooking house consists merely of four posts supporting the roof, which does not reach as far down toward the ground as that of other houses. It contains a stove fashioned from small coral stones which are heated in a fire made from wood or coconut waste. The food is cooked or baked using these hot stones. Coconut shells serve as cooking vessels.

Fire is created through rubbing, but they hardly ever need to perform this task, since they maintain the fire and in an emergency ask their neighbor for help. Fire is always to be had in one place or another. For this reason, the young people are no longer familiar with the skill of fire-rubbing. The taro is roughly cleaned, i.e. the roots are cut off, while still in the field. It is peeled in the cooking house. Today, small knives are used exclusively. Mrs. Krämer did not see shell blades in use anywhere. If the roots are very small or still young, a piece of the stem is left on. The waste matter, the peel, has no special use except perhaps as fertilizer around the trunks of the palms.

The peeled and chopped taro is pressed into coconut shells, a little water is poured over, a taro leaf is placed on top, and a second coconut shell is placed over it all as a lid. These half- or three-quarter shells are called pög, They rarely mash the taro. To serve it, they use a turtle-shell scoop, fetifet eri uor. They drink salt water only ou of necessity at sea. In cooking, they only use it when preparing breadfruit preserves. They consume breadfruit primarily at feasts, beri geri mag, in order to satiate themselves. They also make palm wine and have specia methods of protecting it against theft.

Terms for agriculture and plants in an economic context after E. Krämer.

| taro field, enclosed field | medzoch |
| :--- | :--- |
| plantation for fertilizer | katzefas |
| fertilizing plants in general | pipieri för, atoap, uari |
| grass as fertilizer | neti |
| well | dare He. |

It is a telling winness to the popularity of the ropes from Tobit that during the visit of the expedition the Palau natives who came on lanc secretly traded for as many as they could get, even though the leader had strictly forbidden this and they had to do it in secret.

| drinking water | tianürü |
| :---: | :---: |
| stone boundary | vaserïboar |
| salt water | ded |
| dig out fields | kikik A. Kr. |
| wooden mesh sieve to transport sand | airibek |
| taro | uod |
| taro leaves | bakoru uod |
| pura leaves | bakoru pura |
| whole taro plant | mepa |
| small taro with stem | $b a$ |
| taro stem | me |
| types | uodagengagan, bamogu, arieres, uodenen, terimegan |
| leaf taro | ӧпииоd |
| till a field | atöapa, atzap |
| pull out plants | usu; usous |
| taro root | uoagag, uageg |
| taro seedling | bagora uod |
| seedling | bag |
| plant a taro seedling | bovotogü |
| cut off a seedling | bagag |
| scrape roots | iemögo, ioso |
| peel taro | ietete uod |
| peelings | giniu uodapisitete; gumuoda pisitete |
| taro peel | ietete uod |
| coconut bowls for taro | poig |
| squeeze taro into the bowl | tignaro |
| filled bowl | poigeriuetoch |
| prepare a taro leaf | meun a bakure |
| wrap taro | mapoigera notogo |
| cook | bomuri sagam or sagani; bogeri uod |
| coconut palm | uan |
| coconut, drinking nut | buik or lük |
| old nut | tuou |
| stick for nut | iauoir |
| shell | tagach |
| I rip off the husk | beia i otem |
| make a hole for drinking | buiengi |
| old nut smashed in the middle | gepie |
| toddy | atsi |
| raw nut | totu muri |
| cooked nut | тогuиa |
| seed juice | iongögü |
| banana | uits |
| breadfruit | mai, bekerieu |
| dish | mangöи |
| eat | mangan |
| not cooked through | toto muri |
| cooked through | іеиа |

stone boundar
salt water
dig out fields
taro
pura leaves
whole taro plant small taro with stem
taro stem
leaf tar
till a field
pull out plants
taro root
seedling
plant a taro seedling
scrape roots
peel taro
pers
coconut bowls for taro
squeeze taro into the bowl
flled bow
wrap taro
cook
coconut, drinking nut
old nut
shell
I rip off the husk
make a hole for drinking
old nut smashed in the middle
toddy
cooked nut
seed juice
banana
dish
not cooked through
cooked through
ianürü
ded
uod
bakoru pura
тера
me
odagengagan, bamogu, arieres, uodenen, terimegan
пиио
atöapa, atzap
oagag, uage
bag
bovotogi
iemögo, ioso
iniu uodapisitete; gumuoda pisitete
ignaro
,

bomuri sagam or sagani; bogeri uod
an
tuou
tagach
eia i otem
buiengi
atsi
tu muri
пั̈̈gй
uits
mangöи
toto muri
eис


Above: Dancers on Tobi
Below: watching local men dance on Tobi. Glass plate scans, Hamburg Museum.



Above and below: weaving wraps and leaves. Glass plate scans, Hamburg Museum.




The interpreter Pita (right) with an unidentified older man. Glass plate scan, Hamburg Museum.


Local women wearing woven wraps. Glass plate scan, Hamburg Museum.

| it has a bite | iakat |
| :--- | :--- |
| knife for peeling | dzeren, zer |
| knife piece | buaie |
| cook house | um |
| oven | um |
| stone | uaas |
| small oven stone | masumach |
| hot | iebuedz |
| leaves for pressing | davegi |
| sugar | ienag |
| driftwood | menima A.K. |

2. Clothing, Tattoos, Jewelry and Weapons

Notwithstanding trade contacts with Europeans, the clothing has not changed significantly since the time of Holden. Senfft did see many European articles of clothing in the natives' possession, but these were individual purchases, and one cannot say that they have permanently taken on foreign dress. Holden says that all the children no completely naked. In 1909, the boys, after they had grown out of earliest childhood, were all wearing narrow hip belts with the ends hanging down in front or wrapped around the penis in the style of the men's belts.

The men's clothing consists of a narrow loincloth, matsi or madzi. For maro they also have the name vitevitike. According to E. Krämer, they use this term for cloth when it is being worn, and apparently also for maro made from cotton. Holden says that their only article of clothing was a belt made of tree bark, so that it can be assumed hat they knew how to make fabric out of bark, a technology of which there is no trace today. The woven belt are crafted only by the women. The material is always banana fiber; the black pattern is created by the addition of hibiscus threads dyed black. On average, they measure $175 \times 15 \mathrm{~cm}$. The technique and style of the patterns is the same as on Songosor. They make very simple sashes with more or less wide decorated ends. The patterns on eac piece are the same at both ends. In comparison with the Songosor belts, the variety of patterns is infinite. Although only a few design elements are used (see Plate 3), they are constantly combined in new ways. The warp thread are left as a fringe. The belts are worn by folding them once lengthwise and wrapping them around the body so that one end is pulled through in front, the other behind; the penis is concealed in the process.

Grown girls wear a body cord, nigek, made of twisted or braided plant fibers or pandanus leaf. It can also be made of hair, in which case it is called enidzim. The cord is wrapped around the hips once or several times, and a bundle of leaves or twigs is fastened to it in front of the pubic area. In back, the buttocks are covered by a fairly long tail made of about 17 split coconut pinnae (umipani $=$ leaf, bagasai uarigat $=$ strip, E.K.) lined up on a cord. It usually hangs down as far as the knees and often to the calves. According to A. Krämer, the pubic bundle is called vorikari nemoats, according to E. Krämer uorigari me monata; the rear tail according to A. Krämer tagaki, according to E. Krämer tochuba iemoch

This dress also seems to be worn after marriage. When a pregnancy commences, the woman wears the pregnancy belt, tagari faifil, a pandanus leaf strip, unebego, about 20 cm wide. After childbirth she puts on a strangely shaped braided pandanus mat, distinguished from ordinary dress mats by a small additional braided rectangle The typical female garb is the short wrap skirt, vorior or iep, made of a finely braided pandanus mat about 40 $x 100 \mathrm{~cm}$ large. It is already worn over the pregnancy belt and corresponds exactly to the Songosor skirt. In thi context, Holden states that the girls begin to wear such a mat skirt upon reaching maturity. Married women who have already given birth wear an additional fiber skirt, gabariteh, over the wrap skirt; it is made from split coconu eaf pinnae that are fastened onto a cord. There also seem to be braided mats on which a fringe has been attached or left protruding which also signal motherhood.

Fig. 29. Modern brimmed hat with repaired base of pandanus leaf. Width of brim 9 cm , height of headpiece 10 cm . The headpiece gets narrower toward the top. The patch consists of eight pandanus leaves, folded once and overlapped. It is sewn on with black hibiscus yarn




Fig. 25, $4297^{\text {II }}$. Rear apron for young girls, tagaki. Coconut leaf pinnae strung on a cord. Length 75 cm , circumference
85 cm . - Fig. 26 . Plaiting sample of a women's dress mat. Length 44 cm , including the strips not yet worked in 150 cm Material: pandanus leaf, width 50 cm


Fig. 27. Pregnancy mat after E. Krämer.


Fig. 28, $4621^{\text {II }}$. Old hat of tortoiseshell, bochomen. Diameter about 40 cm , height $15-16 \mathrm{~cm}$. The lower edge is reinforced by a sewn-on reed hoop. The tortoiseshell plates are sewn to each other and to the hoop with raffia and yarn. The natural seams of the tortoiseshell are re-sewn with yarn. -A wide band of pandanus leaf strips, stitches of coconut twine. Diameter of the headpiece 16 cm , height $81 / 2 \mathrm{~cm}$. No. $4622^{\text {II }}$ hat of the same material.

In Holden's time the Tobi natives already had hats, which they called chappo or sombrero, and in recent times they are among the items offered to ships for barter. The expedition found two types of hats in their possession brimmed hats braided of fine pandanus leaf strips worked after the European model, and the native conical hat of tortoiseshell and pandanus leaves. The latter are distinguished from those of the neighboring islands by the wide headband attached to the underside, and by the unusual and valuable material, since turtles are not caught with any frequency. The hat no. 4621 in fig. 28 has a headband $81 / 2 \mathrm{~cm}$ wide made out of pandanus leaves, which overlaps at the edges like a stiff European men's collar. The edges of the leaves are folded over once, so that the head is made of two layers which are sewn together with basting stitches of coconut twine. The edge of the hat cone is reinforced with a circle of reed. The tortoiseshell is pierced, and the individual plates are fastened to each other and to the reed with raffia-thread seams. Where necessary, the natural seams of the tortoiseshell have also been resewn with sturdy thread. They also make hats of the same shape out of pandanus leaves alone. They are used as fishermen's hats, decorated with fishhooks and tied under the chin with a cord.

The hats made according to the European model are sewn from woven pandanus strips. Presumably it is hats of this type which, according to Hellwig, they learned to make from Manila natives, perhaps on Yap or Palau.

They have not gone very far toward mastering this craft; if the form is not as desired, they pull them together with coconut cord until the hat fits the wearer. Fig. 29 shows the technique of the strips and an old hat notable for the well-crafted repair work at the crown. Originally, this surface too was made from strips, and when they became faulty, a six-sided patch of pandanus leaves was inserted.
The hairstyle of the natives is dominated by their custom of letting the hair grow freely for both sexes. In the case of small children, it is more or less long, often discolored by the seawater, and hangs loose about the head. They do not make a part. Grown girls and women gather the hair loosely behind or on the right side and put it up there in a loose, disheveled bun. The men make a knot on the top of the head or on the left side. A bun at the back of the head is rare among them. On Palau, they have adopted the custom of cutting their hair, and one of the emigrants has grown a beard. On Tobi, both are completely unheard of.

Tattooing, varibori, was already being practiced in Holden's time, and they found this practice so essential that they forced their white captives to undergo the procedure. It is striking that at that time, they wished also to tattoo the face and were prevented from doing so only with the greatest effort. This is a custom that is now no longer practiced. In 1909, all the adults were tattooed. Holden describes the procedure in detail: While the patient is held fast on the ground, the figures are drawn on the skin with a pointed stick. After this, they are pricked with a tool made from sharpened fishbones, similar to a miniature carpenter's adze but having teeth instead of the continuous sharp edge. This tool was held one or two inches from the skin; then it was driven in with great rapidity by blows from a small piece of wood, so that it rebounded immediately after each stroke. In this way, the arms and chest were worked over, and immediately the pigment, ${ }^{1}$ which is prepared from the pigment of the plant called savan, was applied to the pricked surfaces. The operation causes such an inflammation of the body that only one surface can be completed at a time; as soon as the burning of the sore abates, a new section is begun.... His comment that the oldest among them are most richly tattooed and the younger ones the least allows the conclusion that over the years more and more designs are added, and that the creation of this highly valued body ornamentation requires a very great span of time.
Among the men, Hambruch saw two types of pattern: one strongly resembling the patterning on Yap, Songosor, Pur, Merir and Mogemog, and another, much rarer, that shows only wheel-like figures (ues He.) instead of the 1 Savan is Calophyllum inophyllum.

stripes, squares and spirals (reri batititi He.). Krämer names only the parts of a single design, a pyramid of steps symmetrical on both sides: from bottom to top, the steps are called setar, gukatar, seriteri and fatar. According to Hambruch, small boys were tattooed on the legs as well. Fig. 30 and the carved and painted wooden figure in Plate 5,3 show the normal male pattern. The division of the surfaces, the decoration of the chest, the back and the thighs is the same as on the neighboring islands. As a strange specimen, and with much laughter, Hambruch was hown a man who appeared a little simple but otherwise quite healthy, with female tattooing. He seemed used to the derision of his countrymen and was married with children, although according to the marriage laws in force they were not necessarily his offspring.
The women's tattooing is much more sparse than on the neighboring islands, and one never finds the richer patterns of the Merir women on their thighs. They decorate only their calves and hands, and even here, much les richly. The back of the hand is covered with zigzag lines, and a sign similar to a $y$ appears on the first and las digit. The top of the wrist is adorned with a line having x -shaped pendants. The pattern on the right hand shown is somewhat richer: a filled-in zigzag line runs from the first thumb joint to the wrist. The other fingers are bare On the back of the hand, rows of continuous zigzag lines alternate with interrupted ones.

The patterning of the legs begins above the knee, leaving the patella bare and running down the shins to the ankles. The same design elements as on the hands are used: the zigzag line is called vaseri bori gerik, the shor zigzags above the knee are called gugetari and those below siarifeidze.
tattooing tools consist of fork and hammer. The fork 4572 II in Fig. 35 consists of a bamboo handle 12 mm wide and pointed at both ends. The top end is stuck through the hole in the tortoiseshell fork so that it protrudes as a point 5 mm long. A plant fiber wrapped several times around the handle and fork horizontally and vertically holds the latter at a slight inward angle. The other end of the fork is honed to a thin edge and furnished with fourteen teeth. The other fork on Fig. 36 No. 82 II differs from the previous one in form and material and the apparently unusual binding. It consists of a piece of split bird bone and has only four tines. According to Hambruch, the handle is called bug arid, the fork metag arid, the teeth tsirikopo, the hole tobol, and the binding ianu uts. (uts = banana fiber).

The simplest adornment, and one always used copiously by both genders, consists of leaves and blossoms Young girls twine wreaths and vines around their neck, breast and hips. The men stick a rolled-up leaf in their earlobe, which is always pierced; this custom was already prevalent in Holden's day. The women fasten entire bunches of leaves and blossoms to their ears. Children are rarely seen with this sort of adornment, and their loose hair usually completely obscures their ears. The women use turmeric powder very abundantly: they color their mats and belts with it and rub their faces and bodies with it, especially when they are getting themselves ready for dancing. The main element of the dancing costume is the coconut pinna leaf

Men wind it around their forehead, upper arm, lower arm, calf underneath the knee, ankles and wrists. Fo this use, they take the leaves of young fronds, ubut, which they tie together if necessary, for example for the headbands, ubut tagata or meker; the knots are called bukobuk. The ends stick out stiffly and sometimes protrude significantly from the body, so that this type of leaf decoration is quite striking. It is notable that for dances, the men also decorate the index finger of each hand with them, so that the possibility of a sexual meaning for this adornment suggests itself, all the more so since young girls also decorate their fingers with them during dances, while the men put on a little skirt of coconut pinnae over the maro. This knot-decoration was also seen on the fingertips of the chief and the priest (see Fig. 30).


Fig. 35


Fig. 37
ig. 35, No. $4572^{\text {II }}$. Tattooing fork, arid. Bamboo handle, 12 mm wide, 15 cm long. The tortoiseshell fork, honed to a thin edge and tied on with plant fiber ends in 14 teeth. Width 2 cm , height 3.5 cm . Fig. 36, No. $82^{\text {II }}$. Tattooing fork, arid, with bamboo handle 11.5 cm long and reportedly unusual binding. The aria, with bamboo handle 1.5 cm long and reportedy unusual binding. Th $4253^{\text {II }}$. The hammer, carved from Calophyllum wood, is 34 cm long. The striking surface measures 5 cm at its widest. The end of the handle is flattened and wound around with coconut cord. Fig. 38, No. $83^{\text {II }}$. Hammer of mangrove wood The striking piece, sorobu taiiu, is 11 cm long. The handle end is called patsa.
In order to better fasten the flowers and leaf bundles, cords are very popular among them, which they run from the shoulder to the opposite hip and tie. It appears that originally, plants were the only known ear decoration The expedition found only a single earring, and this consisted of European glass beads with three red Spondylus riangles. It is fastened to the ear by a tortoiseshell hook, which is pushed into the ear hole. It has a pierced opening hrough which four strands of glass beads have been strung, alternating two white beads with two black ones. Besides the Spondylus pendants, a common European glass button finishes the piece.

Necklaces, strands of various lengths with or without pendants, are found mainly among women; men wear them sometimes, children more rarely. The simplest pieces of this type are cords of coconut yarn, to which single bead or pendants are added. In recent times, European buttons have become very popular. In the past, pendants usually took the form of fishhooks and were made of tortoiseshell (of Chelone imbricata, boat) or shell. Often, the hook shape is only implied. They are called aprietoch or aprietau. Fig. 40 shows a piece of this type, which was worn ogether with four others. The kidney-shaped disc is pierced to allow fastening. Fig. 41 shows a hook of unusual shape. It was worn alone on a cord hanging down as far as the chest and is made from a piece of tortoiseshel almost 10 mm thick. Real fishhooks are very popular as pendants with both men and women. The necklace No 4004 II in Fig. 42 is a typical piece. The leaders, cholochol, of two large tortoiseshell fishhooks, chat ma chama are knotted together and form the necklace, with the hooks on the ends as the fastening. 5 pairs of small fishhooks, knotted together in pairs by their leaders, are fastened to the necklace at intervals. -Conus bottoms, mes or metz, are used in a very similar way. They are knotted to the necklace, twisted from pandanus leaf or coconut fiber, by small loops that are passed through a hole. They use the tips of these snails in the same way

The sea urchin provides a similar type of neck adornment, called nach. The bulbous ends of the greenish or violet spines, similar to porcelain and shimmering like velvet, are pierced and they are lined up on a cord twisted from coconut fiber. About 20 legs with a length of $3-8.5 \mathrm{~cm}$ are needed for a rich piece. But for a piece of jewelry, they prefer to collect legs of similar length if possible, which they use without piercing by catching the end in a cord loop. -Small sea urchins are used whole; they are pierced at the top and threaded onto a cord. The necklace in Fig. 46, No. 4591 II, consists of four pecten shells whose hinges are pierced and fastened at intervals to a braided coconut fiber cord.
The pieces that follow are necklaces of coconut and shell discs. Of course, snail shells can just as well be used for these. According to the material, they are called kim or bure. The first word is used to describe snails or shells in general, the second is said to mean Conus. The beads or discs are strung on coconut twine, daga. For the necklaces themselves there are various names, each no doubt having its own limited meaning, but these were not determined. The general name seems to be mugeri. However, it was also given for men's necklaces of large Conus, mes, with tortoiseshell hooks. Women's necklaces are called pare geenoch; mother-of-pearl shells they call para goenan, plain shells uaiieo. The small conus snail is collected during low tide, then polished on stones and pierced with a shark tooth. Frequently, the shell beads and discs are already being replaced by European glass beads. The necklace No. 4347II in Fig. 47 is still unfinished. The discs are very thick and still unpolished. They are pierced through from both sides and clearly show the boring ridge that is created by this piercing method on their edges. The necklace No. 4342 II, 64 cm long, consists of thinly ground coconut discs with a thickness of 5 mm , between which European glass beads are inserted at regular intervals; the two outer ones are white, the center one is blue. A thin breadfruit raffia cord was used for stringing. In necklace No. 4344 II, coconut and shell discs of 5 mm thickness alternate with each other. They are threaded onto coconut twine

Necklaces of this sort are also worn as multiple strands and enriched with bridges. In this manner, they resemble the belts that Fritz saw being used, of which one of the Palau natives was allowed to select one out of those kept in the spirit house. ${ }^{1}$ (See Fig. 51.) The necklace No. 4343 in Fig. 50 is made of coconut discs interrupted by two European beads between which is another coconut disc. It is double-stranded. 16 cm from their ends, the strands run through the holes in two bridges consisting of two shell plates and one coconut plate. The ends hang down over the chest and back.

For belts, Fritz saw simple strands of beads. A rarer piece, and one that is valuable to the natives as well, is the wide belt with bridges No. 4480 II on Fig. 51 from the spirit house. It consists of nine alternating strands of coconut and shell discs connected by seven wooden bridges. In front of and behind each bridge, each strand begins with a shell disc followed in the second position by a coconut disc
This pattern has the effect that each coconut strand has a shell disc in the first position, and each shell strand has a coconut disc in the second position. This pattern has the effect that each coconut strand has a shell disc in the first position, and each shell strand has a coconut disc in the second position. Behind the last bridges, the stringing threads of coconut cord are woven together in a braid-like fashion (see Ngulu).

Their bracelets are rings of Trochus, tortoiseshell or coconut; this was already customary in the time of Holden. E. Krämer found tortoiseshell bracelets similar to those on Songosor as frequent grave gifts in the children's graves. They like to wear multiple Trochus bands around their wrists. They are found with and without the epidermis. They are made as follows: the shell is made so brittle by fire or glowing coals that the bottom and turns of the raised areas are whitened with coral lime. The pattern shows only slight variation from one side to the other. $\overline{1 \text { Max, a servant on the expedition and a Palau man, obtained the permission of "a great man" to select such a belt from among many others }}$ in the spirit house. Besides this one, the expedition was able to obtain another. They are similar to the Bul belts of Ngulu.


Fig. 39, No. 4303". Earring of Fig. 42. Necklace for men and women, chal. The leaders of the large black and white European beads tortoiseshell hooks, chat ma chama, form the necklace, with the hooks with Spondylus pendants and acting as fasteners and the small hooks, knotted together in pairs, used as tortoiseshell hook. Length 9 cm . pendants. Length of necklace 48 cm ; dimensions of the large hooks 3 cm 2.5 cm .


Fig. 40, No. 4322". Pendant from a necklace, aprietau, of ortoiseshell. Measurements: 4.5 $\times 3.5 \mathrm{~cm}$.



Fig. 43, No. 4332". Necklace of coconut cord and ten Conus bottoms, polished on both sides. Length of the cord 38 cm , diameter of the discs $18-38 \mathrm{~cm}$.

Fig. 41, No. 4282 ${ }^{11}$. Chest adornment, chab, of tortoiseshell. Measurements: $10 \mathrm{~cm} \times 4.5 \mathrm{~cm}$, depth of tortoiseshell 10 mm .
hell can be cut away to such an extent that only a part of the lowest turn remains. The ring obtained in this way is carefully polished, and often the entire outer layer is removed as well. Fig. 53 , No. 4850 II shows a bracelet of coconut shell. In contrast to the protruding, disc-shaped tortoiseshell band, it is cylindrical and almost 2 cm wide. Like their neighbors, the Tobi people value the black-and-white colored long wooden hair arrows, which are used solely for ornamentation. They differ from the combs of Songosor (Vol. I) mainly in that they have a single prong, so that they are more properly called arrows; those of Songosor have three or four prongs. The simple pattern is based on zigzags and is found on a small rectangular piece, the continuation of the prong

In Holden's time, weapons consisted solely of spear and club. They used the latter against whites on a number of occasions and killed a few people in this manner. They carved the spears out of palm wood. They were 10-20 fee ong, and their tips were furnished with sharks' teeth. For war, Tobi natives have the word maur. Since 1882, the natives have been reported to possess firearms, and probably they had them for some time before that. Moreover they were well-versed in their use, and are said to have carried them when they approached passing ships. In 1909, here was no sign of firearms and the people insisted they had no knowledge of shooting, which is certainly not entirely consistent with the truth.

Terms for clothing etc. according to A. Krämer
hat
hat
wooden comb
ornaments for forehead and neck
head knot
female leaf headdress
ear ornaments
neck ring
neck ring of bur shell to tie the lower jaw
Trochus bracelet
finger ring
belt
coconut arm bracelet
to tattoo
color
spear, arrow, fishing spea
bow (hunting)
stone slingshot
shield for spear battle

## bokin: pagun Ham.

 gameteratsin, erueren Hamubutemakemak
bukobu
maker
tsiketsik
megenag, maigel Ham.
bur a magemag
iagog
legelipög
legelipög
tatag
tagag
tarifer
bolob Ham
gasik
rasir
garekuk
garekuk
3. Household and Household goods.

With respect to building style, the houses show the same style throughout as those of the neighboring islands. They are square edifices with gabled roofs extending almost to the ground. Those that are not open houses to begin with are sealed very tightly and therefore very dark and close inside. The gable areas and walls are densely hung with mats; the door hole is so small-it is usually passable only by crawling - that neither air nor light can enter through it. Moreover, the houses are built extraordinarily close to each other-as close as two feet-and heir interiors are rarely if ever cleaned. Even the houses of the great chiefs are no exception.

The sketch made by Mrs. Krämer (fig. 55) of the interior of the women's house provides information about the beam pattern of houses on Tobi. Seen from the outside, the roof of the house, which is densely hung with mats, extends to the ground, so that the gable area seems to rest on the ground. The interior demonstrates a strong
 Fig. 44 , No. $91^{\prime \prime}$. The twenty sea urchin legs, $6.5-8.5 \mathrm{~cm}$ in length, have their ends pierced and are strung onto a
twisted coconut fiber cord which is 45 cm long. Fig. 45 , No. $4348^{\text {II }}$. The sea urchin legs, $3.5-5 \mathrm{~cm}$ long, are not pierced, but fastened onto the $40-\mathrm{cm}$-long coconut cord with loops.


Fig. 47, No. $4347^{\text {II }}$. Unfinished necklace 56 cm long of coconut discs measuring 9 cm in diameter. They are pierced from both sides and show the boring ridge created in the process. Fig. 48 , No. $4342^{\text {II }}$. Necklace 64 cm long of very thinly cut coconut discs 5 mm in diameter with European beads inserted at regular intervals. The middle one is blue, the outside ones are white.Thin breadfruit raffia cord was used for stringing. Fig. 49, No. $4344^{11}$. Necklace of coconut and shell discs 5 mm in diameter, strung on coconut twine. Fig. 50 , No. $4343^{11}$ Double-strand necklace of coconut discs, among which two European beads and one coconut disc are inserted at intervals. 16 cm from the ends, the strands are run through a bridge consisting of two shell plates and a coconut plate. Length of necklace 64 cm , bridge measurements $1 \times 2 \mathrm{~cm}$.
relationship with the buildings on Songosor, Pur, and Merir. Because of its special function, the strong framing beam is decorated with phallic carvings and a zigzag line.

The floor of the cult house consisted of planks. The birthing house was completely lined with mats, and probably the common houses have no wood floor at all. In Holden's time, the Tobi natives built houses with wooden floors elevated to such a degree that they can be thought of as two-story buildings, since the upper room was large enough to contain a man. On one occasion, Holden found it necessary to flee; he ran into a house, swung himself up into the upper room through an access hole, and blocked the entrance with a crate. He described the houses in even more detail to Hale. Hale writes: The houses of the natives are built of small trees and rods, and thatched with leaves. They have two stories, a ground floor and a loft, which is entered by a hole or scuttle through the orizontal partition, or upper floor. ${ }^{1}$ In our century, this building style was rarely found, and then only in a weake form. The moderately high upper space is used to store nuts etc. It is entered through a hole with the aid of a line hat hangs down. In the course of his inquiries about expressions, Krämer also encountered a word for stairs ieretak, and upper floor, gomag. The customary roof covering is coconut fronds that are usually woven into mats.

A special feature of Tobi houses is the rain roof, bat, baz or vasik, and the water trough (Fig. 56 / Fig. 57). Due to this and to the thick covering of mats, no water enters the interior even during heavy rains. As house decoration, nail shells hung on coconut cords are used. A foreign structure on the island was an abandoned house on the west coast belonging to a man who had come from Ternate, according to the testimony of the people. It was in ruins, but the columns and posts still stood. The roof was significantly lower than those of the Tobi houses. Inside, ther as a bed of masonry.

Expressions for the house and its parts.

## village

spirit house
hut, dwelling
sleeping house with plank floor cooking house
fish cooking house
taro shed
boat house
canoe shed
house without walls
ren house
blood house
hen house
taro houses on the plantation
porch, round piece
corner post
middle post
roof
mat covering
oof mat
te

Hale, op. cit. p. 79.

```
gasogosog A.K.
fare kikak A.K.
im A.K.
imari masek A.K
murum A.K.
im epat ig Ham
murum Ham.
far A.K., varet Ham.
palachalach Ham.
imaseka A.K.
imotsorion A.K
imaripar A.K.
imeri koko A.K.
imera pitek A.K
imeri nibor A.K
morivan ipiiar Ham.
bin A.K. asusi, sug, siguri Ham. sök, suk A.K.
sumoniar Ham.
eas A.K.; morupan, iusur Ham.
daberiei; amuts mach Ham.
eiasor Ham.
otoru Ham.
lugerum, toberam nani Ham
```

Fig. 51, No. $4480^{1 I}$. Wide belt with bridges from the spirit house. Nine alternating shell and cocont disc strands are held together by seven bridges. Before or after each bridge, each strand begins with disc strands are held together by seven bridges. Before or after each bridge, each strand begins with
a shell disc that is then followed by a coconut disc. The stringing cords of coconut twine are braided a shell disc that is then followed by a coconut disc. The stringing cords of coconut twine are braided
together after the final bridges in the manner of a plait. Total length 132 cm ; length between first and last bridge 66 cm , width 6 cm .


Fig. 52. Bracelet of Trochus nilot., lekerek. No. $4350^{11}$ and No. $4855^{\text {II }}$
Fig. 53, No. $4850^{\mathrm{II}}$. Arm bracelet of coconut shell. Width 1.8 cm di 7 cm

Fig. 54. Decorative wooden arrows. No. 4356" ${ }^{\text {I }}$ The ornamental continuation of the solitary prong consists of a rectangular flat piece of wood 16 cm long and 3.5 cm wide, whose edges are
decorated with an ornamental band consisting of triangles decorated with an ornamental band consisting of triangles pattern, rhomboids have been carved into the middle at intervals and colored black like the edging. The raised areas are whitened with coral lime. The reverse has a shallow groove instead of the homboids (b). Total length 26 cm , decorated portion $16 \times 3.5$ cm . No. $4357^{\text {II }}$. Pattern the same on both sides. Length 23 cm , decorated portion $14 \times 3.5 \mathrm{~cm}$.


Fig. 55. Interior of the birthing house imeripar. After a sketch by E. Krämer
roof beam
floor purlins
purlins (roof)
slats and trough
wind protectio
rafters (roof)
rafters (wall)
decorative slats (?)
attic planks
${ }^{\text {attuc slats }}$
attic entry hole
climbing line to the hole
stairs
door, door hole
door (tied)
binding yarn
door lock
house wall
toilet
fence
well wall
fireplace
oven
Polynesian oven
ash heap
trash heap
fire fan
orch
roof for rain protection
frame with rack of slats ledge for sleeping mats sleeping mat
bed
um Ham.; ungorap A.K
afei Ham.
aitom, auitom, hoitsom Ham
igaga pangek A.K.
ariket, iiagrofat Ham.; igarevorovat A.K
dugeroto, igailofob, uarikel Ham.; igagasusu A.K
oaries, atit, titiripin Ham.
or A.K.
bosar A.K.; itor, posobos Ham.
meiïfen, meiuch Ham.
iet, ba,b iiapengach Ham. gomag A.K.
pitratumoch Ham.
tari Ham.
ieretak
gatam A.K.; gato Ham.
beritari, pirepireregatam A.K.; chatam Ham.
at A.K.
katkateri gatam A.K.
tit A.K. erügür Ham.
ninieripag A.K.
ut A.K.
sar A.K.
satavas A.K
nuruot Ham
m A.K.; ninieripag Ham
main Ham.
ör Ham.
moiara A.K.
gipoi A.K.
or A.K.
paragarag A.K.
pasots, pasobos Ham.
pin Ham.
tsoobo, tsoob, tasabari fagak A.K.; sob Ham.
bosobos A.K.; piie Ham.

In general, the wooden containers are carved out of a single piece of breadfruit wood. Older pieces show great neticulousness in their crafting; newer ones, worked with European tools, are treated more cursorily. The containers break down into dishes and bowls, pots with lids and lidded boxes.

The dishes are sometimes so shallow that they should really be called coarse wooden plates. Thus, No. 48051 in Fig. 62 is a flat, perfectly round plate with an edge $1 \frac{1}{2} \mathrm{~cm}$ high. Hollowed out inside, on the outside it has a pronounced slant that merges into the bottom. Fig.s 63-73 show narrow dishes of somewhat irregular shape. No. 4817 is boat-shaped and meticulously crafted. The sides of the container are gently sloped on the outside and merge with the flat bottom, which ends on either end in a sharp ridge going all the way to the edge. The dishes 399 II and 4821 II are more trough-like, the former oval, the latter almost square. No. 71 II is a special piec


Fig. 56. Tobi dwelling house with water trough after a sketch by E. Krämer.


Fig. 58, No. 4279 ${ }^{\text {II. }}$. House decoration, a Cypraea tigris fastened to a coconut cord.
ig. 59. Stone bed in the house of the Ternate (Dogerana) man, after A. Krämer


Fig. 57. Water trough after E. Krämer


Furnishings. Among the furnishings on the island, wooden utensils occupy the principal place. The richne of forms among bowls, pots and boxes is astounding and much greater than that of the neighboring islands. According to the natives, the manufacture of the wooden utensils, especially the large chests and coffins, lies in the hands of certain woodworkers, the so-called senapes. In 1909 there were supposedly only two of these artists, and they were on Yap at the time. The fact that the natives sold great quantities of containers of all types to the visitors without difficulty of any kind, apparently in the knowledge that they could easily obtain more for themselves, speaks against this assertion.

Fig. 60. Floor plan of a family house. Sketch by P. Hambruch 1 post, sug; 2 ledge for sleeping mats, pin; 3 large chest, bots; 4 6 lidded chest or bowl; 7 pantry cabinet, ianibots.


Fig. 61. House of a shipwrecked man from Ternate, after a sketch by Hambruch. a) palisade posts, b) posts upporting roof, c) masonry bed of stone, d) cross section of roof
with its triangular form.
The bowls are produced with and without handles. Fig. 74 shows one without a handle. Fig. 75,76 and 77 show narrow, moderately high bowls with small handles and rounded or steep sides. The bowl No. 64 II is meant for the preparation of turmeric powder and is called tabi ren. The boat-shaped vessel is the lower part of a lidded bow as shown in Fig. 78. Crude and irregular in workmanship, it is colored gray-brown on the outside, black-brown inside. The bottom shows ren sediment. From the bottom, shaped like a flat oval, the sides rise steeply, almost perpendicular, while the ends rise at an angle of about $60^{\circ}$ to an elliptical edge whose sides come together in two points. A rebate of $1 \frac{1}{2} \mathrm{~cm}$ runs around the edge, which is 3 cm thick. Two triangular protrusions, the points facing down, form the handles. The two tall bowls in Fig. 79 and 80 are made of mangrove wood. No. 4816 II is a wide oval, irregularly worked vessel. The sides are convex near the top, slightly concave near the bottom. The bottom is relatively small and flat inside and outside. Two flat, thin handles are attached to the ends of the vessel, of which one broke off along with a piece of the side and was repaired with lashing. The high-sided bowl No. 72 II has a terrine-like effect due to the form of the handles and the pleasing flare of the sides. The following vessels are round, the bottom being smaller than the upper edge. No. 4056, Fig. 81 also has sides that rise from the bottom a a slant and incline slightly inwards at the edge. The bottom, which is flat inside and outside, forms a sharp angle with the sides. The bowl No. 4007 II has convex sides that rise from a bottom 22 cm in diameter to an opening with a diameter of 38 cm . The bottom, which is very thick and rounded inside, has a foot all around its bottom edge that is $1 / 2 \mathrm{~cm}$ high. The bowl No. 4619 in Fig. 83 has a bottom that is $1 / 2 \mathrm{~cm}$ thick and perfectly circular; it has a perpendicular edge where it meets the sides, which rise in a rounded shape. The edge of the vessel is rounded off to about 1 cm thick, making the sides seem to curve inward and appear very thin. The round bowls No. 4815

II and No. 4053 II are distinguished from the previous ones by their handles. Similar to each other in form, they differ only in size and handle shape. On No. 4815 II they are on opposite sides and protrude like noses, while o No. 4053 II only a single protrusion is found on the rounded-off edge. It is pierced and furnished with a cord for hanging.

Wooden vessels crafted with modern tools and little care.
Very large, heavy lidded vessels with a bottom portion similar to No. 72 II have served as coffins since ancient times and have already been described, cf. p. 100. The following large rectangular chests, whose build occasionally already suggests European influence, serve the same function in part. In general, the natives use them to store valuables: woven belts, dress mats and rope, and other fragile objects. However they are used, all these chest are called bag. Fig. 86, No. 129 II is a coffin, a rectangular box with a lid placed on top and only one handle (remaining?). The chest No. 4244 II in Fig. 87 is a very well-crafted old piece of mangrove wood. The long ides, perpendicular to the bottom, are curved along their length, giving the chest an expanded midsection. 2 cm underneath the edge of the lid there are remnants of pegs. The bottom, too, is bent lengthwise and curves slightly the lid is slightly curved along its width. Fig. 88 shows a chest of breadfruit wood with a rather complicated build after a European model. According to Hellwig, it serves to store perishable goods. It consists of a bottom and lid. The bottom is crafted of three parts: the midsection, carved from a piece of tree trunk, with curved bottom an ong front and back sidepiece, and the two opposing side pieces. The lid consists of a midsection and two wide end pieces, attached to it by pegs and joints and, in addition, with a copper band and coconut yarn lashing. The lid rests on the rebate of the lower section. Both have carved fastening ledges all around their perimeter. In each there are square peg holes in exactly corresponding locations, through which long tapered pegs are pushed. These pegs are pierced to allow coconut line to be pulled through.
The individual parts have special names:
rebated edge
long sides
short sides
bottom, inside
bottom, outside
wedges, pegs and plugs
uor
notor
notor
parnanil
parna
pinar
${ }_{\text {ram }}^{\text {chapi }}$
tivan

A strange creation of native carpentry is the crude, moveable chest in Fig. 90. It consists of the boxlike lower part furnished with wooden wheels and having a fixed lid around the edges, and the smaller lid to close it off, which is precisely fitted to the opening. The opening of the fixed lid and the edges of the closing lid have complementary rebates. The closing lid consists of four wide edge boards, rests on four stout, long legs, and is mortised and pegged at this juncture. The sides are formed of wide, horizontal boards that are dovetailed and pegged into the legs. The feet continue down about 20 cm beyond the sides and are furnished with wooden wheels on the short sides. They are connected by an axle whose rebated ends run through the long sides of the legs, which have openings for this purpose. The closing lid, made from three boards and two narrow side strips, is furnished on the inside with a wooden latch that can be opened from the outside by turning with a key-like tool.
The following pieces are medium-sized square boxes of varying shapes with handles and lids. They are used for storing all kinds of valuable small items such as fishhooks, jewelry and turmeric makeup. One of the bigges containers of this kind is No. 4377 II in Fig. 91. A large, crude box with perpendicular sides. One of the short
sides has been broken and replaced with a board inserted in the European way; it is fastened to the box with crossnails. The lid, which is strongly rounded on its long sides, has large, flat protrusions carved into its short sides and rounded off at the ends. The box No. 4825 II in Fig. 92 is trough-shaped and is semicircular in cross-section. Unlike the other containers, the bottom part consists of three parts: the body with a slightly flattened underside, carved from the trunk piece of a breadfruit tree, and the two ends, which close off the body in front and behind The end pieces with their rebated edges and the body, which fits into this rebate, are connected to each othe with nails. The lid is carved out of one piece and has two pegs on the ends. The large lidded box No. 4548 II of breadfruit wood has sides that are slightly curved horizontally and vertically; they rise outward from the bottom, only $21 / 2 \mathrm{~cm}$ wide, to the lid, 32 cm wide; this gives the box a cross-section shaped like a trapeze. The pegs on the lid are pierced vertically, those on the box horizontally.

The box No. 4570 in Fig. 94 shows very clean workmanship. The long sides are curved horizontally and vertically, forming a container with narrow sides and a convex middle. The edge of the lid, which has the same measurement as the bottom, is strongly rounded off in the middle. A carrying cord runs through the holes in the handles carved onto the lid and ends of the box. The flat-lidded, sharp-edged, rectangular box No. 4567 II is carved of mangrove wood. The long sides are slightly curved and, like the ends, are perpendicular. The sharp-edged lid rests in a rebate. Flat, vertically pierced protrusions with rounded-off fronts have been carved onto the box and lid on thei hort sides. A breadfruit cord, pulled through the holes and knotted underneath the box protrusion, serves as carrying handle. The flat box with no number has a rectangular shape with slightly curved long sides and straight short sides that rise at a slight angle. Its bottom is flat and covered inside with a piece of palm leaf sheath. The lid, which is curved along both its length and width, has two pegs carved onto it below the rim, partly to anchor a fastening cord that runs horizontally around the box, and partly as handles for opening the lid. No. 4487 II on Fig. 97 is a strikingly narrow rectangular box with limited space, for storing fishhooks or jewelry. Here too, as on most boxes, the lid rests in a rebate $1 \frac{1}{2} \mathrm{~cm}$ wide and 1 cm high. On one of the short sides of the box, 1 cm above the bottom, is a flat, somewhat rounded peg whose purpose is unclear due to the lack of other pegs. Fig. 98 shows small lidded box with a trapezoid shape. The long and short sides form wide angles with the bottom. The lid ha been fitted tightly into the rebate of the bottom. Small pierced pegs on the ends of the lid hold the carrying cord he difference between the short sides is 3 cm . In No. 4561 II, Fig. 100 shows a box whose bottom is similar to No. 4487 II with regard to the peg near the bottom.

The old blackish brown almost rectangular box of Calophyllum wood is a special piece. The sides, 4 cm thick, are carefully smoothed on the outside, but on the inside they are rough and uneven and, like the bottom, clearly show signs of recent work, giving the distinct impression that newly acquired iron tools were tried out on this piece. A rebate 2 cm wide and 2 cm high runs around the edge for the sides of the lid, 2 cm thick, to rest in. Our description of containers of this type ends with the delicate small boxes that have been collected in extraordinarily varied hapes. They are called devidevi, a term that also seems to be used for the larger containers described above Among others, there are coffin-like shapes (Fig. 101), but only 7 cm high and 22 cm long. No. 4502 is a delicate small hexagonal box with straight edges and a rebate. The lid rises toward the middle, which is bisected by a sharp ridge. Fig. 102, No. 4552 II is a container for tattooing equipment with a flat inset lid. A cord is fastened onto the middle for lifting up the lid. The double box No. 4479 II is a special piece. It is new and crafted very carefully, and unique in the Hamburg collection. The remaining small boxes serve to store small fishhooks. The smallest f its type is a flat box with handles, 7 cm long, $4^{1 / 2} \mathrm{~cm}$ wide, and 3.1 cm high. The small box No. 4595 has an exceedingly strange shape. Like the one following (Fig. 106), it too looks like half a small "coffin."

The remaining containers are fashioned of coconut, snail or sea shells, drift bamboo, or whatever else seemed suitable. In this context, vessel No. $65^{\text {II }}$, Fig. 109 is worth mentioning: it is made from the center piece of


Fig. 62, No. $4885^{11}$. Plate-like shallow dish with a rim $1 \frac{1}{2} \mathrm{~cm}$ high; strongly hollowed out inside, rounded off outside. Diameter 37 cm , height 3.5 cm , bottom diameter 25 cm . Fig. 63, No. $75^{\mathrm{II}}$. Old fish bowl, tabi ig, of breadfruit wood. The carved handle is pierced and furnished with a hanging loop of coconut cord. An image of a fishhook is engraved on the bottom. The edge is straight, the bottom is flat outside, slightly rounded inside. Length 46 cm , width 16 cm , handle 3.5 cm , bottom $13 \times 42 \mathrm{~cm}$; height 4 cm . Fig. 64 , No. $80^{1}$, tabi e segar. Triangular dish Fig $65,4050^{11}$. Bowl of breadfruit wood with straight long sides, slanted short sides and small rectangular bottom. It has a small triangular handle on each end. Height 7 cm . Interior measurements: $30 \times 35 \mathrm{~cm}$, bottom $11 \times 15 \mathrm{~cm}$. Fig. 66, No. 4064". Tabi a iauar. Dish with pour spout of breadfruit wood for drinking and filling water jugs of coconut. Hanging loop of coconut cord underneath the spout. Height 4 cm , diameter 16 cm , bottom diameter 10 cm . Fig. 67, No. $4605^{\prime \prime}$. Trough of breadfruit wood with long, straight, flat handles. Inside is round and outside is tapered. Length 35 cm , width 21 cm , height $81 / 2 \mathrm{~cm}$, handie lenghs. $8 / 2$ and 5 cm , bottom. $8 / 2 \times 14 \mathrm{~cm} .7 \mathrm{Fig} .68$, No. $4610^{11}$. Egg-shaped dish, especially suitable for pouring. Breadfruit wood. Height 8 cm , length 28.5 cm , width 18.5 cm . Bottom rounded inside, flat outside. Diameter $18.5 \times 13.5 \mathrm{~cm}$, flattened edge. Careful craftsmanship. Fig. 69, No. $4817^{\text {II }}$. Dish, tapa ua ieirai. The gently rounded sides of this very carefully crafted vessel merge with the flat bottom on the outside; at the ends, it finishes with a sharp ridge that runs all the way to the edge. Length 83 cm ,
width 17 cm , height 10 cm , length of bottom 50 cm . Fig. 70 , No. $4399^{I I}$. Wooden dish. Length $291 / 2 \mathrm{~cm}$ width 17 cm , height 9 cm , bottom $19 \times 10 \mathrm{~cm}$. Fig. 71, No. 4883". Shallow wooden dish. Length 37 cm , width 26 cm , height $9-10^{1 / 2} \mathrm{~cm}$. Fig. 72 , No. $4813^{1 \mathrm{I}}$. Wooden dish. Length $26^{1 / 2} \mathrm{~cm}$, width 15 cm , bottom $13 \times 9 \mathrm{~cm}$, height $5-6 \mathrm{~cm}$. Fig 73 , No. $4821^{1 \text { II }}$. Wooden dish. Length 30 cm , width $231 / 2 \mathrm{~cm}$, height $6-7 \mathrm{~cm}$, bottom $16 \times 121 / 2 \mathrm{~cm}$.
washed-up drum from Wuwulu or Aua. The eight pegs on the lower end served to anchor the bottom. The lid about 2 cm thick, is fashioned of two pieces of breadfruit wood that are fastened together by tying with coconut twine and sealing the seam with Calophylum resin. On the inside of the lid, a groove has been carved out that corresponds exactly to the edge of the vessel. Coconut cords that run through two holes in the lid and two loops of coconut cord attached to opposite sides of the vessel ensure a tight seal when knotted. Fig. 110, No. 4291 II is a water scoop of coconut. A coconut cord is passed around the base of a breadfruit tree branch which had o be shortened for transport; the cord is knotted 22 cm beneath the stick, and its ends hold a coconut shell. A container for Calophyllum resin, essential as a sealant, is shown in Fig. 111, No. 4366 II. Three pairs of coconut fiber cords encircle the lower half of a coconut and are knotted above its open end. A loop for hanging is pulled from the knot through a hole in another coconut half-shell that serves as a lid. Fig. 112, No. 117 II shows a water container of drift bamboo, baubau. The only alteration is a hole in the side through which a cord for hanging has been fastened. Fig. 113, No. 110 II, shows a Nautilus pompilius shell used as a drinking vessel; it is also furnished with a cord for hanging.

The heavy taro pounding boards are made without care or art of breadfruit or mangrove wood. Fig. 114, No. 71 It shows a pounding board in the form of a half-circle with a 2.5 cm high ledge around the rim that meets the bottom sharply at a wide angle. The pounding board No. 4238 II is trapezoidal with gently curved sides. The edge, 1.5 cm high, tapers inward and merges with the bottom almost imperceptibly. For pounding and grating they use coral stones, fatifit chruot, which do not differ significantly in shape from the wooden pounding tools, vor, Fig. 116 No. 4236 II, once they have been fashioned.

To help with cooking and eating they have spoons and spatulas or knives of wood, shell, or tortoiseshell. O the wooden spoons, No. 4617 II is the simplest in shape. The sides of the ladle-like, oval bowl taper inward to the bottom, which is flat on the inside and outside. The handle, coming off the upper rim of the bowl, is curved, and the widened end is tapered off. The bowl of spoon No. 4618 is similar to that of the previous one, but the handle seems to be carved after a European model. It comes off the middle of the bowl. Fig. 119 shows a ladle in No. 4627 II. The walls, tapered inwards, are rounded to merge with the bottom, which is flat inside and out The handle, which begins 1 cm below the ladle rim, is flat on top and semicircular on the bottom, and ends in downward hook-like extension. The spoons of sea and snail shells' show nothing new and correspond to the previous pieces. They are called tit.

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The taro spatulas of tortoiseshell are called tzirua or tzirik. No. 4025 II in Fig. 121 is an eating spatula of naturally curved tortoiseshell. The long sides taper inward, the ends are rounded and furnished with a long, sharp blade No. 4026 II is similar to the previous, but it is smaller and the ends are straight. The spatula No. 4396 II has its bade on one of its long sides. The large spatula in Fig. 124 has a handle. It is made from the side of the shell and shows the natural rib-like reinforcement in the center, which tapers off in the handle. One side has been honed to

[^5]

Fig. $74,4609^{\text {II }}$. Wooden bowl. L $241 / 2 \mathrm{~cm}$, w 17 cm , h 7 cm . Fig. 75 , No. $4610^{11}$. L 32 cm , w $19.8 \mathrm{~cm}, \mathrm{~h} 81 / 2-9$ cm , bottom $14 \times 101 / \mathrm{cm}$. Fig. $76, \mathrm{No} .4616^{17}$. Boat-shaped wooden bowl with sides sloping up and curving in at orizontally L 40 cm, w $19 \mathrm{~cm}, \mathrm{~h} 9 \mathrm{~cm}$, bottom $111 / 23 \mathrm{~cm}$. Fig 77 , No 4058 II Similar in shape this bowl differs only in its width, its handles and its very careful craftsmanship. The handles are trapeze-shaped and very functional. Some indented carving runs parallel to the handle all the way to the edge, creates an edge band on he handles about 7 mm wide. $\mathrm{L} 56 \mathrm{~cm}, \mathrm{w} 33 \mathrm{~cm}, \mathrm{~h} 11 \mathrm{~cm}$, bottom 37 cm . Fig. 78, No. $64^{\text {II }}$. Wooden bowl for the preparation of ren, tabi ren. It is the bottom part of a lidded bowl with a rebate of $11 / 2 \mathrm{~cm}$. L $73 \mathrm{~cm}, \mathrm{w} 32 \mathrm{~cm}$, 22 cm , bottom $37 \times 24 \mathrm{~cm}$. Fig. 79, No. $4816^{11}$. Irregularly worked tall bowl, mangrove wood. Bottom is flat inside and outside. One hanle boke of and has been repared by lashing. L47 cm, w 37 cm , h 16 cm , boton 22 cm . Fig. 80, No. $72^{11}$. Well-crafted bowl, mangrove wood. Tall sides end in an edge $1 \frac{1}{2} \mathrm{~cm}$ thick. Bottom, vorked and slightly hollowed out at the ends, flat inside and outside. The handles are square, but triangular from the side. L $52 \mathrm{~cm}, \mathrm{w} 40 \mathrm{~cm}, \mathrm{~h} 22 \mathrm{~cm}$, bottom 32 cm . Fig. 81 , No. $4956^{\prime \prime} . \mathrm{L} 47 \mathrm{~cm}, \mathrm{~h} 21 \mathrm{~cm}$, bottom 30 cm . Fig. Fig 83 , No. $4619^{I I}$ Thin-walled, round convex vessel, edge tapered to 1 cm . Bottom set off against the side. Poo craftsmanship with modern tools. Dia. 29 cm , bottom dia. $19 \mathrm{~cm}, \mathrm{~h} 8.5 \mathrm{~cm}$. Fig. 84 , No. $4815^{\prime \prime}$. Round vessel with two nose-shaped handles. Dia. $54 \times 481 / 2 \mathrm{~cm}$, bottom dia. 39 cm , h 15 cm . Fig. 85 , No. $4053^{\text {II. Round vessel with }}$ a peg whose hole is furnished with a cord for hanging. The sides, tapering inward from round edge, meets the bottom, flat inside and outside, at a sharp angle. The edge is tapered off. Dia. $31 \mathrm{~cm}, \mathrm{~h} 8 \mathrm{~cm}$, bottom dia. 24 cm .


Fig. 86, No. 129". Coffin, bag. Length 123 Fig. 86 , No. $129^{4}$. Coffin, bag. Length 123 cm ,
width 35 cm , height 30 cm. Fig. 87, No. $4244^{11}$. Old chest of mangrove wood with curved bottom, orizontally curved sides and slightly curved lid. Length 98 cm , width $281 / 2 \mathrm{~cm}$, height 25 cm . Fig. 88, No. $4233^{\text {II }}$. Large chest of breadfruit wood, ai, with ledges and lashing for storing perishable goods. Length 124 cm , width 42 cm , height 44 cm .
 Fig. 89. Storage cabinet. Sketch by P. Hambruch Fig. 90 , No. $130^{I I}$. Moveable chest, bag, with wooden wheels. Length 144 cm , width 87 cm , height 66 cm . Inset lid uor, lid pegs susur, long side pauangi, short side piga, edge igatomo wheels tungo.


Fig. 93
Fig. 94


Fig. 91, No. $4377^{11}$. Wooden box with repaired end. Length 71 cm , width 44 cm , height 23 cm. Fig. 92, No. $4825^{\text {II }}$. Trough-shaped lidded box of breadfruit wood with three-part bottom that is nailed together. Length 63 cm , width of the flat lid 32 cm , height 28 cm . Fig. 93, No. $4584^{\text {II }}$. Lidded box of breadfruit wood with trapeze-shaped crosssection. Bottom: length 52 cm , width 21.5 cm , width of lid 32 cm , height 24 cm . Fig. 94 , No. $4570^{\text {II }}$. Lidded box with carrying cord, of breadfruit wood. The walls are convex, the edges rounded off, the bottom flat. Length 44 cm , width 14 cm , height 13 cm .


Fig. 96


## Fig. 10

## Fig. 99



Fig. 102


Fig. 95 , No. $4567^{\text {II }}$. Box of mangrove wood with carrying cord. Length 34 cm , width 19 cm , height 11 cm . Fig. 96. Flat box without a number. Length 34 cm , width 25 cm , height 11 cm . Fig. 97, No. $4487^{\text {II }}$. Narrow box for jewelry or fishhooks with only one peg. Length 32 cm , width 6.5 cm , height 13 cm . Fig. 98, No. $45666^{11}$. Smal No. $77^{\text {II }}$. Old rectangular lidded box of Calophyllum wood with a rebate 2 cm high and walls 4 cm thick. Length 37 cm , width 29 cm , height 26 cm . Fig. 100, No. $4561^{1 \text { I }}$. Wooden box with 4 pegs. Length 36 cm , width 22 cm , height 12 cm . Fig. 101, No. $4502^{11}$. Hexagonal wooden box with fishhooks. Height of the bottom plus the lid 4.5 cm , without lid 3 cm . Length 12 cm , height of the ridge on top of the lid 23 mm , the corner edge is 13 mm . Fig 102 , No. $4252^{\text {II }}$. Small wooden box with inset lid, cord to lift it and a tattooing fork inside. Length 16 cm , width 6 cm , height 7 cm .


Fig 103 No $4213^{I I}$ Small wooden box for fishhooks. Legth $111 / \mathrm{cm}$, width $41 / \mathrm{cm}$, height $31 / 2 \mathrm{~cm}$. -Fis 104, No. $4080^{I I}$. Small wooden box, apa devidiv, of breadfruit wood for fishhooks. Length 8.3 cm , width 5.8 cm , height 2.5 cm . -Fig. 105, No. 4795 II. Small wooden box. Length 8 cm , width 5.5 cm , height 2 cm . -
a blade. To sip water they use a simple tool that is hardly altered. They use the hollow bones of birds of any sort
To hang the various containers up inside and outside the houses, they usually use simple, plain hooks cut from branching twigs. Thus, the hanger No. 125 II in Fig. 127 is a special piece bearing the name azenimerach. It is carved from a thick piece of breadfruit wood. The block, originally rectangular, is tapered from the middle to one end, creating an almost round peg. It, as well as the wide end, are pierced with holes that are conical from both sides; the holding rope from the house roof passes through the peg hole, while the hanging rope of the vessel or basket is fastened to the hole in the wide end. To guard against rats, a board with a hole in the middle is placed over the peg and rests on the wide lower end. In other cases, the rat guard is attached to the holding rope.
pestle (of coconut wood)
inner lid surface
outer lid surface
side and lid ledges
holes in ledges
lip of lid
lashings
zuzu, dudu
ran (i me uar)
uar
talinar
uia uiar
piretar
chorochoro

ig. 106, No. $94^{11}$. tabi meri uor. Box of breadfruit wood for fishhooks. Height 10 cm , length 15 cm , width 9.7 cm . -Fig. 107, No. $4268^{\mathrm{II}}$ tabi tabi tachul. Box of breadfruit wood with shell discs. Height 12 cm , lower par 9 cm . Diameter of the lid resting in the groove $111 / 2 \times 91 / 2 \mathrm{~cm}$, of the bottom $8 \times 8 \mathrm{~cm}$. -Fig. 108, No. 4479 beg. Double box of breadfruit wood with two lids resting on a groove, six perforated handles and cord closur for snails, shells, and discs made from them. Dimensions: $19.5 \times 28 \times 41 / 2 \mathrm{~cm}$, height of lid about 2 cm , depth of
compartments in central section (height 14.5 cm ): 7 and 8 cm .


Fig. 109


Fig. 11


Fig. 113

mique features as the wooden utensils. In their techniques and shapes they are so close to those of the neighboring Fig. 109, No. $65^{\text {II }}$. Vessel made from the center piece of a washed-up drum from Wuwulu. Length 49 cm , lower diameter 30 cm , upper diameter 28 cm , diameter at the narrowest point 22 cm . Fig. 110, No. $4291^{\prime \prime}$. Water scoop boiötir. Length of branch 19 cm (breadfruit tree). Length of coconut fiber cord 38 cm , height of coconut vessel 12.5 cm , width 8 cm . Fig. 111, No. $4366^{\text {II }}$. Container for Calophyllum resin made from two halves of coconut nicher 25 cm , bottom diameter 6.5 cm . Fig 113, No. $110^{11}$ Drinking vessel of Nautilus pompilus, amegech.
islands that the objects described there, as well as their depictions, can be referred to. The mats correspond to Fig. 114, No. $71^{11}$. Taro pounding board of breadfruit wood. Greatest width 57 cm , diameter 43 cm , height 6 cm . Fig. 115, No. $4238^{\text {II }}$. Taro pounding board of mangrove wood. Length 92 cm , greatest width 62 cm , narrowes width 43 cm , height 5 cm . Fig. 116, No. $4236^{\text {II }}$. Taro pounding tool, vor, of breadfruit wood. Old and slightly damaged. A slightly curved cone with flat pounding surface. Height 19.5 cm , bottom diameter $91 / 2 \mathrm{~cm}$.


Fig. 116



Fig. 121, No. 4025. Eating spatula of tortoiseshell, tzirua or tzirik. The ends are rounded and have a sharp blade Length 33 cm , width 4.5 cm . Fig. 122, No. $4026^{11}$. Eating spatula of tortoiseshell, tzirua or tzirik. L 27.5 cm , 2.8 cm . Fig. 123, No. 4396". Eating spatula of tortoiseshell, tzirua or tzirik. The blade is located on the long side $\mathrm{L} 10 \mathrm{~cm}, \mathrm{w} 4 \mathrm{~cm}$. Fig. 124, No. 108 ${ }^{11}$. Spatula made from the side of the shell with rib-like continuation. Blade on shoulder bone of the large sea turtle. $\mathrm{L} 28 \mathrm{~cm}, \mathrm{~h} 14 \mathrm{~cm}$. Fig 126. Hollow bone of a bird for sipping water pau ue. L 15 cm , dia. 7 mm . Fig. 127, No. $125^{\text {II }}$. Hanger of breadfruit wood, azenimerach. Length 27 cm , thickness 5 cm , dia. of the hole 6 cm , w of the wood 8.5 cm .


Fig. 128, No. 278I. Rat trap, teziz iri ga touei, (collected on Pur). Length of bamboo cylinder 24 cm , diameter $7^{1 / 1}$ cm ; the rectangular opening measures $4 \times 5 \mathrm{~cm}$. The piston of Premna wood is 25 cm long, and is 5 cm wide at he bottom. The bamboo bow is 1.30 m long. The string is formed of two coconut cords
Fig. 128 No. 278 II. This trap consists of three parts: a bamboo cylinder, a piston of premna wood, and a bow of bamboo with a string of two coconut cords. At the lower end, the ground surface, the bamboo cylinder is closed off by an internode. The protruding part of the cylinder is deeply grooved to accommodate the bow when the trap is set. Halfway up the cylinder a rectangular opening has been cut out. Two small holes are bored on the opposite side. (One hole is enough for the functioning of the trap. A new hole was made because the first had becon unusable). The piston has a significantly smaller diameter than the cylinder, and therefore is extremely loose. It upper end is sharpened into a wedge and has a V -shaped incision, in which the bowstring rests when the trap is set. When setting the trap a small wooden plug is placed into the above mentioned hole; it is placed very loosely and prevents the piston from going past. The bottom of the piston is positioned just at the upper edge of the rectangular opening in the cylinder. A piece of bait is fastened to the bottom of the piston by a thorn and hangs down into the opening. By pulling the bowstring up over the piston's top, the trap is set. The least disturbance of the piston enough to push the loose wooden plug aside and send the piston shooting downward with extraordinary force. The rat, which caused the disturbance and pushed aside the wooden peg by tugging at the bait, is crushed


Fig. 129, No. $4840^{11}$. Hanging basket of slats (bamboo strips and hibiscus sticks) with coconut cord for hanging. Length 68 cm , width 34 cm , height 11 cm , with a cord of 150 cm .


Fig. 130, No. $76^{\text {II }}$. Child's toy of breadfruit wood. cm , diameter of the center
hose shown; the weaving in of the strips is the same as in the sailor's jacket shown. In contrast to the neighboring islands, Tobi has the crude, simple mats of coconut palm fronds that have already been described on Nukuor (See: Results of the South Sea Expedition vol. 8, Nukuor, Plate 1/1, No. 7230 II.) The middle ribs lie in the center of the mat, the weaving is closed by small braids at two corners, the weaving pattern is the same as in the basket 1472 II.

The baskets in Plates $3 / 1,2$ and 4 and the net bag in Plate $5 / 2$ from Songosor are also found on Tobi. The strongly pering basket of coconut leaf in Vol. II, however, is a differt piece. Besides these woven baskets, they a have some made of slats and wooden sticks that differ from the child's cradle, whose one end was a few centimeter narrower than the other, only by their regular rectangular shape. The pictured hanging basket No. 4840 II has grid-like bottom formed from 5 round cross-sticks (hibiscus) and 8 bamboo strips that are laid over them at righ angles and wrapped with coconut cord at the crossing points. On each of the long sides, the bottom is closed of by a round stick that is tied over the 5 cross-sticks. On the short sides, a cross-stick is tied onto the ends of these two sticks to form the sides in combination with the alternating lengthwise and crosswise sticks. Two short stick attached vertically over the long sides ( 14 cm from the corners) reinforce the sides. Coconut cords fastened to the corners are knotted together 50 cm above the bottom and serve as a hanging cord.

The fire fan, ipoich, shown in Plate 18 is almost the same as on Merir. It is woven in a single-woof pattern of folded coconut leaves. The middle rib forms the handle and reinforces the surface. The shape is triangular. The short side measures 24 cm , the two long sides 34 cm . It is also used as a fan and fly-chaser.

Against infestation by rats, they use large rat traps whose construction is unique to Tobi. They have been encountered on Pur as foreign objects, and there they were specifically designated as Tobi traps, teziz iri ga touei.

To transport fruit, the people like to use a carrying stick, chamauri. A collected piece measures 190 cm with a diameter of about 2 cm and is made of coconut palm wood, dug. It seems to have been a spear originally.

Although not belonging to household furnishings proper, a child's toy will be mentioned here-the only one observed and brought back. It is a kind of wheel, a round, thick, cylindrical piece of breadfruit wood with a hole the middle. The thickness is 5 cm , the diameter 10 cm , that of the center hole 3 cm .

Terms for household items and technology after A. Krämer.

| torch | tor | basket | tsög; ereis Ham. |
| :---: | :---: | :---: | :---: |
| cooking pot, dish | tagak, lau Ham. | large basket | tangaik |
| wooden bowl | tabi | small basket | gerais |
| large wooden bowl | ierap | mat | tsob |
| small wooden bowl | togoutol | loom | teg |
| food ladle, spoon | itit; perik Ham. | weaving mat | matsi |
| needle | teet (?) | iron blade | tebeseke |
| wooden roof needle | toutou | Tridacna blade | basuk |
| drill | bukabuk, (bagangere biobi) | rope | tar |
| file | keake | cord, coconut | gorogor |
| axe | tere; tauofil Ham. | fishing line | iao |

cooking pot, dish wooden bow small wooden bow food ladle, spoon needle
drill
file
axe
weaving
tor
tabi
ierap
togoutol
it; perik Ham.
toutou tere; tauofil Ham.
garamal aus iagoma, fasifes
sög; ereis Ham
ang
tsob
matsi
tebeseke
tar
iao

Fig. 131, No. 4765ㅍ. Toy canoe, tegak, with half-spherical outrigger gear Canoe length 117 cm , height 9 cm , width 5 cm . Outrigger beams 38 cm ,
short crosspiece above the boat - here the mast step - 4.5 cm , crosspiece in front of the boat 9.5 cm , large lengthwise brace 55 cm (including its curvature), outrigger arc approx. 9 cm , pontoon, length 46 cm , height 7.5 cm , width 8 cm , height of forks 2 cm , height of mast 68 cm .

$\square$
$\square$

Fig. 132, No. 4766". Toy boat with mast of poplar wood Length 86 cm , width 5 cm , height approx. 8 cm , length of beams 32 cm , angled poles 40 cm , mast step $4 \mathrm{~cm}, 1^{\text {st }}$ lengthwise brace $49 \mathrm{~cm}, 2^{\text {nd }}$ lengthwise brace $27 \mathrm{~cm} .3^{\text {rd }}$ lengthwise brace $111 / 2 \mathrm{~cm}$, pontoon, length 39 cm , width approx. 6 cm , height 7 cm , fork length 4 cm , mast, length 35 cm .


## 4. Canoes and Fishing

The canoes of Tobi are extraordinarily seaworthy, well-built and agile vessels that draw little water. They can hold 12 to 20 people and are fitted with sails as needed. In this case, they can reach quite high speeds. Holden claims hat they were created with great effort from washed-up tree trunks, since there were no trees sufficiently large on he island itself. If his report is not entirely based on a misunderstanding, it must refer to an exceptional situation brought about by a natural catastrophe, because none of the later visitors ever doubted that the canoes were built of native woods. In addition, the abundance of vessels at all times speaks against this suggestion.

The canoes are one-trunk vessels with outriggers and a rail matched to the thickness of the trunk. On average, the canoes are 9 m long and 80 cm high. The outrigger is firmly attached to the canoe hull and unlike on Palau is not removed when the canoe is pulled ashore. Regarding the form of the outriggers, two types can be distinguished among the toy canoes obtained on the island. The half-moon shape seems to be the more common on utilitarian boats, and Hambruch mentions only this one.

The toy canoe No. 4765 II in Fig. 131 has an identical bow and stern. The outrigger beams are attached so that they protrude significantly over the rail. On the outside of the canoe's shell facing the outrigger, a short lengthwise piece of wood is found under the outrigger beams. About midway down their length, the long, strong outrigge pole is attached lengthwise; it is lashed fast under the beams. Not far from bow and stern, the bent angled poles that form a half-circle arc to the middle of the pontoon are attached to the edge of the canoe. On the toy canoe this arc is made of a single piece of wood and lies under the beams and the long cross-brace. At the center of the canoe, the beams are connected by a short, lashed-on crosspiece. The pontoon has four forks, which are held in a notch and hold the ends of the outrigger beams. The mast is let into a short crosspiece that is attached to the side of the canoe opposite the outrigger. The second toy canoe, No. 4766, Fig. 132, possesses a slender body with a sharp keel running all the way to bow and stern, and is well sprung. The outrigger gear consists of two outrigger beams, three crosspieces and two angled poles. Eight pegs, let into the pontoon, form the forks and hold the beam ends. They are lashed on with coconut yarn. The other ends of the beams rest on the rail, where they are also attached with yarn that is pulled through small holes in the hull. To prevent shifting of the outrigger gear or loosening of the lashing, two angled poles are added which are fastened onto the rail on the lee side on one end, and onto the crosspiece in front of the pontoon on the other. The short crosspiece above the canoe serves as the mast step.
 haft diameter 3.5 cm , blade length 80 cm , width 25 cm .

The mast is supported by a forestay, aft stay and luff stay. Sometimes they make do with only two stays. The luf stay runs through a wooden holder, uariengalap, located on the end of the outrigger beams. But by no means all vessels have such equipment. Some canoes also have a top attachment, oa sibir. The luff stay and forestay are knotted together at the mast.

The triangular sail is sewn together from 19 mat strips whose weaving techniques are identical to those usual in the women's dress mats. The material is pandanus leaf. The seams run parallel to the mast. The free edge of the sail, the leach, is called danimat. It is tied to the mast with short lines, faufaur. Individual loops, called bobu, also run from the sail around the boom. Here there is also a small and a large sheet, morirap and moritsi. The Tobi people use paddles,' ${ }^{\text {n }}$ uatir, of simple shape and without any kind of decoration. The paddles visible on the picture taken by the expedition seem to have significantly narrower blades than the collected paddle pictured here. Thus is uncertain whether this one is an exception, or whether those on the picture are a bit distorted, but this fact should be pointed out. The paddle No. 78 is made from a piece of breadfruit wood. The short, cylindrical shaft, ezar, ends in an unusually large blade, tobur. Center ribs, with the profile of a low ridge, reinforce the blade, which is concave on the inside and convex on the outside, on both sides. Bailers were neither collected nor described.

Description of a canoe and its parts after A. Krämer
boat
small one-person canoe
toy canoe
boat hull
inside
bow
stern
bow attachment
stern attachment
keel
middle part of the canoe space for fis
rail attachment
lattice between hull and long lengthwise outrigger pole, often with fireplace paddling seat
pontoon
outrigger beams
small lattice between canoe hull and first lengthwise outrigger brace short lengthwise outrigger brace
outrigger half-moon
long lengthwise outrigger brace
large lattice between the $1^{\text {st }}$ and $2^{\text {nd }}$ lengthwise outrigger brace short outrigger crosspieces above the pontoon
pontoon fork
fork holes
trusses between outrigger crosspiece and pontoon
sail
iil strip, dress
leach
oa oa tsosamar
tegak uatir moar, tsimar a baug mugir or moar poeg eri moar poeg eri mugir gapir far diran vagaf do dam, tam kio
tsoriba rongoninieremot
matakafan eobata rot iganot and tsa ngiri veten bie bie tam iapit oa sibir, uch oa sibir uras
danimat

1 In addition, a richly carved paddle washed up from New Guinea was obtained. The richly decorated blade and the shaft which ends in a tanig human figure are made of one piece. The shaft ends on both sides of the blade in a center rib. Length 190 cm , blade length 45 cm , thickness at the joint 35 cm , diameter of shaft 25 mm , length of the figure at the end 15 cm .

| mast | gosugos |
| :--- | :--- |
| boom | nim |
| line for tying to the mast | faufaur |
| line for tying to the boom | bobu |
| large sheet | morirap |
| small sheet | moritsi |
| mast | gans |
| mast hole | bie bie ngans |
| fall =line that goes through a pulley to raise sail (halyard) | ugach |
| luff stay | iengalap |
| forestay, aft stay | tagets |
| holder for luff stay on the outrigger | uariengalap |
| paddle | oatur, uatir |
| The natives know the following types of fishing: |  |
| 1. fishing with rods |  |
| 2. fishing with nets |  |
| 3. fishing with a fishing kite |  |
| 4. fishing with traps |  |
| 5. fish driving |  |

hook tip with barb
side surfaces
top end
lower point, opposite the tip
hole
fly
lashing (crosswise)
leader
supporting sticks
natari pae
kano ueri zon
achach
zuari p

For a fishing rod they use a bamboo pole. The pole in the Hamburg Museum is 3.64 m long and has a diameter of 5 cm on the handle end, and 1 cm at the tip. Two fishing lines of breadfruit raffia 4.80 m long are wound wound this fishing rod. A compound fishhook, its spoon broken, is tied to the end of one. The hook of the other line is completely lost. The people call the rod uao or vaur, and the line gau.

The simple fishhooks are used on the open sea. The natives go out with their boat, preferring to set a sail. The small tortoiseshell hooks are used for catching $k i o$ at a depth of 3 to 4 meters. In this case, hermit crabs are used for bait, umen or bar. The other fishes caught with hook and bait generally live at a depth of $100-500$ fathoms Spiderweb bait, lito bogaga, is very popular; it serves mainly to catch the highly feared garpike (belone). It often causes injuries during a fish drive, and some are said to have died, while others were saved by a medicine. The say that even the great whale, gas, fears the large belone, called mag. Other bait fish are

| choukos $^{1}$ | gafis | dochu $^{2}$ |
| :--- | :--- | :--- |
| varag | vororum | ariuoro |
| iogon | igeraro | mor |
| mataitsa | gausik |  |
| mos | legareg |  |
| vachaubir | chanap |  |

According to Hellwig, the last three most prefer to take the tortoiseshell hook. The shape of the hook correspond to that of the decorative hooks already described. The main difference lies in the fact that those not destined for practical use are not completely cut out. On the fishhooks, the end is furnished with a groove for easier fastening of the leader, and the sides are widened. The tip which is bent inward, is found with and without a bab The material is tortoiseshell or shell. In the past, they also used wood (coconut shell) and as early as Holden's time, iron as well, though with little skill (cf. p. 13). The tortoiseshell hooks are called gau boat or gau bos (Hellwig); the large ones with barbs, bauk (He.) or gau bot (Kr.). These are used for catching the kerangep togu. The smal, friangular, pointed hook gae is used for all kinds of fish. Aperietau is purely a designation for an ornamental hook gau tike tagag is a hook of coconut shell.

The use of dragging hooks, called egeg, is unique to Tobi. A single man in a boat suffices to practice this method of fishing. While paddling slowly forward, he drags a large tortoiseshell hook on a longer line in the water behind him. The bait is simply the end of the leader. The fish caught in this way are the foot-long red mar, the magabu, black with white stripes, the lipau and tsepotam.

The simple, larger hooks are also used with a sinker. Using short cords, a few hooks are fastened at intervals to a long line, eau, of eroma, an Urticacea.
A According to A. Kramer.
2 According to Hellwig.

The sinker is at the end of the main line. Smaller fish serve as bait. The line is let down to the bottom; they catch he 1 - to 2 -foot-long red bare this way, probably the Pomocentus. They call this kind of fishing eau tsio. See Fig 141.

In the same way they also use large individual hooks of wood or tortoiseshell with barbs, called kamtserigon; their fishing line also has a sinker. This fishing method is called firon. The fishing kite, Kr. atseig or gatseig, He. dori gaiieik, is also frequently used on Tobi. The rod is a bamboo pole, bohau, 2.60 m long, that is further extended by a stick of breadfruit wood 1.30 m long stuck into the opening. The joint is firmly wound around with coconut yarn. In the same way, cracks in the rod are held together at four separate places. The fishing kite is used from a boat or standing on the edge of the reef, and it catches the large and small belone, mag and gafereika. The kite, Kr. tsae, He. dao, is a breadfruit tree leaf prepared in the usual way. ${ }^{1}$ A long coconut cord, Kr. eanigots, He. iau goes through it. One end is fastened to the rod, the other carries the bait, Kr. lito bogaga, He. to ni dobuage, the spiderweb. A long cord encircles the rod, forming long loops, tongon, at intervals. The cord running through the kite now runs through these. According to a sketch by Krämer, there also seems to be a hand hold, sirara, tied to the rod. When the pike lunges up for the spiderweb bait, the saw-teeth on its sword get entangled in it. Since the ine is extremely long, the kite dances at a great distance from the towing boat. When the fish has taken the bait, he line must be taken in very rapidly.

Fishing with nets, $u g$, is done from a boat with throwing nets of various sizes, in shallow water with handheld hets e.g. during a fish drive, and in deep water with sinker nets.

Fishing with the large throwing net, ua rei, is done from a boat. It is made of coconut twine and has a mesh of 5-8 cm . It can measure $11 / 2-2 \times 100-200 \mathrm{~m}$. The net edges are called gatig, the holes aveid (He), matamatar (Ham.), the net knots bugebuge, the edges chorochor, the wooden floats apes, the coral sinkers vaser. With these, they hunt he foot-long gor and the 2 -foot-long geniki. They say it is also used to catch Mugil, iaok, and bachi. The smal stationary net, parasagid, is only 50 cm wide but $51 / 2 \mathrm{~m}$ large. The mesh size of this net, knotted of breadfruit affia, is about 1 cm . The coral sinkers are $1-5 \mathrm{~cm}$ long, the small floats have an average size of 5 cm .
Handheld nets occur in all sizes. They are called tsou and in addition the name of the fish for which they are intended. Except for fish drives, they are used mainly for torch fishing at night, terimet, where they are manipulated either while wading or from a boat. The frame has three or four parts. A fork is attached to the handle-either tree crotch or two bent sticks. It extends to the middle of the oval frame. The other half is formed by two bent sticks that overlap at the upper edge of the frame and are firmly tied together; their other ends are tied to the end of the wooden fork. The net attached to the frame has a relatively fine mesh and one or two corners. The knots are executed without craftsmanship and rather sloppily. These nets correspond exactly to the Songosor and Pur nets in Plates $5 / 1$ and 4 . The net itself is made of breadfruit raffia
According to their function, which also determines their dimensions and mesh size, the natives distinguish various ypes whose names in part agree with the designations used on the neighboring islands.

Terms:
tsou Kr., huuch Ham., tieu, ieu, to nanu uhare He
fine-meshed handheld net with narrow holes for small fish net for catching mangag, Exocoetus.
net for catching mag by torchlight
the same for small fish
net with two corners
tsouri mangag A. K
tsauri gou A. Kr
tsauri gou A . Kr .
tsou tirimata
kapiri He .
irivau, girivau, gochoma He

## mar (Ham.)

bar, iubar, ebare, vauvaure He., favol (Ham.) hati, vauvaure (He.) chapar (Ham.)
vauvaure He .
monoro, patapatar (He.)
The sinker net, ven, fen, is manipulated from a canoe. It is swung overboard on a line that is fixed around the mast or in some other way, or even simply held fast in the hand, and is sunk underneath the surface of the water As soon as a fish touches the bait, it must be pulled up again with a jerk. If the fisherman is not quick enough with this maneuver, or misses the right moment, the fish escapes. It consists of a round frame. A cord is attached in two places on each side; it is knotted together farther up, and is tied to a very long sinker line of coconut yarn, The net is very wide-meshed and has two corners. A cord is stretched over the frame with a loop to hold the bait above the middle of the net at the height of the frame. Two lines drop down from the frame; they are knotted into the net, hang freely, and carry the sinker on an extension. See the fig. in Vol. I, Fig. 15

Terms:
sinker net
frame
frame lacing
net
hanging cord
bait
bait loop
sinker
sinker line

The Tobi natives use astoundingly large fish traps, garaits or bieu, Sarf. ueb. See Plate $15 / 2$ and Plate 19/1 Until they are used, they are left to stand free on the beach under the shade of the first trees, and they are sunk into the deep out in front of the reef on a very strong line. They are put together from very strong wooden poles of Eugenia, fariep, with coconut yarn lashing. The entrance is under a protruding roof and walls that slant outward and also protrude significantly from the entranceway. It is much wider at the bottom than at the top, and gets narrower toward the back. The roof is shallowly vaulted. They are furnished with an anchor when they are sunk The measurements of the trap depicted in Plate 15 are: total length 255 cm , front 114 cm , rear 120 cm , height in front 64 cm , in back 66 cm , height of side wall midway down its length 67 cm , height of the front midway dow its length 76 cm , height of the rear midway down its length 76 cm , entrance height, width at top 18 cm , width at bottom 53 cm , protruding part of the roof 27 cm in the middle, diameter of one wooden pole $12-15 \mathrm{~mm}$.

To recover the traps from the deep they have a special tool, haruuenigech. A pole, mesid, of about 40 cm , flattene in front, has three just slightly longer wooden tines, ureaugor, placed around it and encircled with a few loops line, uep; they are bound tightly to the pole. The tool is tied to a thick, strong rope, tari, and when it is let down it catches in the rough wooden poles of the trap.

From time to time the natives organize a great fish drive. The old people call together the young folks, armed with driving clubs. At the time of the expedition's visit, everyone gathered at 9.30 pm on the west side. About 200 people participated. Around $2 o^{\prime}$ clock the tide had gone out. The people had surrounded a fairly large area of the


Above: local canoes around the island. Photos A. Krämer. Glass plate scans, Hamburg Museum.





Below: Village people participating in the great fish drive, on the west coast of the island. Photos A. Krämer.


the large hand-held nets described above. They do not have, or no longer have, fishing spears, cham meri or gasik They say they were made only by the woodworkers, and the missing tool is due to their absence, or dying off The spear found by Hambruch is supposedly the only one of its kind. It is made of coconut palm wood, 2.95 m ong, diameter 2 cm , smooth, broken in one place and repaired by wrapping with cord. The catch is usually very bundant and is distributed to all inhabitants. For the most part, Caranr, Mullus and Belone are caught.

Turtle hunting brought very few results in Holden's time and currently does not seem frequent either. Nothing more could be learned about sea cucumber fishing than the native name, periper

## 5. Tool

Plaiting is completely in the hands of the women. They do the same work as on the neighboring islands. As is the ase there, coconut and pandanus leaves are their only material. The objects created are mats of varying types roof mats, sleeping mats and the women's dress mats; further, bags and baskets, of which some are plaited in a single-woof pattern (la over lb) and some in a double-woof pattern (la over 2b). The angle at which the strips cross can also vary: it can be right, acute, or obtuse. The only aid they have are plaiting boards. The strips ar obtained by splitting the leaves with sharp knives of shell. The roof mats are fastened to the lattice with large needles (according to Hellwig). The roof mat needle collected on Tobi is carved from hibiscus wood and is 21 m long and 13 mm in diameter at its thickest point. At its head, there is a notch aimed at preventing the "sewing read" from slipping off


Fig. 144, No. $99^{\text {" }}$. Roof mat needle, totirim, of hibiscus wood with a notch to prevent the thread from slipping off. Length 21 cm , diameter 13 mm .

## Terms having to do with plaiting:

plait
bend
split
pabiscus
banana raffi
coconut lea
breadfruit raffia
plaiting board
roof mat needle
top of plaiting
edge
plaited strips running parallel to the edge single-woof plait
basket edge
braided closure in baskets
scraping knife
shell for splitting
bags and baskets
According to E. Krämer, vats is th


Fig. 136a, No. $4215^{\text {II }}$ Length fig. 136 cm , width about 1 cm Fig. 136b, No. $4215^{\text {II }}$. Length 3.3 cm , width 2.5 cm . Fig. 137, No. $4214^{1 \prime}$.


Fig. 141. Fishing line with
beach, and as the water receded they killed the fish that had been chased back with the clubs, or caught them in


Fig. 143, No. 107 ${ }^{\text {II }}$. Tool for recovering large fish traps, haruuenigech of wood and rope. Length 40 cm .

Fig. 142. Schematic drawing to explain the construction of the fishtrap.


| pandanus-leaf basket | tugudob E.K. |
| :--- | :--- |
| finely plaited basket | zugounud E.K. |
| roof mat | ias E.K. |
| pandanus sleeping mat | bob, tuop, tob E.K. |
| coconut-leaf sleeping mat | souari, iroiie E.K. |
| from one half | giri E.K. |
| from two halves | dabochanE.K. <br> ribs in the center mesovor E.K. |
| double-woof mat | iapeoueri E.K. |
| single-woof mat | vasivasietag E.K. |
| woman's dress mat | vitiviti E.K., iep vitiviti, vorior A.K. |
| small mat piece on a pregnancy mat | iamaiE.K. |

small mat piece on a pregnancy mat

Weaving is done only by the women. As on Songosor, the only product is the men's modesty belt of banana fiber (more rarely hibiscus raffia) with black patterning by incorporating hibiscus threads. ${ }^{1}$ The loom consists of loose pieces of wood. The warp is held under tension by the worker, who squats with her legs pulled up, holding the breast-beam, which is attached to the weaving belt, on her lap and moving so far away from the warp-beam, which is fastened to the house wall or placed behind two posts rammed into the earth, that the warp becomes taut. She sits on a mat, the loom is also placed on a mat underneath, and she spreads another mat over her lap, on which the breast-beam and the warp rest. For the production of the plain, simple, single-woof belts, a loom is sufficient that consists of:

## breast-beam <br> heddle-rod <br> separating rod <br> warp-bean <br> $\begin{array}{ll}\text { warp-beam } & 7 \\ \text { sword } & 2\end{array}$

shuttle
guiding pieces 8
For patterns, four further pieces 3 are necessary. They go between the separating rod and the cross-rod. They warp the threads over a coconut mat. 5 stakes are rammed into the ground (through the mat). To keep them in a line, at the beginning a cord, dzidzere, is wound around the first and the fifth. During warping, the pieces of wood for the breast-beam, heddle-rod, separating rod, warp-beam, and cross-rod follow as they are listed here, so during warping the cross is at the end. The warp begins at the heddle-rod, and the cord is pulled over it with a heddleeye. For example, the cord is laid under the warp thread to the left of the heddle-rod piece. Coming around it, it is pulled to the front. In the next round, the warp thread does not get encircled. In the following round, the cord is laid under the warp thread to the right of the heddle-rod piece, brought around it in the same way, and brought back to the front over top of it. Another round without encircling by the cord follows. In this way, the cord goes back and forth, always staying in front of the heddle-rod piece and grabbing the warp threads alternately from the right and the left. The warp runs in front of the breast-beam piece, behind the heddle-rod piece, in front of and behind the separating rod piece, in front of the warp-beam piece, behind the cross-rod piece, runs around it, and on the return, crossing over itself and forming the cross, it now lies behind the warp-beam piece, separating rod piece, heddle rod piece, and breast-beam piece. This way of warping is sufficient for the plain belts or belt parts.

Now the warping pieces must be replaced by the loom pieces, and the warp is then moved $90^{\circ}$ and brought into he horizontal position.
The plain belt that was obtained, He. 674, has warp and weft of hibiscus raffia; the patterned belts, with the exception of the black wef threads, have only banana raffia weft

First, a wide, flat board, the warp-beam, 7 , is inserted in place of the first wooden piece. Then the board that deeply notched at both ends, the breast-beam, 1 , is inserted between the separating rod piece and the fourth piece, and then the fourth piece is pulled out and then the third piece is replaced by the separating rod, 5. Special care must be used when replacing the second piece, the heddle-rod piece, with the round heddle rod, 4. During the setup and preparation, the separating rod and heddle rod are tied together at both ends. The last piece is replaced by the cross-rod, 6 . The weaving belt is looped around the notches of the breast-beam, and the weaver can begin her work

Before she begins the weft, she opens and closes the heddle and separating compartment and places three or fou thin, flat sticks, 8 (leaf ribs or bamboo strips) crosswise into the warp. These rods, over and under which the warp threads run, alternating singly, are there to prevent the warp threads from shifting sideways, and also serve the weaver as guiding pieces as she now puts in the first woof threads of white raffia. After a white, single-woof piece about 1 cm wide has been created, the weaving of the patterned section, which is found at both ends of the finished belt above the fringe, begins; the fringe is formed by cutting open the last bit of the continuous warp down the middle, rather than filling it with weft. The loose ends of the warp threads, which are not fastened on Tobi, form the fringe. Now, according to the type of patterning, two kinds of weaving processes can be distinguished. The continuous black-and-white sections are woven, ateig, while the open ones are plaited in, with the black plaiting thread covering the woof thread. Plaited weaving is called tiuetip. All black-colored material is hibiscus raffia even in belts of banana raffia. As the individual pattern requires, simple single-woof parts alternate with blackwhite weaving and plaited weaving. In every case, however, the patterned sections lie at the beginning and end of the work; the middle is formed by a long, plain section. To produce the ateig sections, new compartments, 3 , and a fine, sharp rod, the tinetip, are necessary. It is used for bringing up the required warp threads. The stitching thread is threaded through a needle with a hole and pulled through with its help.

Terms regarding weaving, after E. Krämer:
to weave
to plait-weave
to weave from the left
to weave from the right
to tie on
to split raffia
breast-beam
peg on breast-beam
weaving belt
loops on the belt
warp-beam
posts for holding
small wood pieces before the woof is put in
heddle-rod
heddle
separating rod
cross-rod
sword
auxiliary wood piece
töach
liuep, tiuetip
mauorei
magöitei
bugosi
tara
$b a b$
meiauar
denitoch dazi He.
meior chomon He .
bab a netaguk papaneto He .
dzitoch
asouasop
uaringün uarinu He .
ngün
topan tapan He .
uarïrï anitor He .
aupope He .
aupop
ateig uarinu? uarulut He .

| pointed stick | tiboimera, tinetip |
| :--- | :--- |
| hibiscus raffia | girifog |
| banana fiber | uidz |
| black hibiscus raffia | dziem |
| warp | obomogeri toach |
| weft | iuach |
| patterned section | tib, egisau |
| smooth section | toach |
| needle for plait-weaving | atei tibatiba He. |

atei tibatiba He. Ropemaking is done only by the men. It is unclear to what extent they are also involved in the preparation of
the material. Probably they are usually relieved of this task by the women. To separate the fibers, especially the fibrous layer surrounding the coconut, a beating stick called susurügot is used. The one pictured here is a flattened cylinder and tapers toward the handle. It has two beating surfaces, one flat, the other half-round. The notch at the handle end serves to hold the hanging cord. The more delicate fibers, such as banana and hibiscus raffia as well as breadfruit raffia, are prepared with shell knives and scrapers.



Fig. 146, No. $93^{\text {II }}$. Beating stick, susurügot, of coconut wood to beat coconut fibers. L 45 cm, w 6 cm. Fig. 147 , No. 55". Ropemaking utensil, sereioch. Two hibiscus sticks, seriöch, are tied to a coconut wood stick 119 cm long, chem, 18 cm . ia. $1.5 \mathrm{~cm}, 1$ of crosspieces 18 cm .

Three different pieces of equipment are used for ropemaking. For heavy rope they use the cross-shaped wooden pieces with cylinders that are described in detail for Songosor, and that are customary on Yap.

|  | Hambruch <br> utensil | Hellwig <br> eburifigifin |
| :--- | :--- | :--- |
| aiteripiripit |  |  |
| rod | taberigach | bauba (bamboo) |
| cylinder | uarubar |  |
| crosspiece | saritigifin | epau |
| tip | seuupu | toboi, sugubur (butto |

lashing
The second ropemaking utensil is called sereioch. It consists of a cylindrical, tapered pole of coconut palm wood, onto whose thick end two small sticks of hibiscus wood 18 cm long are lashed crosswise with cocout cood cords are wound onto the crosspieces, the end of the rope is attached to something, and the ropemaker, walking slowly backward, slowly unwinds the rope while turning the tool, so that the cords wrap around each other. The hird tool is shaped like a butterfly and is called sreitech, which presumably is the same term as sereioch. Each half of the flat wooden piece has three holes, through which the cords are probably run during ropemaking. Two such utensils have been collected. Their use could not be observed. The tines on the lower edge are called batur, the holes biabia, the grooves in the center etoporozig, the notch at the top etopor.

The finished yarn or line is wound neatly into balls and is also traded this way, a very desirable article for trading with ships. The ends of the thick coconut lines are prevented from unraveling by encircling them with hibiscus raffia.
ball of light rope
hibiscus cord
breadfruit cor
as a ball
ball of thin coconut cord

A few terms:
a tuchum neteri He .
gerivo He .
chorochor, He.; iochoma or eachut He .
tu un oro oro He .
orugataii

The technique of knotting also seems to be entirely in the hands of the men. They produce their own fishing nets and in addition produce net bags exactly like the Songosor bags in Plate $5 / 2$. Here they are called terev; the edge loops are called talinar (ear). The material for the fishing nets varies depending on what they are to b used for. Usually it is coconut yarn for rougher nets and hibiscus cord for fine ones. To create a net, the yarn is wound onto the netting needles, iaaf, which are notched at both ends and have a rectangle carved out of them. The forks are called aouief. The one pictured is 40 cm long and only 12 mm wide. The flat netting wood, metatuor, which determines the gauge of the mesh, is 18 cm long and 12 mm wide. The technique is the same as has been described previously.

The weaving belts show a completely different kind of knotting technique. Unfortunately it is not known whether they are produced by men or women. The material is coconut yarn; the knotting is the same as on the Nukuor weaving belts. A very long strip is knotted, with several loops along its long sides. Behind these, the belt is cut for use, so that several belts are created. The strip pictured here is 3 m long and 13 cm wide. It is long enough for four belts.
Dyeing. As far as is known, the natives use dye for tatttooing, to color hibiscus threads for woven mats, and for body decorations and painting the spirit boats. The color yellow takes first place both in amount used and in perceived value. They call it gen or ren and obtain it, as elsewhere, from the Curcuma root, which is grown by the women in great quantities. It is always in great demand, and the yellow color is also the usual payment for the special work of the craftsmen who produce wooden utensils and jewelry. The women especially use large amounts to color their bodies and their clothes. According to Hellwig, they distinguish between a reddish and a yellow color according to the type of root, and he says the red is considered more valuable. ${ }^{1}$ The preparation is as follows: The roots are scraped on a grater over a mat. The grater, a block of coral, is called vaseritach. The gratings fall onto the mat, where they are moistened with rainwater. Usually a woman's dress mat is chosen for this task, since it has the finest weave. After it has been sufficiently moistened, the mass is wrung out over wooden dish (Hig. 78) or is passed through a sieve, fegerigan, see Fig. 73, Part I of this volume. In another place he says that the color looks yellow on light-colored objects, and reddish on the dark skin of the people.

The frame is called garifen, the net ranifen, the handle baurifen. Then this pulp is poured into coconut bowls, and hey are placed over a moderate fire. During cooking, frequent stirring is necessary. Gradually the superfluous water evaporates. For final drying at the end, the bowls are placed in the sun. To use as a dye, the yellow powde extracted by this means must be mixed with the juice of young coconuts. This is obtained by scraping the meat which is then wrung through coconut fibers. The mass is simply applied with the hands to the objects, mats or fibers to be dyed.

According to Hambruch, they also use a sieve for this process like the one described and pictured on Songosor for producing mogemog flout.

## A few terms:

unprocessed Curcuma root
ren bowl of coconut
finished dy
ren pre
frame
frame
net
pressing the ren
parach Ham.
tabi ren Ham.
ren Ham.
fegerigan Ham
garifen Ham.
rarifen Ham.
baurifen Ham.
$u r$ Ham.

The black dye to color hibiscus raffia is an earth color. From time to time, usually in May and June, it is washed up in the roots of the sago palm, saksak, from the Philippines or the rivers of New Guinea. They call it podz According to Hellwig, they soften it with rainwater and mix it with the expressed oil of old coconuts. The dyeing is done either by immersing the hibiscus fibers in the liquid, or by applying the colored earth by hand and following this by pouring the oil over. According to E. Krämer, the dyeing process for the fibers is much more complicated: The leaves of the kiri (red Terminalia and red fruits of the Cornelian cherry are both called kiri!) are ground between stones and pressed in water. First, the fibers to be dyed are placed in a dish full of pounded coconut husks and kiri, leaf water, for three days, then for four days in water of podz, pounded agariburodz (a typ of bean) and taoeripotz (leaves of a plant). Finally, they are hung in the sun to dry.
They obtain the dye for tattooing, boroto, through the gradual charring of good, fresh nuts of Calophyllun inophyllum, savan. Many of them at once are placed underneath upended coconut shells over a wood fire. They burn for one day. On the next day, the soot of the charred nuts is scraped out of the shells. This dye must be mixed with water.

Woodworking, which according to the natives is practiced only by certain workers, the senepes, but is most probably also understood by other men, is done with the help of axes, hatchets, chisels, etc. For smoothing surfaces they also use shells. The material is native trees: breadfruit tree, coconut palm, Calophylum, poplar, and others, and any washed-up wood that is at all usable, especially bamboo and cork, asanap. Wooden utensils that wash up are also re-worked. They make a cut all the way around the native trees and then get them to fal by means of a wedge cut halfway around the perimeter. In the past, when only the shell axe was known, the tree runks for making canoes and chests were hollowed out with fire, 'but they claim that felling trees with the aid of fire was never practiced.

The old hatchets have a handle at an acute angle, onto which is fastened a blade of Tridacna gigas. For this purpose the hinge section or one of the convex shells was selected. The natural concavity was formed into a triangular When two young men made this statement, an old man disagreed. But they were not swayed: fire make hole, wiawiar; wor (axe) work finish!

Fig. 148, No. 118 Ropemaking utensil, sreitech.

Fig. 149, No. $4071^{\text {II }}$. A roll of coconut rope for trading purposes. Height 30 cm , diamete 17 cm .


Put

Fig. 150, No. $116^{11}$. Netting needle and mesh rod, iaf, of bamboo. Length of needle 40 cm , width 12 mm length of mesh rod 18 cm , width 12 mm .

Fig. 151, No. 4300. Sample of work in knotted weaver's belt.
Fig. 152, No. $4300^{11}$. Strip, 3 m long and 13 cm wide, knotted from coconut yarn. When it is cut behind the loops, it yields four weavin belts, tanitoch.


Fig. 159, No. 73". Boring drill, sireli buruch. The square vertical rod, 52 cm long and 12 mm in diameter, which 5 sharpened at the bottom and pierced at the top, has a crosspiece 18 cm long on its of the flywheel (diameter 28 cm ) is a carving in the form of flower petals enclosing the hole through which the vertical rod passes. A cord is wound around the rod under the flywheel to prevent its sliding downward. The drill sliding downward. The drill
bit, an iron nail, is lashed to

blade by further grinding. Usually, the handle consists of two parts, and the elbow is created by tying together two pieces of wood, the straight handle and the extension piece. The blade carrier, usually made of a harder woodmostly Calophyllum - than the handle, lies in the groove of the extension piece. The people distinguish between blades with flat and convex cutting edges. The collected pieces display little careful workmanship.

|  | Terms: |
| :---: | :---: |
| shell hatchet | uor |
| handle | ietar, iezada, hiebag He.; ezato Ham. |
| elbow | buch Ham. |
| extension piece | bungere He . |
| end of the handle under the extension piece carrier | ieta, sechasecha He., the latter an obscene expression,He. to He . |
| head of carrier | tochotocho He. or mata He. |
| general expression for blade | tere He., Ham. |
| convex blade | uor Ham., He. |
| flat blade | $i e b a r \mathrm{He}$. |
| blade with triangular cross-section | uorigut He . |
| cutting edge | meteiri Ham. |
| lashing of the handle | vauvau He. foifoi Ham. |
| lashing of the elbow | machapi tiumor He. |

Old Tridacna hatchet blades
According to their own reports, they have had iron for five generations already. In Holden's time they were already familiar with it, but their greed for it was greater than their skill in handling it. They say they first obtained it from an English ship and named it kapbol after it. They themselves say that later captains laughed at this name, and that they did not know the real name. According to Holden's pronunciation, Pickering gives this mysterious word as pahng $u l$ and pishoo; Hale circumscribes Holden's expression with pangul and pitsu. In more recent times, ron is delivered to them by British ships and O'Keefe. They obtain iron in bars, sheets and strips and are very adept at creating chisels, hoes and other tools for themselves with the help of fire and stones. Old files make very sharp boring chisels. In general, they are very skilled in making functional tools for themselves. The necessary wooden handles are rather crude, it is true, but functional. Axe handles having older forms are also furnished with homemade or European blades, and every house possesses the requisite number of tools of this kind. For fastening and protecting iron parts they use the skin of a ray, called chin m'tete.

For the production of jewelry, they need drills, cutting instruments and compasses. The drills on Tobi are the boring drills already described in more detail in other places. They can pierce not only tortoiseshell and coconut hells, but also snail shells such as Conus. The drill bit is an iron nail or a shark's tooth. The Tobi drill picture here is interesting on account of its beautifully decorated flywheel. It should probably not be assumed that the natives fashion them in this manner for such a purpose; it is more probable that it originally had another function, perhaps as a lid. But here, too, no example of this can be found among the gear on Tobi, and so everything speak for it having washed up. The simple drills with bits of iron or sharks' teeth are the same as on Ngulu. To pres coconuts, zebuuton, for their oil they have a large wooden press, uaroro, which was described and sketched by Hambruch. A wooden block, part of a tree trunk, serves as a pressing block onto which the shredded coconut is placed on a bed of coconut fiber and taro leaves.
drilling cord
crosspiece
flywheel

Terms:
sireli buruch Ham., buobu He sirela Ham., igar He.
biabia Ham., viaviar (hole) He
atochronu Ham., ior He.
sirera He .
omum Ham., chatachonu He.

The taro leaves are supposed to catch the expressed oil, which is immediately poured into vessels. A strong, long lever, uaroro, is used for pressing; one end is rounded off and protrudes quite a bit beyond the pressing block, the other is placed into the opening of a hollowed-out tree trunk, tsitsil. The opening is large enough for the lever to be moved up and down inside it. In front of the opening is a support, irabor, a strong board whose ends rest on two coral blocks, $f a z$.


Fig. 153, No. $4287^{11}$. Old shell hatchet, uor. The hatchet handle of breadfruit wood has a short knee-shaped extension extending from the handle at an acute angle at its upper end. A shallow round groove has been hollowed out along the top. Into this is placed the hatchet lining of Calophyllum, which is spindle-shaped and flattened bit towards the blade; it is attached to the handle by coconut cords running over two wide grooves in the lining, crudely worked bade of Tridacna has a straight blade running at right angles to w de and is tied to the lower end of the lining which is carved out to match the shape of the


Fig. 154, No. $4294^{\text {II }}$. Length 10 cm . The natural convexity has been formed into a triangular cutting edge by further grinding. Fig. 155 , No. $123^{\text {II. }}$. Length 12 cm , width 7 cm . Roughly worked from the hinge. Cutting edge roughly broken out, not worked over The slightly convex cutting edge was created by diagonal grinding of the upper section. Length 16 cm , width 9 cm . Fig. 158. Length $12 \frac{1}{2} \mathrm{~cm}$.

If they ever get into the situation of having to produce fire, they use a fire saw, chai. The piece pictured here is made from drift bamboo. The shoots at the internode have been left standing. The large piece serves as a base, the narrow bamboo rod as the saw, rarorief. The work is not easy; it requires three men: one to hold the base, the other two to saw back and forth. Frequently the effort fails, since the bamboo may be rotten or not quite dry. The large bamboo piece is placed on a bed of dry leaves. Then its surface is scored with two crosswise grooves and then a lengthwise one crossing over them. For this they use a piece of shell or hard wood. First the bamboo s sawed through with great pressure on the first cross-groove; smoke is produced, and the glowing sawdust falls onto the dry leaves, where it is fanned to a flame by careful blowing. Usually, however, the second cross-groove must be sawed through also.
tool to aid in harvesting should be mentioned: a breadfruit picker of breadfruit wood, 4.50 m long, onto whos ip a piece of reed has been lashed at an acute angle. They climb the palms by means of steps hewn into the trunk, using foot bands as aids.

Fig. 163, No. 133 ${ }^{\text {II }}$. Breadfruit picker. Length of reed: 27 cm , length of pole: 4.50 m .



Above, aquarelle by E. Krämer, spirit canoe in spirit house fare kikak.






Tobi men. Photos taken on Palau by Paul Hambruch. Glass plate scans, Hamburg Museum.



| iegaiei | hafasafas | Iits | Its | kangitsir | marekengitsir | luk | ruh |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| iegoma | yohoma | ikera | ihera, iheratsah | kapiri | hapir | lusa bagaga | tabuhaha |
| iegon | yohong | ikera, ganei | ihera, haneiye | kareparemom | haraparamamu | ma | ma, maho |
| iegotsogots | iyehotsohots | im epat ig | ime patsih | kasitog | hasitoh | machabachaparog | mahapahaparoh |
| iekakep | iye hahep | imam eamo | imeiyamu | kat | kati | macham | maham |
| iekau; atogunu | iyekau, hatatunu | imarat; tai metag | imarat; tei matah | katkateri gatam | katiri hatam | magakes, magakis | mahahus |
| ielat | iyemohor | imari masek | imari masuh | katsap | hatsop | magam | maham |
| ielimat | yahamat | imaripar | imeripor | katsivara | hatsafaraho | magoitei | mauhoutei |
| iemaiseis | iyemaiseis | imaseka | im sehe | katzefas | hatsefash | maker | maher |
| iemaisois | iyemasois | imauai | imouwai | keikukomar | heihuhomar | makkah'kes | mahahus |
| iemangau, iagusu | iyemangau, iyehusu | imei eai | meiyai | kein, gin | hin | makkrazm (palauan) | hahifou |
| iemaugudz | yemanguts | imera pitek | imeri pitehi | kein, gin | hin | mame masune; marenup | mani mosuwe; marenap |
| iemerat | iyemarat | imeri koko | imeri koko | keiraro, tsike maitona | hairaroh | man | mang |
| iemetak | iyematah | imeri nibor | imeri nibor | keiraro; tsike maitona | hairouroh; tsuh maitona | manga, mangan | mangau |
| iemis | iyemis | imir | emir | keirourog | heirouroh | mangou | mangau |
| iemogo | iyemoho | imoso | emosou | ker | her | maningis | maningis |
| iemogotipei | iyemohotipei | imotsorion | imetsoriyong | ker beu manga | her hobe mangau | maniren | marureng or hotsou |
| iemor | iyemor | ingetsich | ingetsih | kere samar | her semar | manivetiri | maniworifetir |
| ienag | iyenau | ioba | iyeba | keripei, ker, krupoin | kuripei, kuu, kurpoum | man'tee mate | faiyn |
| ienana | iyehangahang | iobetei; ibetei | iyebatai; ibatai | kikik | keri | manuur | imenur |
| ienau | iyenau, ynau | iochoma | yohoma | kio | hio | mapoigera notogo | mepouri notoho |
| ienegogar | mohohari | iogeruk | yeuut | kiop | hiop | mar | mar |
| iengalap | yengarap | iogog | yohoyoh, yohong | kiri | hirihir | maragagau; (salt) | marehahau(sor) |
| ienimo | iyemoho | ioi teringar | youteringar | kiri | kir, uwatsirihet | marakaraiie | marakara ine |
| iep | уep | ioik | iyouhu | kirifarekotogot | tsirifarihotohot | marenap, irekeri mar | marenap, irekiri mar |
| ieper, iepereig | iyeper; ihapereih | iokuen | iyehun | kirifoi | hirifou | marikech | maruheh |
| ieper, itaitau | iyeper, etaitau | iongogu | yangohu | kirio | hiriyo | marikir | merihir |
| iepungetu | iyepungutuh | ior | yor | klo wayzer'ris | nihotsopos | masarug | masaruh |
| iepupun; sogizoch | iyepupung; sohosoh | iori fed | yori fen | kobo faichi | hobe faita | masek, masek uor | masuh, masuh iywor |
| ierap | iyerap | iorigon | yorihon | kobo faichi | hobe fauhu | masirap | masirap |
| ierei | iyerei | iorubaut | sahengeri bout | koharu | kokorung | masul | masuh |
| ieretak | iyeretah | iorubut | iyoribut | kokom | hokom | masumach | fasumah |
| ierier | yariyeri | iorur | iyerur | kopito mai ia | hobito maiya | mataitsa | metetsa |
| iesag | iyetsah | iou eirae | iyouwe iraye | kororun | kokorung | matakafan | matehefang |
| iesiar, erepaizia | iyesiar; iyerap siyar | iouar, iouuei | iyawar, iyawai | kos, kus | hus | matane sir | matametsure |
| iesumevotsumar | iyesu wotsimar | ioueie | iyouweiye | kotoragei | hotorahie | matangatan | matangatang |
| ietakare titir | iyetahura titiro | iouer, matar | iye uwer, matar | kreel | (not Tobian) palauan word | matare | matar |
| ietau | iyetau | ioug | yeuho | kreel | hauka (palauan word) | matari baraki | matari parahi |
| ieteibor | iyetaibor | ipito | ibitoh | kruegu | kuruhub | matari betsur | materi petsur |
| ieter, ietei | iyeter, iyetei | irae | iraiye | kumotsi; humuets | humotsi; humots | matari feniaro | materi feniyaro |
| ietete uod | iye tete wot | irarimar | urerimar | kuou masirap | huwou masirap | matari fenieran | materi feniyarang |
| ietiel | iyetiet | iratsag | iratsah | kupei, ietedz, pitser, pe | em | matari feri bugos | materi ferebuhos |
| ietiet | teitei | iratsag iakat | iratsah iyehat |  | hupei, iyets, pitser, patsam | matari feri burau | materi feniburau |
| ietir | yetir | irekir faivil | irekiri faifir | legelipog | reheripou | matari feri burau, beioog, | legutauamets, aperifer |
| ieton | yatang | irevi;pirau; puraro | urefi; peuru; peuraroh | legutan | ruhur tsapiri hub | materi feniburau, peiy | woh, ruhutawuumots, hapirifer |
| ietsingtsin | tsingitsing | irotou | irotowa | legutauuamets | ruhutowamots | matari feri gasafa | materi ferehasafa |
| ietsou; totog | iyetsau; totok | irouro, feveta | irouroh, fefetar | lekutabar | rukur tapar | matari feri gevitsi | materi ferehefits |
| ieua | iyewa | irourog | irouraho | lepei | repei | matari feri tsamag | materi feretsamah |
| ifar | ifar | iruk | iruh | letagug | retehuh | matari ferigasafa, materi | eri bugos |
| igaga pangek | iha pengehi | isenap | iyesenap | lii | riiye, riye | mat | eri fenihasafa, materi fenibuhos |
| igai | iha | isongaker, isongakir | isongahiri | lima | rimau | matari fitogan | materi pitohang |
| igamogok igamagog, | ihamahoh | isun, imag | isung; imaho | limabuge | rimobuhuh | matari gesuch | materiheso |
| igamagog mei ibaur | ihamahoh me ibe uur | it | ite | limagh | rim | matari kesa | matari hesa |
| igamogog mei bomanga | ihamahoh me ibe mangau | itaguratsag | itohuratsah | limei | rimeihe | matari kesa, mesarug | materi hoso, masaruh |
| iganot and tsa | ihanot | itaigametach | itaihametehi | limeik, limek | rimeihe | matari maripar | materi meriporu |
| igaut | ihout | itetiuh | itetuh | limer | rimar | matari songorogo | materi songoroh |
| igeraro | iheraro | itit; perik | itit; perih | lim'mah limi | rumi | matatut; mata tir | metetut |
| ii | iye | iuia | huhau | limo, limou | rimouw | matitu | mototihu |
| iiapengach | iha pengehi | ivor | iwor | lipagar | ripahar | matotu | matotuh |
| iisei | iye sii | kamagag | hamahah | lugerum | ungerum | matsi | metsi |


| matsisik | masitsih | morikar | morihari | oreii | woreihe | rare busi tamei | rauri bisir tamei |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| mauer | mauweri | morimarch | werimah | oromar | worumar | raroparap | roroparap |
| maugar | mauhar | moro | moror | otaran | watarangi | rarou | rarouw |
| mauorei | mauwerei | moruaa | mouri uwa | otsapi | hotsapi | rauinei | raunei |
| maur | maur | mos | mos | ouse | wasei | ren | heng |
| maurigad, iratsag | mourihat, iratsah | mosue | mosuwe | pah tehik | patsih | repei | repeiye |
| me | me | mot | mot | pah tehik getehi-gee | patsihitsih | riair | riyaer |
| me mara | meira | mouer | mowar | pahng-ul | pahang | ribar | ribar |
| meda itar | meta itar | mourimes; iimes | mourimes; imes | palachalach | paraharah | ribe | ribwe |
| meda itom | meta itom | mugir | mihir | parach | parah | rigolaf | rihoyafi |
| medzoch | metsaho | muk'kah maka | mangau | paragarag | paraharah | rigou | rihou |
| megemag; maigel | mehemeh; meher | muruot | umuru wot | parnanil | panangir | rikerivognar | ruhuriwangar |
| megemek | mehemeh | mus'see | masuh | pasots, pasobos | posots; posopos | Rikerivongar | Ruhurwahangar |
| meiaki | meiyahi | nan | ngang | patog | patoh | Rikerivongar and Farik | Ruhurwahangar and Farikir |
| meiangei sirei | meyanger sirei | nan I be manga | ngang ibe mangau | pee'peeah mah'ree | pipiyeh mare | rimoton | rimotong |
| meiangei tamei | meyangari temei | nan tay makah'kes | ngang tei mahahus | pei, paum | pei, poum | ringetogor | ringetohor |
| meiarei | meyarai | nara imei | mata rimei | peian, paiian | peiyon | rog, rogo | ruh, roh |
| meiauar | meyawar | natu | hureiye | perem | pehem | rogutsari | ruhutsoru |
| meima | menima | neem | nim | pes | pes | roi | meyahi |
| meisegarire, meisegarire | meiseharire | neheki | nehehi | peuuor | peiyewoh | rongoninieremot | rongori niniyerimot |
| meiufen, meiuch | meiyefeng, meiyouh | neneseri, rau | nunusuri, rewa | pin | ping | roni teringar | rani teringar |
| memer | memeri | neti | fetir | pinar | pingar | ronibaut | rani bout |
| menai | menaiye | ngan | ngang | pipi | pipiye | rsars | yarsars |
| menetak | meneteh | ngan samar | ngang semar | pipi agamata | pipiye yahamat | rueis; gabaritsiriket | riweitsi; hapari tsiriheti |
| mepa | pa | ngangebebukohma | ke im | pipi gepitek | pipiye hapitehi | rukereparibon | ruhuriparibong |
| merie | meriye |  | ngang ibebiroh maiseke im | pipi iar | pipiyar | rukurarimar | ruhurenimor, ruhurerimoru |
| mesagari rigenerae | meisehariri heneraiye | ngas, uguk | ngas | pipiar | pipiyar | rumar | huhomar |
| meseoro | meseyor | ngi metare bugotar | ngi mataribuhat | pipieri for, ataop, uar | ngang ibe mangau | ruo | huuwou |
| meta itar | meta itar | ngi, mengidz, far | ngii, ngiits, far | pirepireregatam | pirepireri hatam | saba | sebuhuh |
| meta itom | meta itomu, | ngibon | nibong | piretar | piretar | sah-kum ah wahroo | seik ma uwaruu |
| metai, metara, matar | matai, matara, matar | ngiri veten | hiriyefeteng | piser; hai | pitser, hai | sa-kum ah goo | seik ma huouw |
| metak | matah | ngitsa, nitoporuch | ngitsepiruh | pisi tamei | bisiri tamei | sakum ah leemo | seik ma rimou |
| metan | tangar | ngitsei, nitse | ngitseir, ngits | pisir | bisir | sa-kum ah saroo | seik ma soru |
| metaripi | mataripiye | ngoi, ngou | unga | pisir, euueis; mee'-an | bisir, iyeweits; meiyengamu | sa-kum ah soo | seik ma sew |
| metau | matawa | ngungupa | ngungupah | pisisirei | bisisirei | sa-kum ah tee-o | seik ma tewou |
| metsere kupei, metari pits |  | nibor | niboru | pita tich | peitatiho | sa-kum ah vah'oo | seik ma fauw |
|  | metseri hubei, matari pitser | nikari | nihari | podz | pots | samar | semar |
| metseri paur; metari pog | metseri paur; matari pou | niketam | nihetam | poeg eri moar | pauhuri mouwar | sarik | serihe |
| metsok | motsoh | nim | rim | poeg eri mugir | pauhuri mihir | saru | soruw |
| meuisi | me bisi | nimal | rimar | pogun | pohung | sasaribon | sasaribong |
| meun a bakure | me uun burah | nimarier | namariyeri | poig | pouh | Sauiefan | Tsouniyefeng |
| miagi | meiyahi | nimeretak, uore | nimeretahi; iwor | poigeriuetoch | pouheri wotoh | sauug | sebuhuh |
| mimi | memeri | ninieripag | niniyeri pah | pooh'ruk | puhuraho | sauug ma sei | sebuhuh ma seih |
| mish'erum | mesirom | nipa gar | pehem | popariuarimesori | popori wari masauh | se umoi | sewa moiye |
| misi, iemusi | misiye, imisiye | nivagaf | nifahafi | pororimezarach | popori meheroh | seau |  |
| moa | mowa | not | natu | pula; burago | buroh | sechat | sehat |
| moar | imowar | notor | rotor | purak | puhuraho | seg, sek | seihe, seih |
| mogemog | mohumoh | nueis | riuweits | rabatut, dauu | raw | segangir, achoechoror | sehangiri, horohoror |
| mogonagir | mohonuhur | nugeriuiripis | ruhuriweripes | rag | rah | sege ma iuga | seih ma huhau |
| mogoreitsak | mohoreitsahu | oa, oag | uwa, wah | rai faiil | rei faifir | sege ma seiau | seih ma seyau |
| moi engar | meyangar | oa sibir, uch | uwar biriye, uh | rai mar | rei mar | segengas, seienes | sahanges |
| moiara | moiyar | oa tsosamar | uwa tsosemar | ram | iran | seiae ma seiau | seih ma seyau |
| moiere faivil | moiyeh faifir | oari bugurog | wari puhuraho | ran | rangi | seiau | seiau |
| moiere mar | moiyeri mar | oats | bisiri hih | ran | rango P . | seie maseau | seih ma sewa |
| mongai | mongoi | oatur | fatur |  | iran | seiguemar | seih ma huhomar |
| mor | moru | ogori faripei | hohori faripei | rangerifoi | rangirifou | seiiamar | seih ma semar |
| mora bitu | mori bito | on | un | rani pei | rani pei | sek ma saru | seih ma soruw |
| mo'rahbeeto taitu, bitu | mori bito, taito, bito | onuuod | uniwot | rani tan | rani tang | sek ma | seih ma fauw |
| moribon | miribong | orabuge | worobuhuh | ranirogi | rani rohiye | seka ma gluo | seih ma huwouw |
| morig | moruh | oreiau | woreiyou | rao, pungunau | raw, punguno | sekama su | seih ma sewa |


| sene voguk | sorubuhuh | talinar | taringar | tsiketsik | tsuhetsuh | ue tiai | uwetiyei |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| senepes | senap | tamarikik | tamarihih | tsimai | tsimei | uenen | ueneng |
| seniget | soruhat | tamats; erab | tamats, erap | tsimare bogigei; ach | echorerugu | uet |  |
| senigngengas | soruhangas | tamatsemesirats | tamats ma sirats |  | tsimare buhuhei; hahorohoror | uet enen | motoneng |
| serii, serik | serihe | tan | tangi | tsog | tsuh | uetiei | uwetiyei |
| serimar | sorumar | tangaik | tengaih | tsoobo, tsooh | tsob | ug |  |
| serio | soruiyou | tangakir | tangahir | tsoriba | tsoripa | ugoan, oarangei | wahang, wahangei |
| seruug | sorubuhuh | taoeripotz | tafeiyaripot | tsororimetar | tsorori metar | ugochongogon | uohongohong |
| sesechi | seseih | tapai | tepaiye | tso | tseu | ugsug | fahawa |
| setap | setabu | taperoch | tsapiruuh | tsou tir | tsoutir | ugug | uhuh |
| seu | sewa | tar | tari, taringar | tsou tirimata | tsou turumat | uia uiar | biyebiyar |
| seu masirap | sew masirap | tara | tarati | tsouri mangag | tsouri mangahu | uidz, uits | wits, witsi |
| seu, seigeteu | sewa, seihetiho | tat | tati | tubumar | tuhaemor | uku | uhu |
| sevoguk | sebuhuh | tatag | tatah | tugudob | tsuhutsob | umipami | unpanu |
| siaeguuei | siyeri hubei | tativocharach | tatiwahahawah | tugutarei | tuhutafeya | un epan | unpanu |
| siaruau | siyarebau | tauakiag | tawahiyah | tukuk | tuhuh | ungorap | ungerap |
| sibobugau | sibe buhou | tauor | tawar | tumhah | tomau | uoagag, uageg | wahah |
| sieboro | bihin | teberika; tarapa | tsiriheti | tumoki, tumu | tumuhi | uobotar | uototar |
| siei, meseiach | siyei, mesiyats | tee'tree titri, titinap | titiro, titinap | tumuto | tumutso | uod | wot |
| sine kik | sin hih | teg | toh | tuomar | tiwoumaru | uodagengagan | woto hangahang |
| sine sirei | sini sirei | tega faivil | tehi faifir | tuou | tsouw | uodenen | wotoneng |
| sinerisebagaga | siniritabuhaha | tegak | hahah | tut, maimatare | tut, matatut |  |  |
| sinetemei | sin temai | tema temei; tamar sin | tema temai; temar sin | tuuabu | tiuwobuhuh | uokitog, birau soborouitog |  |
| singoto | singo | temei, miiangei | tamei, meiyangei | tuuag, tuuau | tiuwouw |  | wehitoho, bira sabarabitoh |
| sirei | sirei | teringerai | taringar | tuuah | tiuwau | uor | uwor, wor |
| sirela; igar | sirar; ihar | teten | teteng | tuuei | tueihe | uorefangan me faivil | wor fangani ma faifir |
| sireli buruch; buobu | sireribuhobuh; buhobuh | tibiti mabag | tibeti mabohor | uas | faas | uoreik | woreihe |
| sirera | sirar | tignaro | tingarong | uabats | ebets | uoremal | woromar |
| sitek; basutach | sutah; wasutah | tingaro | tingaroh | uabuge | waribuhuh | uoriar | uwori yar |
| sivar, sivoro | siwor | titiripin | titiri ping | uagag | wahah | uorik | uworoihe |
| soer'ree-wedg-vag-ee-vee | riweitsi faifir | tiu | tiuwouw | uahogi | uahohi | uorimag | warimoh |
| sor, soru | soru, soruw | tiuemal | tiuomar | uaiio | faiyau | uorimeri | warimaru |
| soru umoi | soruw moiye | tiuerik | tiweihe | uamar | famar | uorimet | worimat |
| srimal | sorumar | tiuik | tiuweihe | uan | uun | uoro | worouw |
| ssibachasi | sibe hasi | tiuou | tiwouw | uar | uwar | uoroiau | woroiyou |
| su | sewa | tivan | tsifon | uar | uwor | uorotu | uworotuh |
| sug, siguri | suh, suhar | toach | toh | uara theira I sapito | uwarasura isabitoh | uorou | worouw |
| sutag | sutah | tob | tsob | uarasu | warasu | uosurog | uwosuraho |
| taberigach | teberiha | tog, nauer | toh, nauwer | uarasuira, uarasu | warasura, warasu | uot | wot |
| tabi | tapiye | togoitot | tohoutot | uaremal | uarimar | uota gangagan | woto hangahang |
| tabi ren | tapiyeri heng | togoutol | tohoutot | uari | uwari | uote rimagau | woteri mahan |
| tabu, ietap | tabu, iyetabu | tokere poremam | hote harapa ramamu | uaribug | waribuhuh | uou umoi | huwouw moiye |
| tabur'rah eek'ah | tsapitsiriheti | tomai | tomau | uariengalap | uwariyengarap | uouti | wautu |
| tachafaivil | tahe faifir | tomum; chatachonu | tongong; hatohunu | uarii | warihe |  | maur |
| tafei | tafeiya | tona | itona | uariiau | waruw | usu; usous | usu; usus |
| tagach, tagag | tahahu | topan tapan | tapang | uarik | warihe | uuasanie | uruteh |
| tagak, lau | tahahu, hawa | tor | tur | uariket, iiagrofat, ig | vorovat | uungne | umen |
| tagakitsim | hahahutsim | tororo | toror |  | ket, iharihorofat, ihari horofati | vachaubir | wahabir |
| tageg | tahuh | torumar | tsorumar | uariki | farikir | vagaf | hahaf |
| tageri poh | teheri pou | totirim | toutourim | uariki | uwarihe | vagek | bahuh |
| tagita megarat | tahita | totitir | totitiro | uariu | uwaruw | vahn | fan |
| tah-ree | tari | toto muri | toutu umuri, tsotumur | uariu | waruw | vaii | faihe |
| tai | taiye | tou, meetatau | tau, metatawa | uaru | uwaruw, waruw | vamal | famar |
| tai tipei bomanga | tai tipei ibe mangau | touta | tauta | uasera | uwasora | vaniborivatsa | wani porufats |
| tai uisi | tai bisi | tovetiv | tafitefi | uasuaa | fasufos | vanim | wanim |
| tainuru | tsaru ruru | trioarivor, triovara | tiriyawar wor, triyawarifar | uaterugeia | fater heya | vanimagat | wanimahat |
| taipipi | tai pipiye | truveinemar | trubenamar | uatuti | tutu | vanimagat, farebugik | wenimahat, faribuhuh |
| taito | taito | tsauri gou | tsouri hou | uau | fauw | vai | fano |
| taitoiogoi, ibobueiiegom | taitoiyohoi, ibebuhouiyohom | tseberi paur; tapiri pog | tobori paur, tsapiri pou | ubei | uubei | varag | farah |
| taitou | tautah | tsigeitsegagen | tsuheitsehaheng | ubutemakemak | ututeri mahemah | varik | faihe |


|  |  |
| :--- | :--- |
| vaseruboar | fasuru bor |
| vasirigipri | fasur hapir feen |
| vasugerigotugo | fasuheri hotiho |
| vatanesegumar | matanisuhumah |
| vatariara | matariyer |
| vati | fahu |
| vatoberig | fateberih |
| vatochi | fohohi |
| vatou | fatowa |
| vats; bogu | fats/ pohuwo |
| vau | fauw |
| vauvau | faufou |
| vauvaure | faufour |
| vavi | fafiye |
| ven | feen |
| venaigeg | fenihheh |
| verree-verree | forufor |
| vetiveti | fatifet |
| vettel | fatur |
| viiiemal | fisimar |
| viiik | fishihe |
| viiu | fisuwe |
| vis | fis |
| visebug | fisibuhuh |
| visig | fisihe |
| visimer | fisimor |
| visio | fisiyau, fisiyou |
| visu | fisuwe |
| vitseraun | fitserauun |
| viziits | fitsifits |
| vor | faoh |
| vorieran | weriyarang |
| vororum | wororum |
| votokorima | wotohorima |
| votsenkabi | wotseneihepit |
| votsimarinam | rienitsimerinom; piye |
| vovitika | bofitihang |
| wanimerat | wenimahat |
| waran | farang |
| warikel, igagasusu | wariket, iha hasusu |
| wasichari | wase hari |
| wawee | wai |
| way zer'ris | marisoris |
| wenieg | waniyoh |
| yah-saik | yahseik |
| yaht | yat |
| yah-too | yatu |
| yah-veesh | yah fis |
| yah-wah | yahwa |
| yah-woor | yahwor |
| yennup | iyenap |
| yim | im |
| yuhkayl | iyekair |
| yuhmoat | iyemots |
| zauuau | faiyau |
| zer | tser |
| zuzu | sus |
|  |  |




## MERIR.

Girl Remezieleng. Photo by Sarfert. Glass plate scan, Hamburg Museum. (see also back cover)

## .History of Discovery.

or the first time Merir is mentioned in the Somera-Report, that describes the voyage of the "Santisima Trinidad under Padilla in 1710. On Songosor the Spaniards hear about the Island Cemerideis, hat was somewhat larger than this and was about a days voyage away in S1/4 SE direction. However they did not visited that Island. Only in 1769 the name surfaces in the shipping reports again. Captain John Payne of the ship "Ponsborne" reports briefly, that he on the voyage to China, taking the route between Waigeu and the northern coast of New Guinea had passed by that Island.

In the year 1788 an English squadron under captain John Davy Foulkes set sail in Batavia on its way to China Under the participating ships where the "Duke of Montrose" under captain Joseph Dorin and the "Asia" under Foulkes command. After they sighted Tobi on the outbound journey on January 1st 1789, they passed by Meri on their way home on June the 4th. The position was taken onboard the "Asia" and with $4^{\circ} 20^{\prime}$ ' eastern longitude and $132^{\circ} 19^{\prime}$ northern latitude logged.
Most likely at the same time the name of "Warren Hastings-Island" was given by the captain of the "Duke of Montrose. I seems to be that, by the "Asia" under captain Stone 1805 an other new positioning of the longitude was made. In between that time the Spaniards passed by this Island once more. The corvettes "Descubierta" and "Atrre vida" under Alessandro Malaspina had the orders, to undertake hydrographic surveys in the Pacific Ocean and passed on December 24th 1702 Merir. Although that ships had relatively often sighted and positioned the Island, exact records have never been published. The last published positioning was done by the Swedish steame "Nippon" in 1912. The Hamburg Expedition recorded the position with $132^{\circ} 19^{\prime} \mathrm{E}$.

## 2. Name

On Songosor, the Spaniards learned the name almost correctly. However, later on Ceremides became Pulo Merire In doing so, Pulo was considered a kind of preposition, probably an approximation to Pur. Pulo Ana finally becomes Pulo Anna, just like Merir becomes Pulo Maria, so that the names of the islands appear to be entirely Christian. The term "Warren-Hasting's-ssland" was supposedly coined by the ship Montrose. - The natives cal their island Merier or Meliel. The peoples pronunciation of $r$ and $l$ is difficult to distinguish, so that one thinks to hear sometimes one sound, sometimes the other. ${ }^{1}$ The e of the final syllable is so ephemeral, that it is only hinted at. The pronunciation of the second syllable can best be compared to with the pronunciation of the ending $r$ in English. As a sound it only appears insofar as the position to articulate it is created, the sound however, is not executed. It only gives the preceding vowel its typical completion, which sounds like an extremely elusive $e$ hus, the correct phonetic writing would be meri'. The $i$ carries the sound. In the simplest writing this corresponds to Merir.

## 3. Location.

According to the information of natives, the journey from Songosor to Merir takes one day and the distance is about 30 sea miles in a southeastern direction. According to Rosser it was only 10 miles. Fritz reports that the government schooner, coming from Pur, reached Merir being pushed more by the current than by the engine. ${ }^{2} \mathrm{On}$ the other hand, the current next to Merir was so strong that the schooner had to give up on the trip from Merir to Tobi. It was the end of November

| Eastern Longitude | Northern Latitude | Author | Year |
| :--- | :--- | :--- | :--- |
| $132^{\circ} 19^{\prime}$ |  | Foulkes, "Asia" | 4.6 .1789 |
| $132^{\circ} 18^{\prime}$ | $4^{\circ} 20^{\prime}$ | Stone "Asia" | 1805 |
| $132^{\circ} 8^{\prime}$ | $4^{\circ} 19^{\prime}$ | Krusenstern | 1819 |
| $132^{\prime} 28^{\prime}$ | $4^{\circ} 19^{\prime} 30^{\prime \prime}$ | Horsburgh ${ }^{1}$ | 1826 |
| $130^{\circ} 8^{\prime}$ | $4^{\circ} 20^{\prime}$ | Arrowsmith |  |
| $132^{\circ} 28^{\prime} 30^{\prime}$ | $4^{\circ} 20^{\prime}$ | Rosser | 1879 |
| $132^{\circ} 8^{\prime}$ | $4^{\circ} 20^{\prime}$ | Pac. Islands | 1890 |
| $130^{\circ} 29^{\prime}$ | $4^{\circ} 20^{\prime}$ | "Peiho" | 25.8 .1909 |
| $132^{\circ} 21^{\prime}$ | $4^{\circ} 20^{\prime}$ | D. Nippon | 1912 |
| $132^{\circ} 23^{\prime}$ | $4^{\circ} 21^{\prime}$ | Deutsch. Kol. Lexikon | 1920 |
| $132^{\circ} 19^{\prime}$ | $4^{\circ} 19^{\prime}$ | Pac Islands | 1933 |

## 4. Geography.

The low island, covered with trees, can only be sighted from a distance of 12 sea miles. From north to south measures about $1 \frac{1}{2}$ sea miles ( $2,281 \mathrm{~km}$ ), the width (east west direction) is nearly 1 sea mile. ( $1,852 \mathrm{~km}$ ). In the sketch, Fig. 154, from Gollert another proportion is depicted. The islands is surrounded by a coastal reef that protrudes to the north and the south about $1 / 2$ a sea mile. The surf surrounds the entire island; however, it is stronger long the extensions of the reef. In the middle of the western side, where the settlements were situated, there is also an elevation, a hill about 4 m high. ${ }^{2}$

Nearby there is a small bay, where the water is significantly calmer. Here the dinghy of the Peiho landed. Two dams follow along the beach sides which are fringed by a small sandy beach. Almost directly behind it, begins bush of $2-3 \mathrm{~m}$ height, The northern part of the island is a little higher. In the middle, the terrain subsides and is covered by swamp. The southern tip has many tall trees, mainly coconut palms, which were all, withou exception, destroyed by the devastating typhoon in 1904 that also ruined Pur. Many white, mostly broken trunk still stood tall and offered a sad impression. At the visit of the Peiho 5 years had passed since the catastrophe, bu he island cannot yet be inhabited. The bush had become so dense and had everything completely over grown so that we could only fight our burdensome way to the old settlements with the help of machetes

Two years after the catastrophe, the official report about the visit reads as follows
"Horrible destruction. Here, the sea must have flooded the entire island, with the exception of a few higher areas Even now a salt water lagoon remains in the middle of the island. In my opinion, Merir is about twice the size of Pulo Anna. We found 20 women and seven men there, whom we took at once on board. - Among the poor and dirty houses was a taller building in better condition, thatched with mats and impressive columns made of calophyllum. A peculiar framework was attached to the middle column. Some coral stones where lying on the floor underneath the framework. This building was the meetinghouse. The apparatus mentioned above served cultic purposes.

The stones are said to have fallen from heaven. I learned the following from our new fellow passengers: That typhoon started at sunset with a storm coming from the north that turned via east to the south. The sea flooded the Island coming from the east however it did not reach the village because it is situated 10 m above se

[^6]level. Before this event about 200 people are said to have lived here. Nobody died in this typhoon, yet afterwards famine started. Many people died. Some, who had stolen other's provisions, were killed. An epidemic is said to have started because of the vast consumption of land crabs that killed many, especially children. 6 months after the storm nine boats left Merir with 50 people on board and sailed to Sonsol. Only 5 boats with 34 passengers arrived there. - A magician is said to have created the storm. ..."

The fauna is the same one known to live on coral islands. What is important for the natives is clearly shown in he index of words. Hereto Sarfert investigated some closer details, however not all of the below specis could b dedicated with certainty, because the writing of the Merir words contain here substential differences, respectivly he details may have been for fishes, that had not been named in the numbered list of the 53 species. The numbe behind the comments correlate with the species named in the numbered list.
xatik $=$ a species of White-fish with red-brown dorsal fin and red strips on the upper rim of the mouth. 18
geri $=$ black, with yellow trim on side fins and its tail. At the beginning of the tail it has on each side a sting. 13 lou $=$ blue-green. 42
eriek $=$ light-brown with dark-brown, almost black spots. 26
reriek $=$ light-brown with dark-brown, almost black spots. 26
leneki $=$ blue, with black markings on the upper half; black-yellow with black on the side-rims. 27
pesemel $=$ black back and belly, fins white/transparent w/black trim; tail black-white-red; side fins greenish. 29 rigeleo $=$ scales black, in the center with greenish rectangle; tail whitish, in front black, belly front blood-red. 49 uuraxar $e=$ black. Front of tail black red - yellow ring w/two stings each side, forehead yellowish, mouth to eye a yellow line, mouth red-yellow. 7
ole $=$ Back red, belly red-yellow to yellow. 12
$r i r i=40 \mathrm{~cm}$ long, gray; forehead and front part of belly black, tail black-white-black. 16
euagl $=10 \mathrm{~cm}$ long, it looks like it has 2 pair of eyes, back gray with black horizontal strips, belly white with red horizontal strips.

| Tree | siriget | Palm wine | rasi |
| :--- | :--- | :--- | :--- |
| Leaf | saure | Mangrove | nalarare |
| Stem | रaazaite | Banana | fazol |
| Branch | lara | Taro | ueigl, uot(r) |
| Bark | gien | Yam | a am |
| Root | ualarar | Areca nut | uo |
| Flower-Stem | rareit | Betel-lime | uese |
| Flower | mougura | Betel-container | uauuau |
| Flower-stem | iasare | Pumpkin | pamugen |
| Fruit knot | uare | Bush | niuar |
| Flower-petal | taurar | Maddow | fetir |
| Pollen-receptical | meteleri | Arrowroot (tapioca) | mogumog |
| Fruit | uar | Been | zep |
| Grass | fetiri | Pineapple | ngongor |
| Pandan | fuzole | Sweet potato | gmiet |
| Coco palm | ngaru |  |  |
|  |  |  |  |

Also the flora does not offer anything exciting. The most important crop plant are cocos palms, from which they harvest palm-wine, pandanus, Mangrove, Banana, Pineapple, two sorts of taro, yams, Areca-nut, pumpkin, arrowroot 3 (tapioca), sweet potato and beans. But we have to keep in mind that these accounts where given by the natives on Palau and it may be questionable, if they really knew all of these plants on Merir. It has been proven, that they learned about the betel-nut only when they came to Palau. It is interesting, that they have special word for specific plant parts, like flower-paddle, leaf, stamp, pollen-vessel, and fruit-knot


It is noteworthy that they have a name for crocodile: rauaig. They know more than 50 kinds of fish; as all other islanders they like also to include marine fauna, thus clams, snails, etc.

| Animals. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| dog |  | piriz | scales |  | urar |
| pig |  | peik | gill |  | tapar |
| flying fox |  | unarik | fin |  | ingite |
| rat |  | ges | tail fin |  | pasare |
| fur |  | gin | ventral fin |  | ingite |
| tail |  | ngure | dorsal fin |  | ingite |
| bird |  | mar | lizard |  | uzeri, gumaser |
| egg |  | sarai Xaian | turtle |  | uar |
| feather |  | üare | crocodile |  | rauaig |
| wing |  | paure <pei | shark |  | paro |
| beak |  | iauar < iaunei | butterfly |  | giegi |
| bird's tail |  | ügure | caterpillar |  | ngar |
| swallow |  | iogoreen | fly |  | ran |
| wild dove |  | mar | mosquito |  | ramи |
| egret |  | xailau | louse |  | guz |
| rooster |  | marumar $\chi$ | aian spider |  | rigatauzulox |
| hen |  | mariueiuiet | 㐅aian spider net |  | rigatauoragl |
| chick |  | raperi Xaian | crab |  | lagun, ievi |
| duck |  | lan | clam |  | periperi |
| fish |  | iek |  |  |  |
| Fishes. |  |  |  |  |  |
| 1 र | ұalangab | 19 | melaun | 37 | ualei |
| 2 tata | tales |  | ialan (other side of reef) | 38 | rimauraure |
| 3 ta | taku | 21 | iazure | 39 | faramea |
| 4 v | vauvau | 22 | mangal (flying fish) | 40 | uodadiri |
| 5 m | mamusik | 23 | uari (sea turtle) | 41 | perfau |
| 6 m | mazoal | 24 | taiaua | 42 | loue |
| 7 r | rari | 25 | oraisi | 43 | fizilimata |
| 8 u | uaule | 26 | leri | 44 | teteri |
| 9 r | rimelion | 27 | negi | 45 | iar (ii) |
| 10 | xamazogiri | 28 | negilipauo | 46 | tiri |
| 11 | mami | 29 | pesemegl | 47 | turupu |
| 12 | gume | 30 | gupari | 48 | rigelauneri |
| 13 | גasenger | 31 | putaf | 49 | rigeleua |
| 14 | mesagoaxe | 32 | mangesure | 50 | gite |
| 15 | maki | 33 tarieri |  | 51 | zala |
| 16 | rieri | 34 tangarengari |  | 52 | itoxoma (shellfish) |
| 17 m | тӧzo | 35 ualauiri |  | 53 | periperi (shellfish) |
| 18 x | xatige | 36 rigerau |  |  |  |

## 5. Settlements

Because of the heavy overgrowth by vegetation of the dwellings it was not possible, to produce a detailed accoun Because of the heavy overgrowth by vegetation of the dwellings it was not possible, to produce a detailed account
of the settlements on Merier. However the Merir-people on Palau where able to give details about position and style of the buildings, fields and places. Two natives and the chief Peilox and the man Malailan drew a map of their home island from memory. The orientation, which they gave the island has been kept. There was only one village on Merir it was divided in two parts, each headed by a special chief. It was situated on the western side and had three landing places, Meteri.
6 pole ueuaisi (canoe exit)
10 pieri uor, also burial ground
7 grieran (canoe exit)
rizaxe $=($ canoe exit $)$
8 mesalu
iiuen $=$ (north)
12 uugi uoririk (no. 1-6 ar
names of coral-heads)

1 pole meteri u
3 pololi


Fig. 155. Island and Settlements on Merir as per Maleilan. Drawn on 19th. of Aug., 1909.

The big middle one, meteri meiiiuen, was used by everyone, both the smaller ones, on the right and left side meteri geringimaco and meteri meiiog, were only used by women. In the south of the island, on the northern rim of the swampy area, a small path led across the island. Two other trails, just like the the main path already described led to the landing places. The passages for canoes passed through the small bay rixace, where the water is usually calm. The southern tip of the reef is called aurun ("reef"); when the weather is fine one can barely see the bottom in the "deep water". The landing place pieri uor, situated just behind, has many turtles and was also the burial place.

In-between the reef and the beach, there are many rocks. The dam, made of rocks, in the northwest of the island is called grieran. According to Peilox, the two village halves are called Meiiogl ("southern village") and Meiiuen ("northern village"). These names we know already from Songosor and Pur, they indicate the points of the compass. We also found the big meeting house caringimaco from Peilox's map Nr. 6. It was situated not far from the beach and was overgrown with vines. The original thatched roof was completely replaced by these tendrils. The rectangular wooden construction with its raised ground floor and gabled roof could still easily be recognized. The place, on which the meetinghouse stood, was called meter geringimaco, the same name that Sarfer learned for the main landing place. As can be seen in Peiloर's map, the house is situated right behind the landing place. Property was divided into individua places that have special names. A piece of land in general is called uurax.

1.-3. Landing places, 4. Meriteifau, 5. Faterazan, 6. caringimaco, meetinghouse, 7. Capiriem $=$ blood-house in the bush, 8. Meiiuen northern village, 9. Meiiogl $=$ southern village, 10. and 11. female paths, 12. house of the 2nd. chief Rugovar.

Fig. 156. Settlement, according to Peilox.

Meteri gerin imaco 2 meteri maiol
(place of the chief's meeting house) 3 farugur
There were over 100 house names listed, similar to those on Songosor and Pur. The foundations for 1-56 were located on the coast, the rest in the forest. As the name list shows, Merir must have been densely populated a ome time, which matches with the current population count given. This consists of 87 names of households. On Merir they had in meiogl three birthing huts, imeriper or raperiem and at the same time women used them a menstruation-houses. Families erected the actual menstruation-houses, moruunngtoro, according to their need.

The inhabitants of Merir, dislodged by the famine to Palau, were settled on Goror in the village Ngarabodl. ${ }^{1}$ Here they only named the houses, using the names of their old home island. They do not use a name for the land. As indicated in the map most of the houses are located in the north of the long path that traverses the settlement from E to W. The village continued to grow towards the north, as demonstrated by the two houses 19a and b, still under construction. In the west, the path turns to the south to the village Grorör, in the east it wanders off into the fields. The small pond in the curve serves people as a bathing place. As the index shows, the population has only wo menstruation-houses (for about 25 women). People live in nuclear families. In many cases two couples use one house. Children, also the older ones, always live with their parents. Widows and frail persons stay with thei elatives.

| Rezaugatiu | 30 Fariaitaz | 59 Meiriagl |
| :---: | :---: | :---: |
| 2 Farogiriagl | 31 Peito | 60 Imeriperiperi |
| 3 Nitegl | 32 Ruguraparim | 61 Imearotore |
| 4 Rezaradiu | 33 Uauzuk | 62 Ranogo |
| 5 Farimok | 34 Mailiogl | 63 גapanonogo |
| 6 Repelelox | 35 Lugunuguvari | 64 Imopalunge |
| 7 Uauriuore | 36 Riguriveri | 65 Gamirin |
| 8 Iaugere | 37 Iareare | 66 Malerigazox |
| 9 Rapeliare | 38 Rugeriagl | 67 Imeagl |
| 10 Farugrieg | 39 Imeripue | 68 Peigazox |
| 11 Fariuoro | 40 Uugolimaro | 69 Malarieme |
| 12 Megirimegl | 41 Peimau | 70 Uarieme |
| 13 Farumau | 42 Faregulugulu | 71 Farorogo |
| 14 Imoguiagl | 43 Fareuoiie | 72 גarametegi |
| 15 Fauoriagl | 44 Arutararo | 73 Nipeteriem |
| 16 Farigeliuato | 45 Meiriogl | 74 Fanü |
| 17 Imertueri | 46 Fariseri | 75 Farigirivau |
| 18 Uauripazo | 47 Fereugisi | 76 Fariapogo |
| 19 Imeiate | 48 Iaulurapa | 77 Iemepapa |
| 20 Imetaivo | 49 Farifasa | 78 Peimeri |
| 21 Imotauteigi | 50 Rariuatag | 79 Uzeren |
| 22 Peimaro | 51 Terigezox | 80 Rigiripalau |
| 23 Lagitaigi | 52 Reremetiu | 81 Peigoro |
| 24 Peimagl | 53 Imetegiete | 82 Fariuorozik |
| 25 Rugarab | 54 Imeauala | 83 Imezalau |
| 26 Peitom | 55 Feriaugl | 84 Imerigou |
| 27 Ruguvari | 56 Urupau | 85 Merigaurouo |
| 28 Tamürengi | 57 Uararazora | 86 Rugeriar |
| 29 Farizauan | 58 Razauzauriueri | 87 Fatiriueg |



## s

Names of houses: 1. Terigazox, 2. Imoguiol, 3. caremetiu, 4. Farimorozik, 5. German, 6. Peimagl, 7. Goronia, 8. camauria (under construction), 9. Peizom, 10. Rugarap, 11. Leigitaco, 12. Imeriper or caperin blood-house), 13. Peiiazox, 14. Ailirap, 15. Peima
Uoiligez, 18. Zauoiagl, 19. caisau (under construction).

Index of Inhabitants of the Merir-Settlement Ngarabodl on Palau

| House 1. Terigazocc | Tutamag $\delta^{\text {d }}$ - Aparuau ${ }^{\text {¢ }}$ |
| :---: | :---: |
|  | Uieizog ${ }^{\text {d }}$ - Metaizog + |
| House 2. Imoguiol | Veteretirur $\widehat{\widehat{ }}$ - Gare $q$ (originating from Songosor) Etenitoz $\widehat{0}$ - Meziek ㅇ |
| House 3. caremetiu | Sipon $\begin{gathered} \\ 0\end{gathered}$ - camoruueli $\odot$ child Fiz, 10 years old Sinai $\begin{gathered}\text { त }\end{gathered}$ Zangarog ㅇ |
|  | Maniterore ${ }^{\hat{3}}$ - Tonir $q$ (originates from Songosor) |
| House 4. Farimorozik | Parimegl ${ }^{\text {a }}$ |
| House 5. German | Ianis ${ }^{\text {d }}$ - Imetiuegl ¢ |
|  | Fitopo $\widehat{o}^{\lambda}$ - Maizela $q$ (originates from Songosor) Uaranga ${ }^{\lambda}$ - Uotiegitaz $\uparrow$ |
| House 6. Peimagl | Ueien C - Fororeitan ¢ |
|  | Irarorinar $\delta^{\lambda}$ - Faleilan $q$ young man camat, 18 years old girl Sau, 10 years old |
|  | Sisie ${ }^{\text {® }}$, old man |
| House 7. Goronia | Rumonelin ${ }^{\text {che }}$ - Mazangalar ¢ |
|  | Ratumai ${ }^{\text {o }}$ - Sain $¢$ (originates from Pur) |
| House 9. Peizom | Morifeil $\delta^{\text {- }}$ - Tazitama ${ }_{\text {¢ }}$ |
|  | boy Atuna, 5 years old |
|  | Lukom of - Uoitegi $q$ (originates from Pur) girl Uimagura, 7 years old |
| House 10. Rugarap | Peilox, $\widehat{3}$, widower for a long time (see plate 12) |
|  | Tugu, boy, five years old |

Tutamag $\hat{o}-$ Aparuau ${ }^{\circ}$
Uieizog of - Metaizog +

intoz - Meziek $\downarrow$
child Fiz, 10 years old
naio - Zangarog
Parimegl
Fitopo $\begin{gathered}\text { or }\end{gathered}$ - Maizela $\uparrow$ (originates from Songosor
Uaranga $\begin{gathered}A \\ \text { U }\end{gathered}$ - Uotiegitaz
rarorinar $\widehat{\delta}$ - Faleilan $\odot$
young man camat, 18 years old
isie $\begin{gathered}\hat{\jmath}, \text { old man } \\ \end{gathered}$
umonelin $\delta^{-}$- Mazangalar +
anain (originates from Pur)
boy Atuna, 5 years old
girl Uimagura, 7 years old
Peilox, ${ }^{\text {ond }}$, widower for a long time (see plate 12)
boy Tomiza, 7 years old

House 13. Peiazoc House 14. Ailrap

House 15. Peimaco
House 17. Uoiligez

House 18. Zauoiagl

William ${ }^{\hat{\prime}}$ - Reiizik
Eriselen ${ }^{\hat{\prime}}$ - Roangei $\uparrow$
boy Zulap, 8 years old
girl Remezielan, 12 years old, daughter of the first
women, whom Eriselen had left.
Maropo of - Gutumeri 9
4 month old child, still without a name
Merigiore $\delta^{\top}$ - Roilangei $q$ (originates from Pur)
Tom $\widehat{\delta}$ - Uazalopi

## boy Neiimar

Tongamoru 9 , widow
Guman $\widehat{\delta}$ - Tini (originates from Seneues or Nauru) boy Uainuar, 1 year old
Ualeirei ${ }^{\lambda}$ - Uoitiru $\rho$ (the husband was in prison, during that time the wife slept in a small house) (see plate 12 girl Zilauei
Fenigamar $\widehat{\delta}$ - Ranizacoi ㅇ
Taiuar $\rho$, widow, currently in prison because of begging
Maleitar + , widow
Lauilepe o ${ }^{3}$ - Tipeitop ㅇ

boy Itimar, $2^{1 / 2}$ years old
Mariate, an older brother of Lauilepe, sick since a long time
Thus, 25 couples have 14 children. The children, with the exception of Remezielan and camat, are still young. The number of Merir-People is declining even more when we take into consideration that 7 of the 25 married women mentioned here come from other islands, thus almost a third. These marriages seemed to be the result of a longe residence on Songosor where the suffering Merir- and Pur-People first turned to, before the German government had them transferred to Palau.

## 6. Population

According to the census on Palau in 1909, the number of Merir-People was only 73 souls: 29 men, 30 women $(25$ couples) and 14 children. As they said themselves, there were probably 100 more before the big typhoon. Most of them are said to have died of deprivation. As the survey showed, the state of health on Palau was good Of the 22 adults examined 7 could be termed fat, 2 skinny and the others were characterized as normal. Their personal hygiene was effective. Especially their very strong teeth are well kept and even betel chewing has not effect affected their white color. They collect white sand from Ngarakobassang with which to clean their teeth People go to the toilet in a squatting position in the bush. 22 of the 59 adults were thoroughly examined in an anthropological fashion.

The result was that people are of nearly medium height; the women a little taller than the men. Their limbs are generally slim and not long. The body hair is generally very spars or missing entirely. Their hair is simple or widely wavy. The face is generally moderately high, the forehead straight, the eye opening slanted slit, the epicanthic fold is common. The Merir-People have moderately protruding cheekbones, straight noses with big nostrils and its tip pointing downwards and usually close-fitting alar wings of the nose. The jaw-bones are strongly developed, thei teeth are big and healthy. The ears are well formed and close to the head they have a European form. Knock knees are the rule, probably a result of faulty posture. When measuring the heads, seven of the measured men had long heads; the three other ones have medium long heads. $66 \%$ of the women have long heads and $33 \%$ medium ones.

Guuon ${ }^{\text {ot, }}$, Family Teiiasa, 25 Years, Merir.

| nutritional condition: fat; state of health: healthy |  |
| :--- | :--- |
| skin color | forehead |
|  | cheek |
|  | region of the breast bone |



## Maleilen ${ }^{\lambda}$, Merir




$\qquad$








 | 39,7 |
| :--- |
| 38,4 |
| 39,2 |
| 37,3 |
| 38,3 |
| 3,2 |
| 39,1 |
| 41,3 |
| - |
| - |
| 37,6 |
| 37,4 |
| 37,3 |
| 35,7 |
| 33,6 |
| 37,4 |
| 32 |
| 39,2 |
| 3,2 |
| 37,2 |



 | 67,357 |
| :--- |
| 68,229 |
| 64,705 |
| 66,54 |
| 66,48 |
| 67,39 |
| 64,948 |
| 68,46 |
| 6910 |
| 61,08 |
| 67, |
| 67,71 |
| 70,68 |
| 77,36 |
| 72,62 |
| 67,75 |
| 64,9 |
| 69,94 |
| 75 |
| 78,57 |
| 66,84 |
| 70,28 |





```
nose root: medium, wide, moderately high
    back: medium, straight
    tip: pointed dow
    alar wings: thin, low and clinging
    nostrils; lengthwis, wedge-shaped tapered to front, protruding down
    prognatie Nr.o
lips: bulging, edged, cor
    teeth: straight, large, tooth-to-tooth position
            ars: helix edge, edged at the top and at the botton
            d, pierced right and left
fingers
nails
    small, short, narrow, curved
    hin, long, limp
    small, narrow 
    the second right and left
body tattooed in the old fashion
```


## Matiratira ${ }^{\boldsymbol{\beta}}, 20$ Years Old, Meri

| nutritional condition: fat; state of health: healthy |  |
| :--- | :--- |
| color of the skin | forehead |
|  | cheek |
|  | region of the breast bone |

Eraselen ${ }^{\hat{\prime}}$, Merir


## Ueiian $\begin{gathered}\lambda \\ \text {, } \\ 25 \\ \text { Years Old, Merir }\end{gathered}$

| nutritional condition: medium; state of health: healthy |  |
| :--- | :--- |
| color of the skin | forehead |
|  | cheek |
|  | region of the breast bone |
|  | abdomen (above the navel) |

Ueese | $\lambda$ |
| :---: |
| , 20 Years Old, Meri |



Remark. The skin is lighter than the skin of the other Merir-People. This type ressembles more the population of Palau, however, the family of the man was indicated as a pure and old Merir-Clan.


## Marapo ${ }^{\lambda}, 25$ Years Old, Merir

| nutritional condition: |  |
| :--- | :--- |
| color of the skin | edium; state of health: healthy <br>  <br> forehead |
|  | cheek |

character of the skin
color of the iris
color of the hair
form of the hair
head
, 2
Nr. 2; Sklera: bluish; conunctiva: discolored in the area of the open slit of the eye hair of the head nr. 27
flat wavy; body hair: very sparse
forehead: low,narrow, straight, curved
parting: slightly domed
entire face: moderately high, elliptical, moderately wide, pointed downward.
slit of the eye: slanted, narrowly slit, almond shaped, double eye lid cheekbones: moderately protruding
nose: root: medium, moderately high
nose. back: medium, straight
tip: pointed downwards
alar wings of the nose: thin, low, clinging
septum: short, wide, wedge-shaped and tapered toward the back,
protruding downwards
protruding downwards
nostrils: lengthwise-oval
jaw: Prognatie Nr. o
lips: medium, bulging, edged; upper edge: composite curve
teeth: straight, big, white, tooth-to-tooth position
ears close to head, helix edge, edged on the top
earlobes: attached, both pierced
hands:
"Caroline hand" developed on the right
finger: the first two phalanges of the index finger cannot be bent, otherwise norma

Iukam ${ }^{\lambda}$, 25 Years Old, Merir


Gumaiane ${ }^{\mathrm{i}} \widehat{\lambda}, 25$ Years Old, Merir.


Menitoroe ô, 30 Years Old, Merir
nutritional condition: medium; state of health: covered with ringwor nutritional condit
color of the skin frehea
heek
gion of the breast bone
abdomen (above the navel)
upper arm, bent side
pper arm, bent side
pper arm, stretche
palm of the han
ner side of the upper thigh

Nr. 4; Sklera: yellowish; conunctiva: discolored in the area of the open
, Sklera: yello in the ir of the head Nr. 27
fat wavy; body hair: very sparse
orehead low, wide, straight full
parting: slightly domed
back of the head: curved
entire face: moderately high, oval, wide, pointed downwards
slit of the eye: slanted, moderately wide slit, almond shaped,
cheekbones: moderately protruding
nose root: narrow, moderately high
back: medium, straight
ip: pointed downwards
septum: short, narrow, wedge-shaped and tapered towards back
nostrils: narrow, diagonally oval, big
jaw: Prognatie Nr. o
lips: medium, bulging, upper edge: composite curve
eeth: sloping, small, white, tooth-to-tooth position
ears: close to head, helix edge, edged on the top and the back
arlobes: attached, pierced left and right
small
hick, short
small, short, wide, curved
tim, long, limp
small, short, narrow
the first one on the left and right foot

Taiian $\varphi, 25$ Years Old, Merir

| nutritional condition: skinny; state of health: healthy <br> color of the skin <br>  <br> forehead <br> cheek |  |
| :--- | :--- |
|  | region of the breast bone |
| abdomen (above the navel) | 11 |
|  | region of the shoulder blade |

Koiitek $q, 20$ Years, Merir
nutritional condition: fat; state of health: healthy
color of the skin
forehead
cheek
region of the breast bone
belly (above the navel)
region of the shoulder blade
upper arm, bent side
upper arm, strethed side
palm of the hand
inner side of the upper thigh
mucous membrane-upper lip
mucous membrane-lower lip
soft, dry
nr. 2; sclera: bluish; conjunctiva: discolored in the area of open slit of the eye
hair of the head nr. 27;
simple;
none
forehead: high, narrow, straight, curved
crown of the head: slightly curved
back of the head: curved
entire face: moderately high and wide, elliptical, pointed at the bottom
slit of the eye: slanted, narrowly slit, almond shaped, double eyelid
cheekbones: protruding
nose root: medium, flat
back: medium, straight
tip: pointed downwards
alar wing: thin, low, clinging
septum:
nostrils: norrow, wide, wedge-shaped and tapered to front, protruding down
jaw: prognathism nr. o
lips: medium, bulging, lined, upper edge: composite curve
teeth: slanting, big, overbite, white, healthy
ears: clinging, helix edge, lined on the top
earlobes: attached, pierced left and right
small, delicate
thin, long
small, short, flat
thin, short, limp
small, short, narrow
the second one right, the first one left. Big toe clinging.
hemispheric, diameter of the nipple 20 mm, color 26, edge sharp- cut, nipple small


## Ueleila 9 , Merir

| nutritional condition: fat; state of health: healthy |  |
| :--- | :--- |
| color of the skin | forehead |
|  | cheek |
|  | region of the breast bone |

Tasetania,+ 23 Years, Merir


## Mesimok $\uparrow$, Merir


nutritional condition: medium; state of health: healthy, healed yaws

R. $\frac{\mathrm{mmmppci}}{\mathrm{m}} \overline{\mathrm{i}} \quad \mathrm{i}\lceil\mathrm{i}\lceil\mathrm{c} p \mathrm{mmmm}$ mmmppci「i$\quad i\lceil i / c p p m m m$
ears: close to head, helix edge, lined on the top and on the back
arlobes: attached, pierced left and right
small
thin, long
nall, short, wide, curved
thin, short, limp
hanging, diameter of the nipple: 26 mm , color: nr. 24, edge: blurred, nipple: deep.
ðorangei 9,35 Years, Merir
nutritional condition: skinny; state of health: healthy
color of the skin
forehea
19
cheek
region of the breast bone $\quad 19$
abdomen(above the navel) $\quad 21$
region of the shoulder blade 24
upper arm, bent side
$\begin{array}{ll}\text { upper arm, stretched side } & 25 \\ \text { palm of the hand }\end{array}$ palm of the hand
inner side of the upper thigh
mucous membrane-upper lip brane-lower lip
carmine white carmine white
character of the skin
color of the iris
color of the hair
form of the hair
head
nr. 3 , sclera: yellowish, conjunctiva: discolored in area of open slit of the eye hair of the head nr. 27
simple, flat wavy; body hair: none
forehead: moderately high and wide, straight, full
crown of the head: slightly domed
back of the head: domed
entire face: moderately high and wide, oval, pointed downwards
slit of the eye: slanted, moderately slit, almond shaped, double eye lid heekbones: strongly protruding
nose root: narrow
back: narrow, straight, lightly convex
ip: pointed downward
alar wing: thin, low, clinging
septum: short, narrow, wedge-shaped and tapered toward
the back, lying high nostrils: narrow, small
aw: prognathism nr. o
lips: medium, bulging, lined, upper edge: composite curve

## 

hands
fingers
nails
calves
feet
longest toe
breasts
small
small, long
short, narrow, curved
thin, short, limp
thin, short, limp
the second one left and right
hanging, shriveled, dia. of the nipple: 15 mm , color: nr. 3e, edge: sharp-cut, nipple: deep.



Body Parts. (According to Sarfert)

Haisa P , 24 Years, Merir

| nutritional condition: medium; state of health: healthy |  |
| :--- | :--- |
| color of the skin | forehead |
| cheek |  |
|  | region of the breast bone |


| tongue, mouth, lips | ererigiere, iauuei, tuzauoil | eye lashes, head hair | meteleri metei, simei |
| :---: | :---: | :---: | :---: |
| nose <br> nostril | uauti <br> raniuoit | incisor corner tooth | ngirouugutei ngiriie |
| eye | metei | molar | ngiriie |
| lid | poili metei | beard | iope |
| ear | taringei | mustache | homoi |
| hole in the earlobe | tautau teringe | whiskers | aruzei |
| cheek | tepei | chin-beard | louei |
| forehead | mangoi | pubic hair | oloi |
| head | fazik | tooth | ngim, ngid |
| eyebrow | fati | chin | etei |
| hair of the eyebrow | meteleri fati | shoulder | heuelei |
| arm | pag, pei | ribs | siri ngaringarin |
| upper arm | sepite | breast | ngaringngarin |
| forearm | mesete | nipple | tuti |
| elbow | apiripinipei | female breast | uilire |
| hand | gитиz | female nipple | tuti |
| back of the hand | irigiri gumuzi | belly | ziei |
| palm of the hand | zanipei | abdomen | apiziei |
| knuckle | uigunugupei | navel | putoi |
| finger | $\chi$ ati | side | peigi |
| thumb | $\chi$ atirape i | back | taligi |
| middle finger | atirozoiro | buttocks | metongai |
| finger nail | $k i$ | glans | falor |
| leg | gupei | scrotum | $z o ̈ r$ |
| thigh | söpi gupei | semen | ueti |
| lower leg | ineseri gupei | vagina | unnore |
| knee | simoroungie | clitoris | uiare (?) |
| calf | siere gupei | anus | parata |
| hair of the armpit | meteleri uaripei | tear | seni metei |
| shoulder blade | rgirupei | breath | ngaze |
| pinky | atizik | penis | ngos |
| foot | pasaro gupei | skin | kin |
| sole | fare gupei | bones | sire |
| heel | <arpirpin gupei | blood | sar |
| toes | रatire gupei | menstruation blood | sar |
| toenail | giri gupei | blood vessel | uarar |
| body | pozi | wound | ipal |
| throat | üei | meat | uitigur |
| neck | rgiriuiei | heart | $n g a z$ |
| gorge | zigiri gerei | spittle | zanagut tuuei |
| armpit | uaripei | sweat | maurau |
| hair of the armpit | meteleri uaripei | tear | seni metei |
| shoulder blade | rgirupe $i$ | breath | ngaze |

## Special Section.

## I. Society and Intellectual Culture.

## 1. The Community.

The community consists of two strata, the common people, sau, and the chiefly families, sauri getan. There is no obstacle for intermarriage of both groups. Twenty chiefs ruled in old Merir, they all held the title tamar. However, only the paramount chief held the actual power. The common man is only allowed to get near to the chief on all fours. Women, too, could become chiefs. In 1909, there were only 13 chiefs in Ngarabodl:

| 1. Peilox | 8. Irarorimar |
| :--- | :--- |
| 2. Ualeirei | 9. Melelen |
| 3. Guman | 10. Zukom |
| 4. Ariselen | 11. Mangiore |
| 5. Marifer | 12. Tutamag |
| 6. Lauoizepe | 13. Ianis |
| 7. Meziek |  |

The first chief Peilox attributed his line of ancestors to the first settlers of Merir. Guman is considered to be the second chief, although in the index he was only listed on the third position. It seems that he intermittently rose in his position, as Ualeirei, the second in line, was in prison; according to Hambruch. Both are brothers. Their clan comes from the Seneues-Islands.

Two small canoes hung on the middle post in the old house of the chiefs. They were connected by sticks and thus represented a double boat. One belonged to the god of the house, Mariteifei, the other one to the heavenly god Rugeiren. When a new chief followed the deceased one, he first had to construct such a canoe, only then is he allowed to build his own. Yet, no sacrifice takes place. The procedure is not quite clear by the way. The informant said: a new canoe is built when the successor accepts the title. Then all young people have to build one of these two boats while all the chiefs have to deliver food for them . ..'

## 2. Family.

When a young man wants to marry, he informs his parents. He is free to marry whomever he loves and in case he girl does not want him, he cannot marry her. He goes to the house of the parents of the chosen girl and gives them some of his possessions as a present. In return he gets the girl and he brings her to his house. The marriage is celebrated in the house of the groom without chants and dances, only with food. He and the parents of the bride themselves provide the food. Members of both families are invited. Part of the people stay in his house; the other continue to eat in the house of the parents-in-law.

On Merir polygamy was still practiced. A man could have up to three women who lived with the man in one house. Recently this custom has been abolished. By the way exogamy is practiced. Sexual intercourse during menstruation is forbidden. The woman goes into the imeriper, where all children are also born. Also shortly before giving birth and for some time afterwards the couple does not have intercourse. In case the child is weak, this ban is active for one year.

1 compare Tobi, Western Carolines, Volume 2.

When childbirth is imminent, the pregnant woman is brought to the imeriper, where she remains about 30 days Men are never allowed to enter the house and are also not allowed to be present at birth. While giving birth the woman in labor kneels or sits on the lap of another woman who massages her. All women who are present also help to massage the woman. The navel cord is cut with a shell, girigi, the placenta is buried. From the beginning the child stays with the mother. If the birth was a success, then mother and child are healthy, and the event is celebrated with singing and dancing. On the occasion of a first child's birth the celebration lasts 20 days. No feasts are held for the other children.

The child only gets its name when it is older, this means when it is liueri or ueiniet. The father gives the name. In case he is dead, then the mother has the right to do so. From this time on the child is allowed to eat whatever and as much as it wants. There are no initiation rites for boys, however the act of giving a name indicates a segmen in the development. The first menstruation is celebrated with a feast lasting twenty days. A man is never allowed to pronounce the name of the mother, the sister, the grandmother on both sides, and of the sister of the father. O the other hand he is allowed to call the sister of the mother, the wife of the father's brother of the father, and the mother's brother by name.

The name of the father, the grandfather, the father's brother and sister are forbidden for the woman. However, she is allowed to call the mother's brother by name. To break these laws supposedly causes the persons addressed with the forbidden name "to cry". We observed that chief Guman did not uttered the name of his father, nevertheless the older brother did so. All men of the same family call each other uizi, all women niangei.

Even though not actually forbidden, it nevertheless is against the emotion and decency to pronounce the name of a person, Zaugepit, the first settler on Merir, supposedly introduced the taboo on names. Guman, the nephew of Lavoizepe, calls this one, his uncle also papa, who on his part calls him manerei. Guman's brother Ualeirei uses the same address. Cousins also call each other papa, a name a female cousin also uses to address a male cousin, and also all older men. A nephew is called raure uizi. Other common terms can be seen in the following index:

| man | mar | daughter | rafazei, reiveiviet, fatiarveiviet |
| :--- | :--- | :--- | :--- |
| woman | veiviet | grandfather |  |
| father | papa, also term for all older men | on the father's side | paparipapa |
| mother | neita, also term all older women | grandmother f.side | zinipapa |
| brother | uizi (between brothers) | grandfather m. side | papaneita |
|  | miangei (between brother/sister) | grandmother m. side | zinineita |
| wife | ngeili | father's brother | uizilipapa |
| son | rei, fatiar | father's sister | miangeiripapa |
| younger brother | uizi leuueit | mother's brother | miangeineita |
| older brother | uizi teinap | mother's sister | uizineita |
| sister | uizi (between sisters) | husband father's sister zini miangeiripapa |  |
|  | miangei (between | wife father's bother | liri izizilipapa |
|  | brother and | husb. mother's sister | zini miangeineita |
|  | sister) | wife mother's brotherliri uizineita |  |
| older sister | uizi leinap | son father's brother | raure uizilipapa |
| younger sister | uizi leuueit |  | fatiar uizilipapa |
| husband | ngeili | old woman | rorop, tigeuei |



Terms of greeting and their use are the same as on Pur. Nose greeting is generally used when, after a long separation, people see each other again. Parents practice this testimony of endearment anytime towards each othe and also towards smaller children. However, among the other family members the nose greeting is proscribed except in serious circumstances, such as voyages and death. Each deceased person is honored by all family members with a nose greeting, the last proof of love. The mourners, too, greet each other in this fashion in the mourning house.

Death and funeral ${ }^{1}$, When a member of the family dies, the entire clan gathers in the mourning house and lament loudly. They tear their hair and beat their breasts. The wife of the deceased cries the loudest and beats her breast with full force. Initially she appears to be like in a cramp, and people have to hold her arms, in order to prevent her from mistreating herself. In the meantime women decorate the body. He is clothed with a new lavalap, and all his jewerry is placed on him. His hair is anointed. The body is smeared with yellow turmeric root powder The women's weeping has the form of a chant; natural sounds are only heard from the widow. No sorrow can be detected among men. Once they finish chanting their lament they have a quiet conversation. Children are also admitted, yet initially they stood laughingly amongst the crowd. Finally the body is wrapped into a sleeping mat A decoration made of shells is placed from the lower part of the chin over the head. The deceased, who had died at six o'clock, was wrapped one and a half hours later into a big cloth.

During this procedure the wailing chants started anew. ${ }^{1}$ In the meantime more and more women are coming. They sit a little bit away and chat. Whoever has some food at hand, eats it quietly during the death lament. People also smoke cigarettes rolled from banana leaves. At the same time another man carves his new comb. One old woman, lying on the left side of the body, is particularly noisy. From time to time the women who have arrived later and who are sitting farther away join in the lament. At one o'clock the house is filled with men and women, altogether 33 persons have gathered. Around three o'clock the face of the body is painted entirely yellowish red, and the body, covered by some red cloth has been bedded on three mats.
Those men who know to sail according to the stars are not allowed to come into the house of the dead, as this would violate the will of the god of the mariners. If they would however still do so, sharks would surround their boat during their next voyage and bad weather would haunt them. Nevertheless, at the death of a mariner they are allowed into the house and are also allowed to touch his body. This rule applies to all, who know about navigation and the stars. In the meantime it is four o' clock, the body is sewn into the mats and accompanied by loud lamentations it is carried to the open grave that had been dug.

Immediately it is placed in there, then the grave is closed. In former times the deceased stayed a whole night in the house, the high chief even stays half of the following day. A common person is carried by four men, the chief is carried by all men. His body is placed into his own big canoe or into the one of his family. They hoist the sail and let the boat drift on the open sea. While the canoe is drifting loud lamentations accompany it. Burial in the ground is practiced among the common people, burial at sea takes place in aristocratic circles. In the old days, on Merir maybe even before the move to Palau, the widow moved into a small house that had been erected for this purpose. She remained in there for three days. During this time she had to lament and cry. Afterwards the house was burnt down. The widow may marry again. In case she loved the man very much, she waits three months otherwise she can do so after one month. When she gets married again the children move to their mother. In addition, custom demands that the mourner walks and sits bent for a quarter of a year

## 3. Laws.

Right of ownership. Land on Merir was divided into a great number of plots ${ }^{2}$ with special names that to some extent were subdivided into further, smaller plots. The father of Peilo had seven plots of land, of which Peilox received five and his sisters two. The owners of the fields do not form a community, only within an extended family they watch over their mutual interests. Thus, the sisters take care of the fields of a man during his absence. In case he does not have a family, he will pay natural produce for this service. For the rest everyone works individually and everyone can build his house and his plantation wherever he wants. Coconut palms belong to those men, who plant them themselves, sometimes already in their childhood. The fields, or more precisely the plantations belong to women
Inheritance Law. When a chief passes away, his oldest son receives two thirds of the inheritance. The other children have to share the remaining third. In addition the oldest son has to give the brothers and sisters of the deceased from his inheritance. This happens when they have helped with the funeral of the deceased. The estate of male commoners is divided in equal shares and passed on to all the children. Only the oldest son receives the house and the canoe. The closest beneficiary is always the son. In case a man has no children, when his wife marries again his inheritance goes to his father and his brothers and sisters.

[^7]when his wife marries again his inheritance goes to his father and his brothers and sisters. Otherwise it seems that the wife gets a share of the inheritance. The surviving partner of a marriage always inherits the coconut palms. In case both of them die then the child inherits them. In case there is no child, then the brothers and sisters inherit. The same is true for the taro fields. The wife inherits the house in case she remains unmarried. Only the son inherits the chiefly title not the brothers.

Criminal law. Vendetta is not practiced. In case of assault and battery the culprit pays a fine to the family of the person he had harmed.

## 4. Tradition.

The lore of the Merir-People is essentially the same as the one on Pur and Songosor. Here too, people poin o Mogomog as the original home island, though not with the same distinctiveness. Interesting traits are the mentioning of the settlers' intermediate station on Palau, the settlement of Tobi, the mosquito magic, and the father's fear of the son when he did not bring back the mother. The Merir version of the settlement's history: Zaugepit was the first man who came to Merir. Nobody knows who had created the island. However, Zaugepit made the laws

Talau was the first man on Songosor. He was a Mogemog-Man. He came from there in a canoe. In those days Mogemog was too densely populated. Mariteifei was the first man on Pur. He left Mogemog and came via Yap. This island was also too densely populated, therefore he went to Palau, where again too many people lived. Here he encountered Talau. Both of them went with Talues ${ }^{1}$, the father of Zaugepit, to Songosor. They set forth in three canoes. Talues and his family were in the first one, Zaugepit with his were in the second and Talau with his family sailed in the third. On Songosor was nobody. Therefore, they settled here

Later on Zaugepit and Talues continued their trip to Pur and left the islands Songosor to Talau, the oldest son. On Pur they took a green coconut leaf and buried it in the sand, while they went to visit the island. In the meantime Mariteifei landed. He had come from Mogemog to Asapal (on Yap), had stayed a long time there and had sailed directly to Pur. He saw the fresh footprints in the sand and also the spot where someone had dug. Digging there, he found the green leaf. He said to himself: People already arrived before me. Therefore, I am taking an old leaf! He buried it, covered it with some sand and placed Zaugepit's green leaf on top. Finally he covered everything Then he followed the footprints into the bush looking for the others. He found them and a dispute followed. He said, "who are you? Where do you come from? This here is my place!" However, the others said the same to him
"Good", Zaugepit and Talues finally said, "let us go into the bush and see who has the older right!!" Then Zaugepit unearthed the green leaf, showed it around and said: "look, I am the older here." Mariteifei said: "good, this is your leaf, now I am going to dig out mine". He dug it out and showed them the old leaf. "Look," he said, "my leaf is old, yours is still green. Thus, I came much earlier and you only came after me." Then Zaugepit said, good, you are right, you are the owner of this land and we will look for another place."After that they left Pur and came to Merir. However, there were so many mosquitoes that Zaugepit did not want to step on shore. Talue said, "I now go on shore and will do something to make the mosquitoes disappear." He took a green leaf and saic certain word into the leaf. Nowadays nobody knows this word anymore. ${ }^{2}$ This made all mosquitoes leave and he arrivals remained on Merir. This island was only inhabited by turtles which lived in the water and on land. Later on Talues left Merir and went with his wife and both his daughters to Tobi. Here he deposed the daughters with their husbands and said to them: "you are going to sleep here!"

1 also called Taleues.
2 The magic is called $a i$

Talues himself did not stay with them but continued sailing from island to island (Tobi, Merir, Pur, and Songosor) in order to see his children. Once when he sailed back from Tobi to Merir his canoe capsized and his wife died inside the hut on the canoe, because she did not manage to get out. He then returned to Merir, yet did not dare to step on shore because he had not been able to save the mother of his son. He was afraid and sailed around Merir Zaugepit sent a canoe. As the father did not come on shore he assumed that he had lost the mother. The canoe was supposed to bring Talues on shore. He landed and Zaugepit asked how his mother had died. Talues told him. They buried the mother on Merir.
Talues' family is called Sauri getan. Mariteifei also belongs to the same family. He is Talues' brother. He and all the others died . . . Talues brought his daughter Rimelepei to Tobi, came back and left Merir entirely to Zaugepit He himself died on Tobi. Zaugepit died still young: Once upon a time he was resting and ordered his wife to ready a coconut for him. He drank it. She playfully snatched the nut from him. It fell out of her hands and hit him so unfortunately that both his incisors were knocked out. Zaugepit was so ashamed because of this that he no longer partook of any food and died.

Just like on the neighboring islands the very sparse accounts connect to the names of the most important chiefs The incidents are more or less the same events as those the Pur-chief, Maian had described. The index of the first chiefs of Merir consists of 23 names, according to Peilox, the last one in this list.

| 1. Talues | 12. Uoraparimar |
| :--- | :--- |
| 2. Zaugepit | 13. Megemau |
| 3. Mal | 14. Mareitepit |
| 4. Uoiie | 15. Arigirifer |
| 5. Taugauoi | 16. Uorop |
| 6. Uoiiesiek | 17. $\chi$ afinimar |
| 7. Langarizeri | 18. Maramaiuruk |
| 8. Zauteti | 19. Monuoiu |
| 9. Merat | 20. Iterap |
| 10. Lagi | 21. Erume |
| 11. Tamemilen | 22. Eriiiriferi |
|  | 23. Peilo |

Under the reign of Uoiie, the 4th. chief, Papuas came and killed all men, women, and children on Merir. Only Langarizeri and Zauteti stayed alive, because they had been on Songosor. Merir had to be settled again from Pur and Songosor. As Maiian reported, the chief escaped. Zauteti, the 8th. chief and Langarizeri, obviously the ones who had been saved from the Papuan attack, killed each other: Langarizeri rammed a knife into the body of Zauteti. The other one wrested the knife from him, pointed it to his murderer and stabbed him to death. Thus they both ended

The 1st. chief Tamemilen died as an old man, which seems to have been a remarkable and memorable circumstance. The 12 th. chief Uoraparimar was slain by Larera-People. Megemau, the 13 th. chief, drifted to Uleai, as it wa reported by people from Mogemog. Mareitepit, the 14th. chief was a mariner. He constantly sailed back and fort between Pur and Songosor and died as an old man. The 15th. chief Arigirifer, drifted west to Draus (?). He died there, the others who had been with him returned home. Under the reign of Uorop, the 16th. chief, the Larera People came. Nobody was taken away, but many died in the fight. The Merir-People fled to the open sea. The 18th. chief Maramaiuruk gave nine turtles to people from Pur, who in turn gave a lot of food.
1 According to information of chief Peilox

Under the reign of Monuoiu , the 19th. chief, Pur-People on Merir and their chief were slain. It was a conspiracy instigated by the Pur-People, as can be detected from the respective Pur tradition. Under the reign of the 20. chief Iterap five women from Papua arrived drifting. They came from "Sofi". Among them was the grandmother of a boy who is today $15-20$ years old. The 21 st. chief Erume died already as a small boy

Oddly enough people on Merir know more about wars in ancient times than those on Pur. Though maybe they are only more open about it. In former times many fights supposedly took place between Songosor, Pur, and Merir The leader was the high chief. War songs were chanted and the captives were killed. Besides the fight with stones, wrestling matches were of prime importance. The parties tried to grab each other from the back, to crush the stomach, and to suffocate the adversary. People also supported their clan members. When the fighter did not seem strong enough, they crushed the head of the enemy with a stone. The Merir-Man Uaiumar was famous because of his physical strength. In a wrestling match he supposedly "rrushed" his enemies "very quickly dead". Such wars are said to have still happened at the time of the grandfathers of today's generation. In case he was not killed, the defeated man immediately had to pay curcuma, ropes, wooden bowls, and mats. However, this last information probably refers more to the private quarrels between Merir-People, because at war no one was ever made prisoner.

A lot about drifting canoes was stored in the memory of the natives. As far as chiefs were involved the events were already mentioned. A certain William still knew about two Merir-People who had drifted to Palaw On f them was only tattooed. While one returned to his home island the other one died on Palau. A brother of Lanilepes sailed with six others from Merir to Pur. On his way back he drifted to Manila. People supposedly stayed there. This happened when Merir-People still lived on their home island. Guman and Lauilepe report that in the lifetime of their father Papuans drifted from Nugumi-Ninigo to Merir. They were five women. One of them married a Merir-Man and gave birth to a son. The women died because of sicknesses. They were called: Merifito, Sizoi, Sipo, Gues, and Rofi. Their offspring, two boys, died during the typhoon. One descendant of these women, Moping, is still living on Songosor. He represents the third generation. On August 3, 1909, 12 men, 4 women, and 2 boys, accompanied by soldiers, came from Nabukit to Goror. They originated from Mogemog and wanted to sail to Yap , missed this island and drifted to the Philippines. Then however, they, in their two canoes, found alone he way back to Nabukit

## 5. Religion.

The religion of Merir-People is based on the same belief as the one of people on Pur. The world, respectively the earth, iuar, is surrounded by the firmament, ran. On top of it is the sky, uaunen, in the east is tataro; underneath the world farifer is situated. Rugeiren , the god in the sky, together with his father Arizirapa and his mother Itamariu, lives in uaunen. Both his sons, Orofat and $\chi$ lose (?), and his sister Iremegei stay with him. Two fish Igezaupi and Tigeligeli dwell in the underworld, farifer. Whenever they move there it creates an earthquake.

Rugeiren is the highest god and rules over everything: sky, earth, land, and sea. He holds the life threads of all human beings in his hand. When somebody has to die the god breaks his life thread. He lives above the star mazitöp. He lets people die who do not have a good character and are up to no good on earth. He allows the other ones to recover from their sicknesses. Izamagei or Iremegei, the sister of Rugeiren, creates the sicknesses of human beings.

Arizirapa, Rugeiren's father, gave his son all the power. He sends rain and sunshine and makes the seasons succeeding each other. He also gave humans the gift of speach. Arizirapa and Itamaru had eight children:
 Izamariu ${ }^{\circ}$.

Rugeiren lives together with Iremeigi and her sister Ialo. His three sons Orofat, $\chi$ lose, Alore, and his daughte Mozilope stay with him. All these gods have their duties: Orofat is the messenger of the gods and the creator of al living beings. He creates the fish, the birds, the trees, and the plants. However, it is not known who created heave and earth. Orofat also taught humans to correctly build a house. In former times people had a light way to build their houses. When they wanted to climb on top of the house to thatch the roof, the house collapsed under their weight. Thus, Orofat told people: "If you use my invention, your house will no longer collapse." People, however, did not care for his advice. The next house they built collapsed again

Then Rugeiren advised them to take Orofat's invention to their heart. Since then they do so and their houses stand solidly. It is said that the alteration consisted of installing strong wind bracings situated in-between the construction of the apex and the wall. Another time Orofat and Rios created human beings. Rios did not understand how to correctly construct human beings. He did not make them any joints, so that they could not move. On the other hand, Orofat created his human with joints. When he had finished building him, he hit him with his fist into the joints of the arms and legs and the human ran away. We do not know anything else about Rios only that he lived on earth and died there. - As Rugeiren's messenger Orofat wanders around everywhere and is on the lookout. Whenever he finds something not in order he reports it to Rugeiren.

The natives term all other sorts of smaller spirits, inhabiting heaven and earth and working there, also as sons of the god of the sky with the same name. Alore gives humans their work and orders them what to do. Mozilope visits the sick and massages them. Iremegei gives medicine to the sick. Izazapiu draws the tattoo designs on the skin, and Izamario executes the tattoos. रoto builds the houses and Zeren the canoes, whose construction is his invention. However, Orofat invented the European ships.

People report: When Zeren invented the canoe he had a quarrel with Orofat. While he was still working on Orofat came and inspected the canoe. Zeren said, "what are you looking at? You cannot build such a boat." Orofat felt insulted, took a coconut, hoisted the sail, went to Spain, and built a boat. Then he sailed back to Merir and said to Zeren: "look, here is my canoe, which I built myself." - "Good", said Zeren, "it has nearly the same size. You did not build a bigger one than mine." Thus, Orofat once again went to Spain, built there a schooner, and came back with it. He said to Zeren, "this is my canoe!" Zeren replied, "this is still not big!" Thus, Orofat went once more to Spain. There he built a big schooner and came back with it to Merir. Zeren sailed out in a small canoe to meet him and called him. Yet, Orofat did not listen to him but sailed over the small boat, broke it and made it sink He went on shore in another canoe. ... The other Orofat legends, too, reveal quite clearly the picture of the "very clever man whom nobody loved".

Once upon a time when people built a chief's house, they dug a hole for the middle supporting post. They dug very deep and Orofat said to them, "why are you excavating such deep holes? This is not at all good for the beams." While the other ones were digging Orofat shoveled the earth out. When they were finished, they pushed him into the hole and thought they had killed him. Yet, Orofat called his small ants for help, ordering them to gnaw a hole all along the post. The ants did this, however, they gnawed all the way to the bottom where Orofat was. When the house was finished the inhabitants prepared a feast. Now Orofat crawled out from his cave and sat on the overlying cross-beam. Then he ordered the ants to bring him some coconut. They took a little bit and gave it to him. He rubbed it between the palms of his hands, forming a small ball, and in this fashion created an entir coconut. Then he asked them to bring some taro. Once again they brought a little bit, he formed it into a small ball, and made a big tuber out of it. In this manner he had brought some of all dishes and made them whole again. When people distributed the food in the house and all started eating Orofat also opened his coconut. When the other ones heard the noise they asked, "what was that?"


Looking at the spot from where the noise had come they saw Orofat in the middle of his many dishes. People marveled at this. They looked into the cavity where the post stood; it was in perfect order.

Since then nobody ever did anything against Orofat and people started to believe that he was a god. . . After this event Orofat returned once more back to the people on earth. He went to catch some turtles and caught four animals. He took them and placed them on the sand of the beach. Then he went home and told the chief that he had caught four turtles and that on the next day people should gather and distribute them. Orofat received the smallest turtle, the chiefs received the bigger ones to divide.

Orofat had the gift to turn himself into something else, to make himself small and big. So he came down to earth at night and turned into a rat. He bit a hole into the side of one of the turtles reserved for the chiefs. He took all the fat out and defecated and urinated into the body of the animal. The fat, however, he stored in his own turtle. He treated the other turtles the same way. The next day, when the chiefs wanted to gather, Orofat went into the bush and turned into the bird, riangeik. When the chiefs had finally gathered they asked, "is everybody here?" Then one of the chiefs asked once again. Yet, the high chief said, "Orofat is missing!" They sent a man into the bush to look for him. He shouted, "Orofat, Orofat!" Yet nobody replied. So he went back and told the chiefs that he had not found anybody. Orofat's father, the first chief, asked him whether he had found Orofat. He replied, "no!" Then Rugeiren asked, "didn't you see anything in the bush?"-"Oh, yes," said the man, "a riangeik". Thus the man went once again into the bush. This time, following the advice of Rugeiren, he called, "Orofat, No-Orofat! Come, do not come!" Now Orofat answered, "I am coming!" When he finally came, they divided the turtles and he received the smallest one, as he had known beforehand, The bigger turtles had to be carried away by two men each. However ten men were necessary to carry away his turtle. On the same day the chiefs killed their turtles and cut them open. Then they found the fat covered with excrement and Orofat's vomit welled out of its mouth. All of them insulted Orofat when they came to him and saw that his own turtle was full of fat. . . Tautu - Uerimezau is a mariner. He learned the navigation from Arizirapa and later on taught it, as well as the knowledge of the stars constellations, the winds, and the direction of the waves, to human beings. Aririmeze invented the oracle.

Here too, people think the world of the dead is situated on two big canoes. It is called uezeti. Their harbor is located somewhere in the west, iroto. The bigger of the two boats belongs to Ruko, the god of the sea, and is called uametaue. Masaa , the son of the shark, rules over the smaller boat. The canoes always sail against the current. When the current goes to the north, they sail to the south and vice versa. Thus, the sailing direction of the deathships can be determined by the currents. Nobody knows anything about the land where the ships are moored. The spirits of young people, eriz ${ }^{1}$, are placed into the small canoe. Old people, those whose hair is already grey, are in the big boat. They do not have to work. The young people, however, have to help. For instance when Ruko has his ship cleaned the young people from the small canoe have to come on board his ship. When an evil spirit, what means the spirit of a bad person, comes then Ruko has him chased away or killed by the other spirits. The spirits of the dead sail in a canoe to the ships of the dead even when they were buried in the ground. Masaa is the son of he shark and lord of the small ship of the dead that collect the spirits of the dead. This is the reason why he play major role during sicknesses. From time to time Masaa also has to travel to Rugeiren and by assignment of Ruko he has to report about the conduct of the inhabitants of the two Merir-Villages.

Ruko is the god of the sea and rules there as absolutely as Rugeiren in the sky. He does not have a father, hi mother is Iaoröpo. He has three or four sons who are with him on his canoe. Chief Peilo no longer knew their names. All together his knowledge about the realm of the dead was as thorough as the one of the men Ualirei and Lauoizepe. In addition they told the following story:
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Once upon a time Ruko's canoe sailed past Merir. From the beach Mariteifei saw Mautuma, Ruko's wife, and fell in love with her. He sailed close to the canoe and almost capsized it, so that Mautama fell over board. Mareteifei caught her. When Ruko suddenly could not see his wife anymore, he looked around and saw how Mareteifei kidnapped her. Then he took a sou-net and tried to catch her again. Yet he only caught her spirit, while Mareteifei kept her body and married her. Mautama was just holding a small shark, which was Masaa, in a coconut shell filled with water. When the canoe capsized she lost the shell and Masaa, both of which fell into the water. Therefore, she started a loud whining. Because of her crying Mariteifei went again to the canoe and tried to catch the shark with his hands. However he did not catch it. Therefore, he went to Ruko, in order to borrow his net. This, being a coarse-meshed net, did not bring him any success. Now he borrowed a close meshed net from him. This time he was lucky and caught the small shark. Mareteifei was supposed to catch the fish for Ruko, therefore he had gotten the net. He, however, did not do so but caught the fish for himself. He took the shark home and placed it in a leaf. While the small shark was lying on the leaf it turned into a human child. The next day he was again a shark and on the following he was again a human being and this continued alternately. In this fashion he grew up. When he had become a man he did not turn into a fish again. Then Ruko came and carried him away Before Ruko had been alone on both his canoes. If he wanted to sail one canoe he had to anchor the other one first. Therefore, he took Masaa away from shore and gave him one canoe. Mareteifei had given his consent because the god had said to him, "I will teach Masaa, should I die he can take my place.'

Masaa was a son of the shark. Mautama saw him as a small fish in the water, and caught him with her hand. First she placed him into the canoe, then into a coconut shell and kept him for her own pleasure. Masaa, too, takes only the spirits of good human beings on board of his ship, the other ones he chases away. Generally he stays at sea all the time. Occasionally though, he comes on shore and goes to Guman's house. This one is the "spokesman" of Masaa.

Masaa plays a major role when sick people are treated. When a human being gets sick, this means he gets sick in a natural fashion, then Masaa cannot help. However, when an evil person had caused the sickness then he can chase away the sickness-spirit. Even in case someone is very sick, he will not die as long as his lifeline, the line leading from his head to Rugeiren's hand, is totally intact. This means when there are no damaged or weak spots. When Masaa sees that the lifeline is completely in order he can help, because he then realizes that the sickness is caused by an evil human being. Thus, when someone is sick, people pray to Masaa not to take away this person Masaa enters the spokesman, now Guman, whose family since the older times provided the spokesman. Yet, he only comes when the sick person, or his relatives give presents to Guman. Masaa then says: the spirit of this man is in my canoe. He dismisses again the spirit of the patient when he is satisfied with the presents made to his spokesman. Masaa also tells his spokesperson if he can help or not. The healing process starts when Masaa talks to the evil spirit, who causes the sickness, and chases him away. In that event of death that Sarfert had witnessed the patient or his family had not given anything to Guman. Therefore, the man had died. After his death the spirit came to Guman and was railing against the diseased and his family. The spokesperson, obsessed by Masaa, shivers fiercely and shouts, "ha-ha-ha-ha". During this seizure Sarfert heard Guman singing. The deceased had not given anything to Guman because he did not believe in the power of Masaa.

If no presents are given to the spokesperson, then the spirit comes only after the death of the patient, chastising him and his relatives. Besides Guman, Ualeirei can also be the spokesperson, because they are brothers. also Masaa is considered an evil spirit and is the lord of the humans' spirit whom he wants to have his canoe.

The shark is the important totem animal of Merir-People. He is considered the god of the sea and nobody eats him. In case someone would dare to do so then his boat would have to capsize and the shark would devour him. People also have different set phrases spoken at sea to the shark so that he would leave them at peace. According to the information of others these are not set phrases, but people beg the shark in a normal way not to devour them.

The rest of the gods also take care of the Merir-People. Thus, during the meeting of the chiefs, a spirit comes to Irarorimar , one of the chiefs. Also to Ariselen. Mostly they are the spirits of Mariteifei, Orofat, Talues, and Zaugepit who possess certain men. They are considered to be benevolent spirits. Mariteifei comes to Lauoizepe, Ariselen, Totumag, and Irorimar. The relationship between certain people and spirits is passed on from father to son and is linked to the family. It is remarkable that the spirit of Talues, who actually belongs to Songosor, without doubt came to Merir however not to Palau. Since the Merir-People live there he no longer visits his spokesperson.
The speaker of a spirit is a sort of priest, for instance Irorimar is the priest of Mariteifei, who visits him wheneve he feels like it. Just like Masaa he has the power to heal. He also comes when chiefly meetings are in session. Then a big feast is prepared and Irorimar partakes of it. Then the spirit takes possession of him and he asks him to bestow health upon the chiefs, something the spirit promises to do. - Orofat sometimes comes to chief Lukom, however never during the meeting of the chiefs but only in the house of the man. Just like Mariteifei and Masaa he, too, can heal the sick. The spokesmen of the mentioned gods are the only doctors or priests of the people on Merir. Their spirits are the only ones who come to the people.

Zaugepit provides the seasons and ripens the fruits. He can also provide a good catch of fish. He was also the one who gave the advice not to cut any breadfruit or other trees during their time of ripening. Zeren is a big, strong, and evil spirit dwelling in the northeast of heaven. He holds a wooden club in his hand with which he beats the spirits. He never takes a rest; all the time walking up and down. When a spirit comes he kills him with his club In his area of heaven, which is admittedly small he is the sole ruler. Rugeiren too, who otherwise is the lord of heaven has nothing to say here. Both of them live together without any conflict.

In former times an old man supposedly lived on Merir, who practiced medicine. He washed ulcers and placed leaves on the wounds. He also prepared extracts of plants and gave the sick food and drinks. While he gave the potion he sang. Not only the chiefly family considers the shark their totem animal the entire population has given rules to avoid certain animals. This originated in ancient times. Below are the following animals, they, however, are not considered to be inhabited by spirits:
$\chi$ aseper, a small turtle, feiie (Palau rul), a stingray with a long tail, Rauut, an eel, Periper, a fish, Git, a jellyfish.
The whale lazo, supposedly very frequent in in the waters surrounding Merir, is on the other hand not a totem animal, itai tuuutop. These animals are not eaten by anyone. Talues is said to have introduced this law. If someone would dare to do so, he would not catch anything.

Stars are also connected with all sorts of legends: Thus, the star Ur is a spirit who wants to catch two people fleeing from him. Once upon a time the star Mar had strong wings. When he flapped them typhoons would come. Therefore, the evil spirit Zeleillain, who owns Songosor, took a stick and broke Mar's right wing. Since then he can only flutter and there are no longer strong winds every month.

The creation of man is a deed of the moon and the mouse. They were the first living beings and wanted to have the human being according to their likeness. The legend goes like this:
The moon and the mouse were the only living beings on earth. One day they were thinking to create human beings. The moon wanted to have them after its own creation: at full moon they should be big, during the waxing and waning moon they should be small; and they should be immortal. The mouse, however, did not want this, preferring to have human beings after its own creation. Therefore, they should be mortal, too. Like all other creatures they should grow and get older and older until they finally died. The mouse had a big dog and she threatened the moon to make it also mortal, if it did not create human beings according to the mouse's wish. The moon was afraid of the mouse's big dog and relented. Thus, humans were created mortal.
The invention of fire that is based on thunder is told in several versions. In this connection the mentioned totem belief is also remarkable: thunder is afraid to sit on his totem the pandanus tree.

## The Invention of Fire.

The two women, Izamerio and Izazapio lived together in one house. Izazapio made mats and loin cloths. Izamerio went out of the house. It was raining, lightning, and thundering. A flash of lightning struck. The woman saw the fire on the ground. She took a coconut shell, placed it inside, and covered it with the second shell. Then she went back to the house. However, she did not know yet what she had found. She chopped some wood and added some of the fire to it. Then she saw how it burned. She placed some food on the fire and ate from it. This made her quite fat. When the woman Izazapio saw the other woman being so fat she went to her had asked her, "what kind of food made you so fat? Before you had been so skinny." Izamerio gave to the other one some of her food and this one replied, "ob, this is good food! How do you do this?" Izamerio said, "I will give you some of it (the fire); it is something very good." And she gave her some of the fire. Izazapio told everyone. All human beings came and wanted to have some of her food and then from her fire. She gave all of them from it.

According to another version the invention happened like this:
During a thunderstorm a woman by the name of Izamerio (the wife of the chief) went out to fetch some water. A flash of lightning came down and it thundered. She saw the fire and placed it into a coconut shell covering it with a second shell. In her house she made a hole in the ground and deposited the fire in there. In those days it was still very cold on earth. She placed taro inside, fish, and everything that was eatable: she cooked it and ate it. While she became quite fat from it all the other humans remained skinny. They came and saw how she was so fat. She offered food to all of them. They, however, did not accept it. Though one night .

## Rizilela and Ariforaua. ${ }^{1}$

Thunder (?) fell down on top of a pandanus tree. A woman went to the waterhole in order to fetch some water She found the thunder on the pandanus tree. He asked her to take her down from the tree because the pandanus is the totem of the thunder and he did not want to stay on his totem. He said, "if you take me away from this tree you will find something good. It will be at the place where you will bring me. When I have left from there and you come back to it, you will find it in a coconut shell." He also ordered her to keep the shell with its content well hidden at home. He told her that the content would be very precious, that she should place it onto wood and then should place her food inside. Then the food would be especially good for consumption.

Once the woman had moved the thunder to another place and returned to it the next day, she found the coconut. She took it home with her, dug a hole into the ground and placed some of the content (of the nut) inside and cooked it.
Obviously the narrator mixed up the names: Ariforaua found the fre and gave it to Rizilela (comment of Sarfert.)

One day her younger sister Izazatio said to her, "you look so good, so thick and fat, what kind of food are you eating?" The older sister gave her some of her food, which she tried and found very good. She asked the older one how she had prepared it. This one answered, "I will show you later not now." She became bigger and bigger. The younger one was wondering why and one night she secretly observed the sister how she cooked. When this one took the fire out of the shell she walked over to her and asked her, "what do you have here? What kind of food are you preparing?" Then the other one revealed to her the preparation and gave her some of the fire.

Now there were only two women in the village who knew the fire. Both lived in different houses. Both kept it secret and cooked their food just for themselves. Both of them became very fat, while the other ones remained very skinny because of their raw food. When the other ones noticed this, they said, "what kind of food are you both eating that you become so fat, while we remain skinny?" All people went into the houses of the two sisters, inspected them and found the fire. Without asking they took some of it and said, "why are you both eating only cooked food, while we should eat raw food?"- Since this time all human beings have the fire ...
6. Time, Knowledge of the Sky, Navigation ${ }^{1}$.

Due to historical tradition chronology is indicated by generations instead of years. Therefore, no one knows to tate his age in years. Nevertheless a division of time in years, months, days, and times of the day exists. The year sarts when the sun rises at its spot on the horizon, where the constellation called mezitöp has also its rising point. Therefore, it is called like the constellation mezitöp. This beginning of the year is in the first month of the year called tumugl which in 1909 should have corresponded our August-September. The year ends when the sun finally rises again in mezitöp, after completing its movement from its rising point mezitöp to the south and he north and passing mezitöp once. According to information of the natives the sun's course of the year has he following months:

|  |  | Position of the Sun |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Name of the Month | in the Constellation | Name of the Month | Position of the Sun |  |
| in the Constellation |  |  |  |  |

The above mentioned 12 months, as can be seen with ease in a comparison with the constellations in the second row, they are partially named after these constellations, especially after the 5 months tumugl, mezitöp, uru, iarüar, taiglauor and maybe even after a sixth one (mari = constellation mauri?). Looking to Pur and Songosor we see hat is also true for the remaining 6 months. All the months are named after constellations, the rising points of which the sun itself traverses in the course of one year from N to S and back.

The weeks and days of the week have no name. On the other hand the day, the natives count it from 6 o'clock in the morning until $60^{\prime}$ 'clock in the evening, is divided in 20 segments. The period from $90^{\prime}$ 'clock in the evening until around 1 o'clock at night is combined. The times of the day, which of course correspond only approximately to our hours:

| 1 o'clock midday |  |  | maruk | $40^{\prime} \mathrm{clo}$ | ck in the morning | uitalari or nioniar |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | " |  | tapar | 5 | " | niueigiregite |
| 3 | " |  | teleriuolik | 6 | " | nintiari |
| 4 | " |  | torigios | 7 | " | timar iruar |
| 5 | " |  | tozarei | 8-9 | "in the morning | linga lauat |
| 6 | " | in the evening | iotoroiar | 10 | " | fafareki |
| 7 | " |  | niuaraue | 11 | " | fafzerau ozeeng, |
| 8 | " |  | mozo | 12 | " | fafzerato otaraain |
| 9-1 | " | at night | nogarepariuoin | 12 | " noon | otarain |
| 1 | " | at night | tang razitouo |  |  |  |
| 2 | " |  | tauoriuoin |  |  |  |
|  | " |  | tauoriuoin lari. |  |  |  |

For the orientation in navigation the natives named certain points of the compass, which absolutely correspond with our 8 cardinal points. These are:

| north | ieuen | northeast | ratineuen |
| :--- | :--- | :--- | :--- |
| south | iogl | northwest | irotoeuen |
| east | ratiu | southeast | ratiuogl |
| west | iroto | southwest | rotoogl |

Moreover, just like Pur- and Songosor-People they have developed a much more sophisticated way of finding their bearings, according to the rising and setting points of 19 constellations. According to Chief Guman the 19 constellations are:

| 1. mezitöp | 7. maiteberesen | 13. tumugl |
| :--- | :--- | :--- |
| 2. uru | 8. rivangavan | 14. metegli |
| 3. marailigegl | 9. rivangavan | 15. uouo |
| 4. mauri | 10. uoreuoi | 16. megl |
| 5. grieg | 11. ierüar | 17. mezaupur |
| 6. uorax | 12. taiglovar | 18. megli tamar |
|  |  | 19. uorouuer or tauonin |

Of these constellations megl (16) is Centaur $\alpha, \beta$, the uouo (15) is the Southern Cross, and taiglovar (12) are the 4 stars of Orion, among them the three stars of the belt (compare with the names of the stars of Ngulu). According to the testimony of the Merir-People those from Pur, Songosor, Tobi, Mogemog, and Oleai sail after the same stars and always find their way. Following Guman's directions the rising points on the eastern horizon of these 19 constellations were charted in the constellation charts. Fig. 158. Fig. 159 depict constellations in the same orde according to Chief Peilo, however here are all individual stars indicated, that belong to each of the constellations

In order to understand Guman's chart of stars according we still have to point out that the numbers correspond with those of the list of stars on the previous page, that the 19 constellations do not rise at the same time, thus, in the concept of the natives, the 19 points of the chart are a sort of lines of the rose of a compass on the eastern horizon. Line nr. 1 is supposed to indicate the eastern point, line nr. 10 the northern point, and line nr. 19 the southern point. If you insert on the western half of the horizon also the setting-point of the same constellations, as it happened in the details given by the Merir man William, and if these points are indicated with $1^{\prime}-19^{\prime}$, because they correspond with the rising points of the same constellations the result is, according to Fig. above, a rose of compass with 38 lines


Fig. 158 .
Fig. 159.
Fig. 158. Constellations of Merir-People for their navigation, according to the native Guman. (Eastern half
Fig. 158 .
Fig. 159.
Fig. 158. Constellations of Merir-People for their navigation, according to the native Guman. (Eastern half of the horizon). - Fig. 159. Constellations of Merir-People for navigation, per chief Peilo


It is hardly necessary to state that the natives chose these 19 constellations in such a way that their rising respectively setting points result in an approximately even division of the horizon, thus that the "lines" of the this "rose" have more or less the same size. It is important to remark that Sarfert started his recording for the expedition on Merir and here for the first time the natives' nautical knowledge and their rose of compass caught his attention. This is relevant because the rose of compass in illustr. above has 38 lines while the ones from Pur and Songosor have only 36, although the natives of these islands reassured him to sail following the same 19 constellations. These two additional lines result because the constellations 10 and 19 are indicated with their rising and setting points while for Pur and Songosor 10 and 19 occur only once as the southern and northern point. Maybe the Merir-People's double inscription is an error, as they now lived for many years in Palau and did not sail anymore. However, this could also be true of the single inscription of the lines 10 and 19 for Pur and Songosor. Hopefully a comparative examination will be able to shed light. We also should not take offense that in Fig. above each side of the horizon does not have the same amount of lines. This was certainly caused by the natives' rough drawing since they are not used to such a reproduction and this can be seen in a comparison with the compass roses of the other islands.

Courses. Further more William indicated in his compass rose, just like in a map, the islands Merir, Pur, Songosor, Tobi, Seneues (St. Davids-Group, Mapia-Uarat?), and Osariki (Helen-Reef). As their entirely wrong geographical position to each other already proves, this was not his intention. He wanted to indicate sailing courses, this mean the direction to the rising and setting points of the constellations which have to be kept when sailing from one island to another. Yet, due to his inability to draw he did not manage to illustrate this. At any rate, the indication of the course was left out, and thus, an incomprehensible chart was the result. Unfortunately Sarfert's sketch book with the Merir sailing courses was lost, therefore we have to refer to the analogue courses of Pur and Songosor. In order to determine the direction when sailing people look, just like on Songosor, over the outstretched fist such a fashion that the knuckle of the middle finger serves as an eyepiece. Fig. below shows how to aim for the star of the course and how to determine its course to the rising and setting points.

When Merir-People were still living on their home island they went on sailing trips between Songosor and Pur for trading purposes. They also took women on such voyages. There is ample proof of this in their accounts. Recently they travel sometimes on board trading ships. In this stayed for Lauilepe was two months on the Hermite and returned after half a day layover on Ninigo on board the ship of the trader O'Keefe's ship. They call New Guinea Nugum and Palau Panie. They knew from this group the islands Malakal, Olukzap, Uruktzapel, Ngargol, Nagrekopassanga, Goror, and Aulong. They measure the position starting from Malakal. They know Papua only from hearsay; they do not like to deal with them. For instance the man Guman refused to be brought face to face with Papuans. Nevertheless, they know that "Papuans have arrows, bows, and the shield, but no spears". They also know that they do not know the loom.

Fig. 161. Positioning the rising- and setting-point of course star visible in the sky. After a sketch of Sarfer.


Expressions for the Surrounding Nature.

| heaven air | ran iauilari | lunar eclipse <br> (the moon is dying) | imezi melem |
| :--- | :--- | :--- | :--- |
| rain | ut | water | sar |
| rain cloud | roso | sea | retet |
| rainbow | legiem | wave | rauraparal |
| wind | iain | high tide | iauurapaupa |
| storm | tarapara iain | low tide | imeta |
| lightning | ipeiezeen | swell | iauurorox |
|  | fizie | sand | pi |
| thunder | merupi | pel | day |
| sun | iaro | night | ilari |
| shadow | iaungan | morning | nipoin |
| moon | melem | midday | nimiarie |
| new moon | elos |  | rotoin |
| full moon | melem mereb | evening | niuaraue |
| waning moon | iausigidot | year | mazitöb |
| waxing moon | melem mesik | month | melem |
|  |  |  |  |
|  |  |  |  |

## 7. Feasts, Dance, Songs, and Games.

The feasts are collective public festivals or dancing feasts celebrated for special occasions. When the breadfrui sareripe an eight day feast takes place in the chiefs' meeting house. It seems that this is mainly a celebration for the chiefs. The participation of the population is not certain. At the inauguration of a chief, due to the passing awa of his predecessor, a chief has to organize a celebration lasting 4 days. The other chiefs help with the expenses. When a newly built chiefs' house is finished a day dance is held.

The twenty-day feast in the month mezitöb is likely to be a fertility feast. People celebrate in a boat on sea; during his time sexual intercourse is not allowed. In former times at the end of a victorious war a feast was held. The other feasts are family occasions. The marriage celebration lasts only one day. On the occasion of the birth of the first child a twenty-day celebration takes place.

For children born there after no more celebrations are held. A one-day celebration marks the occasion for a child's first apron donation. An initiation rite takes place for girls, though not for boys. The onset of the first menstruation is followed by a feast of twenty days. Tattoos are also celebrated

Dances and games take place during the day and at night by the moonlight. The dances are very similar to hose on Pur. They have the cultic men's and women's dances and the obscene dances of the turtle. They are accompanied by chants. The trumpet shell, tauni, is not used for it.

Lovesongs, uarol, are occasional songs that everyone can compose and they go around among the population. People also take some on from other islands. Thus, the song liaiilaxa uagita tipei was composed by a man from Songosor

[^8]
## Schildkrötengesang der Männer

(PR 22) $d=$ ca 88, rubato, Original große Sekunde tiefer

etc. Ende:
etc. Ende:

Turtle chant of men. xameti. All men together wrote the poetry, chanted by the man Moarifaul.
Petitiuno peitaigetake rar gala razada meta riga uulezei zatile zazali latuzeita nieririmeze razeietiu zangoru goulle zale ueimer
Comment Herzog: the cylinder contains 11 lines, of which the first two are in the transcript, except for the set phrase at the end.

## 

P. R. 23. Women's Turtle-chant Xameti, chanted by the woman $\chi$ aparuar (Aparuau). Satirical chant aimed at men. ezama zalitipei ouamezili merei zeua euosouai uito fengerieisak ovara riatoiai gesimeta raiegi zaiseua uolu zeauare efitiftit ielenil mazaxe sengel uizili mesago lauozu meferemei meizau nauaure uie siriperi meri tepite uie. Comment Herzog: the transcript contains small sections from the beginning and two lines from the middle part The chant is very similar to P. R. 17a.

## marifáñgelmamắlei

(PR 24) $d=$ ca 74 , poco rubato, Original kleine Terz tiefer



\% 1
xamereis or Uarol (love song). The man Ariselen is the poet; chanted by Uaian (?)
Marifangel mamalei / iratar mie / mezegl / Xarimeigiri me mengeon / merer niemei house / uarara glifazi / irupa xametipe / imengimengi iramangl / itiuaut tauai
zeuatiperi uagi aifatane maisere / bongizaue / garararani house / irifezangala / ialom ozaramazier reai /ranileaxo rerar mar / auua đan xirazegl / periei mengiek giriezegl / ougapasai lalam / zirifare xailau / leseiua atoiara iraugl renizamur / ereniuara tagete / naugitale mare / mitima zerielauar lenilata rifereis / rieri melib gugalib / laii tauua riafan / zimeni getaua re iengi / zi goulu mezaie taume / zi memaru iaxamagl / iaze mezarasox / mexaiefin ngexee / rigaraxaue xamales / fini tailan / zarapazereni lange / renizozi fatox / fararenipar / larasavar uaii zapur larimete meniaisete / laxauou ie riai / uatala rifan / gezaxe fini gararorox / tiperie / iai ialurox / rani iai uararox arafazei ieiki uararom.

Comment Herzog: dance song (Ualuk) concerning the sun and the moon. Unfinished. Singer Uaian. Transcript of he first two sections of the song, the others have no set phrases for the beginning.
liaiilá $\chi$ a uagíta . . . .
(PR 19) rubato

## 


रamereis. Ualuk ${ }^{1}$. Dance chant for women. Composed by the Songosor-Man Felegietag.Chanted by the old man Sisie.
liaillaxa uagita tipei
rara mata raseai rauia lurapa
uer raiti pailefas raizatipe tamas
auane tagliferifi era zogu ngareai tilagau lamariiia. Alari arore
era mangüre ngareai rai uauazirimite raigia pa üngara glaenau riagle
גapa iaueri giauo uariomu tegliveivi.

Comment Herzog: The cylinder contains two sections. The transcript contains the 2nd. and 3rd. line of the secon ection, which has all together 6 lines.

## uarifange miu

(PR 20) $d=$ ca 72 , rubato, Original große Sekunde tiefer

(盾

[^9](PR 17a) $=$ ca 124, Original Quinte tiefer


## (1)




```
\(24^{*}\)
```

| xamereis or Uarol. Love chant. Chanted by Uaiau. Chant for women. |  |
| :--- | :--- |
| Uarifange meu uouoi rimar limar | zealim matala gieie |
| razimad leni zonia ielis | uona üle talau |
| metei taunar fangeile | ziale roto ueietar |
| eluue uana soias | meta taua fangüle |
| zelu uani gari tar | ifata iai ga ualix |
| uani faro maigezi | mere nitau mala rauue |
| mazol ngaza imal | tauar imeru fangi glinger |
| zeeffilo ruua taivau | uazara rearu |
| ziriogovute a amali | uarani tepi ielanger |
| uerie iafla ringange | uia seta glimari. |

Comment Herzog: Women's love song, chanted by $\chi$ aparua. The cylinder contains 11 lines, the transcription shows the 3rd. and 4th.

As the text passages marifangel mamalei . . . and uarifange meu uouoi . . . have not been indicated with the respec tive number of the cylinder, their attribution to the transcription is not possible with certainty. It is likely, however hat they belong together as indicated here. At best for the first mentioned song the transcription P. R. 17a come into consideration. That it belongs to P. R. 24 is indicated by expressions in the text.




Comment. On this Herzog remarks: The transcription reproduces the first half of the song, with the exception of a few bars at the beginning, which had been left out because of indistinctness. Then again another bar (indistinct) is missing, followed by two bars, which are at the end of the transcription.


Uarol，chanted and composed by the old man Sisie．
Comment Herzog：The transcription contains the last 3 lines of the melody．
（PR 18）rubato；Ende des Liedes
尃官事：



The transcription P．R． 21 and P．R． 25 a and b are death chants．Both were sung by a woman，the last one by xaparuar．The first chant contains 11 lines of which the first 4 are depicted here；a few sounds in the beginning are missing of the second，a recording mistake．The transcription P．R． 25 features the first two lines of the 10 lines cylinder（according to Herzog）

## Toten－Gesang

（PR 21）$d=$ cca roo，rubato




Toten－Gesang
（PR 25a）rubato－parlando，Intonation schwankend


（PR 25 b）poco rubato


The amount of games ${ }^{1}$ is amazingly numerous and not all of them are known on the neighboring islands．Only two of the games are for the entertainment of one individual，a practice of their skillfulness．Most of them are games for several people and only few can be played by two．Most of them by far are games concerning movement，some have a sportive character．

1．＊גazopozopo．A memory－game．One of the participants digs a random amount of holes in a self－determined sequence into the sand．Then he turns away and has to memorize the amount and the succession of the holes Whoever makes a mistake will be laughed at．A hole is called perotoर，two holes liauou，three sierei，five limare ör This seems to be the maximum amount．Curiously the number four is not included．The chief chose the following picture of holes．Illustration 162


Fig．162．Memory－game Xazopozopo．
＊Juggling several fruits of the Calophyllum tree in one hand
＊Fazeraurou．A calophyllum fruit is attached on each end of a string．The string is held with one hand in the middle，then the fruits are spun in circles in different

## directions．

4．＊Taiuel．One player throws with a small sou－net the fruit of the fida free away；another one has to catch it with the net and throw it back to he first one
5．＊Peïpei－w restling match．The player performs with one arm an undercling and with the other an uppercling．The loser is whoever lies first on the back．The play with which on Pur affairs of honor are settled causes much happiness among Merir－People．
6．＊ Ilai，fencing game with sticks，a mock fight．People only beat against the sticks．


Fig．163．The game fazeraurou

7．＊Rapazatirimoz．Divided in two parts people grab a long pole on the ends and push with it against each other until the pole breaks．
8．＊Kilim，footrace．The goal is indicated by a vertical post where people run to．There they turn around and run back to the starting point．
9．Gluaze，to play tag．Men of both parts of the village of old Merir position themselves in two rows．Each individual player of one row tries to catch his opposite from the other row．
10．＊Taitai．Two men stand opposite each other，each one linking one leg underneath the one of the other．Then they jump in circles and try to pull each other away an to make the other one fall．
1．Rigezailou is a snake game where you crawl underneath．
12．＊Rauiri．A strong man rotates another man in circles．He holds him fast on one foot．The man pushes the other foot against the leg of the one who spins him around．


1 The ones indicates with＊are also known on Pur
13.* Mangali gatalizanga. A man pushes both feet against the thighs of a man standing in front of him who holds him on the arms and spins around with him
14.* Ronoto. Rope skipping. A liana is turned with both hands above the head while the player jumps with both feet over it.
15.* Piripiri. Rope skipping. Two men swing a long liana while other men jump across underneath it. For a change they jump off and on with one and the other foot.
16.* Giligili pazopaz. People run in circles with their faces turned outwards. In their middle is a man who tries to get outside. When the man is standing outside, then two, including the man, crawl through. In this fashion the line-up and the movement change.
17.* Maleuutiu. People stand in rows and clap their hands while singing. Then they swing their arms in between the ones of the others. Taking once the left arm, once the right arm of the adversary in between their own. While singing they clap the hands on top and on the bottom. Then they jump closer and then away while clapping the hands.
18. Autotazilai. People jump alternatively on the right and on the left foot while swinging the raised leg to the side.
19. Manimarenged. People form two rows and jump through in between the persons of the opposite row. They jump alternatively on both legs and throw the raised leg back-and forwards while turning their back to each other.
20.* Zozogonumeziau. Persons sitting in a circle grab each other's hands and while singing they swing their upper bodies if possible all the way to the ground. This game causes much happeniss.
21.* Pazozo. A group of men swing their arms and sing while doing so. In the


Fig. 165.
The game rauiri.


Fig. 166. The game mangali gatalizanga nd they all jup fowa
22. Om (cooking house). A women's game. Women sitting in a circle grab each other's arms and pull. Whoever lets loose falls backwards and is laughed at.
23.* Pigipigiuaura. Women's game. Women, sitting in a circle, all place their hand on the ground in the bar of the stone beater. While singing the palm and the back of the hand are alternatively placed on the ground. When the chant is finished they all put their hands down for the last time. Whoever has the back of the hand on the ground is laughed at.
8. Language.

The Personal Pronoun.

1. Pers. Sing. I
ngan, absolut: memete (nom.)
neei (dative)
ie (accusative)
gete (nom.)
nox (dative)
$u k$ (accus.)
iezimer
irazmer
(I and you) gete ma ngan
(we three, excl.) gete ma ngan me iazimer
(we four, incl.) gete ma ngan me iazimer pazimer (we five, incl.) gete ma ngan me inzimer pazimer (we all) xamizeua pipirieglimet


Comment. For the fish only rosai is used. rei iek does not exist. The fish is only regarded as food. Other animals are connected with rei or rosai depending on whether they are kept alive or slaughtered.
4. for consumable fruits 1st. Pers. Sing. rarei

$$
\begin{array}{lc}
\text { Examples. } \\
\text { my coconut (the one I want to eat) } & \begin{array}{l}
\text { rarei uan } \\
\text { my lemon }
\end{array} \\
\text { rarei gulugul }
\end{array}
$$

## II. Post positioned.

| 1st. Pers. sing. | $-e i$ |  |
| :--- | :--- | :--- |
| 2nd. "" " | $-u m$ |  |
| 3rd. | ". | $-a r a$. |

[^10]Examples.

| my hand | gumuzi |  | my arm | pei |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| your hand | gитиzum |  | your arm | poum |  |
| his hand | gumuzure |  | his arm | pauure |  |
| my nose | uauti |  | my foot | gupei |  |
| your nose | uautum |  | your foot | gupum |  |
| his nose | uauture |  | his foot | gupare |  |
| my beard | aruzei |  | my skin | ginipei |  |
| your beard | aruzum |  | your skin | ginipoum |  |
| his beard | aruzara |  | his skin | ginipoura |  |
| my father | papai |  | my son | rei |  |
| your father | papamum |  | your son | roum |  |
| his father | papare |  | his son | rauure |  |
| my mother | neitai |  | my sister | miangei |  |
| your mother | neitamu |  | your sister | miangom |  |
| his mother | neitare |  | his sister | miangara |  |
| my tattoo | faruferi |  | my bed | pazoi |  |
| your tattoo | faruforum |  | your bed | pazoum |  |
| his tattoo | farufora |  | his bed | pazoro |  |
| my house | iemei |  | my apron | marozei |  |
| your house | imom |  | your apron | marozoum |  |
| his house | iemara |  |  | marozora <br> tailara <br> tailai <br> tailamu |  |
|  | The | Present. | Past. |  |  |
| 1st. Pers. sing. 2nd. <br> 3rd. <br> 1st. Pers. plur. <br> 2nd. <br> 3rd. |  | ngan igatoro | 1st. Pers. sing. | I went | iraxo ${ }^{1}$ |
|  | you see he sees | gete ogatoro | 2nd. " | you went | oraxo |
|  |  | ie igatoro | 3rd. " | he went | iraxo |
|  | we see | gise zigatoro | 1st. Pers. plur. | we went | ziraxo |
|  |  | ile lagatoro | 2nd. " " | you went | liraxo |
|  | they see | merarai lagatoro ngan iuito | 3rd. " | they went | liraxo |
|  | I come you come he comes | gete ouito <br> ie iuito $\chi$ | Generally the past is expressed in the same form as in the present. |  |  |
|  | he comes we come | gise ziuito $\chi$ | Future. |  |  |
|  | you comethey come | ile lauitox |  |  |  |
|  |  | merarai lauitox | 1. Pers. sing. | I will come | I will go |
|  | I go | ngan iuerox |  | izauitox (uar | azi) izarox |
|  | you go | gete ouero $\chi$ | " " | gozauitox | ozearox |
|  | we go | gise ziuerox |  | izauito | izarox |
|  | you go they go | ile liuerox merarai liuerox | 1. Pers. plur. | zizauitox | zizarox |
|  | they go |  | 2. Pers. plur. | lizauitox <br> lizauitox | lizarox <br> lizarox. |
|  |  |  | 1 The prefixed pro | noun can also be | missing. |

The infix $z a$ presumably came into existence from the word izaua, long way. The meaning of the prefix uaraz could not be solved. It can also be left out. In addition the following forms of verbs and set phrases were recorded

| I give you | ngan iuariku | you give me | gete ouaraneei $\quad$ he gives you |
| :--- | :--- | :--- | :--- |
| he | ie iuarano |  |  |
| he gives him | ie iuarariieie | we give him | pipierimete iuaraneei |
| we give him | gise iuara neei zimer |  |  |

instead of izara there could also be iuerox. gise always means two people. ile can be two or more. merarai they, plural, always two and more.

## build a house: <br> tomorrow I will build a house <br> yesterday I built a house:

uarazi iuifaugl zeua iem.
raro ifaugl zeua iem
raro ifaugl zeua iem

## Some Forms of to See.

| I see | igatoro | I will see | izaxatoro, izaxauauge |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| I saw | igauaugo | you will see | gozaxatoro, ozaxauauge |  |  |
| he will see | izaxatoro | we will see | zizaxatoro |  |  |
| you will see | lizaxatoro | they will see | lizaxatoro |  |  |
|  | The Auxiliary Verb To Be. |  |  |  |  |
| I am sick | ngan i $\chi$ amitek | you are sick | gete o đamitek | they are sick | merarai li $\chi$ amitek |
| he is sick | ie i ұamitek | we are sick | gise zi đamitek | you are sick (pl.) | ile li Xamitek |
| I will be sick: | imerar Xamitek | I am healthy | ngan imaro lari | you are healthy | gete omaro lari |
| he is healthy | ie imaro lari | we are healthy | gise zimaro lari | you " " (Pl.) | ile limaro lari |
| they are healthy | merarai limaro lar |  |  |  |  |
| I will be sick | ngan imaro izi Xan | nitek |  |  |  |
| you will be sick | gete omaro ozei $\chi$ | amitek |  |  |  |
| he will be sick | ie imaro izei \ami |  |  |  |  |
| we will be sick | gise zimaro izei $\chi$ | mitek |  |  |  |
| you will be sick | ile limaro izei đam |  |  |  |  |
| they will be sick | merarai limaro izei | $i$ xamitek. |  |  |  |



The measure of length is the length of both outstretched arms, ngaue.

| 1 length | zangaue | 7 lengths |  | fizingaue |
| :---: | :---: | :---: | :---: | :---: |
| 2 lengths | liangaue | 8 |  | uarungaue |
| 3 " | zorungaue | 9 | " | tiuangaue |
| 4 " | fangaue | 10 | " | zeike tiu angaue |
| 5 " | rimangaue | 15 | " | zeike ma rimangaue |
| 6 " | orungaue | 20 | " | liek angaue |
|  |  | 100 | " | zauoki angaue. |

The following suffixes are used when nouns are counted:
I. zaxai for plants as a whole
II. zeua or zeu for items as a whole, in addition for body parts, large living things (not human) big stones, fruits, wooden tools
III. zifazo for small things.
IV. zimer for humans and small animals
IV. Some suffixes for numbers, the meaning of which is not known, which are nevertheless documented by examples and deviate from the usual ones: -guuo, -erat, -pau and some others

Just like us, the natives use the numeral as an indefinite article. There seems to be no indefinite plural and accordingly the numeral two is used instead of expresssing the plural. Here, too, the respective kind of suffix, depending on what kind of word, has to be used for the numeral. For instance:

|  | Singular |  | Plural |
| :--- | :--- | :--- | :--- |
| house | zeua iem | houses | luoue iem |
| man | zimaro mar | men | liemero mar |
| fish | zimer iek | fishes | liemer iek |
| coconut | zeuna uan | coconuts | luouo uan |
| woman | zimaro veiviet | women | liemaro veiviet |

Now follow some examples for the above shown rules of the natives' language
to I. zaxai

| one tree | zaxai siriged | 6 trees | oroxai siriged |
| :--- | :--- | :--- | :--- |
| two trees | liaxai siriged | 7 trees | fizixai siriged |
| three trees | zeruxai siriged | 8 trees | uaruxai siriged |
| four trees | faxai siriged | 9 trees | tiuaxai siriged |
| five trees | rimaxai siriged | 10 trees | zeike ziu siriged |


|  |  |  | o II. zeuna or z |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Items as a whole, body Parts |  |  |  |  |  |
| a cloud <br> a bracelet <br> a nose <br> a hand | zeuna roso zeuua regei zeuиa uauti zеииа gитиz | a head <br> a fire <br> a mouth | zeuna fazik <br> zeuna iare <br> zеииа іаииеі | a fish net an eye an ear | zeuиа sou zeuua metei zeuna zeringe |

Wooden Tools.
zifazo, the suffix for small things is always used

|  | zifazo, the suffix for small things is always used |  |  |
| :---: | :---: | :---: | :---: |
| a comb | zeuna gom | a wet coconut | iopopu zeua |
| a table | zeuna pazo | 2 wet coconuts | рори luouna |

big tuber of taro zeua tereperi uod a dry coconut iperi zeua uan
Comment: worked wood, which is only part of a whole and does not yet present an item, is connected with zisau. Only finished items have the suffix zeuna. All kindling is zeari.

| Parts of Plants. |  | 1 coconut | zeuna uan |
| :---: | :---: | :---: | :---: |
| a blossom | zeuna mougur | 2 coconuts | luouno uan |
| a coconut | zeиuа uan | 3 coconuts | zoruиo uan |
| a tuber of taro | zeuna uod | 4 coconuts | fauıo uan |
| a lemon | zeuna gulugul | 5 coconuts | nimouao uan |
| Exception: an areca nut $u o$; here a small coconut is called zifaz uan. |  |  |  |
| 1 house | zeuna iem | 3 houses | zoruua ie |
| 2 houses | luoua iem | 4 houses | fauna iem and so on |
| 1 (big) fish | zeuna iek | 3 fish | zoruua iek fauna iek |
| 2 fish | luouua iek | 4 fish |  |

## Big Stones:

big stone zeuna faz, zeuua teriperi faz
As Big Living Things Are Considered.

| uarik | bat |
| :--- | :--- |
| piriz | dog |
| peik | pig |
| mar | bird |
| gas | rat |
| Xeian | chicken |
| iek | fish |
| uzeri | lizard |


| paro | shark |
| :--- | :--- |
| periperi | shell |
| siz |  |

guz louse though gigi (butterfly) and ran (fly) are not.
as long as these animals are small the numerical suffix zime is used. zimer iek is always a small fish.

## III. Zifazo. Small Items

2 small tubers of taro liefazo uod
3 small tubers of taro zorufzo uod
4 small tubers of taro fafazo uod
5 small tubers of taro rimefazo uod
zi maro mari lii maro mari zen
3 men
4 men
4 men
-

| 5 men | ri maro mari | three small men | zerimer geperi mari |
| :--- | :--- | :--- | :--- |
| 6 men | oro maro mari | one good man | imero mari |
| 7 men | fizi maro mari | five good men | imeri rimeri mari |
| 8 men | uari maro mari | one sick man | xamiteki zimero mari |
| 9 men | tiu maro mari | five sick men | xamiteiki rimero mari |

9 men tiu maro mari five sick men xamiteiki rimero mari
zeike maro mari
11 men zeike me zi maro mari

## To IV zimer. <br> Humans.

one big man
one big man
five big men
one small man one small man
a small stone
zifazo faz, zifazo gepar
zifazo geperi uod.
one dry man
teriperi mari rimer teriperi mari igepero meri limer geperi mari zerimer geperi mari iopopu zimero mari

In case zimer is used in connection with animals then it means that they are small; otherwise they have to be connected with zeun

To V. zisau.

| Parts of items: |  |  |  |
| :---: | :--- | :--- | :--- |
| 1 leaf | zisau saure | 6 leaves | orosau saure |
| 2 leaves | lissau saure | 7 leaves | fizisau saure |
| 3 leaves | zerisau saure | 8 leaves | uarisua saure |
| 4 leaves | fasaus saure | 9 leaves | titurisua saure |
| 5 leaves | rimesau saure | 10 leaves | zeketiu saure |
|  |  | 15 leaves | zeike me rimisau saure |

fan (made of strips of pandanus) zisau iliupau; and all crafted wood, before it becomes a finished tool
In connection with VI. Deviant formed suffixes are found - as long as it has been recorded - in connection with body parts, that are otherwise counted according to the rules with zelua

|  | $-a$ |  | -eri |
| :---: | :---: | :---: | :---: |
| 1 tooth | ze a ngid ${ }^{1}$ | 1 hair | ze eri simei |
| 2 teeth | li a ngid | 2 hairs | li eri simei |
| 3 teeth | zeri a ngid | 3 hairs | zeri eri simei |
| 4 teeth | fai a ngid | 4 hairs | fai eri simei |
| 5 teeth | rim a ngid | 5 hairs | rim eri simei |
| 6 teeth | oroi a ngid | 6 hairs | oroi eri simei |
| 7 teeth | fizi a ngid | 7 hairs | fizi eri simei |
| 8 teeth | uari a ngid | 8 hairs | uari eri simei |
| 9 teeth | tiu a ngid | 9 hairs | tiu eri simei |
| 10 teeth | zeike tiu ngid | 10 hairs | zeike ziu simei |
| 15 teeth | teike me rim a ngid | 15 hairs | zeike me rim eri simei |
|  | -pau |  | -at (-rat, -gat) |
| 1 arm | zi pau pei | 1 toe | zerat Xatire gupei |
| 2 arms | li pau pei | 2 toes | lierat Xatire gupei |
| 3 arms | zeri pau pei | 3 toes | zeriat Xatire gupei |
| 4 arms | fa pau pei | 4 toes | farat Xatire gupei |
| 5 arms | rimi pau pei | 5 toes | rimerat Xatire gupei |
| 6 arms | oro pau pei | 6 toes | oroat Xatire gupei |
| 7 arms | fizi pau pei | 7 toes | fizigat Xatire gupei |
| 8 arms | uari pau pei | 8 toes | uarigat Xatire gupei |
| 9 arms | tiu pau pei | 9 toes | tiuorat Xatire gupei |
| 10 arms | teike pau pei | 10 toes | zeike tiu Xatire gupei |
| 11 arms | zeike me rimi pau pei |  |  |

It seems the finger ze Xati is counted just like the toe zerat Xatire gupei. The numbering suffix has obviously been pushed out because of the same sound as the following noun.
finger ze $\chi$ ati, 2 fingers lie Xati, 3 fingers zeri Xati, 4 fingers far Xati, 5 fingers rimer Xati, 6 fingers oro $\chi$ ati, 7 fingers fizi $\chi a t i, 8$ fingers uari $\chi$ att, 9 fingers tiu रatt, 10 fingers zeike tiu $\chi$ ati-guuo

[^11]| 1 leg | zo guuo gupei | 6 legs | oro guno gupei |
| :---: | :---: | :---: | :---: |
| 2 legs | lio guиo gupei zorи gиио gиреі fa gиио gupei riтo gиио gupei | 7 legs | fizi guиo gupei uaro guиo gupei tiuo gиио gиреі zeike tiuo guиo gupei |
| 3 legs |  | 8 legs |  |
| 4 legs |  | 9 legs |  |
| 5 legs |  | 10 legs |  |
| The following nouns are counted in a deviant way: |  |  |  |
| 1 cigarette | zeau sigarete | 1 piece of wood | zi pat |
| 2 cigarettes | li au sigarete | 2 pieces of wood | lii pat |
| 3 cigarettes | zeri au sigarete | 3 pieces of wood | zeri pat |
| 4 cigarettes | fai au sigarete | 4 pieces of wood | fa pat |
| 5 cigarettes | rim au sigarete | 5 pieces of wood | rimi pat |
| 6 cigarettes | oroiau sigarete | 6 pieces of wood | oro pat |
| 7 cigarettes | fizi au sigarete | 7 pieces of wood | fizi pat |
| 8 cigarettes | uari au sigarete | 8 pieces of wood | uaru pat |
| 9 cigarettes | tiu au sigarete | 9 pieces of wood | tiu pat |
|  |  | 10 pieces of wood | zeike tiu pat |
|  | Adverband Preposition. |  |  |
| yesterday | raro | here | ie |
| tomorrow | uarazi | there | itar |
| today | lenei | thither | itar |
| day after tomorrow | mezigilan uarazi | - | - |
| day before yesterday | mezigilani raro | in front | imor |
| before | mozu | behind | imuili |
| a long time ago | firimoru mozu |  |  |
|  | uara mazau | over | ueniin |
| not too long ago | taengi naro | on top | uaur |
| always | pipie lari | underneath | iuar |
| now | igete | outside | irugur |
| tomorrow morning | nimiarie ni uarazi | inside, in | itan |
| yes no | nge nauueri | ahead! come! | paten paton |
| what is this? | metaitar | what is the name of this? | metamere |
| Adjectives. |  |  |  |
| big small | tereper iteper | blind deaf | imazilimatar epinge teringe |
| high | eerai | dumb | itagura titir |
| long | ierei, igömes | lame | torozegl |
| old | inap | good | imaro |
| young | uesi | bad | tamar |
| round | eramatagou | white | eruozopos |
| cold | fau | black | elosolos, elos |
| warm, hot | iues | clean | rala ualau |
| dry | iperi | red | lozas |
| wet | іорори | blue | elozo |


| healthy <br> sick | taiiamite (?) <br> xamitek | green <br> brown | erala ualau elos, elosolos | xaian <br> gaiingau | chicken <br> black dove (pazaox) | $\begin{aligned} & \text { tapar } \\ & \text { lan } \end{aligned}$ | (roraie) duck (sauar) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| dead | mazi |  |  |  |  | rifolox | (polorol) |
|  |  |  |  | хatao | (guel) | riangeig | (rogai) |
|  |  |  |  | хauan | (gazam) | rigosoi | (frariek) |
|  | II. Economy and Material Culture. |  |  | रalag | egret? (soro) | gelefaz | (pongpeinugl) |
|  | 1. General. |  |  |  | a black bird (pezaux) | iriri |  |
|  |  |  |  | ngaugau | (mölup) | girin $\chi$ au | (meluglgu) |
| The main food resources of the natives are a griculture and fishing. In the process the economically necessary workloads are distributed among the sexes in the following manner: men execute the construction of the house |  |  |  | uirig <br> liazi | a white bird (soser) (rosurloouogl) | ritoto uot rigar periper | bat |
| and the canoe and they practice fishing. They only participate in agriculture conditionally: they plant (for instance |  |  |  | mesigo | (grgies) | uitiaz | (otilic glat) |
| together with their wife) coconut palms, sugar cane, and they prepare palm wine. In addition they do all kinds of wood work and construct their own fishing tools. Women do the chores at home and in the field. Sometimes |  |  |  | paiienei |  | liamax |  |
|  |  |  |  | faugalau |  | mensauru uurax | (zuzuk) |
| wood work and construct their own fishing tools. Women do the chores at home and in the field. Sometimes men support them doing this. Women never fish and of all the practiced handicrafts they plait and weave the |  |  |  | giop | (pelorel) | zok |  |
| loom. |  |  |  | menifariu |  | ziuaual | (pagai). <br> (rosurloouogl) |
|  |  |  |  | tiuxalis | (driz) |  |  |

The fields, the distribution of which has already been described - except for their names - are called according to the fruits grown there. They distinguish meteri uurax and meteri uod (taro), meteri mogumog (arrowroot), meteri fazogl (banana), meteri moru and uone gisar. Only women tend the taro fields. After the area has been cleared from grass, then the ground is prepared. To do this they only use the digging stick, ұoto. However, no special depressions are created. In the end the tuber are placed into the ground. Every 4 to 5 months people can harvest. In order to crush the soil people have a tortoise adze, tapazilai; the extra wide
blade is inserted into the handle.

Fig. 167. Axe made of turtle, according to Sarfert


Women alone prepare the meals. They do not keep special hours and the entire family eats together There are only food taboos for pregnant women. If possible they do not let the fire extinguish. In case of need they fetch some in the neighborhood. In former times they used two sticks for whipping fire, called gliag; the same method as on Pur and Songosor. Recently they use matches. Besides the meat of fish Merir-People eat pork and an amazing number of poultry. With the exception of chicken all of it is hunted. The birds listed below are eatable. ${ }^{1}$

In addition, they cherish two small crabs, lagum (Palau rugung) and ievi (Palau gadad). However they do not know how to catch them, but get them from Palau-People

[^12]The Most Important Dishes Made From Plants:

1. maru. Peeled and cut taro, placed on fire and covered with stones, roasted, on Palau known as pesur.
2. uuarx. The other kind of taro cultivated by them. It is prepared in the same fashion. On Palau brak
3. $\chi$ auguz. A salad made from the leaves of a kind of grass. It first must be boiled in water
4. fazol. Roasted pandanus fruit.
5. ziob. A salad made of leaves. It is bound together and roasted, then thrown into hot water. It seems it is eaten out of the water. On Palau this dish is called oser.
6. saunor. A green salad, prepared in the same way as the one above. Palau toro $\chi$
7. maï. Breadfruit. Roasted and boiled as a whole
. gulugul. A kind of lemon, eaten green.
. xalifat. Also an unripe eaten fruit. Palau ropodel.
8. uauuai. An imported fruit, roasted and cooked. (Palau porpai).
9. bamugen. Pumpkin cooked
10. uan. Coconut, either drunk raw or scraped or also cooked
11. mogumog. The flour of the arrowroot
12. gumiet. Cooked sweet potatoes.
13. pelar. Cooked beans.
14. iauauua. Kind of grass on Merir.
15. uarumai. Lemon-like fruit, eaten raw. Palau uaux
16. bokue. Raw and cooked kind of pineapple. Palau lus
17. fas. Big fruit of a tree, raw or cooked. Palau rougo nopa
18. tavas. Small fruit. Palau razopungel.
19. eitaz. Small nut. Eaten raw. Palau mie
20. uarigir. Small fruit, eaten raw. Palau rasimir
21. xanox. Lemon-kind fruit, eaten raw. Palau geregul, loxol.
22. iam. Yams, cooked.
23. tar. Eaten cooked. Palau tal.
24. zeb. Cooked. Palau ripas.
25. rof. After soaking it in water for three days, it is eaten raw. Palau zanges.
26. toik. Eaten cooked.
27. palige. Roasted.
28. farieri uor. Roasted. Palau zuzuk.
29. fetai. Roasted.*
30. ulai. Boiled or roasted
31. use. Boiled or roasted fruit. Palau uoso.

They do not know salt.

## 2. Fishing and Hunting.

Methods and tools for fishing on Merir correlate with those on Pur and on Songosor. When fishing with rod people nowadays use only the small, simple hook, $\chi a u$, formerly made of tortoise shell, recently predominantly made from an iron wire. It can also be used in deep water, when the hook is attached to a stone and sunk with it Then even bigger fish can be caught with it. If anything the other hooks serve only as a neck decoration. There are wo different kinds, the piriatau and the api. The first one is either flat and furnished with a small barb (Fig. 168 366 II) or a bit rounder with a curved tip. The api has been worked from a nearly semicircular piece of tortois shell. The tip is only hinted and right from the start the entire piece was produced as jewelry.
Composite fishing hooks, parupi, are used to catch bigger fish. The lure is made of motherpearl, paritore, the hook is made of tortoise shell, uose.


Fig. 168.

Fig.168, nr. 1366 II . Decorative hook made of tortore piriatau, on a necklace made of paig.. 169 Diameter of the hook 5 cm , length of the string plaited from 4 strips: 120 cm . - Fig. 169, nr. 1374 II Composite fishing hook, parupi. Lure made of mother-of-pearl, length 11 cm , greatest width: 21 mm . A small ortoise shell hook is attached with hibiscus bast. Length of the back-end: 32 mm . Tip of the hook slightly curved nwards. Distance between blinker and tip ca. 3 cm . Front part twined from a double strand hibiscus bast. Fly fom human hair. - Fig. 170, nr. 4633II. Fishing hook

At the bottom a fly of human hair is attached. The front part consists of very fine string, twined from a double strand of hibiscus bast

For Net-fishing the Merir-People use nets with handles (handle-net), drop nets, bag-net, and standing nets. The handle - net , sou, is the same as on Pur. Merir-People distinguish between sou riuarimata and sou rimangal. The first one is the smaller one and is only used within the reef. The fisherman wades into the water with it. It is also used during night at low tide. The man holds the net in one hand, a torch made of coconut fronds in the other. A second man holds the fishing basket. The first one fishes the sleeping fish, the second one collects them in the basket. This kind of fishing can also be practiced alone when the rays of the full moon come down vertically. Then the sleeping fish are flushed with a stick at low tide. They are driven from their hiding places behind stones into the net right next to it. The sou riuarimata of the Hamburg museum is well done and its construction is comparable with the net from Songosor on plate 5, 4. The handle is called iuar, the frame $\chi$ ature, the piece of wood to stiffen the net oruuei. The frame consists of two bent pieces of wood, the tips of which are attached one over the other. The handle protrudes considerably into the frame. The ends are attached on both sides of the handle. A stiffening piece of wood, 24 cm long, is positioned at the end of the handle. One side of the frame measures 72 cm , the handle has a length of 1 m . The wrapping is made of coconut sennit cord. The net is made of the same material: of double stranded, strongly twined bast. The side of a mesh is 2 cm . The wooden pieces of the frame are pulled through the first meshes of the net.
In most cases the sou rimangal is bigger than the sou riuarimata and used outside of the reef. In the light of the full moon several canoes with three men each leave for the open sea. One of the men has a torch in order to flush the sleeping fish. The other two have each a sou. In this fashion people catch the flying fish mangal and the jumping fish maki. The last one can be quite dangerous and supposedly can spear a man to death. Therefore, for this fishing technique people need very bright torches, in order to have a good view. People throw the sou-net on top of the fish, quickly turn it around, and pull it outside. Often more than one hundred fish are caught in this manner. The frame of the net consists of 4 parts. The connecting points are called $\chi a x a r$, the entire frame xature, the lower part of the frame is curved and attached to the handle. The stiffening piece of wood is missing. The net corresponds entirely to the nets from Songosor. The handle, iuar, of the net 1349 II is 98 cm long and has a diameter of 2 cm . The diameter of the frame is $60 \mathrm{~cm} \times 48 \mathrm{~cm}$. The net is netted from a string made of cotton wool, it is very thin and a mesh has a length of $2,7 \mathrm{~cm}$. All bindings are executed with coconut sennit cord.

The umbrella drop net fen is used to fish on the open sea. Just like on Songosor, besides this one, they know the sou golum. These nets are not big. A piece of bait, pere, is attached on a string over the circular wooden frame xatu. The strings for submersion are also attached on the frame. A shell or a piece of coral stone serves a sinker. The net 1375, Fig. 171, has been made quite carelessly. The ugöo is an open mesh bag, used as a throwing net in shallow water. It corresponds with the Pur-Net depicted. Its diameter measures about as much as the width of a man's span. When fishing the fisherman holds it over the left arm and the left shoulder and throws it over the fish. Initially Merir-People, just like the ones on Pur, also fished with the big gill nets, ugarei. Nevertheless, on Palau they also acquired the method used there. They hold the net in between two canoes and always stay within the reef. In order to flush ou the hiding fish, people from each boat throw a stone behind it, in order to startle it and to catch it in the meshes of the net. They call the floats attached on the top rope of the net apezit, the weight on the bottom string are called fazir. It seems like that fishes are only speared when chased out. For this either the sou or the spear is used. At first the fishes have to be rounded up. This is done with the help of several coconut fronds attached to a rope. The leaves have to stick out on all sides. Now the men go into the shallow water encircling the fish with the rope. At all times it has to remain under water. The fish do not dare to get out of the circle because the fronds scare them.

After that the spearing starts. The spears are called $\chi a z i k$ iek $>\chi a z i k$. In former times the spears were made of one piece and the barbs on the tip were carved. Nowadays, they are usually made of two pieces. The shaft is called uungure, he top part $\chi a z i k$, the barb $\chi a m a s e r i p a r$, the last end with the barb meter vezik. The tip and the shaft are held together by tying it with a string, xaxar or mataru uungur (compare Songosor, Fig. 19b, nr. 1514 II).

For kite fishing, sauri ieseik, people use a leaf from the breadfruit tree, sauri mei. It is stiffened by inserting leaf-ribs. The axis of the kite is formed from the rib of a coconut frond, which protrudes quite a bit over the end of the leaf. All this together has a length of ca. 50 cm . People let the leaf fly on a long string, auriieseik. At the end of the leaf a second string is attached, its end jumps on top of the water and has a bait made of spider web. Attached to it the small spider, that produces it, is called sarai. The spider web, getauo lala, makes a fishing hook unnecessary. The mouth of the fish is tangled so tightly in the spider web that it cannot get loose. The fish caught in this fashion can be up to $1 / 2 \mathrm{~m}$ long. The string runs from the canoe through two small holes poked into the upper part of the leaf, from there along the bottom side to the »tail« and then into the water.


Fig. 171, nr. 1375'. Drop ne fen. The circular frame has diameter of ca. 25 cm . The meshes of the net measure 32 necessary to catch big animals: they operate the loop. One fisherman alon meshes of sinker is a shell. can handle small sharks. In this case he takes a thick rope and forms a loop, faloiki, with it. It is kept open due to the stiffness of the thick rope and does not need a stiffening piece of wood. At the end of the loop hangs a small bait fish on a thin string. The string is wound around the body of the fish and attached with both ends on the side of the loop, so that it is strung tight. When the shark wants to eat the bait he has to swim sideways into the sling. As soon as he is inside the men pul the loop tight and push the long end of the rope as a second loop over the shark. Then they pull it outside and beat it dead with a club.

The fish trap, uaiau, was used on Merir. It has a flat bottom and a curved roof. The entrance leads inside like a funnel. It was placed in a depth of three fathoms and was well visible there, so that it was not necessary to indicate the spot. It supposedly was $1 \frac{1}{2}-2 \mathrm{~m}$ long. The natives do not build fish weirs, because the ground is to hard. In shallow water they use the crushed leaves of guru fish poisoning, zope. It is placed underneath some stones. The drugged fish are caught by hands.

Four men in a boat sail outside the reef in order to catch turtles. Two fishermen are roped up. When they see a couple (during copulation the animals spend their time on the surface of the water) the two men jump in. The ends of the ropes are held fast by the two other men in the boat. Now each one of the swimmers grabs one of the animals by throwing himself on top of its back and placing his left arm underneath the left front leg of the turtle and his right arm over the right shoulder of the animal. Then the men in the boat pull on the ropes and in this fashion the swimmer and the turtles are slowly pulled in. Once they are near enough the men in the boat throw a noose over the front legs so that they are bound cross wise and place them in the bottom of the canoe. Individual animals can hardly be caught. They are always caught in the described fashion. Only birds are hunted. The index of animal food shows that many species are consumed. They know five different methods to catch the
animals. The simplest way is to kill birds during their sleep with a thrown stone. However, they also know the slingshot. Doves are caught in flight by day and by night with the big net sou rimer. The net is especially big The huntsman armed with it, climbs a tree. This hunting method is supposed to be very efficient. They hunt with a snare that can be pulled tight, iezerimer. It is attached on a long pole and is made of the rib of a coconut leaf. The catcher climbs a tree with it, closes in on a dove with the snare and then quickly pulls tight. They also use a bow to hunt birds.
3. The Canoe.

The art of constructing a canoe is handed down from father to son. Not all men know how to do it. Currently there are only chief Peilox and the men Ualerei, Ariselen, Lukam, Maniioro, lanis, Uaieu, Ivararunar, Tutamar, Ualaien, and Moarifoil who can build a canoe. They say they learned it from their fathers. Preferably Calophyllum wood, filau, is used. ${ }^{1}$ It takes about half a month to build a three meter long canoe. A big canoe can be finished in five months. The construction of a canoe is accomplished free of any cult. The construction of the Merir-canoe is hardly different from the islands Pur and Songosor

The canoe can be sailed and paddled. When sailing on the open sea people took all their food ready made with them, because they had no fireplace on their boat. The photo here shows a sailing canoe at full speed. Fig. 173 shows a model made by the natives. Fig. 174 depicts a schematic view of the individual parts, especially of the outrigger's lifting gear, seen from the top. Often an attachment is protruding far out on the side of the canoe opposite of the outrigger. According to Sarfert the individual parts of the canoe on Merir are called:

| atform | eau bada Kr . | bow |
| :---: | :---: | :---: |
| lee platform canoe | bairime Kr . аииа | stern <br> top piece on the bow |
| top piece of stern hull | pelir mulite ren iua (1) | float |
| edge of the keel | rapite | longitudinal piece of |
| gunwhale | ngeisrer (2); iei Kr. | wood above the float stiffening cross |
| top piece of gunwhale | rerigieze (3) | holes in the float |
|  | Xeritieta Kr . |  |
| thwart | taur (4) | binding on the float |
| mast board | feleve (5) | forks on the float |
| hole for the mast | uatouari (6) |  |
| beam of the outrigger | giaur (7); | sail |
|  | kiau Kr. | mast |
| curved outrig. beam | fariauxon Kr. | vertical side of the |
| diagonal poles | meteleuen (8) betekevei Kr. | sail, respectively vertical beam ${ }^{2}$ |
| bent pieces of wood | uautam* | lower horizontal side |



Fig. 172. Shark sling with bait, according to E . Sarfert
moar ulite pelir
tamar (13), tam Kr
uarie (14); variei Kr apise* puluuulotam
tautau
rator
rat Kr .
иїе
रauz

хazegaz

Certainly an error, just like on the neighboring island it must be breadfruit.
last long outrigger stick short stiffening wood under the scaffolding
iaupase (9)
leausik, lemetesik (10) taliare (11) xapise (12)
respectively top mast ${ }^{1}$ nun
paddle vature, vatinigax, falir Kr bailer anchor Callophylum resin for caulking
nin Kr . rümetek uor

These terms show the extensive correlation with the respective terms of Songosor and Pur.- The sail is sew together from narrow stripes of Pandanus mats, in which the strips run in the direction of the mast. There are no reports concerning the rigging , however, the photograph on plate 14 shows clearly that there is no abbreviation from the known one. - The snatch block made of breadfruit wood has been adopted from the Europeans and is very popular.

> 4. Clothes, Jewelry, Tattoos, and Weapons.

The natives keep their bodies very clean. Every day they bathe in the ocean. Children walk around naked until they are five years olden. In the old days the women's clothes consisted of an apron-like mat, made from woven material of pandanus leaves, iepe. They were fastened with a belt made of pandanus leaves, rararupeu. Men stil wear the maro, however, today it is made of calico, in former times women wove it on the loom. Recently the raditional women's costume consists of a grass skirt reaching a bit over the knee. In the front it is folded on top of each other and held fast with a belt or a sash, mostly of calico. The skirt starts a bit underneath the hipbone Furthermore, they always wear around the midriff a very tight belt, knotted in the front. This one, too, is made of European material. Men wear the lavalap either looped into a simple knot or carefully spreading the free end and hanging it apron-like over the penis.

$$
\text { Fig. } 174
$$



Fig. 173



Fig. 175
Fig. 176

1 The terms specified here do not correlate with those of Songosor, where the respective terms have the names the other way around. Presumably there is a mistake in terms.


Fig. 173. Model of a boat nr. 1629II. Length of the hull: 120 cm , height of the hull, 12 cm , length of the float: 12 cm , height of the float: $51 / 2 \mathrm{~cm}$, height of the mast: 90 cm . - Fig. 174, nr. 1629II. Top view of the model boat. 1 ren iua, 2 ngeisere, 3 regigieze, 4 taur, 5 feleve, 6 uatouari, 7 giaur, 8 meteleuen, 9 iaupesa, 10 leausik, lemetesik, 11 taliare, 12 apise, 13 tamar, 14 uarie, 15 rator. - Fig. 175, nr. 3885 III. Top piece of hull, pelir, breadfruit wood, 1. 60 cm , h. 19 cm . - Fig. 176, nr. 4635II. Snatch block, height 16 cm .

The woven belt was called marozorozo. Just like their neighbors on Pur and Songosor, during trips on the open sea they wore the sailing jacket called rigou, made of woven material from pandanus. They have the hat, pelin and the cap, eperi pelin, as a headgear. Both are woven from pandanus leaves, fazole. While working in the field women protect themselves from the sun with a taro leaf, winding it around the head. In former times the hair style of men and women was seemingly the same. The hair was never cut, but only loosened with a comb, gom It was twisted to a knot, usually on the side of the backside of the head. Older men let their beards grow.

Flowers play a major role as jewelry. Wreaths in the hair of women and children can often be seen. They also like to wear flower garlands, male riuenisimei. Head decoration is the decorative comb iletöv, usually decorated with feathers from the zouk. ${ }^{1}$ The black colored combs are carved from breadfruit wood, as is already known from the other islands. The teeth are very long. The flat area is divided by a constriction. In most cases the side edge is also decorated. The decoration, too, does not show anything new. Sometimes chains made of pandanus leaves substitute for the wreaths. They are also wound around neck and arm and are called sim or $f z$.

As a decoration of the ear people stick a flower into the peirced earlobes. They have different names for this: auton teringe or dsiei. The decoration of the neck consists of al kinds of necklaces. To begin with there are simple, long, band-like necklaces made of a narrow network from woven pandanus, consisting of borders made in a plait pattern fashion (compare Fig. 128). The width is about 6 mm and the name is uize or fize. They are also used as decoration of the arm or people wind them around their breast and hips. They also produce round necklaces made from strips of pandanus leaves, which are wrapped by small, tightly


Fig. 177, nr. 4638II, nr. 1387 II Combs for dances, iletöv, made of breadfruit wood, carved and colored black. Length 34 cm , length of the teeth $11,5 \mathrm{~cm}$, thickness 1 cm , width at the bottom $6,5 \mathrm{~cm}$, narrowest point 3,5 m . Length 24 cm , length of the teeth 5 cm , width at the bottom $5,2 \mathrm{~cm}$, narrowest point 26 mm thickness 1 cm .
braided strings made of human hair, called accordingly zim

##  <br> 

Fig. 178.

## Fig. 179.



Fig. 180.
ig. 178. nr. 1384II. Necklace uize made of strips of pandanus leaves and braids of human hair, zim width of the leaf strip: 4 mm . After ca. 4 wrappings with leaves follow 5 with hair. - Fig. 179, nr.
2399II. Necklace, mesi, made composed from shell and coconut shell discs, their diameter is about mm . - Fig. 180, nr. 1374 II. Ring, regei $\chi a t i$, diameter 17 mm , width 2 mm .
1 People also use the feathers of the white, mesigo, or the black, les, sea bird.

The general term for necklace is mele. People like to adorn these necklaces with the earlier mentioned hooks made of shell or tortoiseshell, $\chi$ api. Besides these they have necklaces made of shell discs, snail shells, and beads made of coconut shell. Fig. 179, nr. 2399 II shows such a necklace. Two coconut discs alternate with a disc made of shell. They are strung on a string made of hibiscus bast fiber.

As a decoration of the arm people wear the various, above described necklaces made of pandanus leaves and bangles, regei pei, produced by men from shell, coconut shell, or tortoise shell (compare with Songosor Fig. 47) A stone is used as a tool. The spinning top-like snail, Trochus, called iaxoro by the natives, is the source for the material of the first kind. Bangles made of tortoise shell are called regei uoz, those made of coconut shell are rege tarak. Men give them to women as presents.

They also produce finger rings, regei xati from the same material. It seems that men prefer rings made of coconut shell. Nothing more than the name, autoni uoiti, is known of the nose decoration. It was not seen on anyone. Besides the already mentioned bi combs the decoration for dances consists of adornments made of flowers and leaves and, most of all, ornamental painting. People smear the breast and the back profusely with sugun (curcuma) and paint a thick line acros the forehead, the cheeks, the upper lip, and the chin.

The heavenly women Izazapio supposedly invented tattoos, farufer. In former tim certain men practiced it professionally Recently only chief Peilox and Ariselen still know about it. They executed it on men and women. No class distinction is expressed by this decoration. Everybody who wanted could get a tattoo. Besides the already mentioned celebration there are no regulations.

Nevertheless, the person, while being tattooed, is not allowed to work. The new moon i considered the right time to begin. Usually everal people "are processed" at the sam ime.


181, nr. $1380^{\mathrm{II}}$ and nr. $1381^{\mathrm{II}}$. Tools for tattoos. Hammer, aio, made of breadfruit wood. Length $25,5 \mathrm{~cm}$, side length of the uper field: 3 cm . This item is new and very carefully executed Fork, rarit. Length of the bamboo handle: 13 cm , rake, made of poultry bones; length 2 cm , wrapping made of fine strips of pandanus leaves.
 the inside and the outside of a woman, according to Kramer Fig. 184 Tattoos of the buttocks of a woman, according to E . Kramer.

The work takes about one month．People calculate half a day for the completion of the back，for the front，the arms，and the legs also half a day，as well as for the sides and the legs．It seems that there are long periods of rest between the individual stages，as otherwise the long period of time cannot be explained．The execution of the procedure is the same as on Pur and Songosor

The pattern correlates to a great extent with the patterns on Songosor and Pur．Nothing new can be found among it．However，we can say that small abbreviations in detail，if not to say enrichments can be found．Thus，for instance，the decoration of a woman＇s upper thigh，a semicircular arrangement of zigzag lines，closely positioned one after the other，is not known from other islands．Such a lush design is also not known from Mogemog，even if the correlation is otherwise quite extensive．Especially the arrangement of the men＇s back and breast patterns is remarkably similar．On the other hand the pattern of the upper thighs seems to be longer on Songosor，Pur， and Merir．Moreover，Mogemog－People seem to use the fish far more often as a pattern．They fill the area of the women＇s lower legs with wide stripes instead of the fine zigzag lines and strokes popular on the other three islands．（Tattoos of the men Ariserara，according to E．Krämer．Archive Hamburg．）

The tattoos of the lower arms，especially of the inside，are richer than on the other islands．Especially when we take into consideration that the patterns recorded on Songosor are obviously not from there，but are the work of a woman from Oleai．In former times the weapons used by the natives，was the spear，，xazik or uonger，the dagge uazei，and the throw stone haropu or gas．Once the sling shot seemed to have been a weapon to wage war，recently it is only used as a toy and tool for hunting．People call it zulu or uure．It consists of a stick as long as an arm，on the end of which a plant fiber has been attached．It has been made into a noose that can be tightened around the sling stone．In the process of throwing it the fiber breaks and the stone is shot away．The arrow，raure and the bow， xazik or uoleuol，supposedly never have been a weapon，but were always only a toy．The spear has survived as a fishing tool．

In former times the weapons used by the natives，was the spear，，qazik or uonger，the dagger uazei，and the throw stone haropu or gas．Once the sling shot seemed to have been a weapon to wage war，recently it is only used as a toy and tool for hunting．People call it zulu or uure．It consists of a stick as long as an arm，on the end of which plant fiber has been attached．It has been made into a noose that can be tightened around the sling stone．In the process of throwing it the fiber breaks and the stone is shot away．The arrow，raure and the bow，ұazik or uoleuol， supposedly never have been a weapon，but were always only a toy．The spear has survived as a fishing tool．

## 5．House and Household goods．

Everybody knows how to construct a house and does so himself．When getting married the son builds his personal residence，however，it also happens that two or three families live in the same house，depending on it size．Nevertheless，when the family is getting bigger they like to build the new house in the vicinity of the old， paternal house．The division of labor for the construction of the house is the usual one：men build the scaffolding and women weave the mats for the roof and the walls．Coconut fronds are used for the production of these mats． We have no illustration of the badly decayed houses of old Merir．A small model house，constructed by the native of Palau，is depicted in Vol．2：a simple square construction with a gable roof．Walls and roof are covered with mats made of coconut fronds．However，it seems to be a somewhat different from the residential house：the corner posts are not exactly positioned in the corners but were moved a little bit inside．Accordingly the purlins and collar beams have also been shifted，so that the ends of the longs sticks protrude a little and touch the wall of the house．The meetinghouse on Merir had a slightly raised floor．On Palau all residential buildings are positioned on small poles．The filling of the wall has been altered，too．

Without entirely abandoning the coconut mats，they use her wooden slats that have been caulked white．They decorated the new house of the chiefs with white and red colo People produce it from the root of the rör－tree，the other ne from chalk．The construction of the house deviate somewhat from the building on Songosor．The three ridge beams，positioned one above the other，and the missing stay （prop）are remarkable．Purlins and collar beams have no special names．There is an abundance of doors：one unde each gable field and four under each long side．Yet，this may vary at each individual house

The house plan below is the one of the chiefs＇house in Ngarabodl．

The terms for the parts of the house are as follows： 1）posts
）ridge beam
） 3 ridge beam
．ridge bea
）
6）rafters
7）wind bracing，bracing
wall
）slats of the wall
9）sparen of the wall
10）door
coconut mats of the wall
coconut mats of the roof


Fig． 185.
Residential building in Nagrabodl．After a photo by Lorenzen．
Terms for the individual patterns of men＇s tattoos in the front： 1 saberibe，fatur， 3 dangenob or dangouo
Dala．．．．Dangaloat，pude（tail－fish），aberia．In the back bororibei beruneg（mast）harineda right side，piserigering auneon oundore or ngiri paxo ngerimanm ratimoi boro
ogu uoginigena gedau
vararan om vut， Navel tattoo of women

The primary buildings belonging to a village, epipieiem or fariiei, are the residential hut, iem, the cooking house, om, a small house next to the dwelling house, and the boathouse, fare. The stove is called ferange, The sleeping place, igage or rimei, prepared with sleeping mats soper and head-rest, urun. They also have a name for the hammock: imonom.

Wooden tools have been salvaged in a badly weathered state from the ruins on Merir. They consist of different forms and sizes of bowls, töpi, of chests and pots, which show no difference to the known items from both of the other islands. The bowl with the bulging rim (nr. 3879 II) and the oblong bowl with the peculiar handle-decoration (nr. 4299 II) can be considered unusual forms. Even imported items could be found among them: the lower section of a very large bowl with feet, supposedly from the Admiralty Islands, and a small bowl from Palau. Most common were slightly hollowed bowls with a swaying bottom. Inside rounded, with a slightly flattened rim, and short handles. Height, width, and length of the individual pieces vary of course, still both items depicted here are representative for this kind. The biggest is 102 cm long, the smallest one 89 cm . The smallest bowl of the kind like nr. $4299 \mathrm{II} / 5$ is 44 cm long and 7 cm high. The bowl 4229 II/2, already mentioned above, differs from the others less by their form than by their decoration. Around 1 cm underneath the rim is a bulge from which the handles protrude. The part of the side underneath is decorated with an embossed pattern. The relatively tall, circular bowl with its roundish and swaying bottom on the inside and on the outside is the second item that cannot be found on the neighboring islands. $1 \frac{1}{2} \mathrm{~cm}$ underneath the rim runs a small bulge. Fig. 191 shows a round pot with a lid and a round bottom on the inside. The lid is furnished with a groove, which fits into the lower part of the vessel, which becomes narrower at the bottom. The badly damaged chest with a lid is one of those items that are already known from Pur and Songosor. The lost lid probably consisted of several pieces which were attached onto the chest with strings. The upper edge shows the beginning of a zigzag decoration. The small chest nr. 3884 II has a lid placed on top

People mainly use the shells of coconuts as drinking vessels and water containers. The entire nut, with a small hole on top that can be closed, is called paule. When a quarter of the shell has been filed off then the container is called tarako paule. It then serves as a cup. Often half a nut or an entire nut is furnished with a string to hang it. In this fashion it serves to store color or paste. People used small nut halves as a spoon Preferably the small, still egg shaped nuts are used for this. Sometimes people also produce spoons made of sea- and snail shells. In the process of food preparation the well-known pearl shells or pieces of bones serve as scrapers . Any sort of coral stone is used as a rasper

Woven materials, fazifaz, for household purposes and for personal use, are quite similar to those from Songosor and Pur.


Fig. 186. Timber work of the chiefs' house in Nagarabodl. Drawn by Maleilan.

Coconut fronds, iazo and strips of pandanus leaves, terau are the materials which are used. The collected sleeping mat, soper, nr. 1376 II conforms entirely to the Songosor-mat shown there. It is a diagonally woven matting in taffeta weave, apeas, with back weaving at the edge and canted corners. Measurements: $142 \times 101 \mathrm{~cm}$, width of the strips 3 mm , material pandanus leaves. All baskets are woven from coconut fronds. They are all woven in taffeta weave in a diagonal direction, however sometimes the plaiting pattern is $2 a$ over $2 b$ under $2 b$ and so forth, all the while moving forward one \{strip\}. Merir-People differentiate between five kinds of baskets. The tangalik basket is used to fetch taro. Raiz is a basket for fish, used by women and men and has the form of a Songosor basket. Yet, the technique is somewhat different. Half a frond is used at the beginning on the upper edge. The fronds are split and one half is placed on top of the other so that both parts of the same leaf are plaited with each other. On the other hand the Songosor basket needed two halves of a frond, the leaves of which were entwined with each other. This matting also grows diagonally in a taffeta weave. The collected Merir-basket is woven from very short strips of a coconut frond.


Fig. 187
Fig. 188


Fig. 191
Fig. 192


Fig. 187, nr. 3871 III. Wooden bowl made of breadfruit wood, töpi. The bottom on the inside is round, on the outside it is flat and swaying. It has short handles, ornamented with notches. Length 98 cm , width 31 cm , height 15 cm. - Fig. 188, nr. $4299 \mathrm{II} / 5$. Wooden bowl made of breadfruit wood, töpi, with a swaying bottom and small handles. Length 80 cm , width 29 cm , height 12 cm. - Fig. 189, nr. 3879 II . Tall cm underneath the rim. Length 43 cm , width 30 cm , height 15 cm . - Fig. 190, nr. $4299 \mathrm{II}_{/ 2}$. töpi, made of breadfruit wood. Oval; flat on the inside, outside swaying. With a rim and embossed decorations underneath the handles. Length 40 cm , width 26 cm height 13 cm . Fig. 191, nr. 3882II. Pot with a lid. Bottom round on the inside. The lid is furnished with a groove, which fits on the rim of the vessel. The crack has been carefully repaired. Diameter on the top 36 cm , at the bottom 23 cm , height with the lid 23 cm . - Fig. 192, nr. 3884II. Wooden chest with a lid. Length: 34 cm , height: 16 cm . - Fig. 193, nr. 3883II. Damaged base portion of a rectangular chest made of breadfruit wood with holes to attach a lid and with decorations. Length 56 cm , width 22 cm , height 20 cm .

At the bottom it is closed by a braid, the ends of which stick out around 10 cm . Length ca .41 cm on the top 31 cm at the bottom, height 27 cm . The $\chi$ ato-basket serves to store food and is hung on the posts of the house It corresponds to the Songosor basket depicted. The collected Merir-basket is woven from very short strips of a coconut frond. The leaves are narrowed to 43 mm and loosely interlaced in a taffeta weave. The handles rise up on the outside at the same time closing the woven material in the form of braids. Width of the basket on top 4 cm , at the bottom 27 cm , height 29 cm . The basket ngasorouut, too, serves to store food and resembles the bag basket depicted; it consequently differs less by form than by its purpose. The Merir-basket is a badly weathered piece, plaited from two frond halves, according to the schemata la over 1 b , under 1 b . Height $18,5 \mathrm{~cm}$, width on top 32,5 , at the bottom 30 cm . Width of the strips 1 cm . The Xaulueri are carrying bags for women, like the kind of tangalik, but very narrow and flat. The braid at the bottom is free and can be moved back and forth. Width on op 48 cm , at the bottom 39 cm , height 28 cm , width of the strip 1 cm . All bags made of pandanus leaf are called, according to the material, terau. They are carried by men and women or used in the house, in order to store item of personal use. An excellently accomplished piece is the bag nr. 1364 II.

All bags are executed in taffeta double weave in a diagonal direction. Often their upper rim is strongly gathered and they are narrow, flat, rectangular, and of different height. Short braids with knotted ends form the finish. Slit shaped holes are left open on the sides, providing an attachment for the handles. One bag differs from the others by its 10 cm addition of the bottom. The width of the strips is $2-3 \mathrm{~mm}$. The smallest bags of this kind are only 12 cm high and 16 cm wide at the top and 21 cm at the bottom. (An even smaller bag of the same kind supposedly comes from Yap and is only $7 \frac{1}{2} \mathrm{~cm}$ wide at the top, $81 / 2 \mathrm{~cm}$ at the bottom, and the woven strips are $1 / 2 \mathrm{~mm}$ wide.) The firefan ripau, made of coconut fronds, resembles the fire fan of Tobi in Vol. 2. The midrib serves as the start of the woven material, the arm, and the stiffening. The leaves have been woven upwards on both sides. The fronds are made narrower and are folded, on the upper rim they are bent back with the corners sticking up. The ones of the Tobi fan are bent back straight. This is the only difference. The Merir-fan (nr. 1385 II) is $41,5 \mathrm{~cm}$ long, 20 cm wide, and the strips are 18 mm wide.

## 6. Tools.

We could not obtain a lot of tools. As far as we can judge European tools replaced the traditional fashion to great extent. The ones used by women in the household have already been described. The old axe is called tarai and matches the Pur-tool. The taro axe was already mentioned in the section about agriculture. Apparently only European products are used as knives. In former times shells were adjusted for this purpose. The adjacent knife stands out from the other pieces due to the fact that the handle represents a local work. The shaft, made of breadfruit wood, has been notched so deeply that the blade has been inserted there. By wrapping it with coconut fiber cord both of them are attached to each other. The upper end of the wood has been spared of the binding Whatever kind of European iron people can get they cleverly adjust for their purposes. Thus, a piece of strip iron was found as a blade on a coconut rasper. A beveled edge chisel was also in their possession. By the way, the acquisition of these items by the expedition did not pose any difficulties.
The technique of the jewelry production is still quite unaffected by foreign influence. Tortoise shell is pierced with the shark tooth drill, pulapul (compare with Songosor, Fig.97). It was handled like a beater. In case it was used as a drill, then a horizontal piece of wood on two strings was fastened to the top. People use an adjustable compass made from a shark tooth, niriparo in order to draw a circle on tortoise shell for the creation of rings and bangles. After cutting out the jewel, it is smoothened on a stone. Bangles made of Trochus shell are fashioned in the following way: First the upper part of the casing, then the entrance is hewn off with a stone and only the remaining ring is smoothened with stones.


Fig. 195


Fig. 197


Fig. 199

Fig. 200

cm - Fig Fig. 194, nr. 4640 II. Half a small coconut forming a spoon. Length $7,2 \mathrm{~cm}$, width $4,5 \mathrm{~cm}$, height 3 cm . - Fig. 195, nr. 1369 II. Coconut cup for the storage of color, gugung, ocher, produced from the roots of the guan-tree, of the hole 23 mm . - Fig. 197, nr. 4647 II. Spoon made of Turbo olearius. Length 15 cm , width 7 cm . - Fig. 198, nr. 4646 III . Scraper made of Margaritifera. Diameter 8 cm . - Fig. 199, nr. 4649 II . Rasper made of coral stone. - Fig. 200, nr. $4648^{1 I}$. Scraper, supposedly made of whale bone. Length $24,5 \mathrm{~cm}$.


Fig. 201, nr. 4652II. Knife. European blade with a shaft made of breadfruit wood, a work of the natives. Wrapped with coconut fiber cord. Length of the shaft 15 cm , width 3 cm , length of the blade 13 cm ., width $2,5 \mathrm{~cm}$.


Fig. 202
Fig. 202, nr. 4644II. Fig. 203, nr. $4643^{\text {III }}$. Brocading needle made of bone. Length ca. 14 cm . Length 25 cm. Fig. 204. Nr. 3878 II. Old weaving board made from breadfruit wood. Length 63 cm , width 17 cm .

They obtain tortoise shell, by placing the caught turtle one day into the sun on the beach. In this manner the animal is killed. Afterwards people soak it for three days in the sea in a bag that is weighted down with stones After this time the back plate can easily be removed. All arrangements connected with the workmanship of tortoise shell are men's work, which is executed by all of them. Twining of ropes, tari, and string, iau is also en's work The usual weaving wor is done by when All kind of benes esplly those of pis, we weaving sticks. People use coconut fibers, रose, banana, muro, hibiscus bast fiber, and pandanus leaves. Delicate banana yarn for weaving is artfully wound to balls. Women also know about dyeing. They have the knowledge to produce white color (made of chalk), black, blue-green, and red.
Loom weaving is a technique bound to be extinct, because he woven belts, mesik, for men are recently replaced by Calico-lavalap. The loom in all its parts and terms corresponds entirely with the tool from Songosor, so that it does not have to be described here.


Fig. 205, nr. $1370{ }^{\text {II }}$. Ball of banana fiber, muro, for loom weaving.


Burial. Photo by Sarfert.


Dancers from Merir. Photos by Sarfert. Glass plate scans, Hamburg Museum.


| Merir word index German | Modern orthography | fa maro mari <br> fa pat <br> fa pau pei | famaru mare fapat fapau pau |
| :---: | :---: | :---: | :---: |
| aifatane | yai fatani | fafazo uod | fafad wot |
| ailirap | youlurap | fai a ngid | fayau ngii |
| ameres | hamerase | fai au sigarete | fayau siheret |
| apanozor | habanador | fai eri simei | fayari simei |
| apariara | haparieri | faleilan | Faleilang |
| apeas | hapeyad | faloiki | falohi |
| apezit | haped | fangaue | fangaf |
| apiripinipei | hapiripin pai | fangelezi | fangaladi |
| apise | hapise | Fanu | faanu |
| apiziei | hapidiyei | far xati | fahat hatui |
| ariselen | anselmo | fararazale | farihalatu |
| ariueren | yariwerang | farat xatire gupei | fahat haturi hubei |
| arizirapa | hosirapar | fare gupei | fari hubei |
| aroiia | hahoya | faregulugulu | farihuluhul |
| aruuain | aruan | fareuoiie | farewoi |
| aruzara | yarudar | fari maraxe | fari marah |
| aruzei | yarudei | fari meraurei | fari mauwer |
| aruzum | yarudom | fariaitaz | faletah |
| atirozoiro | hatunuh | fariapogo | faripohuwa |
| atizik | hatusik | fariauxon | larifariyauraw |
| atoiara | hatoiyeri | farieri uor | faruyeri woru |
| auane | uani | farieteni | faruyeiteng |
| aurieseik | yawori hasaih | farifasa | farifas |
| aurun | yaurung | farifer | farifare |
| autoni teringe | yautoni teringe | farigaitaz | farihatad |
| autoni uoiti | yautoni bautui | farigauroigi | farihaurohi |
| auna | auwa, awa | farigeluato | farihelifato |
| bairime | yairuum | farigepizoroi | farihepidohoi |
| bamugen | pamuken | farigirvau | farihirifou |
| betekevei | matalafangi | fariei | farim |
| bokue | pohuwa | farimaleireien | farimaleireng |
| bongizaue | bongirawe | farimenipi | farimenipi |
| dsiei | suyei | farimok | farimoh |
| eau bada | yaupad | farimorozik | Fariworosih |
| eerai | eyarai | faripele | faripale |
| efitifit | efitifit | fariseri | farisseri |
| eglamaut | yalemaudi | fariuelei | fariyetedi |
| eitaz | hatad | fariuorox | faruworoh |
| elimet teri meilie | yalematari me lii | fariuorozik | fariworosih |
| elosolos, elos | elosolos, elos | farizauan | faritawas |
| elozo | elos | farozoron | fasorung |
| eperi pelin | hapari polung | farufer, farufora | faruforu |
| epinge teringe | epung taringar | faruferi | farufori |
| epingitio | epungutiwo | faruforum | faruforum |
| epipieiem | epipiye iim | farugrieg | faruhuriyeh |
| erala ualau | ehalawalao | farugur | farihur |
| eramatagou | eramatahun | farumau | farumawo |
| ereniuara | ireni wara | farue | farue |
| ererigiere | yarari harai | fasau saure | fasau saur |
| ererik | ererihiye | fatiar | fatuyar |
| eriz | yarud | fatiar uizilipapa | fatuyeri bidil papa |
| eruozopos | besebes | fatiriueg | faturiyeh |
| esees | bonsisi | fatox | fatoh |
| etei | yatei | fatur | fatur |
| euosoruai | ewol saworiwai | fau | fou |
| ezama | edama | fauoki | fabuhuye |
| fa guuo gupei | fahub hubei | fauua iek | fau iih |


| faua iem | fau iim | gete ma ngan me iazimer pazimer |  |
| :---: | :---: | :---: | :---: |
| fauuo uan | fau wanu | her ma ngangu ma irademaru pardemaru |  |
| faxai siriged | fahae sirihet | gete omaro izei xamitek | her homara peiri hamatahi |
| fazan, razoili | fadongi, ladolu | gete ouitox | her hobito |
| fazifaz | fadufodu | giaur | kiyawor |
| fazik, fazir | faduk, fadur | giegi | hiyehiye |
| fazol, fazole | fadol | gigi | hiyehi |
| feiie | faile | giligili | heliheliya |
| feik | faih | gin | kin |
| felauaizis | falewaisis | ginipei | kinipei |
| felegietag | falehiyetah | ginipoum | kini paumu |
| feleve | falaf | ginipoura | kini paur |
| fen | fen | giop | hiop |
| fengerieisak | fanguruyeitahe | giri | hiriye |
| fenigamar | fenihamar | giri gupei | kuri hubei |
| ferange | farang | girigi | hirihir |
| fereugisi | farihesih | girin xau | hiringohau |
| feriaugl | fareyaul | gise | hisa |
| ferieuen | fariben | gise iuara neei zimer | hisa dibara haneya demaru |
| fetai | fetai | gise zi xamitek | his di hamatahi |
| fezouoki | fidibuhuye | gise zigatoro | his dihatoro |
| filau | fitau | gise zimaro izei xamitek | his dimar peiri hamatahi |
| firimoru mozu | firi morowe moduwe | gise zimaro lari | his dimaho lari |
| fitiarveiviet | fatuyar faifire | gise ziuerox | his diraho |
| fiz | biis | gise ziuitox | his dibito |
| fize | biis | git | hiit |
| fize | fid | gliek | liyeih |
| fizi a ngid | fidiyau ngii | glopoki | liyebuhuye |
| fizi au sigarete | fidiyou siheret | gom | kom |
| fizi guuo gupei | fidihub hubei | goronia | goronia, koronia |
| fizi maro mari | fidimoru mare | goror | koror |
| fizi pat | fidipat | gouule | haule |
| fizi pau pei | fidipau pau | gozauitox | hoda bito |
| fizi xati | fidihat hatui | gozaxatoro | hoda hatoro |
| fizie merupi | fidi marup | grieg | uhurih |
| fizieri simei | fidiyeri simei | grieran | wori yarang |
| fizigat xatire gupei | fidihat haturi hubei | gui |  |
| fizingaue | fidingaf | gulugul | kulukul |
| fizingelezi | fidingaladi | gume | huum |
| fizisau saure | fidisou saur | gumiet | kamuti (tumuso) |
| fiziuar | fidiwar | gumuz | humus |
| fizixai siriged | fidihae sirihet | gumuzi | kumusi |
| gaiingau | heingau | gumuzum | kumusum |
| galax | halah | gumuzure | kumusure |
| gatalizanga | hatalidang | gupare | hubar |
| gauauk | habauhu | gupari | hupar |
| gazo | haso | gupei | kubei |
| gelefaz | helefas | gupum | hubom |
| geperi faz | hapari fadu | guru | kuru |
| ger me iazimer | hera ma iya demaru | gurupeti | ruhuripi |
| ger me iazimer pazimer |  | guvo | hub |
|  | a ma iya demaru para demaru | guz | hud, kud |
| ges | hesi | guzar | hosar |
| gesimeta | hesimatahe | haropu | harobu |
| getauo lala | rihatabulala | heuelei | yafalai |
| gete | her | iai | yai |
| gete a xamitek | hera ho hamatahi | iain | yangi |
| gete ma iazimer | her ma ira demaru | ialan | yala |
| gete ma ngan gete ma ngan me iazimer | her ma ngangu <br> her ma ngangu ma ira dema | ialom iam | iyolom vam |


| iamitiur | papaitiuwo | ile liuerox | ile laraho | is | iis | liemer iek | liyemaru iih |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| iamu | yamu | imariveri | imeriferi | itagura titir | itahura titiro | liemero mar | liyemaru mare |
| iar, iara | yar | imaro | emaho | itai tuuutop | iteri tautub | lierat xatire gupei | liyehatu haturi hubei |
| iareare | yareyare | imazilimatar | emadulu matar | itan | iran | lii maro mari | liyemaru mare |
| iariiar | yaruyoru | imeiate | imeiyet | itar | ihirar | lii pat | liyepat |
| iariar | yaruyoru | imerar xamitek | imara hamatahi | iten | itengi | liiek angaue | liiek ngafar |
| iaro | yaro | imeri rimeri mari | emaho rimaru mare | iteper | ehapara | liimer geperi mari | liyemaru hapari mare |
| iaruar | yaruyoru | imeriboe | imeribae | iterap | iterap | liisau saure | liyesau saur |
| iau | yawo | imerigou | imerihou | itiuaut | itiwou | limare | limaru |
| iauar / iauuei | yawar / yawai | imeriper | imeriporu | iuar | ifar | lio guuo gupei | liyohub hubei |
| iauaua | bobai | imeriper or raparim | imeripor or taraparim | iuararige | hariya | liraxo | ila laraho |
| iauilari | yaulari | imeriper or xaperim | imeriporu or hapirim | iuarauk | ibara hauho | liri miangei | liri meyangai |
| iaulurapa | lunurap | imeripue | imerepua | iuenigemat | ribonihamat | liri miangeireigli | liri meyangai |
| iaungan | yaungar | imeriueri | imeriwer | iuerox | ibe raho | liri uizilipapa | liri bidil papa |
| iaupase | yaupasa | imero mari | emaho mare | iues | ebesi | liri uizineita | liri bidir neira |
| iaupesa | yaupasa | imeta | emat | iuifaugl zeua iem | ibefaulu dewo iim | liuanisike | liwonisih |
| iausigidot | yausihito | imetaivo | imetaro | iuimasegl | ibemadul | liuanuruke | niwoniruh |
| iauuei | yawai | imetalo | imetalo | iuouor | ibouor | liueisi mar | riweisi mare |
| iauurapaupa | bulepoupou | imetegiete | imetahiyet | izara | idara | liueizi veiviet | riweisi faifire |
| iauurorox | raowraparap | imeteri uoi | matariwolang | izarox | idaraho | liuenilen | lbenleuen |
| iazo | yado | imezalau | imedelai | izaua | isao, isaua | lizarox | leda raho, ledao raho |
| iazure | yadur | imezi melem | emade malam | izauitox | idona bito | lizauitox | ledao bito |
| ie | iye | imoguiagl | imehuwal | izauitox (aurazi) | idobitoh (waradu) | lizaxatoro | ila lada hatoro |
| ie I xamitek | iye e hamatahi | imoguiol | Imahuyaro | izaxatoro | ida hatoro | longelon | longolong |
| ie igatoro | iye ehatoro | imom | imom | izaxauauge | ida habauhu | louei | labei |
| ie imaro izei xamitek | iye emara peiri hamatahi | imonom | imonom | izi | iddu | loum | luum |
| ie imaro lari | iye emaho lari | imopalunge | imepolung | kete ogatoro | her hohatoro | lozas | losasa |
| ie iuarano | iye ehaneho | imor | imowa | kete omaro lari | kete homaho lari | lukom | yaikom |
| ie iuarariieie | iya ebara hariei | imotauteigi | imetautehi | kete ouaraneei | her hohaneyai | luoue iem | luwou iim |
| ie iuerox | iye eraho | imuili | imili | ki | aki | luouo uan | luwou uwanu |
| ie iuitox | iye ebito | inap | erap | kiau | kiyao | luouna iek | luwou iih |
| iek | iih | ineseri gupei | meseri hubei | lagum | lahum | luouuo uan | luwou wanu |
| ieleuail | eyalwael | ingaz | ingad | lagum, ievi | lahum, yefi | maian | mauyango |
| iem | iim | ingite | ingir | laiteki | laetahe | maisere | maidelae |
| iemara | imara | iogl | iyoul | lan | dabar | maiteberesn | mairapraifangi |
| iemei | imei | iogoreen | cocoriyangi | lanei iuera Matalai | lanei ibera madalaii | maizela | maidelae |
| iemepapa | imepap | iope | leb | lari orofat | lari worofat | maki | mahi |
| iepe | yep | iopopu | eupobu | 1 latit | 1 latit | malarieme | malerimei |
| ierei, igomes | yarai, ekames | iopopu luouua uan | eupoub luwou wanu | latoriveri | laturiferi | male riuenisimei | maleri benisim |
| ieruar | yoruyoru | iopopu zeua uan | eupobu dewo wanu | lauoizepe | Waidep | maleileuen | malerengi |
| ieuen | yefangi | iopopu zimero mari | eupobu demaru mare | lauozu | lawodu | malerigazoc | malerihadoh |
| ievi | yefi | iotoroiar | tororiyaro | lazo | lado | maleuutiu | malewatiu |
| iezerimer | yaderimeru | ipal | ipali | leausik | leyausih | maloriuori | maloriwor |
| iezimer | iye demaru | ipeiezeen | epalada yangi | leausik | yalausih | mamalei | hamalei |
| igatoro | ihatoro | ipemi | ibe mire | legiem | lakim | mamusik | mamusih |
| igauaugo | ihabauhu | iperi | epare | leigitaxo | laetahe | manerei | manarai |
| igepero meri | hapari mare | iperi zeua uan | epare dewo wanu | lemetesik | lamatasih | mangal | mangal |
| igete | meihira | iramangel | ida mangiya | lenei | lanei | mangal | mangal |
| igirope | ruhurap | irarorimar | irahorimale | li a ngid | liyau ngii | mangal | mangau |
| ikai | hating | irarorinar | irarorimale | li au sigarete | liyau siheret | mangesure | mengesur |
| ilai | ilae | iratar | ida tar | li eri simei | liyari simei | manimozu | manimoduwe |
| ilapangaik ilipinge | lapangahi woriping | iraugl | irou | li pau pei | liyepau pei | maniterore | manitaror |
| ilapangaik itit | lapangahiri tit | iraxo | iraho | liangaue | liengaf | marailigegl | mahaliheli |
| ilari | nilari | irazmer | ira demaru | liangelezi | liyangaladi | marailigel | mahaliheli |
| ile iuara neei zimer | ilabara haneya demaru | irifezangala | irifadangala | liauou | luwou | mararai iuara neei zimer | maraharar ehaneya demaru |
| ile lagatoro | ile lahatoro | irigiri gumuzi | uruhuri humusi | liaxai siriged | liyahae sirihet | mari | maar |
| ile lauitox | ila labito | irigirin iapon | irihapon | liazi | liyedi | marifangel | menifangur |
| ile li xamitek | ile la hamatahi | iroto | rotow | lie xati | liyehat hatui | marifer | manifare |
| ile limaro izei xamitek | ile lamar peiri hamatahi | irotoeuen | rotowafengi | liefazo uod | liyefad wot | marinap | ${ }^{\text {marenap }}$ |
| ile limaro lari | ile lamaho lari | irugur | iruhur | liemaro veiviet | liyemaru faifire | mariteifei | maretaifou |



| pozi | podui | retet | reteti | ruguvari | ruhurifare | tauonin | taborengi |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| pulapul | bulobul | rgiruiei | ngiruyei | ruguzongosar | ruhuridongosaro | tauoriuoin | taboribongi |
| puluuulotam | bulobulotam | rgirupei | ruhuri pai | rukovar | ruhofar | tauoriuoin lari | taboribongi lari |
| pur | puro | ri maro mari | rimaru mare | rumetek | rimatahi | taur | ttao |
| putaf | wotapatap | rieri | ruyoru | rumonelin | rumoneilang | tauta | tauta |
| putoi | butoi | rigatauorag | rihatabulala | sar | saru, ssar | tautau | boutam |
| rafazei | rahafadai | rigatauzulox | rihatauduraho | sarai | sahai | tautau teringe | toutou ri taring |
| raiegi | raniyehi | rigirimeiroize | ruhurimairois | sarai xaian | sahari hayang | tavas | tafasu |
| raiii mar | rai mare | rigiripalau | ruhuripanou | sau | sawo | tegliveivi | tahilifeifire |
| raii veiviet | rai faifire | rigosoi | rihosobir | sauri getan | sawori hairang | teiielimer teri meilie | tai yalemata ri me lii |
| raiz | harais | rigou | rihou | sauri ieseik | sauri hasaih | teike me rim a ngid | deih ma rimeyau ngii |
| raizatipe | ra iratipe | riguriveri | ruhurifare | sauuor | sauwor | teike pau pei | deihepau pau |
| rala ualau | ehalawalao | rii | riiya | seneues-Islands | Seneves | tepei | tapai |
| ran | rangi, yeri (fly), yari, yayari | rim a ngid | rimau ngii | sengel | senger | terau | talau |
| ranileaxo | rani leaho | rim au sigarete | rimau siheret | seni metei | sani matai | tereper | tarapar |
| raniuatag | raibatah | rim eri simei | rimari simei | sepite | sapir | teriek | derih |
| raniuoit | ranibout | rimangaue | rimengaf | sialemau | diyaribau | terigezox | iterihadoh |
| ranizaxoi | ranidahoi | rimazai siriged | rimahae sirihet | siere gupei | diyeri kubei | teriperi mar | tarapari mare |
| ranogo | ranoho | rimefazo uod | rimefad wot | sierei | doruyou | teriperi veiviet | tarapari faifire |
| rapariueiz | hapari riweisi | rimei | nimei | siieki | siyehi | tigeligeli | Tiheliheli |
| raperi xaian | hapari hayang | rimeik | rimeih | simer | sim | tigeuei | tihofaiye |
| rapite | hapir | rimelion | rimeliyango | simorouugie | simeri hubei | tilagau | tilahau |
| rararupeu | hohori puua | rimengelezi | rimengaladi | siri ngaringorin | siri mataringorungori | tiouoki | tiwobuhuye |
| rarei gulugul | harai huluhul | rimer teriperi mari | rimaru tarapari mare | siriperi | siripei | tiu a ngid | tiwoyau ngii |
| rarei uanu | harai wanu | rimer xati | rimerhat hatui | songosor | dongoraso | tiu au sigarete | tiwoyau siheret |
| rari | yaru | rimerat xatire gupei | rimehat haturi hubei | soper | soob | tiu eri simei | tiwoyari simei |
| raro ifaugl zeua iem | rarowa ifaul dewo iim | rimi pat | rimepat | sopi gupei | sapiri hubei | tiu maro mari | tiwomaru mare |
| raro igora iek | rarowa ihor iih | rimi pau pei | rimepau pau | sorieigetan | sawori hairang | tiu pat | tiwopat |
| raro ira Matalai | rarowa ira Madalaii | rimo guno gupei | rimohub hubei | sou golum | sou holum | tiu pau pei | tiwopau pau |
| ratam | hatam | rimoor | rimoar | sou rimangal | souri mangal | tiu xati | tiwohat hatui |
| ratineuen | hotiwafangi | riniz | runud | sou rimer | sou ri maru | tiuangaue | tiongaf |
| ratiu | hotiwo | rios | dios | sou riuarimat | souri worimat | tiuaxai siriged | tiwohae sirihet |
| ratiuogl | hotiwaulu | ripau | ulupou | taengi naro | taringinaro | tiuo guuo gupei | tiwohub hubei |
| rauaig | rabaye | ripeiliuolon | ripeiwelong | taiaua | taiyau | tiuongelezi | tiwongaladi |
| rauiri | rauri | ritoto uot | hiringo toutou | taiglauor, taiglovar | talebour | tiuorat xatire gupei | tiwohat haturi hubei |
| raunaure | raunour | riuemuoto | ribeniuot | taiiamite | tai hamatahi | tiuorisau saure | tiwosau saur |
| raunaure veiviet | raunour faifire | riueni tauataf | bontafataf | tailamu | talamu | tiuzeik | tiudeih |
| rauraparal | raworaparap | riuenitotu | ribenitaotau | tailara | talara | toik | tohi |
| raure uizi | rauri bidi | riueniuot | ribeniwot | taku | takuu | topi | tapiye |
| raure uizilipapa | rauri bidil papa | rivangavan | rifangafang | tales | talis | torigios | yato rilos |
| raurugumer | rauruhurimer | rixaxe | ranidaho | taliare | taliharo | tou | touua (tingii) |
| rauure | raur | ronoto | runnut | taligi | taluhi | tumugl | tumuli |
| rauut | rabut | ror | rooru | talues | talebes | tuti | matari tut |
| razato | hadato | rorop | urourap | taluie | yatalu | tuti | tutui |
| razeiertiu | rae dolutiwo | rosai | hosai | tamaniveri | tamoniferi | tuzauoil | turuyawai |
| reai | rai | rosai iek | hosai iih | tamar | tamau, tamoru (general term) | uagita | uehita |
| regei pei | rakeri pai | rosai mar | hosai maru | tamase | tamasu | uaiau | yawo |
| regei tarak | rakei tahaku | rosamum | hosamu | tapar | haperae | ualeirei | Maleirai |
| regei uoz | rakei boss | rosara | hosar | tapazilai | tapadelai | ualuk | baluh |
| regei xati | rakeri hatui | roso | hosou | tarai | tarae | uan | wanu |
| regeriar | ruhuriyar | rotoiet | rotoiyet | tarako paule | karaho poul | uaniale | woniyare |
| regigieze | ruhuringaser | rotoog | rotowaulu | tarapara iain | tarapari yangi | uanigirifou | wonihirifou |
| rei iek | rai iih | roum | raum | tarauli gapitei | talauri hapitei | uansisi | winisisi |
| rei or rosai | rai or hosai | rozor; apeiliveiviet | hapalafaifire | tarieri | tareyare | uar | woru |
| reiveiviet | rai faifire | rugarap | ruhorap | tarigazox | iterihadoh | uarar | wahar |
| remerieparieri | ramariparuyeri | rugeiren | rugeireng | tarotot | tahoutot | uararox | habararoh |
| ren iua | rani uuwa | rugeriagl | ruhuriyare | tataro | wototaro | uarazi | uaradu, waradu |
| reniue | raniweiye | rugiripi | ruhuripiye | tauai | tawahi | uarazi gise zizara Matalai | waradu his didara Madalaii |
| renizamur | reni | rugorab | ruhorap | taues | talebes | uarazi iuera ozara Matalai | waradu ibera hodara Madalaii |
| reremetiu | eramatiu | ruguraparim | ruhuraparim | tauni | tawiya | uarazi iuifaugl zeua iem | waradu ibe faulu dewo iim |


| uarazi izauaitox | waradu ida bito | uimagura | wimahur | xameti | hamati | ze eri simei | deyari simei |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| uarazi izauuor gora iek | waradu ida hor iih | uirig | birihi | xametipe | dametipei | ze xati | dehat hatui |
| uarazi lizara matalai | waradu didara madalii | uirinar | firenau | xamiteiki rimero mari | hamatahi rimaru mare | ze, zi | de, di |
| uarazi ozara matalai | waradu hodara madalaii | uitalari | bita lari | xamitek | hamatahi | zeari | deyari |
| uare | uhur | uitarau | ruhutarau | xamiteki zimero mari | hamatahi demaru mare | zeau sigarete | deyau siheret |
| uari a ngid | waruyou ngii | uitigur | fitihor | xamizeua pipirieglimet | hami dewa pipiyeri yalemat | zeauare | deyawar |
| uari au sigarete | waruyou siheret | uito | ebito | xan |  | zeb, zeik | deb, deih |
| uari eri simei | waruyeri simei | uiz, fiz | fid | xanox | hannoh | zeike ma rimangaue | deih ma rimangaf |
| uari maro mari | warumoru mare | uize | biis, bidi | xaparuar | haparuwar, haparuyar | zeike maro mari | deih mare |
| uari pau pei | woropau pau | uizi leuueit | bidi leiweisi | xapilouo | hapilou | zeike me rim eri simei | deih ma rimari simei |
| uari xati | waruhat hatui | uizi teinap | bidi leinap | xapiritiri | hapirifare | zeike me rimi pau pei | deih ma rimepau pau |
| uarie | wariyengi, woriyengi | uizik | fidih | xapiriuori | hapiriwota | zeike me rimisau saure | deih ma rimesau saur |
| uariek | warih | uizili | bidil | xapiriuota | hapiriwotaq | zeike tiu angaue | deihetiu ngafar |
| uarieme | uwarim | uizilipapa | bidil papa | xapise | hapise | zeike tiu ngid | deihetiuo ngii |
| uarigat xatire gupei | worohat haturi hubei | uizineita | bidir neira | xapizaxe | hapidah | zeike tiu pat | deihetio pat |
| uarigir | uwari kir | uizireigli | bidiri lii, waisi elii | xapizaxo mauruk | hapiraho ma uruh | zeike tiu xati | deihetio hatui |
| uarik | warik | uleai | wereai | xaremetiu | harematiu | zeike tiu xatire gupei | deihetiwo haturi hubei |
| uaringelezi | warungaladi | umezeriveri | mezeriferi | xarimeigiri | mariyehiri | zeike tiuo guuo gupei | deihetio hubei |
| uaripei | fari pai | ungasik | ungesih | xaringimaxo | haringamaho | zeike ziu simei | deih ma deo simei |
| uarisau saure | warusou saur | ungasik igado | ungesih yaado | xarpirpin gupei | hapiripin hubei | zeike ziu siriged | deihetiwo sirihet |
| uaro guuo gupei | waruhub hubei | ungirab | ungarap | xasenger | hasenger | zeiki me li | deih ma luwou |
| uarol | yarol | uoiligez | ribonuhes | xaseper | hasab | zeiki me zer | deih ma doruw |
| uarouoki | warubuhuye | uoitegi | woutehi | xasik, xatige | hadih | zeiki me zi | deih ma deo |
| uaru pat | warupat | uoleuol | balobalo | xatao | hataf | zeireigli | dini lii |
| uarumai | uwari mei | uone gisar | bonihasar | xati | hatui | zeketiu saure | deihetio saur |
| uarungaue | uarungaf | uonger | bungurfatur | xatirapei | haturapai | zengelezi | dangaladi |
| uaruxai siriged | waruhae sirihet | uor | buru | xatire gupei | haturi hubei | zerat xatire gupei | dehat haturi hubei |
| uatan | tongutong (tongu) | uorax | woroh | xato | hato | zerauruk | laerauruh |
| uatar | wahar | uoreuoi | werewer dabuk ( N ) | xatu | fadu | zeri a ngid | doruyeri ngii |
| uatoe | fatou | uori | woru | xature | yatur | zeri au sigarete | doruyou siheret |
| uau | uwou | uorouuer | werewer | xau | hau | zeri eri simei | doruyeri simei |
| uaule | baul | uose | bos | xauan | habang, hayang | zeri maro mari | dorumoru mare |
| uaunen | wenengi | uotiegitaz | botiehita | xauguz | hauhud | zeri pat | dorupat |
| uaur | uwawor | uouo | bubu | xauz | haud | zeri pau pei | dorupau pau |
| uauriaozo | woriyado | uouoi | luwou | xaxar | hohor | zeri xati | doruhat hatui |
| uaut | wautu | uru, urun | uuru, urung | xazegaz | lari horuhoud | zerimer geperi mari | dorumoru hapari mare |
| uauta | falewari | urupau | urupau | xazik iek | hadih iih | zeriot | deriyout |
| uautam | boutam |  | uut | xazopozopo | hapodupodu | zerisau saure | dorusou saur |
| uauti | bauti, bautui | uuarik | warih | xirazegl | irasangel | zeruxai siriged | doruhae sirihet |
| uautu | wautu | uungure | bungur | xlose | dios | zeua | dewa |
| uautum | bautum | uunore | bunar | xose, xoto | hoos, hoot | zeua iem | deo iim |
| uauture | bautur, bauture | uurax | burah | zaiegi | daniyehi | zeua or zeu | defad or dewo |
| uauuai | bobai | uzeren | udarengi | zaiseua | dai dewo | zeua tereperi uod | deo tarapari wot |
| uauzuk | woduh | uzeri, gumaser | uder, humaser | zale | dale | zeuatiperi | dewa tiperi |
| uazei | uwadei | variei | woriyengi | zalitipei | halihitipei | zeuke me zi maro mari | deih ma demaru mare |
| uei | uyei | vature, vatinigax; falir | fature fatunihaho | zamagl | damale | zeutaroieteik | deuotarorietahe |
| ueimer | we immeri | vauvau | faofao | zamareigli | tamari lii | zeuua | dewo |
| uenifozumaxo | wonifadumaho | veiviet | faifire | zanagut tuuei | sani kutufei | zeuua faz | deo fadu |
| ueniin | wenengi | veve | hori | zangaueu | dangaf | zeuua fazik, gom | dewo faduh, kom |
| uerigapepe | farihapeipei | xaian | hayang | zanipei | rani pai | zeuua gulugul | dewo huluhul |
| uerigerei | bonsisi | xailau | halau | zarat xatire gupei | dehatu haturi hubei | zeuua gumuz | dewo humus |
| uesi | waisi | xaisau | hisau | zaringelezi | dorungaladi | zeuua iare | deo yaafi |
| ueti | wet | xalag | halau | zarouoki | dorubuhuye | zeuua iauuei | dewo yawai |
| ugarei | ukarai | xalangab | halangap | zaugepit | dauhepit | zeuua iek, iem | deo iih, deo iim |
| ugo | uuho | xalifat | halifato | zauoau | rihitawau | zeuua metei | dewo matai |
| ugu, ugure | uhu, uhur | xamaseripar | hamasuripar | zauoiagl | dabeyol | zeuua mougur | dewa taur |
| uiare | biyar | xamat | hamat | zauoki | dobuhuye | zeuua or zeu | dewo or deo |
| uie | biye | xamauria | hamauria | zauoki angaue | dobuhui ngafar | zeuua pazo | dewo pado |
| uieizog | uieisok | xamazogiri | hamaduhir | zaxai siriged | dahae sirihet | zeuua regei | dewo rahei |
| uigunugupei | bukuyeri hubei | xamereis | hameras | zeangid | deyau ngii | zeuua roso | dewo loos |


| zeuua sou | dewo sou |
| :--- | :--- |
| zeuua teriperi faz | deo tarapari fadu |
| zeuua uan | do uwanu, deo wanu |
| zeuua uauti | dewo bautui |
| zeuua uod | dewo wot |
| zeuua zeringe | dewo taring |
| zi maro mari | demaru mare |
| zi pat | depat |
| zi pau pei | depau pei |
| ziei | diyei |
| zifar uan | defadu wanu |
| zifazo | defadu |
| zifazo faz, zifazo | defad fadu, defad |
| zifazo geperi uod | defad hapari wot |
| zifazo uod | defad wot |
| zigiri gerei | sukuri harai |
| zilai | delaye |
| zim | sim |
| zimaro mar | demaru mare |
| zimaro veiviet | demaru faifire |
| zimer | demaru |
| zimer iek | demaru iih |
| zimeripi | simeripiye |
| zineigli | dini iii |
| zini miangeineita | dini meyangari neira |
| zini miangeiripapa | dini meyangari papa |
| zinineita | dini neira |
| zinipapa | dini papa |
| ziob | hiop |
| ziraxo | diraho |
| zisau | desau |
| zisau ilupau | desau ulupou |
| zisau saure | desau saur |
| ziuaual | sibabol |
| zieueik | tiwoih |
| ziueni pazei | duweni fadai |
| zizarox | dida raho |
| zizauitox | dida bito |
| zizaxatoro | dida hatoro |
| zo guuo gupei | dohub hubei |
| zogu | duhu |
| zok | duuhu |
| zope | dope |
| zor, zer | dor, doru, der |
| zoru guuo gupei | doruhub hubei |
| zorufo uod | dorufod wot |
| zorungaue | dorungaf |
| zoruua iek | doruu iih |
| zoruua iem | doruu iim |
| zoruuo uan | doruu wanu |
| zouk | duuk |
| zrimeruoki | rimebuhuye |
| zriueiz | riweisi |
| zukom | yaikom |
| zule, zuzuk | duul, duuh |
| zutaik | dutahe |
|  |  |



Chief PeiloX and Ualerei. Photo by Sarfert. Glass plate scan, Hamburg Museum.

Please note this copy is read-only, and not suitable for sharp printing.

The large $9 \times 12$ " full printed set of Palau Volume 1-7 is available for sale at the Belau National Museum and Etpison Museum gift shops for USD \$175.

All proceeds from this non-profit translation project will be used to re-print these books.



[^0]:    1 Wichmann: Nova Guinea Vol. I, p. 228
    John Meares: Voyages made in the Years 1788 and 1789 from China to the N.W. Coast of America.... Vol. II, p. 103-106. London 1791

[^1]:    1 Annals of hydrography and maritime meteorology, 1898, p. 209

[^2]:    Kotzebue, Voyage of Discovery 1815-1821, vol. 3, p. 104.
    2 Kotzebuue, bibi., vol. 2 , p. p . 8. This map was drawn by the Oleai native Edok. According to Chamisso's indications, the distance in days was added by the native Kadu from Oleai, who was Edok's companion in suffering. Both had been cast up on the Marshall Islands from was adeai.
    Oleal
    3 Hellwig: Diary of the Expedition, p. 203.

[^3]:    1 He also does not believe in connections between the Tobi natives and the Carolines and acknowledges at mosta weak linguistic influence, but he contests the linguistic similarity of Tobi to Songosor and Merir. Hellwig found that the appearance of the Tobi natives strongly reminded him of the inhabitants of Wuwulu and Au.

[^4]:    isisirei; neida Han
    eiangei sire
    are busi tamei
    amarikik
    oats
    uasera
    marenap, irekeri mar
    irekeri faivil
    faivire ta
    meuisi
    tai uisi
    pee'peeah mah'ree P .
    senap He .
    maur
    okom
    otoragei
    gene
    tafei
    magaketak
    bag
    ari bugurog
    repei
    ioba
    ${ }^{\text {arares }}$
    tar
    gourobuk
    tsiep
    abu, ietap Ha .
    aing
    meta itom
    masek, masek uor
    lii
    gapitiki
    tangakir
    kimeian; kideian He.

[^5]:    1 They like to use the shell of Turbo olearius Gmel (Hellwig's "Burgos"),
    2 They like to use the shell of Turbo olearius Gmel (Hellwig's "Burgos").

[^6]:    Compare with Pac. Is. Pilot 1933, p. 496; The island is surrounded by a fringing reef which extends about $61 / 2$ cables from its southern end and about half a mile from the northern end; the edges of the reef are steep-to, except tat the northern end where a shoal, with a depth of fathoms $\left(12^{\mathrm{m}} 8\right)$ over its outer end, extends about three-quarters of a mile northward; it is reported that sailing vessels anchor here.
    24 m according to Gollert, 5 m according to the information of the Südse--Handucch, from which was cited the above description. Accordin the information in Pac. II. Pilof from 1933, p. 496, Merir is 92 feet $=28 \mathrm{~m}$ high (measured to the tree tops.

[^7]:    1 By Sarfert's request one of the men sang calmly a lament.
    2 According to Krämer, the plots, airan, of Merir are called: 1. Rugarap, 2. Rukovar, 3. Pesam, 4. Imariveri, 5. Imeriböe.

[^8]:    One month is indicated here, however, it is not clear if this relates to the time of celebrating or the time of tattooin

[^9]:    In the index of the cylinders quoted as Ualuk (dance)

[^10]:    1 For the use of the form ngeili etc. there are no examples.

[^11]:    

[^12]:    The names in brackets are Palauan term

