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Dr. Paul Hambruch

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Foreword

After death had prematurely ended the production of Paul Hambruch, the editor of the South Seas Publication, Professor Thilenius commissioned me to complete the monograph of Ponape and thereby fulfill the wish of the deceased.

I took over a completely finished material, so that the printing could already begin in a little while. Nevertheless, a review of the material made apparent to me that a change from Hambruch's planned division was advisable, especially since he had originally believed four volumes were necessary. He has completed the description and investigation of the Ponape ruins and the presentation of the material culture up to the places noted in the volumes. His quickly progressing ailment has hindered him in this, so that minor mistakes had to be eliminated in the revision.

The amazing number of original texts collected by Hambruch in a relatively short amount of time are divided in all three volumes according to their contents. The recording of the phonetic transcription, what is more, the translation has extended to fill a period of almost 20 years, which explains certain variations in the rendering. Many things he himself would have altered in the revision, as a glance at the texts of the first volume shows. Nevertheless, interference in the style seemed neither permissible nor advisable to me, as I have never heard the language spoken by the natives, but rather only by him. He himself has commented on his transcription in the first volume, pp. 362-363. Here it should only be repeated that contradictions in Hambruch's phonetic rendering of the same words have become known and intentionally left.

One difficulty resulted from the frequent illegibility of his handwriting. Even with the help of all attainable vocabulary lists, it could not always be
determined what wording the Ponape text had. It is especially true for words like "an" and ari," which only rarely can be distinguished in the handwriting.

Doubtless Hambruch himself would have dealt with some chapters more extensively than was possible for me. I had to limit myself to the true and clear rendering of the old notes. Nevertheless, he did not plan such a comprehensive cultural comparison as he has produced for his Nauru publication. What he wanted to say about cultural relationships, he has stated in the first volume in the section on the language, p. 363 and the race, p. 365, and the rest in the third volume in the section on the ruins, pp. 59, 81, 93, 95 and 99.

The plates for the Ponape publication were already printed collectively several years ago. In doing so, the previously planned arrangement of the material had determined the numeration of the plates, so that now, after the new arrangement, a gluing-over of the already printed numbers was unavoidable.

Also, in this passage I wish to thank the always untiring helper, Mr. Charles Rosenbrock for his advice and his efforts which he has devoted as Hambruch's and my proof-reader and as an excellent and reliable consultant to the publication on all the non-cultural material. Mr. Rosenbrock is the operations assistant of the Hamburg Museum für Völkerkunde, who since 1912 attended and scientifically oversaw the extensive collection of the Oceanic Section with its ten-thousandsof objects.
The Ruins of Ponape

I. Structures of Nan Matol

1. The History of the Investigation of the Constructions.

Since the island of Ponape became known, it has offered the civilized world a puzzle whose solution has become ever more difficult and will perhaps never be completely revealed. Of all the impressions that a visitor might receive from the country and its inhabitants, the most enduring remains the visit to the artificial city of Nan Matol, situated "in the spaces," on the eastern side of Ponape. Divested of their former splendor for decades, gradually falling prey to destruction by the elements, their meaning known to only a few of the natives, who even now withhold its last knowledge from the questioning stranger, these "ruins of Matolenim" have lost none of their interest. Their layout and size exceeds the somewhat explicated, similar, "Constructions of Lolo on Kusae" (cf. Sarfert: Kusae. vol. I, pp. 261-296) and are not inferior to the different type of structures on Tahiti, Rapanui, the Marquesas and Hawaii group. While the inhabitants of the island designate their home as pon pei, "on the sacred masonry," the Caroline Islanders call the island, fanu pei, "land of the sacred masonry." Because these stone enclosures are not limited only to Nan Matol, but are spread over the entire island, as pei and lolun; these are cult or rather, taboo sites for certain clan deities of heavenly, but also of earthly origin. Indeed, at the old sites of the paramount chiefs in the state of Kiti at Tsap ue takai and in the state of U at Selatax, there are structures which repeat the names of the most important structures of Nan Matol in their names: Nan Tauas, Pan Katera, Itet. They do not by any means attain the dimensions of their prototypes in Matolenim and are also not so carefully built as these.
The structures of Nan Matol have already become known at an early date. Even before O'Connell's account, the Hobart Town Courier wrote of them (cf. Ponape vol. I., p. 100, reproduced in the periodical, "Das Ausland" no. 296, of October 23, 1853, p. 1183).

The account originates from the pen of a Mr. Ong, who "has now settled in Australia." He reproduces the essentials of the structures, and in addition, mentions figure stones of Takai en Intelon which he had not seen, but were already described by Christian in his book The Caroline Islands, p. 100.

Ong gave his information to Dr. Lhotsky, who published it in the periodical he himself edited, The New South Wales, Literary, Political and Commercial Advertiser of February 1835, Sydney (Ausland, 1840, p. 617), gave a lecture on the structures to the Royal Asiatic Society on March 2, 1839, (Ausland, 1839, p. 356) and in Ausland, 1840, p. 617, published a lengthy article on "Die Ruinen in den Karolinen," which told of another report besides Ong's:

"Roughtly eighteen months after this article (Ong's in the New South Wales. . . Advertiser) had appeared, The Colonist, one of the Sydney newspapers, gave a more detailed report of these ruins; from this report, I insert the most important parts. The account comes from a Mr. Campbell, who had visited the island as surgeon on a whaler and who later settled in New South Wales. Because Ascension is separated from Sydney only by a six week voyage, it may be presumed that Mr. Campbell, in his report about these islands, has been as exact and straightforward as he could be. The beginning of his report (which takes up approximately six columns of the The Colonist) contains information concerning the locality of the islands and the customs of the inhabitants, which I omit as irrelevant here. He says the following about the ruins:
"On the south side of the islands and a mile from the harbor of Metaleline are the remains of constructions of which the most important forms a threefold square which, all together, takes up an area of approximately 300 square feet. Around this is a parapet (passage) 4-5 feet high and 15 feet wide. This is completely overgrown with trees and shrubs, yet a boat can at any time, travel around these constructions. The type of stone of which these consist is granite; some of these blocks are 20-25 feet long. Around the innerside of the wall is another parapet (breastwork), 7 feet high and approximately 10 feet wide. The walls have a thickness of thirty feet at ground level and 20 feet above their parapet (breastwork). These structures have only one entrance on the opposite side from the ocean; it is 30 feet wide. Whether these structures were ever covered cannot be determined; yet there are no holes in the upper parts of the wall where beams of the like could have been. Neither lime nor mortar is visible anywhere. In one of the structures there are several vaults under the floor which are filled with human bones. The present inhabitants know no further details about the origin of these buildings, nevertheless they are regarded as sacred and few dare to enter them. Not far from these structures is a small harbor where a large dam has been built, within which a considerably large ship could lay anchor. Around this is a wall of enormous strength, 15 feet high, but in a ruined condition; some of its stones weigh 4 tons. The writer supposed that all these walls and dams have been in part constructed in order to protect the structures lying on the land from the intrusion and the force of the sea."

Nan Tauas, described here, recurs over and over again in the course of all descriptions of Nan Matol. It has kept visitors guessing the most, so that the other structures which in part are more interesting have been completely
eclipsed by this one structure and are at first not named at all. It remains
worthy of note that the figure stones of Kitam and Takai en intelon already
became known very early and then fell into utter oblivion until Christian
first mentioned them again (Christian, p. 100). To be sure, he did not see them,
but rather received only a superficial description from the trader, Kehoe.

It remains surprising that Lütke enters the structures on his may yet no
where in his publications does he report anything about the structures themselves.
Also, on de Rosamel's map, the structures are drawn; he says something only
briefly about them (vol. I, p. 118). At that time they must have been completely
deserted, for he maintains he say no human settlements whatsoever in them. He
regarded them as protective structures against the sea and stresses that they
were covered with a heavy layer of vegetation. The Venezuelan, Michelena y
Rojas, describes the structures (vol. I, pp. 121-123) very thoroughly. He was the
first to notice the division of the structures into a priests' city and a royal
city. During his visit in 1841, he examined thoroughly the individual structures,
for he mentions facts that escaped the later visitors, e.g., the bathing holes
and pools which he considered to be cisterns and wells. The illustration accompanying
his travel book is, however, a purely imaginary picture.

The Ruins of Ponape.

A correspondent of The Honolulu Paper, the Rev. C.W. Clark, who visited them
in 1852, writes: "We approached the ruins from the land side and travelled
through a brook or canal 20-30 feet wide, which was enclosed by walls on both
sides and was almost dry at low tide. This led us to the outer entrance to the
ruins or fortification, a wide, open gateway. During the visit we discovered
that the ruins consisted of two rectangular walls lying one inside the other.
The length and width of the outer rectangle amounted to according to a rough
estimate, 236 and 162 feet respectively, the wall was 6-10 feet thick and, on the outside, 25 feet high in some places. The wall seemed to be completely preserved in some places, in others, it was torn down and overgrown with vines and trees. After a few paces from the outer wall we arrived at the entrance to the inner wall, lying opposite the gateway of the outer wall. From the inner wall there rises a raised platform 10-12 feet wide, where the inner wall has not falled down, its height amounts to 14 feet and its thickness, 6 feet; the surmounting rows of basalt columns, from which the wall is built, project some two feet toward the outside, apparently to prevent the wall from being worn. The inner wall measures 95 and 74 feet, respectively.

In the middle a burial chamber rises a little above the surrounding floor. The former entrance was completely barred by basalt columns, but I climbed in through a crack in the roof. The burial chamber measures 15 by 10 feet and is 7 to 8 feet deep. The floor, which apparently was dug through by earlier visitors looking for treasures or objects, is uneven. The chamber is covered with huge basalt columns which stretch over the whole structure and are 17 feet long. On the roof a large breadfruit tree grew whose roots sank through the grave into the ground.

Between the inner and outer wall, still other similar burial places lie in the various parts of the ruins. In some human bones were found; small pieces of old coins, a silver crucifix; a silver compass is also supposed to have been found there. They were probably left behind by Spanish adventurers long before the island became known to the civilized world. The origin and reasons which caused the builders of these "ruins" to construct them, are unknown to the present inhabitants."

Note by Hood: In Upolu I met a reliable person who informed me, as a
a supplement to this description, that he had been there 12 months before, and when he had travelled through the shallow water in a boat, he had seen a large city lying underwater, with considerable buildings, regular streets and an open area in the center, on which apparently a large temple or a similar building had stood.

These describers of the structures are like the later visitors, Cheyne in 1844, and Dr. Gulick in 1852 (cf. vol. I, pp. 133, 181 and 186). Because the natives gave them no information, their view is that people who belonged to a higher civilization built the stone enclosures as fortifications, as strongholds against pirates. Dr. Gulick, to whom we owe a series of excellent articles on Ponape, "The Climate and Productions of Ponape or Ascension Island, one of the Carolines, in the Pacific Ocean," printed in The American Journal of Science and Arts, Second Series, Vol. 26. November 1858, (pp. 34-49). "Ponape" in the Nautical Magazine, 1862, (p. 175ff.) (cf. col. I, p. 181) seems also to have written a special article: "The Ruins of Ponape." This could not be obtained, but only a short notice which is printed in the "Journal of the American Oriental Society, Third Volume, New York, 1853." There one can read, on p. 495: The section history of this island is very interesting and in many ways, full of mysteries. Here there are numerous ruins which are considered to be fortifications. One day we visited one, which is almost wonderful. The walls are 25 feet high, very thick and completely constructed or prismatic stones, some of which are 18 feet long and 2 feet thick. There there are walls inside of walls; the outer one encloses roughly one acre; there are also some neatly constructed burial chambers, in which human bones, etc., were found. When, how and by whom these walls are built will probably always remain unknown. Some assume they are the stronghold of Spanish pirates. I consider that very doubtful. We hope to be able to make
further inquiries and will then be delighted to let you have the further information."

Not until 1874 does a more detailed description of the structures become known.

L. Friederichsen gave a lecture on October 1, at the Geographic Society in Hamburg: "Die Ruinen von Nammatal auf der Insel Ponape." The lecture is printed in the Journal des Museums Godeffroy VI, 1874. Jan Kubary's information given in letters, together with profiles and plans, served the lecturer as a base. For the first time one was able to gain a vivid idea of the structures because the illustration and plan were now given. At the same time, the difficulty of surveying became evident from the map. Even Kubary himself did not succeed in discovering every enclosure in the confusion of the mangroves; he also obtained very few of the names; on the other hand he was already able to explain the meaning of many structures. Of the 92 structures, he sketched 64; the others were hidden to him by the mangroves. The stone enclosures are not as regular as the plan drawn by Friederichsen make them appear. The rectangles are much more irregular also, the condition of the walls is not expressed. The finished, unfinished, torn down and begun walls, together with their various heights and thicknesses are not distinguished. Nan Tauas (Nan Tauacz) was measured very carefully by Kubary and in addition, its different profiles drawn. Even today, they have lost none of their value.

In 1896 the Englishman F.W. Christian visited the island. He carried out detailed studies there which, unfortunately, were sadly hampered as a consequence of the uprisings. His examination of the structures of Nan Matol suffered especially. The Nanamariki, stirred up by the Boston Mission, forbade Christian under pain of death (Christina, The Caroline Islands, p. 105) to enter the structures, to examine or measure them. Nevertheless he succeeded in making a sketch plan, which bears signs of haste and contains a number of errors, although it relies on Kubary's plan.
The sketch records 60 of the 92 structures and offers a number of names not given by Kubary. He also failed to determine the significance of the individual structures.

<table>
<thead>
<tr>
<th>Kubary</th>
<th>Christian</th>
<th>Hambruch</th>
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<tr>
<td>Dziou</td>
<td>Peiniot</td>
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<td>Nan Tauacz</td>
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<td>Udzientau</td>
<td>Uchentau</td>
<td>Us en tau</td>
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<td>Paneor</td>
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<td>Naumorlosaj</td>
<td>(Nanmoluchai) Karrian</td>
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<td>Likop</td>
<td>Lukop karian</td>
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<td>Aneir</td>
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<td>Limenekau</td>
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<td>Lem en kau</td>
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<td>Nanpulak</td>
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<td></td>
<td>Chaponach</td>
<td>Pei kap tsap u as</td>
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<td>Paupeikaloma</td>
<td>? Tau at peitak</td>
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<td>Pan Tipap</td>
<td>Pan ti bob</td>
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<td>Chaok</td>
<td>Para ka tsuka</td>
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<td>Chau Icho</td>
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We are also indebted to Christian for a large number of photographs of the structures, especially Nan Tauas. Kubary's photographs have remaine largely unpublished.

Hambruch worked in Nan Matol from August 15-26, 1910. The results are given here. A preliminary report together with the plan of the structures was given as a lecture, at the annual meeting of German anthropologists in Heilbronn, in 1911, and published in the "Korrespondenzblatt für Anthropologie, Ethnologie and Urgeschichte," 1911. The plan given there, a copy of the map drawn in Ponape, differs in minor details from that given here, which was drawn anew according to the route book.

2. The Survey

On the morning of August 15, I had left my base camp at Mutok at high tide, then alone could one leave, and hoped to reach Nan Matol in one tide. Nan Tamuroi, Nan Tiati, Likin Takai and Lot were passed undisturbed until the water, that sank in the meantime, halted further travel. Luckily the reef island, Nanior was in the vicinity. Scanty, low saltwater bushes, some Ipomea with their dense, tangled foliage, offered little protection from the scorching sun. It was necessary to wait here six hours until the voyage could be continued. A quarter of an hour before sunset I arrived at Us en tau in Nan Matol, where the fief
holder of Nalaim en Matolenim had already prepared an old trader's shed as a
dwelling for me. Provisions and baggage were put away, and sleeping places
assigned to my four companions, two Melanesians and two Ponape natives (see
vol. 3, Plate 2). Nalaim came over from the adjacent meeting house to discuss
the future work, especially the survey. He asked me to carry out the undertaking
along with my men for he could not obtain any men to give me a hand. Although
they were "Christians," an unconquerable fear of the ani kept them from entering
the stone enclosures. He himself and also Tauk en Matolenim were willing to
give all the explanations, so far as then could. He would also put a canoe at
my disposal, in order that I could reach all structures comfortably.

The following day, August 16, under the leadership of Nalaim, was devoted to
the first orientation tour of the structures. With the exception of Us in tau,
Pua Ian laying in front, the coconut plantation on Konterek and Nan Tauas, whose
walls Nalaim had been obliged to keep free of vegetation by the district office,
amost all the walls, stone enclosures, and especially, their inner sides were
covered with dense, low vegetation similar to a primeval forest consisting mainly
of breadfruit and hibiscus bushes. Some giant trees, fig and mangrove trees,
then Inocarpus and Calophyllum trees rise above them. Most of them, particularly
around Nan Tauas, Toron and Pel a kap, were felled by the typhoon of 1905 and
made the survey afterwards more difficult. Dwelling houses stood on some of the
artificial islands. However, they had been abandoned again by their builders and
inhabitants. Hobgoblins, the ani, had gone around and had driven them away.

The touring voyage showed that the main work must be done from the boat and
in the water. The 25 m. long canvas tape-measure that was at my disposal, was
unsuitable for it. Therefore I made a measuring cord out of a 3 mm. thick 38 m.
long, firmly twisted cotton fishline: each single meter was distinguished by a
knotted on, white cotton strip, every fifth meter, by a red strip and every
tenth meter by an orange strip. The elevations, too, could be taken by means of the fishing line with the help of a wooden measuring rod. Surveyor's staffs were not at my disposal. The direction of the walls was determined by means of a bearing compass. Naturally it is a matter of average figures. The walls of the stone enclosures were not perfectly straight, as appears on the plan; yet the master builder had taken pains to give them a main direction; these were retained. The carriers of the measuring line at the same time replaced the surveyor's staffs used to take bearings. Bearings were taken of the corners of the individual stone enclosures directly when that was possible; otherwise by my companions, placing themselves as bearing objects in the direction of the wall to be measured. Before measuring a structure, as much of the vegetation as possible was removed, chiefly from the corners, in order to obtain a useful field of measurement. After the directions had been set, measurement of length and height, and for some walls the width, too, followed. The results were written down in the measurement book and in the evening, transferred to paper ruled in millimeters. Every structure, every stone enclosure was searched. Probably nothing escaped the eyes of my Melanesian companions. Many a noteworthy find was thus made.

On August 17, the survey was begun. We began at Pei ni ot, and after than, structure after structure was systematically measured until on August 25 the survey was completely at Pon kaim.

3. Layout

With one exception, all the structures were erected artificially on the reef. Now and again, sand islands may have been useful in the layout, as in the case of Karian, Kap en not, Pik a lap, Pan katera. Only one structure had been erected on terra firma, on the island of Tsamuin: the grave of the conqueror of Ponape, Iso Kalakal. The grave enclosure which hides the grave, Pei en Kitel, is, however,
for the most part also built on the reef adjoining Tsamuin.

The entire layout consists of 92 separate enclosures, which are in part divided into further sections by walls. With an average width of 500 m. and length of 1400 m., it extends over an area of 0.7 sq. km. or 70 hectares, i.e., almost twice as large as the size determined by Kubary of 41.8 hectares. In the southeast the layout abuts on Nakap harbor, which cuts deep into Ponape's eastern wreath reef.

This kan im, multitude of houses, city, is divided into three main parts: 1. Matol pa, lower space, lower part, which contains the dwelling places of the king and chief ceremonial place, Itet. 2. Matol pau ue, upper space, upper part, in which the dwelling places of the priests and the most distinguished burial place, Nan Tauas are located. A lagoon-like, shallow basin separates these two parts from each other. 3. The city wall, which begins at the outworks of Pei ni ot and runs via Nan Molusai, Karian, and Pan ui to Pon Kaim. Narrow and wide streets, all filled with water at high tide, in part running dry at ebb tide, separate some stone enclosures from each other. Also, the city wall, is provided with various passages. One of them, the Mueit en Kiti, is distinguished by a row of sunken basalt blocks which only opens the wat at high tide. Three 60-70 m. deep holes in the reef, Nam in kau, Le en kai and Nam in ias have been included in the layout. The outworks of Pei ni ot were intended as the head of another wall, which was supposed to have run from here out cutting off the northwest edge of Nakap harbor, to the island of Nakap lying two km. to the east, where another city layout was already being built (cf. Plate 10).

The royal city is built on the reef part, Nan le en mok. The priests' city is built on the reef parts, Pon muitak and Pon muirak, both of which are separated by $\text{ unfinished wall of Tip en uai}$ beginning at Pei ni ot.
The eastern city wall, beginning with Karian is built on the reef part, Pon pik a lap. Lying in front of it is the sand island, or more exactly sandbank of Pik a lap, on which, according to tradition, the conqueror of Ponape, Iso Kalakal, landed from Kusae.

Since ancient times three streets lead through the city. Today however, only one is still used; the two others are in decay, silted up and marshy. The first is the canal, Tau en Nan Kiel mau, the "canal of the beautiful lizard (alligator)". It came from Iokes, where above the waterfall Pan nekiir in the stream's bed the impression of its body, which has the form of a large alligator is still shown today. The Nan Kiel mau was called to Nan Matol. The path it took bears its name ever since. It leads over the reef Pon muitak, past Konterek, between Pua Ian and Tau (see Plate 2) leaving Us en tau, Pulak and Tapau to the right, past Lele Katau on the left to the southeast corner of Pei Kap, between Pei Kap and Itet, leaving Pei en mueik and Kala puel on the right, to the Mueit en Kiti. A shrine was formerly erected to it on Pan Katera. Even today no native departs from this water way when travelling through Nan Matol. The second canal or waterway was the Tau en Lole, the inner canal. It runs, in the upper city, between the dwelling courts of the priests. It began at Imuin a lap and Tsap a los and led to the shallow laggoon which divided the upper and lower city. At the southeastern corner of Pei kap it united with the Tau en Nan Kiel mau. A third canal, the Tau en gasapal, canal of the burial, led between Tau and Nan Tauas. The deceased were brought for setting aside in Nan Tauas along it.

4. Method of Construction

The structures of Nan Matol are distinguished from the others of Ponape, and also from those of Kusae, in that they are more carefully erected and built,
so far as can be seen from their appearance. That may be due to the fact that building material was more suitable and easier to obtain then in Kusae, although for Nan Matol, too, large distances had to be covered from the quarry to the building site. Two kinds of material were used: basalt and coral stone. The latter was found in abundance on the reef itself; the basalt was mainly procured from Lot, Nan Tiati en Matolenim, Auak, U and Tepek. As the natives tell it, their ancestors are supposed to have lit a great fire, heated the stone and split it with sea water, in order to get the building material to Matolenim on floats with ropes of the tough, strong Hibiscus fiber. Plate 12 shows such abandoned quarries for column basalt in SelataX en U. Here there was a loading place, and even today the reef is strewn far and wide with large and small fragments of amorphous and column basalt. On that spot the building materials, which quite often weighed a ton, were brought into their present position by means of the inclined surfaces of tree trunks, especially coconut palms, using leverage; tree trunks were used for this also and the tractive force of Hibiscus ropes. A tremendous piece of work was carried out, of which we who live in the machine age cannot have any conception.

With the exception of the legend of Sipe and Saupa, there is no information about the master builders of the city; but these builders seem to have envisaged a single, large-scale layout. Individual constructions periods can scarcely be distinguished. A more careful treatment and construction was given structures such as Nan Tauas, Us en tau, Karian, Lem en Kau, Peikap, Pan katera, Pei en Kitel, Pan ui and others, which were supposed to be raised above the others as places of worship and burial. The material was sorted into certain sizes. By the sizes and according to the appearance, whether amorphous or column basalt, they tried to bring into the buildings a certain structure characterizing them
that took the place of ornamentation.

The low artificial islands that mainly were dwelling places of priests and nobles, were treated more simply. The enclosure here consists of pure column basalt, while for the high walls a mixture of column basalt and mighty round and angular amorphous basalt was preferred.

The schematic sketches explain the method of construction. During construction they proceeded as follows: They built the massive walls out of single lumps of stone directly on the feef (fig. 3) or, first of all, made a foundation out of a row of basalt columns arranged parallel to each other on which the wall proper was built. The foundation stones generally lie along the width of the wall, more rarely, they follow the direction of the length. Sometimes, also, the two directions alternate with each other. If the construction units used in the direction of the length of the wall are called "stretcher" and those lying crossways over them are called "headers," one can see that a wall is built up of "stretcher" and "headers." The spaces between the stretcher rows were filled with basalt and coral rubble, while the headers were generally contiguous. Mortar (stability) or wooden pegs to secure the construction units' sturdiness were not used.

They used another method. The construction units were hewn into shape, fitted to each other, with column basalt this was superfluous and the gaps and cracks that occurred were levelled off as well as possible by slipping in or between, smaller stone fragments of basalt or coral (cf. Plate 2, Us en tau and Plate 4, Nan Tauas: inside of the outer wall and northwest corner of the second inner wall). The high walls are reduced towards the top. The structure Nan Tauas is distinguished from all others by the attempt to build the corners of the walls projecting outwards beyond the top edge. The thickness of the walls varies greatly. On the low, residential islands, they are 1-1½ m. wide, for the high walls, 2-3 m. wide. The low islands are up to 3 m. high, the enclosure walls of the ceremonial and
burial places, 3-11 m. high. The islands usually have a square ground plan, but constructions with a completely irregular ground plan are not lacking, for example, Us en nam, or a triangular ground plan like Pei to. After laying the foundation, they placed basalt columns on them on the inner side and on the outer edge of a structure, lengthwise, and filled in the spaces that occurred with pieces of coral (fig. 7). Over this was another layer of column basalt places crosswise, or rather, heavy basalt blocks were heaped on it. Thus the construction continued until the wall had the required height. Corners were formed by small towers (fig. 8) with a square ground plan, which were built up in the same way as the side walls. The artificial stone enclosures were then filled in with coral rubble (cf. figs. 3-8; R = grown reef; HW = highwater mark; B = upper limit of the artificial floor of coral rubble and humus), which always rose somewhat above the highwater mark, but in the case of the low islands, generally the upper basalt layer of the enclosure was left exposed as a parapet. The courtyards, surrounded by the high stone enclosures, are also filled in with coral rubble which, for example, in Us en Tau reaches a height of 3 m., in Pan Katera, 3-4 m. and in Pan ui even 6 m. Above this, the surrounding walls rise another few meters as a rampart.

The skill of the gateway layout is noteworthy. They are present in all the high structures and in the tombs. They are either open above (cf. Plate 9, large gateway in the northeast side of Pan Katera or closed, cf. Plate 4, gateway in the wall of the southern inner courtyard of Nan Tauas, Plate 7, in the inner courtyard of Karian). While the covered gateways of Nan Tauas are comparatively small and are so low that a visitor can only crawl in, one can walk erect through the similar gateways at Pei en Kitel and Karian.
Some visitors to the structures were of the opinion that the high walls have been parts of regular buildings whose beams later decayed and collapsed. That is an unproven and untenable hypothesis. Nothing similar ever existed. Only the burial chambers were true stone houses, as they are preserved for us in Nan Tauas, Karian, Pan ui and Pei in Kitel. These stone chambers extend down to the reef and their walls, like the floor, are formed by basalt columns laid crosswise. Every four-cornered room thus formed is provided with a terrace-like wide surrounding structure of basalt columns. On one of the long sides, an entrance leads into the interior of the chamber, whose roof is covered with selected, huge and heavy basalt columns up to 7 m. long.

A dense vegetation has today taken possession of the structures. The old ceremonial places are covered by an almost impenetrable bush; the other residential islands were cleared and planted with coconut palms that are thriving magnificently. But the natives fear has only let an attempt be made, just as the recolonization remained in the initial stages. Most of the more recent residential places already have been abandoned.

Worthy of attention is that the exterior of the structures was little changed in spite of the severe storms and typhoons that raged over them. Comparisons of Kubary's photographs of 1873 and mine of 1910, e.g. of the entrance gateway of Nan Tauas, reveal that the basalt columns stand diagonally in the entrance and other large columns covering the floor, just like the projecting corners of the outer walls, have not changed their position (cf. Plates 3 and 4).

5. The Individual Structures

The City Walls and Grave Walls

A town wall and grave wall surrounds the city of Nan Matol and gives it the appearance of an entity in itself. It runs over the reef Pon mui rak above the
special part (?), the reef part Pon pik a lap (above the great sands) and the reef part Nan le en mok (in the dark water). Six special burial chambers are enclosed in it.

Far outside, in front of the city proper, lies the artificial island of Pei ni ot (the outwork). Pei ni ot was intended to form the connecting place for a wall that was to be built on the reef edge of Nakap harbor that runs in the west-east direction, beginning at Nakap, where the foundation of a new city had already been laid.

Pei ni ot consists of a square, 34 x 35 m., that was built of amorphous basalt blocks. This surrounding wall is 1-1½ m. high, and circa 2-3 m. wide. The inside is heaped up with coral rubble. The stone enclosure is surrounded with low mangrove bush. In the inside there are the remains of two house mounds both of which are situated within a frame of prism basalt. This frame is also almost square and is at a distance of approximately 5 m. from the enclosing walls that surround it. It can be followed only from the remains. From the strewn basalt debris, its approximate development can be discerned. Finds were not made on Pei ni ot. Beneath these outworks are the foundations of a stone enclosure that is no longer complete. It is separated from Pei ni ot by a canal 5 m. wide, and measures 8 x 20 m.

Four meters away from this foundation, the incomplete (322 m. long) barrier and protective wall of Tip en uai (Clan of the foreigners) begins. Two passages, each 5 m. wide, divide it into three parts of 85,139 and 88 m. in order to then meet with the bend of the first, outer, completed protective wall of Nan Tauas. This wall is the strongest in the city. It is, on the average, 7 m. thick and consists of two rows of mighty amorphous basalt blocks (cf. Plate 1), which are 2-3 m. thick. The space between the rows, which attains a height of 3-5 m., is filled with coral rubble on which lush vegetation of trees and bushes flourishes.
today. West of the Tip en uai wall, in the direction of Konterek, the wall is 112 m. long, of which 42 m. have remained uncompleted and only the foundation is left.

Southeast of the Tip en uai wall, the wall extends 139 m. directly to the beach of the deep water of Nakap harbor, where it turns and extends for 30 m. to the southwest, following the edge of Nakap harbor. An opening 7 m. wide separates it from its 28 m. long continuation of which, however, only 8 m. are actually complete. This part of the wall probably contains the heaviest basalt block, weighing several tons (cf. Plate 1). At an interval of 18-15 m., a second wall funs somewhat parallel to this first, outer barrier and protective wall which must have been built quite resistant to the occasional flooding breaker. Only the smallest part has been completed. Its width was calculated to 5-6 m., its height, 4 m. The next basin thus created is called Nan Molusai (in the quiet, navigable water) and formerly served as a bathing place.

The boundary of Nakap harbor again turns to the southeast. The outer barrier wall there is built 8 m. long, 5 m. high, where, running west southwest in its continuation, it is supposed to define the sport field of Lelou. This wall was supposed to consist of a double row of basalt blocks, as above, it was to be 140 m. long and, after a passage 10 m. wide, to be lengthened another 105 m. Only the foundations were laid. The barrier wall which was supposed to shut off Lelou from Nakap harbor was intended to be even more massive. Here too, the foundations are laid from two double rows of basalt blocks; the wall was calculated to have a length of 90 m. and a width of 25 m.

These remnants of the foundations lean close against the graveyard wall which begin here in Karian, is about 500 m. long running in a southwesterly direction; it is separated in a row of single structures.
Karian. The foundation of the inner barrier wall of Lelou continues by the 26 m. long side of Karian. In front of it on coral rubble, a 16 m. wide platform is built from coral blocks; it reaches to the Nakap harbor. The structure is 26 by 36 m. and has a rectangular shape. It is very carefully built (cf. table 6). At the bottom lie two or three rows of huge, roundish basalt blocks one on top of the other, whose interspaces are filled with basalt columns. Toward the top, the wall is crowned by 5-6 layers of binders and stretchers, so that the wall maintains a height of 5-6 m. with a thickness of 2-2½ m. At the Lelou side, a platform of coral rubble measuring 32 by 16 m. abuts on Karian; in the center, the traces of a former house foundation together with the hearth layout are recognizable. The southern, narrow side of Karian is remarkable for its gate which is unequalled in size and beauty in the structures. It bears eloquent testimony to the excellent, technical skills of the natives. The gate is 3 m. wide, 2 m. high and 3 m. deep. Five carefully chosen basalt columns, more than 7 m. long, form the roof, over which five arches of stretchers and headers rise. The side walls of the gate are built in the same manner. Directly in front of the gate lie two large, flat kava stones. It cannot be by chance that a coconut palm rises near them. But nothing could be found out about it. If one enters through the gate to the inner part of the courtyard, which is thickly filled with Hibiscus, one finds a platform of coral rubble, measuring 6 by 14 m., which forms the front section of one of the loluns, the small stone enclosures, which many times characterize a burial place. This lolun measures 5 by 6 m. and is built from small basalt columns. Directly next to it lies a second, smaller grave place measuring 5 by 5 m. Finds could no longer be made on Karian.

Lukop Karian abuts on Karian. The east wall of Karian (4-5 m. high), densely overgrown with mangroves, continues 360 m. to the south and encloses the places,
Lukop Karian, Tsap u tik (the small place), and Aneir (south wind). These three places lie on an elongated sandbank, whose western border was not built up (cf. Plate 6, Pik en Nan Zapue (sand of the Nan Zapue)). This Pik en Nan Zapue (text 3) plays a part in the legend of the conquest of Ponape. Tsap u tik is a stone enclosure measuring 23 by 27 m., which in the inside conceals a large enclosed burial place, 6 by 9 m. At a distance of 12 m., there is already in Aneir, a burial place, 10 by 7 m., and 29 m. away, the ruins of a stone circumvallation, 15 by 18 m., which formerly probably also enclosed a grave. Pan muasanap abuts on Aneir. This stone square is 90 m. long and consists of two double rows of basalt blocks, which, however, are 25 m. apart from each other and were supposed to form the foundations of a new structure. A passage 20 m. wide separates these foundations from Lem en kau (blue lagoon) which is very well preserved and 3 to 4 m. high (cf. Plate 7). Lem en kau is built from columnar basalt. It measures 110 by 58 m. The inside is divided into four courts by cross walls and interrupted longitudinal walls. The northeastern one measures 37 by 35 m.; the two southwestern ones are 23 by 43 m. and 16 by 30 m. large, respectively. A burial place measuring 2 to 4 m. is contained in the southeastern court.

The graveyard wall is interrupted here by a hole in the reef approximately 60 m. square, whose deep, blue shining water has given the name to the hole itself and the neighboring structures. It is the reef hole, Nam in kau (blue lagoon) which is about 80 m. deep. The grave square, Lem en sei abuts its southern shore. Lem in sei has been erected from stretchers and headers of columnar basalt. It is square. The long and the short sides of the structure, which is approximately 4 to 5 m. high, measure 25 m. In the middle of the courtyard is a burial place measuring 6 to 7 m. It is continued by the foundation of an unfinished structure.
which was thought to be 22 m. long. A 5 m. wide passage, Mueit a lap, separates Lem en sei from the Pik a lap (large snad) whose foundations alone exist, and is 23 m. wide at the just-named passage and has a gap here 16 m. deep and 4 m. wide. The foundations are 37 m. long. A 7 m. wide passage, Mueit en Nan Zapue (passage of Nan Zapue) separates Pik a lap from the wall of Kap en Not (new Not), also only begun and erected of columnar basalt in its outer wall. It is 21 m. wide and 158 m. long. The 5 m. wide passage, Mueit en ualiuel separates Kap en Not from the huge structure of Pan ui (under the Barringtonia trees). This structure is composed of several divisions. The continuation of Kap en Not is low, only indicated in its foundations, 20 m. wide and 97 m. long. On it abutts the actual grave construction, Pan ui. The northeast wall is 52 m. long, the southwest wall, 100 m. The southeast wall is 96 m. long, 9 to 11 m. high; certainly this wall has been torn down and destroyed in several places, probably mainly by the huge Barringtonia trees which grow on it, which were uprooted by storms and typhoons. A natural protection against the wind does not exist on these artificial islands. The foundation structure is erected form single, amorphous basalt pieces, weighing many tons, which have a diameter of 2 to 3 m.; to pile them on each other must have taken enormous labor (cf. Plate 7). The southeast corner is probably the most impressive. Three huge basalt blocks are piled on top each other, and crowned by one of the largest basalt columns; the entirety is 11 m. high. The southwest and southeast walls are composed of amorphous basalt stretchers and columnar basalt headers. A dense tangle of Barringtonia and calophyllum trees has taken possession of walls and courts. This corner courtyard and its two secondary courts which lie at the walls, has been artificially heightened by 6 m. with coral rubble, in which the trees are rooted. In it is a grave measuring 23 by 8 m. The fourth court is enclosed by walls on only three sides; the fourth side is open. It abutts, in a slight curve, on a dense mangrove wood, which can be penetrated only with
difficulty and at the risk of one's life. In the courtyard, there is, at the height of one meter, a grave, a pei, that is 16 by 22 m., which is erected from 5 layers of columnar basalt stretchers and headers, and has, at its western side, an entrance gate 2 m. wide, whose sides are $2\frac{1}{2}$ m. high. Through this gate one arrives at the lolun, 4 by 6 m., in whose center the actual grave is located. In front of the northern side of the pei lie two select, beautiful basalt columns, which perhaps formerly served as seats. Between them lies a large kava stone. Near it the ruins of a large dwelling place were uncovered. A good many finds were made in Pan ui. A 4 m. wide passage separates Pan ui from Mueit (passage) measuring 45 by 70 m., which is separated by 11 m. wide passage from Pan mueit (below the passage). Both islands are bordered only at the passage sides and outer sides by walls of basalt columns, 3 to 4 m. high; the back side is lower and in part, only the foundation remains. Pan mueit is 67 m. and 75 m. large. The wall of the lagoon side is cut into twice, so that the plan of the structure appears graduated like a stairway. In the eastern cut, separated by a 5 m. wide strait, lies the low artificial island, Lole eue. A 15 m. wide strait, the Mueit en Kiti (passage from Kiti) separates Pan mueit from the last structure of the city wall, Pon kaim (above the corner). The vueit en Kiti is so closed by a row of sunken basalt blocks that this strait is navigable only at high tide. It forms the prescribed entrance path to Nan Matol; the other passages were prohibited for general traffic. Pon Kaim does not offer anything special. The 3 to 5 m. high walls, which consist of basalt columns, enclose the 20 m. wide, 265 m. long structure, which today is largely afforested with coconut palms.

The Lower City of Nan Matol, the Royal City, Matol pa.

The actual Kan im of Nan Matol is divided in two parts by a small lagoon which extends westward from Lem en kau to the hilly island of Tsamuin: the royal city,
Matol pa, the lower city, and the priests' city, Matol pauue, the upper city. The former has its center in the royal seat and chief place of worship, Pan Katera besides the sanctuary of the eel in Itei, the other in the dwelling of the high priest Nalaim in Us en tau, to the grave of Iso Kalakal in Pei en Kitel and to the main cemetery of Nan Tauas.

Pan Katera (Kubary writes Nangutra, Christian designates it as Pan Katara, i.e. "Place of the Announcement" or rather, "Place of the Message") was translated to me as "below the stairs." "Understairs," Nalaim en Matolenim meant the three large, step-shaped platforms, on which the sanctuary Nan Zapue or rather, the temple of Nan Kiel mau formerly rose. The structure (cf. Plate 9 and 10) is divided into two parts, a large trapeze, that is enclosed by walls, 4 to 5 m. high, stretchers and headers consisting of basalt columns, and a small annex with a low enclosure. This served as a dwelling place for Sau Kampul, the first court servant of the king, Sau Telur, which the king himself resided in the adjacent court enclosed by high walls. The dwelling place of the Sau Kampul measures 35 by 45 m. and has two entrances, 2 m. wide at the 35 m. long east side. Pan Katera proper has the following measurements: the south side is 89 m. long, the west side, 98 m., the north side, 97 m., and the east side, 87 m., so that Pan Katera takes in an area of about 8400 sq. m. There are closed entrances in all enclosing walls. The most important one lies on the south side. It is 4 m. wide. A large, flat, basalt block, which lies at the right of the entrance, characterizes the place where the king set up his sign, his spear, during festivals, and with it announced permission to enter Pan Katera. Two smaller entrances of 2 m. or rather 2½ m. are in the east wall. In the north wall there is an entrance 9 m. wide and one 2 m. wide (cf. Plate 9). The west side is accessible by an entrance 2 m. wide in the middle. If one enters the structure through the entrance at the south side
and created light and air by cutting down the luxuriously growing Hibiscus thicket, there lie to the right and left, the dwelling courts of the Sau Telur, enclosed by basalt columns. In front, there is a platform, a straight row of flat kava stones with three steps on which the ruins of the large temple layout of Nan Zapue are noticeable (cf. Plate 9). The left courtyard is filled to a large extent by a platform of coral rubble, bordered by basalt columns and showing the foundations and hearth pit of a dwelling house. It is the dwelling house of the Sau Telur. Toward the annex, the courtyard is enclosed by 5 m. high walls of basalt columns. In Pan Katera itself, they are about 2½ m. high, and measure 22 by 35 m. Left and right, at the side of the entrance into this residential courtyard (cf. Plate 9) lie narrow, flat pits, bordered by basalt columns, whose meaning was no longer ascertainable. The other, the right residential courtyard, is carefully enclosed by basalt columns; a narrow entrance leads to the inside, in which also on a platform, as above, the foundations of a dwelling house and adjacent buildings were uncovered. The northwest corner of this stone enclosure, which has walls 2 m. thick, 2½ m. high and measures 12 by 35 m., has a special name: Kaim en man tirip (corner of the bird, tirip, c.f. text 12 and 22). Between the two courtyards, directly next to the land on the south side, a two-stepped platform of coral rubble rises behind the walls; it measures approximately 10 by 15 m., and is paved with basalt blocks and bordered by basalt columns. The sacrificial gifts (kautake) for Nan Zapue were put down at this place. Formerly, 15 m. away from it was the temple of Nan Zapue. Only its foundations exist (cf. Plate 9). One climbed to the sanctuary on a stairway 3 m. wide and approximately 40 cm. high, whose measurements are approximately 35 by 23 m. The house rising on it seems to have been 24 m. long and 10 m. wide, as far as may be concluded from the situation of the ruins of corner posts. Of the house interior, three hearth pits still exist which are bordered
by basalt columns. Directly in front of the lowest step at the south side of the structure lie a row of large kava stones, on which the sacred kava was pounded for the drinking sacrifice for Nan Zapue, and to be drunk by his priest. At the left side of the row, the two sacred trumpets (conch shells) were excavated. Five are supposed to have been present. A pious fraud led the people to believe that the trumpets sounded by themselves in order to give the sign with it for the beginning of the religious and sacrificial festivals and to call the believers. In the picture of Plate 9, far to the left, my interpreter, Etekar stands on the spot where the "sacred trumpets" were raised; beside him Buka Tuhen stands on the first step of the platform; then follows, the Ponape bastard Auntal en Aru standing on the third step, the Nos en Matolenim sitting on the second step and the Nalaim en Matolenim farther to the right sitting on the first step. Behind Auntol en Aru, the first hearth pit becomes visible. West of this platform a long 10 m. high bench which was used to sit on is built at a distance of about 12 m. The houses of the servants were located here. Two similar seats, east of the platform, directly on the enclosing wall, are piled up so high from coral rubble that they reach the height of the outer wall. Here were the dwelling places for members of the royal family. The northeast corner of Pan Katera takes up a square measuring 22 by 27 m., in whose courtyard a small platform with the foundations of an old house site rises. The northeast corner of this residential court is called Kaim en Tsokes. For, according to the legend, it was built from the pillars which flew through the air from Tsokes to Nan Matol. At the same time the belief was kept that Tsokes would exist as long as Kaim en Tsokes existed. In September 1910 the corner fell down. The Ponape people now were sure that Tsokes must perish. After the revolt in February 1911, the state of Tsokes was finished. In front of the residential court the ruins of a house foundation lie, or rather, a bench to sit on. Beside
it lies the bathing hole, measuring 10 by 8 m., bordered by basalt columns. It extends down to the reef and is bordered on top by four layers of columnar basalt on top of the other.

After the death of the last Sau Telur, the conqueror of Ponape, Iso Kalakal, is supposed to have made Pan Katera "saraui," i.e., consecrated, sacred, taboo." From then on, only the Nanamariki en Matolenim and some priests were allowed to enter the place, once a year, in order to make the prescribed sacrifices (see above). Other mortals were not allowed to enter under penalty of death.

In the corner between Pan Katera and the annex for the Sau Kampul is another square, with aptly high, partly low, walls or rather enclosures. It measures approximately 61 by 55 m. This is Kal a puel, the place which the last Sau Telur gave as a dwelling place to Iso Kalakal and his followers (333 men) when they asked for hospitality. Only the north wall is carried out as a high wall, basalt column layers; the south and adjacent parts of the east and west walls are basalt enclosures only 1-3/4 m. high. The northwest side forms a dwelling courtyard, 21 by 29 m. in size with inner walls 2½ m. high. A 2 m. wide gate leads into the house interior, in which the foundation of a former house site is recognizable. The dwelling courtyard is adjacent to a low bordering wall, 17 m. long, with a gate entrance 15 m. wide. The south side has a entrance, 5 m. wide, through which one arrived at the ruins of a former house foundation. To the right of it there is a small square house foundation. Also, the east side has an entrance 4 m. wide. If one enters Kal a puel through it, one has on the right, a small residential courtyard, in whose interior are the ruins of a house foundation. A foundation like it lies between the north wall and this small residential courtyard. A 4 m. wide entrance leads through the north wall into the interior of Kal a puel.
Itet. Kubary or rather Friederichsen, writes Itel. Probably this designation was wrongly read by Friederichsen. The natives do not know the name, but speak only of Itet. This structure measures 31 by 43 m. It is separated from the opposite lying Pei kap by the 1½ m. wide road. The structure has a border of 2½ m. high basalt columns. The main part is enclosed by a carefully built basalt wall, 2 m. high. From outside, this main part is reached through a 1½ m. wide entrance, from the inner courtyard through a 4 m. wide entrance. In this main part, which measures 24 by 20½ m., the "sacred eel" Muan (Nan) Samol was kept in a small plastered enclosure. At certain times he was fed turtles which were kept in Paset in an artificial basin next to Us en tau, brought to Sau iso with a certain ceremonial (cf. text 101), in order to be then killed and prepared on Tol en Itet, an artificially erected, rubble heap, 8 m. high inside of Itet. In this courtyard, under the protection of the eel were kept the weapons, spears, stones, etc. with which Iso Kalakal once had conquered Matolenim. The wooden weapons have decayed, the beautifully polished stones, the size of an ostrich egg, remained preserved. They were thrown. They cannot be managed with a hand sling. One is compelled to think of catapult-like machines, although they have been completely forgotten by the natives today.

A 10 m. wide channel separated Pan Katera from probably the largest structure of the city, Pei Kap (new grave enclosure). The south side measures 111 m., the east side, 113 m., the north side, 105 m., the west side, 116 m. These walls are among the largest and highest; they are of columnar basalt and amorphous basalt (cf. Plate 8). Legends are connected with some of these basalt stones. Thus a turtle-like basalt block (cf. Plate 2) lies between Itet and Pei kap. Behind the "turtle" is inserted the "uan it Tapar," the shield of Tapar, an unknown hero.
Another legend (text 120) tells of the two large basalt blocks on the north side of Pei kap (cf. Plate 2).

An old dwelling site was identified on Pei kap, beside two from more recent times which were in use. In addition, the enclosure contains a broad reef hole like Nam en kau, the lagoon: Man en ias.

Le en kai is a similar, larger lagoon, which is enclosed by the large structure, Toron (cf. Plate 10) and measures 96 by 102 m. It has been carefully erected from columnar basalt and has two entrances, one of 2 m. on the west side, another on the north side, 5 m. in width. This Toron was important as a provisions place. Coconut palms, breadfruit trees and pandanus were planted here. The fruits were destined for the sacrifices, like the oysters which were kept in the reef hole. Today everything is overgrown with dense Hibiscus bushes.

The remaining stone squares of the lower city are low islands on which the houses of the high nobility were erected; only one, Rei lap, which measures 54 by 41 m., contains a dwelling court enclosed by high walls, and is 19 by 20 m. in size. Moreover, Rei lap is divided into two halves by a low wall.

Another low island which lies directly in front of Tsamuin near Sau iso is the 33 by 34 m. large Tsap uei, the place where the tragedy told in text 14 occurred, the suicide of Tip en uei or rather, Sau en Taman by death through fire. Later it was the residential courtyard of the king's successor, or rather, the paramount head of the clan.

Nothing could be learned any longer about the remaining artificial islands. "Because of smallpox we have forgotten much" was the answer in many cases. The tradition was forcibly interrupted and, in part, completely obliterated. The names of these artificial structures and their measurements follow, beginning with the small islands between Toron and Pei kap:
Rei taub, inhabited today, 32 by 31 m.

Take tik (small island), old house foundation, 20 by 27 m.

Pel a kap, three old house foundations, 105 by 90 m.

Mant, 65 by 33 m.

Pen i eir, 28 by 35 m.

pan iso, 36 by 17 m.

Pei en muik, 27 by 25 m.

Lole eue, 40 by 50 m.

Pei ian, 22 by 20 m.

Ni konok, 82 by 35 m.

Pei en apue, 25 by 24 m.

Pei en met, 30 by 31 m.

Likin sau, 20 by 38 m.

Rei tik, 27 by 38 m.

Ua sau, 34 by 54 m.

Bat en lan (stone of the sky), 28 by 20 m.

Pil en lan (water of the sky), 46 by 33 m.

Tsap ue lan (place of the sky), 63 by 35 m.

Pan ti bob (under the Terminalia tree), 84 by 49 m.

Betebete, 30 by 26 m.

At the south shore, Nan uei, of the island, Tsamuin, lies the courtyard Sau iso (royal clan). What role this courtyard once played is unknown. Directly in front of it on the shore, lies the stone, Likon, palan, a flat, broad, turtle-shaped basalt stone which is surrounded by various basalt fragments. When the festival Nan us un tsap was held (see text 100), the turtle consecrated for the sacrifice
was fetched from Paset in Us en tau, brought to Likon palan, thrown down on this stone four times with conjurations, in order to be taken to the Tol en itet for the sacrifice (fig. 11).

The Upper City, the Priests' City, Matol pau ue.

A shallow, narrow lagoon divides the two parts of the city from each other. The upper city was reserved for the residence of the priests; it also has some important places of worship and in addition the most important burial place. The conqueror of Ponape was buried in the upper city. He put an end to the kingdom of the Sau Telur and created the political conditions which governed up to the German time. In Pei en Kitel, also called Pan Kitel, the conqueror, Iso Kalakal (Prince Wonderful) lies buried. The enclosure is 48 by 130 m. large, in part it is built out on the reef; the actual graveyard however, is erected on the firm land of the island, Tsamuin.

From the waterside, a graded entrance 4 m. wide leads into the enclosure, from the landside, a 3 m. wide entrance. Near the entrance from the reef side, lies the stone enclosure measuring 12 by 15 m., which directly abuts the wall on the waterside and contains a grave in the middle. Eighteen m. further to the north, on the harbor edge of the island, Tsamuin, the 25 by 31 m. graveyard of Iso Kalakal has been built. On the south side one enters the graveyard through a 3 m. wide entrance whose center is taken up by a 7 by 5 m. large stone chamber grave of carefully selected basalt columns. Around this grave are grouped three square, low grave sites measuring 3 by 3 m., which are adjacent to the somewhat raised paved enclosure which surrounds the stone chamber grave (cf. Plate 8). Formerly a wide gate lead into the subterranean grave. It is inaccessible today, because when vice-Governor Berg attempted to explore the grave, the support was removed from the
roof stones and with that, the grave collapsed. Finds which were salvaged here are in Leipzig. They are not different from the other finds in Nan Matol. At the left of the entrance in the grave chambers, a row of flat kava stones lie, on which the sacrifices for the deceased conqueror were formerly made. When Berg explored the grave in August 1905, the natives asked him to refrain from it, "because Iso Kalakal will avenge himself and kill you." When Berg actually died of sunstroke a short time later, the Matolenim people were certain that his death had been revenge for the destruction of the graves.

Directly in front of Pei en Kitel lies the foundation of an unnamed stone enclosure measuring 13 by 15 m.; behind it is the trapezoidal structure of Pei to which measures 53 m. on the base, 9 m. on the narrowest side and 72 m. on the longest side. Here the long, street-like channel, Tau en lole (lagoon channel) begins to whose left and right, small and large artificial islands rise, mostly rectangular in ground plan with low walls, on which the dwelling houses of the priests once stood. There are, toward the north:

Pei to, size, see above.

Pui lele (attention! wall!) 40 by 45 m., contains a meeting house of present-day on the channel.

Rei ti bob (to the Terminalia tree), 27 by 51 m., divided in the middle, annex on the south side, measuring 8 by 28 m.

Tsap reirei (the long place), 26 by 35 m.

Pei mei, 30 by 27 m.

Li ki tolok, 53 by 27 m.

Imuin a lap (the large festival), 30 by 67 m.

Pei en ut (worship place of the banana), 19 by 40 m.

Tsap en Luk (place of the Luk), 19 by 35 m.
From Imuin a lap in the direction to the south:

Tsap a los, 36 by 48 m.
Tsap uen pue, 34 by 57 m., with small indentations on the channel side.
Pei ni ap, 34 by 12 m.
Tsap a kap (the new place), 29 by 15 m.
Tsap en tau (the place on the channel), 40 by 34 m., somewhat pulled in on the channel side.
Ni tor, 16 by 25 m.
Tau at peitak, 28 by 21 m.
Tau at peiti, 35 by 25 m.
Tsap uen pei, 22 by 26 m.
Sak a peillon, 35 by 56 m.

Us en man (star at the lagoon) is an irregular structure. The main structure measures 57 by 68 m.; on the north side, in the eastern part, there is an annex measuring 30 by 27 m., which in part intercepts the somewhat smaller annex on the east side, which measures 20 by 35 m. and is directed to the north. Us en nam was the kitchen for the king and later the Nanamariki. He appeared here and at times, distributed the finished dishes to his followers. Parallel to this first road of priest wharves extends a second row of artificial islands for priests' houses. They include, proceeding to the north from Us en nam, the following low wharves:

Perei lap, 31 by 23 m.
Sak a pes (garbage pile), 30 by 23 m.
Likin pei (Im pei), 29 by 34 m.
Tsap on, 28 by 40 m., 38 by 55 m.
Us en pei (name of the pei), 38 by 20 m.
Pon take (on the island), 25 by 36 m.
Ni rik (in the small one), 24 by 23 m.
Ni mogemog, 35 by 28 m.
Tsap u tor, 24 by 32 m., with old house foundations.
Tsap a tik (the small place), 14 by 20 m.
Tsap a tir, 33 by 35 m., irregular structure, with an annex on the west side projecting 31 by 35 m. in size to the west.
Ai ni ar, 42 by 35 m.
Tip en ai, 12 by 18 m.
Map, 25 by 19 m.
Imuin en map, 13 by 25 m.

East of these priest wharves there lie a row of larger, lower islands whose walls, for the most part, enclosed place of worship. It could no longer be ascertained which cult they served.
Pan Katau, 35 by 18 m.
Paraka tsuka, 28 by 41 m.
Tapau, 76 by 59 m.
Pei lapalap (the very great Pei), irregular foundation, at the east side front, repeatedly tapered, 99 by 99 m.; contains the taboo place, Ras a lap in the northwest corner of the square.
Pulak, 54 by 57 m.
Pei ni or, 35 by 26 m.
Pei kap tsap u as (the new Pei at the high place), 70 by 65 m.
Pei en arun, 44 by 26 m., high walls, 6 m. wide entrance on the west side, contains two graves.
Us en tau occupies an important part in front of the channel, see Plate 2. After the death of the Sau Telur and the first Nanamariki of Matolenim, Us in tau was the dwelling place of the Nanamarikis, until they transferred their seats to Nakap or rather, Salon on Tsamuin. Today Us en tau is the dwelling place of the Nalaim, who erected a magnificent meeting house here, using the basalt columns of razed walls. Beside it rose simpler houses, sheds of a European kind, which serve mainly economic purposes (the preparation of copra). The sheds on the small island, Pua lan (25 by 28 m.) were also set up for it; the island is connected with Us en tau by a modern plank bridge. Us en tau has formerly been enclosed by high walls, which today are preserved only in part. The western and northern part are torn down. The original measurements amount to 75 by 85 m. A pei, which today is nearly completely destroyed, was built into the northeastern part. On the other hand, the excellently made boat wharf at the razed western wall of Us en tau is preserved. Here, at the south side and made of basalt columns and large coral stone fragments, an irregular basin is bordered by low walls, in which the sacred turtles destined for sacrifice were formerly kept (cf. text 101). Opposite Pua lan lies the low island of Kon terek, 40 by 68 m. As a low island it is nowadays planted with palms. On account of its excellent state of preservation, it best shows the prototype of a low, inhabitable island. A little north of it, is the foundation of an unfinished habitation site, measuring 20 by 12 m. Between Kon terek and Pei kap tsap u as lies the large, low island of Tau, measuring 56 by 59 m., which contains a grave next to two old house foundations in the northwest corner. On the other hand, on Tau separated by the channel of Tau en gasapal, rises the annex of the structures of Nan Tau as (at the channel with the high walls) which is known best.
Nan Tau as is the cemetery for Nan Matol; the kings, later the Nanamariki, were buried here, in the four grave chambers of the main enclosure, then also in the grave enclosures of the two low islands flanking Nan Tau as, Pon Tau as (above Tau as) and Pau Tau as (below Tau as). The structure divided into three parts is enclosed by three mighty walls (see Plate 5). They gird the entire enclosure and leave only the west side open. Not all were completed. The 10 m. thick wall of Nan Molusai was developed the furthest. At a distance of 15 to 18 m. away from it, a second girding wall was planned; its thickness was supposed to amount to 7 m. It was built up in only two places; for the most part, this wall remained at the foundation. The third wall, 10½ m. thick, surrounds Pon Tau as; it forms the north wall of Pon Tau as, 70 m. long and 2½ m. thick, in order to then form the east wall of Pon Tau as, 10½ m. thick and 4½ m. high, which continues in the enclosing wall which surrounds Nan Tau as and Pan Tau as, for approximately 155 m. This wall, too, is only in part, entirely completed. Pon Tau as, as an artificial island, the measurements, 70 by 52 m. The west and south borders are low. There is a 2 m. wide entrance in the west border. On Pon Tau as, a special courtyard with low surrounding walls has been erected, in which burials formerly took place. Finds which conclude this have not yet been made. Pan Tau as lies south of the cemetery. It is a far extending, artificial islands with low surrounding walls, 65 by 16 m., which has a 2 m. wide entrance on the south side. Impenetrable Hibiscus thicket hinders attempts at penetration. South of Pan Tau as, but 16 m. away, lies the low island of Naru Kap which measures 12 by 31 m. A low wall approximately 66 m. long separates Pan Tau as from Nan Tau as and the 7 m. wide channel surrounding it.

The structure, Nan Tau as is the only one in Nan Matol whose axes are oriented exactly to north, south, east and west. A foundation whose length on
the west side, at the channel of Tau en Gasapal amounts to 59 m., on the south side, 66 m., on the east side, 60 m., on the north side, 69 m. and is approximately 1 3/4 m. high, consists of three layers of basalt columns; the stretchers are longer, thicker and heavier than the thin headers. Up to this height, the nearly square area of 3600 sq. m. is filled with coral rubble. The border around it was raised by two layers of basalt columns like a slope; only in front of the main entrance, a stretch of 5 m. wide was not made higher. Here one climbed up to the interior courtyard on three steps, 4 m. wide. Today, border and rampart are, for the most part, torn down and destroyed. Four m. distant from the border, the first high wall of the first courtyard of Nan Tau as rises. This wall is the highest of the structure. The northern part of the wall has not been completely finished. Selected basalt columns, large and small, were used. In this way, only long, consistently thicker basalt columns were used for the main stretchers. The headers on the gate side are of the same thickness. The space between headers and main stretchers, however, was often filled in again by a three-part layer of lighter, smaller headers and stretchers, so that at the same time an effective architectural-ornamental effect was obtained by this arrangement of the structure (cf. Plates 3 and 4). The west wall with the 5 m. wide entrance in its southern part, is 23 m. long, 2 to 2 1/2 m. thick, 7 m. at the entrance, 8 m. high at the southern corner; in the northern part, it is 24 m. long, 2 m. thick, 4 m. at the entrance, 8 1/2 m. high at the north corner. The north wall is 61 m. long, 2 to 2 1/2 m. thick, 7 m. high at the northeast corner. Nine m. away from the northwest corner, the wall is interrupted at the height of the foundation; here an entrance, 1 1/2 m. wide, 3/4 m. high is left through which one can creep into the first interior courtyard. The east wall is 51 m. long, 7 m. high at the southeast corner. Its average height is approximately 5 1/2 m. The south wall is 64 m. long, 2 1/2 m. thick.
and 6 m. high in the middle. Approximately in the middle, it has a low entrance through which one can creep into the graveyard of the first interior courtyard (cf. Plate 4). This outer wall is strengthened on the inside by a 2-3/4 m. high and 1 m. wide path along the ramparts (cf. Plate 4). It did not serve defense purposes, but rather, according to statements of the natives, open air burial occurred in it, as on the similar galleries of the second court wall and the center grave. Finds, especially of circular discs of parts of the necklaces, chest ornaments and others, included with the deceased, which were made in large quantity, confirm the statements for all galleries. After passing through the 4 m. wide courtyard, one reaches the second courtyard wall, which was built parallel to the first. It, too, has an entrance at the west side, three m. in width, and is very carefully built from selected basalt column material (cf. Table 4). Unnecessarily they built, from three layers of stretchers and headers, a kind of coping which projects a little in front of the actual wall. This second courtyard wall is somewhat lower that the first. The west side, to the right of the entrance, is 8 m. long, 3½ m. high and, including the inner path along the rampart, 2-3/4 m. thick. At the left of the entrance, it is 10 m. long, 4 m. high and, including the path along the rampart, 2-3/4 m. thick. Both northern front parts are surrounded by a gallery 1½ m. high and 3½ m. wide. Such galleries, varying in their widths, surround the entire second courtyard wall, and also the inner path along the rampart of the second courtyard is common to these walls. The north side is 30 m. long, 4 m. high, the east side is 22 m. long and 3-3/4 m. high, the south side is 24 m. long and 3½ m. high. While the west court remains free of special grave structures, they were erected in the north court, the east court and the south court. The north court is 11 m. wide. In continuation of the western two inner court walls, a basalt wall, 9 m. long, 3/4 m. high is
erected diagonally across the court. In it, a 2½ m. wide entrance was left free.

Twenty-eight m. away, this court is closed off by a similar basalt wall, 10-3/4 m. long. In the midst of this graveyard (cf. Plate 4), which is densely overgrown with hibiscus, there is, 10 m. from the entrance and 8 m. from the eastern barricade wall, a low platform, measuring 8 by 9 m. bordered by basalt columns, in which there is a low, grave chamber, nowadays already accessible because often pilaged; it measures 7½ by 5 m. and is covered with basalt columns. Adjoining the second east inner courtyard wall, the east courtyard contains a platform 5½ m. wide, 28 m. long and about 1½ m. high, which is also bordered by basalt columns.

At its northern end, it contains a narrow niche grave, today obstructed. The south court contains a grave structure which is similar to that in the north court, but has smaller measurements. Seven m. from the southwest corner of the second inner courtyard wall, the south courtyard, 12 m. wide here, is closed off by a wall 1½ m. high, with a narrow entrance, which corresponds to a second, equally long wall of basalt columns, with a slit as an entrance, 10-3/4 m. away.

In the center of the graveyard, a small, 4 by 5 m. platform, bordered by basalt columns, has been erected; on it the destroyed chamber grave is located.

Christian says on p. 92 of his book: "Just beyond the crosswall at the back of the vault we saw a long basalt slab curved into a shallow crescent and balanced on two projecting shafts of masonry on the inner side of the southwest wall. When tapped it gave a clear ringing sound, and was probably used for an alarum or for a sort of bell in sacred ceremonies." I did not see this piece any longer. From the center of this graveyard, a low gate, 1½ m. wide, through which one can only creep, leads under the second inner courtyard wall into the second court. At the eastern barricade wall of this graveyard, a 4 m. wide, 20 m. long, and 1½ m. high gallery has been built to it and to the second inner courtyard wall, which also, like all galleries in general, was used for open air burial. Through the second inner courtyard wall one enters the second court. It
is overgrown with breadfruit trees and coconut palms and in its center conceals the main grave of Nan Tau as, the great chamber grave of which the natives tell that formerly the kings of Ponape, the Sau Telur, were buried here. The actual chamber grave, lolun, which is 7 m. long, 6½ m. wide, 1½ m. deep, and rises 1.30 m. above the ground is surrounded by two low walls. Its walls, roof and floor consist of carefully put together basalt columns. The roof of the grave consists of 12, in part, 8 m. long basalt columns. With each standing one meter apart, and having a height of ½ m. or rather 1 m., they form two terraces, so that the entirety gives the effect of a pyramidal structure. On the west side, the chamber grave and terrace walls have an entrance 1-3/4 m. wide. The first terrace, which rises 1½ m. above the ground and is bordered by basalt columns, (cf. Plate 5), measures 11 by 10½ m.; the second, which rises 1 m. above the ground, 9 by 9½ m. The center grave was severely pillaged. Nevertheless, one could obtain, by careful search, small gleanings of human remains, pieces of ornaments, large and small axe blades of tridacna. Similar finds on the terraces and the path on the rampart of the second inner courtyard wall confirm the statements of the natives that formerly burials have taken place here too. In the left part of the middle court between the wall and chamber grave, there are the ruins of a low 8 by 4 m. platform, bordered by basalt columns. The sacrificial gifts for the deceased Sau Telur were deposited on it. That occurred occasionally at the openlap festival. From here they went to Tapau where the prepared food was taken and then was distributed to the participants in the festival.

The special plan of Nan Tau as given by Christian on p. 80 is wrong. Very important parts were omitted or rather, given incorrectly. Kubary's map in the Journal des Musuems Godeffroy is correct and reliable, even to unimportant details. Only the cross section is incorrect: the gallery of the second inner
courtyard wall outside is missing; moreover, the center grave is dug deep in the ground, extending to the reef. It is not built on the artificial filling, as the "ground plan of the Royal graves" shows.

6. The Remarkable "Rocks" and "Stones"

In the description of the individual structures above, various forms were referred to, thus, the "turtle," the "legend stone" of Pei kap, the Kaim en Tsokes, which were of special importance to the natives. In addition, there is a huge, roundish basalt block, the shield of the Sau Telur, uanit en Sau Telur; it is the stone block, Sarui, which lies in the lagoon-like part of Matol pau ue east of Tapau. The statements which Christian makes about it in his book, p. 94, are incorrect. Also, the "head of Laponga" is something quite different. This coral rock block, approximately 2 m. high, which is overgrown with shrubs and rises southeast of Tapau in the middle of the highway, is called Lele Katau and is considered to be the abode of the dreaded demon of disease, Nan sau en set (cf. Plate 7).

7. The Finds

Earlier visitors had already searched the structures and grave sites and in doing so, destroyed or took away so much that only scanty gleanings could be made in August 1910. The story that the structures were allegedly erected by Spanish pirates gave rise to the rumor of fabulous treasures in which the ruins were supposed to abound. Therefore everything was turned upside down all the more unscrupulously, especially when some Spanish silver coins and a silver crucifix had been found in the ruins (see vol. I, p. 181). The destructions wrought by the typhoon in 1905 resulted in the shrubs on the individual enclosures growing wild, which impeded the clearing and searching of the ground. Amazing finds S/5.
will no longer be made. The sharp eyes of my two Melanesian companions will have missed little. What is to be said about the finds here exhausts the material and adds something new to the little already known, among them pieces which could give information about their origin and the people who wore them, if they could speak.

Most of the finds are grave goods, also sacrificial gifts; beside these, some pieces may have been lost or borken work implements. Ornaments predominate. Unfortunately most have been torn and broken when the structures were pillaged. But still enough was found to give an idea of their former appearance.

Finds from Matol pa

From the grave chamber of Panui:

Remains of greatly decomposed mussel coins: lures of various sizes from the center part of the black mother-of-pearl shell.

Adze blade from a polished half Terebra snail, patkul, 9 cm. long, 4 cm. greatest breadth.

Single pierced, polished, little discs, which were sewn on the men's belts, 1 mm. thick, 4 mm. wide.

Parts of necklaces, made from sections of young Spondylus, and pierced length: 3.5, 2.5 cm.

Many hundreds of circular discs, greatly decomposed and frequently bleached, in most various sizes.

Of Spondylus: 3 mm. thick; 1-2 cm. in diameter.

Of Tridacna gigas: 2 mm. thick, 2 cm. in diameter.

Of Conus: 2 mm. thick; 2.5 mm. in diameter.

Of Cassis: 1 mm. thick; 1.5 cm. in diameter.
These little discs were strung on threads for necklaces, similar necklaces are still worn today in the Central Carolines and in the Marshall Islands.

Arm cuffs, or rather rings of Conus millepunctatus:

- 4½ cm. high, 6 cm. in diameter.
- 2½ cm. high; 4½ cm. in diameter.
- 4 cm. high; 6 cm. in diameter.
- 3 cm. high; 5 cm. in diameter.

Fragments of arm cuffs of rather, rings of Conus, very cleanly polished: 4 cm. high, 7 cm. in diameter.

- 3.5 cm. high; 5 cm. in diameter.
- 3.5 cm. high; 6.5 cm. in diameter.
- 4 cm. high; 6 cm. in diameter.
- 3 cm. high; 5 cm. in diameter.

Five fragments of arm cuffs or rather rings of Conus; measurements cannot be determined.

Pendant from the lower part of a Conus snail, unfinished piece, not yet polished, 5 cm. in diameter.

Pendants from a cut off, flat piece of nephelin basalt, about 7 by 12 cm. large; right edge broken; remains of 4 holes, parallel to the edge and arranged circularly, through which the strings on which it was carried were threaded.

Pan Katera.

Of five once existing blow-horns of triton snails, two were excavated (cf. Plate 9 and vol. 2, p. 222) fig. 25.

Itet.

Ostrich egg sized stone, "missile of Iso Kalakal."

Size: 25 by 20 by 17 cm. (cf. Plate 10).
Findings in Matol pau ue

Pei en Kitel.
From the grave chamber of Iso Kalakal: piece of a ax blade, concave, of Tridacna gigas.
A neck-disc of Spondylus.
The findings of this grave chamber were raised nearly completely by Berg in 1905 (cf. p. 29) and were handed over to the Leipzig Museum of Ethnology.

Pui lel.
Pendant from the base of Conus millepunctatus: 3 cm. in diameter.
Fragment of a 1.5 cm. wide and high armlet.
Cross-section triangular, of Tridacna gigas; 8 cm. in diameter.

Tau as peiti.
Adze blade of Tridacna squamosa: 6.5 cm. long, 4 cm. wide, 0.5 cm. thick.
Adze blade of Tridacna squamosa: 7 cm. long, 4 cm. wide, 0.5 cm. thick.
Adze blade of Tridacna squamosa: 5 cm. long, 5 cm. wide, 0.5 cm. thick.
lower end broken.
Axe blades from the hinge part of Tridacna gigas; greatly decomposed:
11 cm. long, 5 cm. wide, 2.5 cm. thick.
9 cm. long, 3 cm. wide, 2 cm. thick.

Pon take.
Four fragments of ax blades of Tridacna gigas.

Us en pei.
Three fragments of ax blades of Tridacna squamosa.

Tapau.
Breadfruit pounder of coral limestone; 9 cm. high, 7 cm. lower diameter.
Adze blade of Tridacna gigas: 10 cm. long, 4 cm. wide, 1.5 cm. thick.
Axe blade of Tridacna gigas, concave: 12 cm. long, 6.5 cm. wide, 15 cm. thick.

Pei lapalap
Fragment of an azde blade of half a Terebra snail, patkul.

Tsap reirei.
Adze of Tridacna squamosa: 6 cm. long, 4 cm. wide, 5 mm. thick.
Fragments of canoe axe blades of Tridacna gigas, unfinished: 9 cm. wide, 2.5 cm. thick; length ?

Ni mogemog.
Adze blade of Tridacna squamosa: 7 cm. long, 3.5 cm. wide, 3 mm. thick.
Tsap u tor.
- Ax blade of Tridacna gigas: 10 cm. long, 5 cm. wide, 2.5 cm. thick.
- Ax blade of Tridacna gigas: 8 cm. long, 5 cm. wide, 2.5 cm. thick.

Tsap u los
- Two fragments of Tridacna gigas (?), imitating whale teeth: 6.5 cm. or rather, 5 cm. long, 2.5 cm. thick.
- Broken ax blade of Tridacna gigas.

Tsap u tir.
- Small axe blade of Tridacna gigas: 7.5 cm. long, 5 cm. wide, 2 cm. thick.
- Fragment of an adze of Tridacna squamosa: 5 cm. long, 4 cm. wide, 0.5 cm. thick.
- Small pestle-like grinder of phonolite.

(Please refer to vol. I, General, article by Herzenberg, p. 451, Schliff, 261 and p. 460, phonolite does not appear cropping out in Ponape).

Us en tau
- Adze blade of Terebra snail, patkul, 10 cm. long; 3.5 cm. wide.

Pon tau as
- Canoe axe blade of Tridacna gigas, greatly eaten by borer worms: 20 cm. long; 8 cm. wide; 7 cm. thick; from the grave chamber.

Nan Tau as; niche grave in the east courtyard.
- many fish lure money of mother-of-pearl shell, greatly decomposed.
- Arm cuff of Conus: 4 cm. high; 6.5 cm. in diameter
- Arm cuff of Conus: 3.5 cm. high; 5 cm. in diameter
- Fragment of Conus rings; flat: 4-5 cm. in diameter; 4 mm. thick.
- Fragments of Conus rings; flat: 7 cm. in diameter; 0.5 mm. thick.
- Fragments of Conus rings; flat: 7 cm. in diameter; 2 cm. thick.
- Pendant of Spondylus shell, twice pierced for stringing carrying bands, circularly polished and smoothed on all sides: 8.5 by 8.5 cm.
- Pendant of small, young Spondylus shells, side edges polished, bored: 3.5 cm. long.
- Long pendants, bent, pointed at the bottom, pierced, of Cassis snail, 7 cm. long.
- Pendant or connecting link for necklaces, bent, thrice bored, pointed as the bottom, of Cassis: 7 cm. long.

Nan Tau as, grave in the north courtyard.
- Very many lure money of mother-of-pearl shell, greatly decomposed.
- Many breast pendants of pink-colored Spondylus shell, pierced twice, polished,
12 by 10.5 cm.

Many Spondylus shells of all sizes, unworked.

Many small, polished pendants or rather chain parts of Spondylus: about 3 to 3.5 cm. long.

7 arm cuffs of Conus millepunctatus of various sizes, one of which: 4 cm. high; 7 cm. in diameter.

Fragments of arm cuffs of Conus.

Fragments and well-preserved, whole, narrow, carefully polished rings of Conus, 1 cm. high; 4 cm. in diameter.

Little discs of various sizes in part in preserved original colors, in part bleached for necklaces of Spondylus, Conus and Cassis.

Narrow, little discs of snails; remains of former borders of waist-belts.

Fragments of spearm-whale teeth; a split, fairly large sperm whale tooth.

An ax blade of half-polished Terebra snail, patkul: 7 cm. long; 4 cm. wide, 6 mm. thick.

An adze blade of Tridacna squamosa: 6.5 cm. long, 4 cm. wide, 5 mm. thick.

Many fragments of so-called Matip arm bands of ornamented rings of Tridacna gigas.

Nan Tau as; chamber grave; remains of burials of the terrace left of the entrance to the interior of the chamber grave.

Piece of a human skull calotte (occipital bone); pieces of forearm bones; ribs; an incisor; part of a zygomatic arch.

Fish lure money of greatly decomposed mother-of-pearl shell.

Large and small unworked Spondylus-shells.

Fragments of unworked Conus snails.

A completely preserved large Conus snail.

Fragments of rings and arm cuffs of Conus.

Ring of a Conus bottom: 4.5 in diameter.

Polished, small and large pendants of Spondylus.

Little discs for necklaces of Conus and Spondylus.

Polished and filed arm rings of Tridacna gigas and Conus millepunctatus with embossed ornamentation, so-called Matip rings.

Adze blade of Tridacna squamosa: 6 cm. long; 3.5 cm. wide.

Nan Tau as, middle chamber grave.

Human remains: Epistropheus, incisor, first molar, fragments of the ulna,
fragments of pelvis, knee-cap, fragments of the upper and lower thigh-bones, heel bone, metatarsus bone, two toe bones.

Completely preserved arm rings of Conus millepunctatus, in part, with fluting.

Thicknes: 0.8 to 2 cm.; diameter: 3.5 to 6.5 cm.

Very many fragments of rings of Conus and Trochus.

Fragments of arm cuffs of Conus.

Fragments of arm rings of Conus and Tridacna, neatly polished, smoothed, fluted, or with embossed ornamentation, so-called Matip-rings. Width: 0.5 to 1.5 cm.; diameter 6 to 7 cm.

Two arm rings of Tridacna gigas, grooved outside edges.

Width: 12.5 cm. diameter of the arm hole: 7 cm.

Width: 11 cm. diameter of the arm hole: 6 cm.

Unworked Spondylus shells

Large chest pendants of Spondylus pierced once and twice.

Small chest pendants or rather connecting links for necklaces of pierced Spondylus sections about 2.5 cm. long.

Many hundreds of pierced little discs of all sizes for necklaces of Spondylus, Conus, Tridacna gigas, Cassis.

Fragment of a bent, twice pierced pendants of Conus, pointed like a tongue: 6 cm. long.

Connecting link of a necklace or a similar pendant of Cassis: 5 cm. long.

Fragments of ornaments or rather pendants of sperm whale tooth, in part split, 4.5 cm., greatly decomposed.

Part of a fish hook of a human bone.

Hook of a fish lure of conus. Fish lures or rather, mussel coins of the middle pieces of mother-of-pearl shell:

Small lures 5 to 6 cm. long; 2 cm. wide.

Large lures 12 to 15 cm. long; 3 to 4 cm. wide.

A stone knife of nephelin basalt.

Fragment of a stone ax blade of nephelin basalt.

Fragment of an ax blade of Tridacna gigas, in part eaten by borer worms;

lower end of the blade, slightly concave: 8 cm. long; 2 cm. wide.

Blade of a canoe ax of Tridacna gigas: 38 cm. long; 8.5 cm. wide; 5.3 cm. thick.
The Necklaces

Many hundreds of these little discs were taken from the graves. In part, they were firmly incrusted together by limestone, connected with each other, also bleached, in particular those from the chamber grave, which the finds in the graves of Panui, which lie higher, retained their original color, especially the red and pink colored discs of Spondylus aurantius (fig. 18). Altogether, the findings of Panui are better preserved than those in Nan Tau as. In part, it could be recognized that they were used for ornamental chains, others may have also been used as trimming on poncho-like coats, both of which are still worn on Truk today. A closer examination of the material showed that, beside the predominantly used red-shining Spondylus shell, other materials were also used, like Conus millepuntatus (fig. 18, c, fig. 19, d, e), Trochus (fig. 19, c), Tridacna gigas (fig. 18, a), and Cassis rufa (fig. 18, d, fig. 19, f). The thickest, about 3 cm. in diameter and 8 mm. thick, are of Tridacna gigas, equally large and thick. The little discs of Trochus, Conus and Spondylus are 1 to 3 cm. in diameter and 2 to 4 mm. thick, externally distinguished in coloring and structure. The thinnest, about 1 mm. thick, are the discs of Cassis, often somewhat bent in appearance. The technique of making them could no longer be explained to me. It will not have been essentially different from the manufacture of such ornaments, today on Truk and the Marshall Islands.

The smallest discs, of a small, unknown snail, obtained by polishing, served to trim the finely woven men's belts. All little discs are pierced in the middle from both sides, in part, filed later, in part the pierced holes are preserved with the originally deepened edges.

White, polished little snail shell discs, found in Nan Matol which were used to trim the men's belts, were originally sewn on with pandanus fibers, as fig. 21 shows.
Connecting Links for Necklaces.

These connecting links were made of a) Cassis rufa, b) Conus, c) Spondylus. They are lancet-shaped, pierced two to three times in the wider part. Single threads with small ornamental discs were drawn through the pierced holes, so that ornamental chains of two to three strands were formed, whose single rows were now and then interrupted by these connecting links. The Cassis pieces are very shiny; the Conus links have a dull white appearance and the Spondylus pieces often have a pink colored gleam because they are made from the upper part of the shell. The ornament has long since disappeared.

These single links then as connecting links for necklaces in connection with the ornament fragments for necklaces shown in fig. 18 and 20, were and are still used today as trimmings on mens' belts. They are generally, as is shown in fig. 22, cut out of a leaflike Spondylus shell, and at the upper end which is cut off straight, a small plug is ground out, which is pierced (fig. 22, b, c). The fastening hook is drawn through this hole. Fig. 22, a, shows an ornament fragment of Conus. These leaf-shaped small pendants are insignificant as compared with the abundant finds of ornament pieces as reproduced in fig. 24 a-f. They are without exception larger than the ornamental links of fig. 22. Young Spondylus shells were used predominantly, and these were ground out of the hinge part of the shell, more or less round on the sides (fig. 23 a-c) or keeping the original shape of the shell. All ornament pieces are pierced for fastening with a thread.

There were great numbers of the chest pendants of Spondylus in the graves, finished, partly worked and unworked, so that it is probably that not only the finished ornament was put into the grave; the unworked and partly finished pieces appear also to have played a role as a sort of money substitute. For this very ornament material, of pink color throughout, is rare and was no longer found in 1910. The pendants were pierced singly or doubly in the upper part (fig. 25 b,c),
the carrying cords were pulled through the holes, and the ornament piece was worn on the breast, showing convex red-colored outer side. Occasionally pieces are found which are very carefully polished smoothly on the edge and on the surface (fig. 25, d), which are pierced twice in the upper third. Such chest pendants are also made of mother-of-pearl shell and Conus bottoms. Fig. 26 shows such an ornament; it is unfinished; the bottom of a Conus snail shell is chipped off and the process of polishing has been begun.

Arm Cuffs

Likewise, numerous complete and borken arm cuffs of Conus were found, ornaments like the one which were worn until recently by the men of Palau and Yap. The Ponape pieces differ from these only in their small size. While Palau and Yap work nearly the complete length of the Conus snail, the Ponape people use only the lower third. The industries for these ornaments were in the district of Matip in Matolenim. Only here were the arm cuffs and arm rings which will be described later, allowed to be made. The bottom of a Conus sanil shell was broken off. I did not learn how this was done. The serrated lower edge was ground off and in the same way, the upper third of the snail was broken off and ground down; then the whorls were broken out. Now a very careful polishing began. The innersides were filed with coral branches, the outsides too and conve . At the upper and lower edges, a rim of about 1 mm. thick was left and the middle piece between the two edges was ground and polished. The pieces mostly have a maximum height of 3 to 5 cm., a minimum of 1 cm., and a diameter of 6 to 7 cm.

Arm Rings

Although most of the arm rings were found broken, they illustrate the high state of an art that was once indigenous to the district of Matip in Matolenim. Similar finds were only made in the eastern Bismarck Archipelago, New Mecklenburg
and neighboring islands, and the Solomons, where this branch of art is still alive today. Tridacna gigas and Conus millepunctatus were chiefly worked; in a very few cases fragments of the ornamental row of Trochus miloticus were also found. The shape makes it certain that the rings were used as ornaments. There were doubts, to be sure, regarding rings of this type as reproduced in fig. 28, because their diameter is so small, that they could be put over any wrist. Pieces from the Marshall islands collection of Mrs. Brandeis, which are exactly like these finds in Nan Matol, bear the designation, "arm ring for children." I would be inclined to doubt this use, for the diameter is not even large enough for a child's wrist. Others, in this case, Ponape natives, explained these rings as sinkers, which were tied to the drag nets. Perhaps this is their purpose, although I did not see a net like this in 1910.

Two magnificent pieces were found in the rubble of the middle chamber graveyard, the arm rings of fig. 28. Both are bored from the hinge of Tridacna gigas; the arm hole, the ring was probably worn on the upper arm, is straight, the actual edges of the hoop slightly concave (cf. fig. 28, b). No one could give us information about the technique of production. It must be assumed that they were made in the same way as is still customary today in Melanesia. Besides these ornamental pieces, there were other (fig. 29) which were made very delicately and carefully, either from Conus millepunctatus (fig. 30, row a), in part deeply channeled, or from Tridacna gigas, which nearly simulates ivory, which are coarser and harder than the Conus rings.

Of the arm rings, shown in fig. 31, the so-called Matip goods, no complete piece was found any more. The fragments along must bear witness. The hinge of Tridacna gigas was used as the material. From it, the ring was bored out. The inside was smoothed and polished. The outside received the most varied decorations.
The decorations consist either of deepened lines, parallel to the edge, such as are made in New Guinea, the Bismarck Archipelago and the Solomons, (fig. 31, a) or, of quite different ornaments, which as such, are repeated nowhere else in the South SEas and are limited only and solely to Ponape (fig. 31, c-f). From the bored and polished ring, the ornaments are filed out and polished, like a relief, either in various thicknesses parallel to the ring's edge, more or less regularly interrupted, (fig. 31, b, c), or full, embossed, vertical to the edge (fig. 31, d), or rather, triangles are left raised (fig. 31, e) and finally deepenings and protuberances are ground out of the bangle (fig. 31 f).

Ornaments from Sperm Whale Teeth

All ornament fragments from whales teeth are greatly decomposed are partly broken. Everything that was found shows traces of processing. The pieces shown in fig. 32a are either filed, pointed or notched all around once or twice, in order to take up the carrying cord. Fig. 32b is a part of a sperm whale tooth, whose lower end is pierced; fig. 32c shows fragments of a larger, tooth, cut to pieces. Also fig. 32d, possibly the best preserved of all pieces, is the cut-through upper part of a whale tooth, which was pierced at its lower end; the bored holes are broken. These tooth ornaments have not been worn in Ponape for decades. But the same kind was still popular in the Marshall Islands, also as a sacrificial gift, as is shown by the reported finds of Capt. Jeschke, at the sacrificial tree of Ja meliout.

Lures and Fishhooks

Hundreds of fragments of the lures in fig. 33 were found in the graves. All are greatly decomposed and flake a great deal in the dry state. They are all cut out of the middle part of the hinge of the Meleagrina, in all sizes, some up to
20 cm. Some are well preserved and (fig. 33, 34, money) show their original condition: on top and at the bottom they are worked like an arrow point, but nowhere pierced, either to be fastened on a fish line or to fasten the actual fish hooks to the lures; in this form the lures are different from all otherwise known forms of the Carolines with the exception of Kusae. These pieces were described as "money" to me. Sarfert's explanations from Kusae shed light on the picture. See his explanations in Sarfert: Kusae, first half-volume, pp. 215-216). The Ponape money of fig. 33, corresponds to the Kusae money, fae metmet. Occasionally it may have been put to practical use in fishing. Fig. 35 shows various hooks; they consist of mother-of-pearl shell, are pierced and were tied with cords to the lower, thinner end of the lures. Fig. 34 shows other Ponape money; they are the only three pieces and were hidden on the taboo place, Ras a lap. This money too was known in Kusae. Sarfert describes it as jibon money. As on Kusae, the mother-of-pearl money also served as ornaments. This is indicated by the great amount of grave goods of these pieces.

Besides lures, fishhooks were also used, hooks such as they still used in the Southwestern Carolines today, of turtle shell in large and small forms. Fig. 36 shows the reproduction of a fragment of whale bone, form and material belonged to the prototype of material Polynesian culture.

Stone Tools

It is strange that on the mountainous islands of the Carolines, implements, weapons, tools, etc., which are made from stone of colvanic origin are largely missing. Whether the art was not understood, or the easily obtainable material of coral origin is better suited to this purpose is uncertain. If the pieces in fig. 37 is not out of place, this fragment could reveal important explanations and give evidence about relations which would be essential for the position
of Ponape. It is made of phonolite, a stone which is foreign to Ponape. The blade shape is also foreign, and is more suggestive of Melanesian forms. The edge is sharp; the blade faces are slightly convex, rounded and cleanly smoothed. Fig. 38 shows a stone knife with a \( \frac{3}{5} \) blade and narrow back; the sides are slightly convex. Fig. 39 reproduces a small basalt pestle; the handle and grinding head are clearly defined; the latter also has an ornamental bulb. Rubbing traces indicate that the implement has been used in a narrow, basalt vessel.

Tools of Shells and Snails

With regard to tools, or rather, their fragments, the results were not limited, but quite one-sided. They were considered to be symbols of power and were therefore put into the grave with the deceased. Only a little was known about their use, nothing at all about their use, nothing at all about the attachment of the blades. It can only be deduced from similar tools of the same material which formerly were present in the region of the Carolines, e.g., on Kusae, (cf. Sarfert: Kusae, First half volume, section III. Technology, pp. 140-143). What is said here is also true of Ponape.) or are still used today on the croal islands of the southwestern Carolines. On Ponape the use of shell-axes has disappeared since the 1840's.

The usual form of the axes, whether large or small, is the transverse axe. There is often a long, curved handle with a short, smoothed block at the upper end, on which the axe sheath is tied, in which the blade was put, which according to the blade forms, in part, was adjustable. Only the adze blades and small Tridacna blades seem to have been tied directly to the block. For the adzes, mainly Tridacna squamosa (fig. 41) was used, and blades were cut out of it that were on the average, 6 cm. long, 4 cm. wide and 5 mm. thick. In one case, a blade of Terebra maculata was found fig. 40; the one half of the snail is cut off
completely, so that the sharp edge of the lowest whorl becomes effective as a blade. The name of this blade form was patkul.

The forms of the larger blades of Tridacna gigas are seen in fig. 41-55. Some are remarkable for their size, like the canoe axe blades. The piece of fig. 42, e.g., has a length of 38 cm., a width of 8.5 cm., a thickness of 5.5 cm.; the piece in fig. 43, which is greatly eaten by the borer worm, has a length of 30 cm., a width of 9.1 cm. and a thickness of 6.5 cm. The ax blades, which are very carefully made from the hinge part of Tridacna gigas or rather its lamellas, received their shape or rather cross-section, and edge according to the purpose they were to serve, by knocking them out and then polishing them carefully. Blades with a straight edge (fig. 48, 49, 50, 52, 57) could be used for woodwork which was to be smoothed (planed); hollow-ground blades and rounded blades (fig. 51, 53, 54, 55, 56, 58) were suitable for making concave forms, e.g., dishes, bowls, etc. The cross-sections vary. The lens-shaped cross-section predominates; but triangular, round, and square forms are also not lacking.

The section about the finds would not be complete without reference to former important reports. The report by Kubary in the Journal des Museums Godeffroy (see p. 7) has already been mentioned; special attention shall be drawn to the little known report by Jubary on pp. 288-290. Dr. Ernest Sarfert published the second important report: Ausgrabungsfunde von Nan Matol auf Ponape, (Excavation Finds of Nan Matol on Ponape) Jahrbuch des Städtlichen Museums für Völkerkunde zu Leipzig, vol. 5, 1911-1912, pp. 33-37. Sarfert publishes the material collected in 1907 by Berg, then vice-governor, at the order of the Leipzig Museum. Four tables with 45 excellent pictures support the report, which, however, is used not much in general. Berg systematically searched the graves of the city wall, until he was killed by deadly sunstroke when he tried to empty the grave of Iso Kalakal
in the Pei en Kitel. The natives had not agreed to the graves being emptied; but they did not want to oppose the district officer. When Berg opened the grave in Pei in Kitel and in doing so, completely destroyed it, the natives considered his death as the revenge of the ani of Iso Kalakal, of whom they had warned him. Berg's finds do not offer anything more than what was already presented in the section on the finds. The neat ornamental lines on the Conus arm ring, which I did not notice in my finds, are remarkable (Plate 6: 10, II; 7: 1-3). Berg did not have any experienced guides with him, for the single sites are either not clearly specified or misunderstood.

Berg

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<th>Likinanair</th>
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<td>Peintam 1-3</td>
<td>probably (seen from the canoe) Lem en kau.</td>
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Seven axe blades of Tridacna gigas which were found in the middle grave of Nan Tauas, two canoe ax blades and five smaller ones are shown by Christian on a Plate between p. 398 and 399 of his book, "The Caroline Islands."

8. The Structures on Na Kap

Another larger Kanim was to be erected on the south point of the small coral island, Na kap (new Na). Only the foundations were built from amorphous, in part, huge basalt blocks (cf. Plate 10). The main layout was planned for the east reef which somewhat falls off to the sea. The structures show a completely different ground plan than Nan Matol. Between two long foundations which
extend south, cross foundations were built, which divide the area into smaller sections. On the west side of Na kap, on the reef between the island and the Na kap harbor, the foundation of a wall was laid which was to be continued in Pei ni ot, to the structure in front of Nan Matol.

9. The Petroglyphs of Takai en intelon

On Ponape, in the battleground of the November 1892 encounter of Kitam, so disastrous for the Spanish, near Nan Matol, on the spur of the Kupur iso mountain range which stretches south, lie the places where I found in August, the petroglyphs that now will be described in greater detail. They are known since 1835 (see vol. I, p. 100) and were mentioned by Christian in his book, p. 100, but were not visited. On August 30, 1910, I made a trip in order to become better acquainted with these petroglyphs. Today one can reach these places by land from the colony in about seven hours, thanks to the good roads. In 1910 it took approximately three hours to get there from Nan Matol. With the canoe one passes between the many reefs of the outer and inner harbor of Matolenim and goes toward the rock which is characteristic as a landmark, the high, pointed Takai u, similar to a sugarloaf (cf. Plate 10 and vol. I. Plate 2, lower picture), in order to enter here the broad, largest river of Ponape, the Pil lap en Letau, bordered by mangroves. There one becomes acquainted with one of the most beautiful districts; rich green extends on both sides and covers the mountain ranged of Matolenim rising like an amphitheatre. In the distance, where the horizonally, appearing ridges of the mountains stand out sharply against the sky, the green changes into a deep, dark blue. Gloomily the highest mountain of the island, the Kupur iso, looks down from the right side of the island. After a river voyage of one and a quarter hours, the end of the voyage is reached; the
broad river has changed to a narrow channel. Here lies the estate, Tsap a lap; now one leaves the canoe. After a quarter of an hour, one arrives on the left bank of Pil lap en Letau, now like a brook at the first petroglyphs, which lie off to the side, in the bush and at that time were covered with dense vegetation. The native calls them Takai en Intelon (see fig. 57-58).

They are four, red-colored lava blocks decomposed on the surface, of uneven size, the largest of which may probably be about a little higher than one meter. They lie close to each other. Three are covered with petroglyphs. It is difficult to find out what they mean; the natives can only give insufficient information about them.

Of the Takai en intelon

The Takai en intelon is a stone which is in Kitam; the people formerly said that it was a house, the house of two men called Muantik and Muanlap. These people are said to have lived in it. Both thought, however, of going abroad. They locked the door of the stone and went away and still today have not returned.

Drawings and photos only can furnish ideas and conjectures. The pictures were chiselled into the rock, like grooves (see fig. 75 and 58, and Plate 13), not all of the same depth, which is best shown by a comparison of the figures of the left and right petroglyph of fig. 57 with the photos on Plate 13. The drawings on the left are much more indistinct and unclear in the photos than the figures on the right stone. The pictures represent, in part, human figures, fish, implements and eight similar figures. Some can no longer be made out because of the severe weathering. The aureole which surrounds the figures' heads is peculiar, perhaps it represents the old, fiber head band which was formerly worn by men. The tassels at the sides are characteristic of it. In themselves all the figures are very primitive and do not show a definite artistic talent. On the side of this stone stand three others; a small one without any figures; and two others, larger ones.
The one is roundish like a cask, and deepened on its surface like a basin (fig. 58); a natural fissure at the edge has been artificially enlarged into a spout. Fanciful minds, of course, see in it "the sacrificial vessel for blook." Nothing is known about it! Another, more rectangular and lower stone lies in front of it (fig. 57) and has the greatest number of petroglyphs: men with aureoles, shadow people, an octopus (?) etc., but in part appearing very dimly in the photograph. The bottom of the bowl stone (fig. 58) has also figures which, for example are very similar to those of Hawaii; here the sword-like figures are found for the first time.

These sword-like figures, which, however, can just as well be compared with the weaving pegs of the warp frame used on Ponape and Kusae, are numerous in another place which lies farther inland.

If one makes a path through a dense Hibiscus bush, one gets to a barren, free area about 1½ hectares large, where the foot treads on bare, smooth, brownish-red lava stone which forms an irregular, undulating surface. Dry ferns and dense Hibiscus bush surround the place, which from its height, affords a magnificent view of Matolenim. This rock surface is over-covered all over with more or less deeply engraved drawings (cf. Plate 13); a selection from drawings made on the spot is reproduced in fig. 59. Swords, knives, ornaments, sheaths, warp frame pegs, fish, eight similar figures, the contour of a foot, and a small human figure are cut into the lava. The proximity of the 1892 battleground suggests that the figures had been cut by the native Philippine soldiers of the Spanish, especially when four deep, circular bowl stones were found (cf. Plate 13); but the view was greatly contested and rejected. The pictures had been there always, when no one thought of Europeans. Relata refero.

I cannot give a satisfactory explanation of these petroglyphs and basin stones of Ponape, but rather only refer to similar petroglyphs, such as those
of Rapanui, Borabora of the Tahiti group and Hawaii, from whence Krämer and Thilenius brought the first reports and pictures of the island of Molokai, which Stokes supplemented with other interesting occurrences of petroglyphs of this group. The meaning of all these petroglyphs has only become in part known; they were generally found in ancient places of worship. Thus also the pictures of the Takai en Intelon will perhaps have belonged to some old places of worship about which today we probably will not learn any more.

10. Beginning, Meaning and End of the Structures of Nan Matol

The most fantastic hypotheses have been made about the meaning of the structures of Nan Matol and its closest surroundings; they have already been presented. A completely conclusive explanation can never be expected. The structures have been pillaged and ruined too much; and even with regard to the named there is not always agreement. That is evident from Kehoe's texts, which I collected; in part, it gives other names than those told me. I think that my named are more certain, because they were named for me by Nalaim en Matolenim, the preserver of tradition and holder of one of the highest priestly titles in Matolenim. He willingly gave information about that which he knew; he was still a relatively young man; thus the result was unfortunately not what I had wished, yet it was absolutely reliable, as control questions to other authorities were confirmed. Unfortunately Kubary did not have the proper informants for his first Ponape publication. Otherwise we would have better information. Whether he has had better success later, as is to be assumed, is unknown at his handwritten material has been lost. The Boston mission was good only at destroying. Their last, most capable and sensible missionary, Dr. Gulick, was transferred early from his Ponape post. He too, with his scientific thoroughness, would have been able to explain the meaning of the worship place, Nan Matol even better than Kubary, because at that time there were many informants. Thus today, only
the modest, small yield of native texts from saga, myth and reality interwoven,
supply some clue about the beginning, the meaning and the end of Nan Matol.

**History of Ponape**

In the beginning there were no names for the tribes in Ponape, because there
were no individual tribe names, but rather, everything was called Ponape. The
Ponape people were not enlightened, they did not know any faith, they did not
know anything of the customs in all times.

In the land of Tsokes two youths lived, the one was called Sipe and the
other, Saupa. They lived together in a place and thought about what they
should do all the time. So the two built a sacred structure, consecrated it,
and instituted the sacred festival for the district. Both also sacrificed to the
spirits, Nan Dzapue and the spirits of the dead in the country. They also gave
names to the districts in the tribe of Tsokes. And so it happened that in the
days when people were in Ponape, they knew the festival periods of the country
and knew when there were no festivals. This sacred festival has the name of
Pan en tsap.' Then they thought how Tsokes could become the first state in Ponape.
They instituted a kind of sanctuary which received the name of Nan i son tsap',
which they thought wise to erect in the sea near the shore. So they built
outside of Tsokes, but it was not good, as there are strong winds and high surf
outside of Tsokes, which always capsized the canoes. So they thought to look
for another small, suitable place. They went to a spot outside of Not in order
to erect here a sacred Nan i son tsap'. But this place also was not suitable,
for it was like the one outside of Tsokes. So they went to the shore of Not and
here built a tribal sanctuary. They named it after the tribe of Not. Then they
went further to U in order to build one here too. But outside of U, too, it was
bad and not suitable for building in the water. So they went on land again and built their sanctuary and called it after the tribe of U. Then they wandered further to Matolenim, which was called Sau nalan in those days. When they came to Sau Nalan, they erected here the sanctuary of the Nan i son tsap', for here it went well because the water was good and the waves, small. Thus all the sanctuaries were erected in Sau nalan and the youths made everything beautiful, because they could build everything in the water as well as on the land. So they stayed there and did an immense work. Both erected nothing but large structures. They built Nan Tauas and all the islands with the holy buildings which were erected in the tribe of Tsokes. Both remained in Sau nalan and called their holy stone structures from Tsokes, so that all the stones came flying by themselves, and with them they two built all the structures. They called them after the tribe of Matolenim and made them the seat of the tribe. They erected fifty structures and consecrated them all; there was no place to which they did not give a sacred name. They called the tribe Matolenim. Both youths were gifted with great magical power, for they called all the stones, so that they came by themselves and the magnificent and huge buildings originated. There are the names which the people know, but we do not even know the names of some.

1. Nan Molusai
2. ?
3. Konterek
4. Tau as
5. Pualan
6. Tau
7. Us en Tau
8. Tsap u as
9. Pei ni or
10. ?
11. ?
12. Karian
There are some of the names in Matolenim. And then when later all the sanctuaries were finished, all Ponape people knew of it at all times. And they became familiar with all customs. And everything was good and proved its value in Matolenim, Tsokes and Not.

Now in the state of Matolenim a man named Lampoi tsap'al lived. The people of Matolenim did not love him, because he was evil and inclined to all bad deeds.
One day they united to kill him. When they had seized him, he escaped from them, they now chased him to Nan Tauas in order to catch him. When he entered there, he did not see a place where he could get out again, for they blocked the door. But he was a strong man, gifted with magic and took a pillar, made a gap, got out, fled and went to Kiti. There he built some structures on the Tol en Kiti, so that he would be reminded of Matolenim, because he thought much of the land, Matolenim, and because he could not go there again, he erected some buildings and named them after Matolenim, so that he would be reminded of Matolenim.

Story of Nan Dzapue

Once Nan Dzapue wandered about in the world. Thus he also appeared in Pankatera in order to look at the place which at that time had no bush, because Sau Telur had had it removed. So he appeared in Pan Kat'ra, and Sau Telur who was mean and very deceitful, seized Nan Dzapue. He shut him into a house on one of the artificial islands, so he would die. And Nan Dzapue nearly cried himself to death. There was a man who lived there and heard Nan Dzapue scream; the man was called Isopau. He wondered about how Nan Dzapue had come into the place for he cried about Pan kat'ra. He went in order to ask him; he went there and found Nan Dzapue, who was tied up, almost near death. He untied him, took Nan Dzapue by the hand and brought him to a small place, which is named Pik (sand) en Nan Dzapue. Isopau laid Nan Dzapue on the ground, for he was almost dead. Then Isopau went away again. Nan Dzapue remained lying on the spot until the tide rose, lifted him up and carried him out to sea. And a sea animal, the conch snail was there; it helped him, for he had almost sunk. And the conch snail helped him until it grew weary itself and wanted to sink. Then the horn-pike appeared to help, took Nan Dzapue and brought him to the land, Kusae. Thus Nan Dzapue escaped death. When Nan Dzapue had arrived in Kusae, he asked the people whether a woman of his
Then they told him that at the time there was still one left; she was very old. He asked them to fetch the woman. They brought her and the woman was called Liapas. Nan Dzapue asked Liapas: "Have you no children left?" The woman answered: "No, master, because I am much too old." Then Nan Dzapue said to the woman: "You will bear a son, who shall go to Ponape for blood vengeance, for I just barely escaped death there." Then he sprinkled the juice of a lemon on the woman. A shudder ran through the woman; then she became pregnant, and Nan Dzapue went back into the sky again.

So the woman was pregnant and bore a son. He was named Iso Kalakal (the wonderful king). The child became bigger and grew up. He gathered many boys around him. And they build many canoes and travelled out on the sea with them in order to undertake a fishing expedition, the apaip'. Then they sailed out on the high sea until they found Ponape; then they anchored outside of Ponape, until they had gotten information about Ponape. Then they returned home again. And Iso Kalakal commanded them to build a large canoe. Then they built a large canoe. And none of them knew what the canoe was for, because Iso Kalakal did not tell them what he planned. And in eight days, they had finished the construction. When the canoe was finished, they set off. There were 333 people. The canoe held this number of people. They set forth and came to Ponape. There they fought the Sau Telur, caught him, and conquered Matolenim. Afterwards there was no Sau Telur any more. And the Nanamariki's of Matoelnim were taken from the descendants of Iso Kalakal, who form the Tip' en pan me'i.

Story of Iso Kalekal

Once Nan Zapue left the sky and climbed down to Pankatera. There he committed adultery with the wife of the Sau Telur. They met each other and bathed in a brook of Sauiso called Tsap ue takai. One day the woman went to the brook in
order to fetch water. There she met Nan Zapue. He slept with her on the spot; then both broke the water calabash of the Sau Telur. Now the woman became afraid. Then Nan Zapue took a rope, a selap, and wound it around the calabash; that is called likin mauk (beautiful outside). Now the calabash was all right again. The woman went home to Sau Telur and Nan Zapue went up to the sky again. Thus Nan Zapue was continually after the woman. But Sau Telur found out; he caught him and confined him in a hut on an island. There he had to remain until the sun set. Then Isobau slipped him away from Sauiso, untied him, and set him down on a sandbank, called Pik en Nan Zapue. Here he remained. A conch snail came swimming along. He climbed up on it. The snail sank; then Isobau took his tortoise shell ear ornaments in order to travel on them and said the sorekentak charm. Now the ear ornaments of tortoise shell changed into a horn pike. It hauled Nan Zapue and carried him to Kusae. When he landed, only one woman from the clan of the Tip en pan mei was in Kusae. He asked whether she was the only woman, for she was very old. He asked the woman to bring him a lemon. When she went away, he said to the woman, she would bear a child. The woman answered that she was already too old. Then Nan Zapue sprinkled lemon juice on her so that she had to swallow it. A shudder ran through the woman and she became pregnant. She bore a boy. The boy grew up and gathered all other boys around him to play. They went in canoes and sailed to Ponape. As they approached, they saw Ponape from the sea; they saw several spear-palms which stood on the mountains. When they looked there, they thought they were giant men, for the blossoms of the palms looked like their aprons. Then they became afraid. They turned back. Their mother asked them: "Why did you turn back?" They replied: "The Ponape people are huge and strong." The woman told them that they were not men but some kind of palm. Now they agreed to build a canoe; they built it. A man named Nan paratak heard that the canoe was to become a war canoe; he was glad about it. He turned a somersault. After the eight days,
the canoe was finished. But when they wanted to launch the canoe, they first cut a man into pieces. Then they put the canoe in the water. They put their large drag-net in the canoe, for they wanted to fish. When they put out the net, Iso Kalekal said to a man called Nan esen from the clan Naniak, he should go to the net and watch for a large fish. Some fish went in the net. Then Nan esen caught a huge fish, he tore it to pieces under the water; then he ate it up. When he appeared, Iso Kalekal speared him; he averted it with his arm, and the spear flew to land. All struck up a tune. Then he climbed aboard and destroyed the net. Then they travelled further.

These are the names of the stonr men in the canoe, who numbered nine. They departed from Pun en No and Einear san Natik; the men who accompanied Iso Kalekal in the canoe from Kusae were called: Eir in Na, Kaneki en Eir, Sau Eir, Sau Epan, Aau Meresu, Sau Merasa, Meilor and Nan paratak. The entire crew of the canoe numbered 333. When they got out on the open sea, they played, beat the drum and sang heroic songs.

A bird, the golden plover, had sat on the canoe float; it flew up and came to Ant. After its arrival, it told the Tsaulik en Ant, that a war canoe would come and land. Tsaulik en Ant asked: "How many are there?" The bird said: "There are 333 men!" Now he said to the bird: "Go and tell the canoe to hurry." The next morning he ordered his people to roast breadfruit kernels. They roasted 333 kernels. The canoe travelled in the Tau en iei entrance; they weighed anchor at Tip en ni set. Tsaulik en Ant went aboard and handed over the basket with the roasted breadfruit kernels, and also a bowl of anointing oil. He presented them with this. Tsaulik en Ant and Iso Kalekal went ashore from the canoe. The crew followed them. All carried stones and built the Pei en Pok with them. There they remained on Ant. While they stayed on Ant they invented all kinds of games;
they also informed themselves about the customs of the state, Matolenim.

Iso Kalekal always slept with a noble woman called Likamotsitau; the woman belonged to the clan of the Tip en Luk. The woman always said to Iso Kalekal that he should not go directly to Matolenim, but rather, should first sail around Ponape. Then they questioned the Mailap oracle; it was favorable. Then they departed. They came to Ponape and entered at Kepara.

A man named Amkos stood there on the reef; he wanted to fight them. But Iso Kalekal did not want to. They all began to sing a heroic song, the suriup. All the sea animals, the dolphins, became afraid; they fled to the entrance of Param. This was the song that they sang:

"Suriop, Suriup, keep off, keep off,
Keep off from Tapuak the canoe,
Waves thunder against the canoe, run over it,
Weigh anchor, bail out the canoe.
I travel with the canoe,
Travel with the canoe of Saunepal,
Bail out the water in the middle of the sea!"

Now they travelled on from Kepara and sailed along Palikir. Now, a man with the name Laui lived in Palikir. He belonged to the clan of the Tip en pan mei, and he saw the canoe. He took his lilicake, some of which he had eaten, and carried it into the canoe. With this he travelled to the canoe and lay alongside. The canoe people had cast anchor on a reef called Aurosei, which is near Tsokes. They cut the cake in order to eat it. Then they noticed that it was only one half. Nan Paratak said that Nan Paratak said that he wanted to eat this remnant. "Why did you only bring this to the chief?" Laui replied: "Do not speak about the Tsap en lu Pon'pei."

With this he jumped out of the canoe and escaped. They pursued him in order to kill him. But he was quick and fleeing, ran to Matolenim. Then they
set out quickly to get to this state. When they were in front of U, a man
called Risapana shot at the canoe with his bow. Now they wanted to fight
him. But Iso Kalekal did not want to. They sailed to Matolenim and went to
Au en kap, in order to anchor there. They climbed out of the canoe and went to
Naneni. Then Sau Telur sent the Sau Kampul there, in order to invite them into
the country. They came and settled on the island named Kalapuel next to Pan
Katera. There they remained and enjoyed themselves, and Sau Telur always sent
them food, for they were considered to be his foreign guests. Sau Telur
also ordered the Lap en mor to cook for the foreigners. All cooked for them,
only Lap en mor did not.

Then the people went to the Lap en mor and asked him about the customs of the
foreigners, and whether they had a prince. He said to them: "No." And yet they
had seen one among them who had a different form and bloodshot eyes. And Lap en
mor was overcome with reverence, and he said: "Do not speak anymore, for he
here is their prince!" Thus Iso Kalekal remained in Kalapuel. He learned what
Lap en mor had said. And he said to his people: "Be on the watch for this man
one fine day." Iso Kalekal and his followers stayed on at Kalapuel. They made
spears and made them all look alike. But the day afterwards, the spears of the
Nan paratak had always become longer. He cut them off, so that they were as
long as the others. But the next morning, they had become longer again. And
again he shortened them. One day, Sau Telur sent him many fish as a present.
They ate them. Nan paratak then went to the shore in order to wash his hands.
A man called Pok en Telur, from Pan Katera, had also gone in order to wash his
hands at the reef. The two now began a game with flat stones and splashed. In
doing so, Pok en Telur injured his arm and broke it. With this, the quarrel and
fight against the Matolenim people began on this day. A great battle began
the people of Matolenim fled. Iso Kalekal pursued them with his people as far as Sapalap; they got to the small place, Sakar en Senipein. Finally they came to Pei ai. Then the people of Ponape had become strong again. And Iso Kalekal and his people had to flee. A man called Nan esen followed Iso Kalekal, blocked his path; but the latter threw his spear at him, which pierced his foot and remained sticking in the ground. He called the people to turn against the Ponape people again. So they fought on until evening. And the next day they continued the fight in the bush. They pursued Sau Telur as far as the small place, Kamaupunpun. They surrounded the place. Then, he jumped into the water, changed and became a fish, the Kital en pul. Then they returned to Pan Katera. There they created the rank of the Nanamariki. Iso Kalekal became the Nanamariki and with him begins the line of the Nanamariki in Ponape.

The Family History of the Tip en pan mai

A woman bore a boy. When she had born the boy she died. The boy went east. They boy climbed up on the "back of the sky;" there he wanted to meet Luk Nan Dzapue. The people there celebrated a great festival. He went to them and sat down in the house with them. Luk Nan Dzapue asked those present: "Who is the boy?" The people answered that they did not know. Then Luk Nan Dzapue thundered at the boy. The boy fled under a stone and hid there. Now Luk Nan Dzapue thundered him out from under the stone. Then the boy fled into a stone. Now Luk Nan Dzapue thundered the stone into pieces. And the boy came out of the stone. Now Luk Nan Dzapue could not do anything else with the boy. And Luk Nan Dzapue called him Luk e lan, because the boy was so greatly endowed with magic powers, and because he had done everything with him. Now the boy was immortal.

Luk Nan Dzapue had the boy sit in the gallery of the house among the people. The boy sat with his back against the wall. And now they celebrated the boy,
until the festival was over. The boy now said to Luk Nan Dzapue that he wanted to go down to the earth again.

The boy went to the Sau Telur at Pandat'ra. Sau Telur treated the boy badly. He had him seized, fettered and put out on a small sandbank which is called Likop' Karian. The boy remained lying there until a fish came; he said to it that it should swim up so that he could travel away on it. It was a horn-pike. Luk e lan now went away on the horn-pike. The horn-pike made a leap to Kusae. There he climbed down from the horn-pike. And Luk e lan asked the people of the country whether a member of the Tip en pan mai was not still alive. The people told him that only one woman was left, but she was already very old. Luk e lan said to them, they should take him to the old woman, he wanted to see her. Then they brought him to the woman. He cut off her eyelids. He took a lemon and sprinkled the juice into the woman's face. A shiver ran through the woman; she became pregnant and bore a boy whom she called Isokalakal. And the woman was called Li pan mai (woman under the breadfruit tree). As Isokalakal sat in the womb of his mother, he learned the story of Luk en lan, and what he had done to his mother. He had all people of the country gather together so that they built a canoe, so that he could sail to Ponape. When the canoe was finished, the crew, 333 people, set forth. They left Kusae and steered to Ponape. They paddled out on the open sea. Then a bird flew on their canoe. The bird counted the people of the canoe; it also wanted to know what plans they had; and it said to them they should call at Ant and visit the Tsaulik en Ant. Then the bird flew away and told the Tsaulik en Ant that a canoe would visit him. Tsaulik en Ant asked the bird: "Where does the canoe come from?" Then the bird said that it came from Kusae. Tsaulik en Ant went on to ask how many people were in the canoe. The bird replied that there were 333.
Tsaulik en Ant now prepared a meal of 333 roasted breadfruit kernels for them, for the entire boat's crew. The bird was the golden plover. But Isokalakal's mother had ordered him to visit an old woman in Ant because he could not learn anything from the young ones. She was a very old woman who was supposed to teach Ponape habits and customs to Isokalakal. So Isokalakal set forth to look for the woman. He sailed to Ant. The others remained in Ponape. They visited the various places. Thus they also came to Palikir. There a man brought half a yam cake.

The man was called Laui. And Isokalakal called the place Tsap' en Lu Pon'pei (place of the half yam cake). Then they visited and looked at the other regions on Ponape. Thus they also arrived in the small passage of Matolenim then informed Sau Telur that a foreign canoe lay in the Uru entrance. Sau Telur then ordered the Sau Kampul to fetch the people in the boat. Sau Kampul obeyed and said to the Isokalakal people: "Foreigners, come and be the guests of the Sau Telur!" So they sailed there and followed the Sau Kampul. He, however, sent word to the Sau Telur that he was leading a group of foreigners to him. Sau Telur ordered the Sau Kampul to lead them to a small place where they should rest. This place was Kalapuel. Isokalakal now stayed in this place with his people. And Sau Telur provided them with food. But Sau Kampul brought them only a little to eat. Then Sau Kampul again went to the Sau Telur. Sau Telur asked him: "When you came to the foreigners, what were they doing there?"

Sau Kampul told the Sau Telur that they always played when he came. When Sau Kampul again brought them food the next morning, Isokalakal and his people did not notice him come. All were assembled around Isokalakal. And they were astonished when Sau Kampul came out of the house again. But Sau Kampul had seen what the people did around Isokalakal; he hastened to the Sau Telur and told him
that he came from the foreigners. They had assembled around one of them. The man around whom they had assembled was still very young and small. But his eyes burnt like fire. Sau Telur thought that it was Isokalakal, the son of Lipanmai; that was the boy whom Luk e Ian had had Lipanmai bear, when he appeared in Kusae, so that he would take bloody vengeance on Sau Telur. And now he was there. Sau Telur decided to attack him the next day. Thus the battle began the next day. The ones held Pankat'ra, the others, Kalapuel. Sau Telur and his people were very powerful. And Isokalakal and his people had to flee from Sau Telur and his men. Now a man from Kusae ahd followed Isokalakal; he was called Nan esen; he had the fight stop at the surf, because Isokalakal with his followers had been thrown into the sea. The man said to Isokalakal that he was his warrior. This man renewed the fight. And Isokalakal fought victoriously against Sau Telur and his people. Sau Telur with his men had to flee to Pankat'ra. But Isokalakal pursued him with his men through the entire country. Finally they fought at a small place, called Sakar en Senipein. The fight continued on to the small place, Kamaupunpun. Here Sau Telur was taken prisoner and slain.

Isokalakal with his people went to Pankat'ra. Since that time to the present day, the tribe of the Tip' en pan mai rules in Matolenim, because the Tip u lap', which had formerly been the first, had supplied the Sau Telur. The Sau Telurs had always ruled all of Ponape; Isokalakal then had taken Matolenim away from these princes of the Tip u lap'.

These four texts give some information and belong closely together, as they supplement each other. b, c, d deal with the destruction of the Ponape empire and the founding of the system of individual states. It is actually the family history of the clan of Tip en pan mai (clan under the breadfruit tree) which comes from the Gilbert islands. Nanapas en Kiti, a member of this clan, tells it best.
Nevertheless, some details escaped him which Emilio, also a member of the Tip en pan mai, and Kehoe who knows the story only from hearsay again quote so that from all three, a rounded whole arises. A woman of the clan, Tip en pan mai would have been more reliable as a story teller, because she systematically learns the family traditions. As in the case of all family histories, she was not to be found. If one extracts the core from the stories of the natives, the following picture arises:

a) Two men grow up in Tsokes, Sipe' and Saupa, who have the ambition to do something special for their state and if possible, to procure hegemony for Ponape which was then not yet united under one king. They erect a structure from basalt stones, consecrate it and institute a festival of worship, Pun en tsap, the one to honor the gods, demons and spirits of the ancestors. A second structure, Nan i son tsap, also of basalt, is erected on the reef, in the water near the shore. But soon they are forced to seek a new place of worship, because wind and surf destroy the structure. New attempts are made in Not, in U, where the remnants still lie today. At last they find the suitable place in Matolenim. The name is still unknown. Sau nalan, sun, is the old name. Here the Nan i son tsap is now erected. By magic, the first stone buildings of Tsokes are called up; the basalt stones fly through the air and arrange themselves in the structures of the future Nan Matol. This is recalled by the northeast corner in Pan Katara, the Kaim en Tsokes. Nan Matol is imitated by Lampoi tsapal in Kiti on the Tol en Kiti.

b) The sky god, Nan Dzapue, wanders through the world, he also arrives at Pan Katara in Nan Matol. A deceitful, cunning king, Sau Telur, takes Nan Dzapue prisoner. He shall die. Another Ponape man, Isobau, finds the fettered Nan Dzapue, frees him, takes him to the snad near the open sea where a conch snail and a horn pike bring him to Kusae. Here he inquires for his clan and learns that only a very old woman, Liapas, is alive. By sprinkling the juice of a lemon
on her, the old woman becomes pregnant and bears a son, who is supposed to go against Ponape in blood vengeance for Nan Dzapue. The son, Iso Kalakal, is born. He gets information about Ponape on a fishing expedition. After his return, he has a large canoe built which carries 333 men. With it, Ponape is conquered, the Sau Telur destroyed. The Tip en pan mai (clan of Nan Dzapue) is instituted as the ruling clan.

c) Nan Dzapue wanders through the world; he arrives at Pan Katara and pursues the wife of the king, Sau Telur. He makes advances to her, rapes her, and from then on, keeps her in his power. Nan Dzapue in high spirits, breaks the drinking calabash of the Sau Telur and shows how it must be mended. Nan Dzapue continues his visits to the Sau Telur's wife and in doing so, is surprised by Sau Telur who imprisons him in a hut of Sau iso (Tsamuin Island). A man, Isobau, frees him, and brings him to the sand near the sea. Here, later, a conch snail, through the magic of Isobau, and a horn pike slip him away to Kusae, where he inquires for a woman of the clan of the Tip en pan mai. The only one still living, a very old woman, come forward. By being sprinkled with the juice of a lemon, she becomes pregnant. She is told that she will bear a son. The son is born and grows up. An excursion is made and Ponape is sighted, but no landing is ventured because the blossoms of the spear palms (kentia) pretend to be Ponape people, as strong as giants, who guard the mountains. The mother enlightens him. A large canoe is built. A man, Nan paratak is so happy about this, that he has to turn somersaults. The canoe is built in eight days; a man is sacrificed when it is launched. A large drag-net is taken with. A man from the clan of Nan iak (in the mangroves), Nan esen, is made the net-master and given the order to pay attention for a large fish. Nan esen catches a large fish; he tears it up under the water and eats it. As punishment for this, Iso kalakal tries to spear him.
In vain. Nan esen enters the canoe again and destroys the drag-net. The boat's crew members -33 men, in addition eight heroes accompany Iso Kalakal. Amid beating of drums and singing of heroic songs, the voyage passes until Ant is sighted. Its prince has already received the news through a golden plover that he will receive a visit from a canoe with 333 men. To receive them, he has 333 breadfruit kernels roasted; as a return gift, the crew builds Pei en Pok from coral stones. They have been friendly with each other and Iso Kalakal informs himself of the Ponape customs. A woman from the clan of the Tip en Luk, Likamotsitau, sleeps with Iso Kalakal; she gives him advice with regard to Ponape: first to sail around Ponape, then to visit Matolenim. The oracle questioned is favorable. They set forth and steer to the southeast coast of Ponape, Kepara. A man wants to fight them. The boat's crew begin a song at whose strength and power even the sea animals flee. In Palikir the foreigners meet a member of the Tip en pan mai, Laui. He gives them half of his yam cake which he just eats. Nan paratak is angry about it. Laui flees to Matolenim at the threats of Nan paratak. The other, after him. In U, the canoe is shot at by an archer. But no one shall defend himself. Iso Kalakal presses on to Matolenim. They land first on the island of Naneni. King Sau Telur sends his steward Sau Kampul and invites the foreigners to visit him and remain in Nan Matol. Kalapuel, the place next to Pan Katara, is designated to the foreigners as their dwelling place. The high priest, Lap en mor, is charged to care for the foreigners' daily requirements; he refuses. He observes and gradually recognizes the position of Iso Kalakal and his plan. Sau Telur at first does not suspect anything. He continues to supply the foreigners, until one day, Nan paratak and one of the servants of the king, Pok en Telur, playing at the shore, begin a quarrel which becomes a general fight between the foreigners and the people of Matolenim. The fortune of war changes.
Once more Nan esen opposes Iso Kalakal; but Iso Kalakal averts him successfully. At the same time, the final retreat of the people of Matolenim begins. They are beaten decisively at Kamaupunpun and lose their king, Sau Telur, who jumps into the water and is changed into a blue river fish. Iso Kalakal founds the position of Nanamariki in Ponape and is the first Nanamariki in Matolenim.

d) A woman, who is not named, bears a boy and dies. The boy wanders eastward and arrives at the sky where the people are celebrating a great festival at Luk Nan Dzapue. Nan Dzapue is astonished about the foreign boy who knows how to evade his thunder. That makes such an impression on Nan Dzapue that he makes him immortal and gives him the name, Luk e Ian. Luk e Ian finishes celebrating the festival in the sky and then wants to return to earth. He comes to Pan Katara, where Sau Telur treats him badly, had him caught and fettered and then put on a sandbank in Lukop Karian. A horn pike saves him by jumping in one leap from Nan Matol to Kusae. Here Luk e Ian asks for the Tip en pan mai woman. One single, very old woman is there. He has himself taken to her, to the woman, Li pan mai, cuts off her eyelids and sprays her in the face with the juice of a lemon. The woman becomes pregnant and bears IsoKalakal, who has learnt in the mother's womb what has been done to Luk e Ian in Ponape, and what he has done with him mother. A large canoe is built, equipped with 333 men, and they go towards Ponape. As in c, they visit Ant. Iso Kalakal is instructed about the customs of Ponape by a very old woman. In the meantime his companions look at Ponape; visit in Palikir. Story of the yam cake; the voyage to Matolenim; the invitation of the Sau Telur; his hospitality; inquiries of the Sau Telur; the steward, Sau Kampul finds out that the leader, a small young man, is the son of Li pan mai, Iso Kalakal. After his bad treatment in Ponape, Luk e Ian has had the woman bear him to exact blood vengeance on Sau Telur. Sau Telur goes to war and is lucky at first. But a man, Nan esen, brings the fight to a standstill;
Sau Telur must retreat, and is finally slain in Kamaupunpun. Sau Telur has been a member of the Tip u lap. Since then, the Tip en pan mai rules in Matolenim.

B through d supplement each other so that the legend becomes clear in all its details. It is not possible to judge the value and importance of the individual episodes; they may have a deeper meaning, but can also be ornamental accessories. The fact that names and persons acting are changed in the presentations must not be given weight. We are accustomed to such occurrences from our own legends and tales. Sarfert in Kusae I, pp. 373-377, gives the two versions of the war against Ponape, which are similar to a certain degree to the Ponape story and, on the other hand, are very different. Once the expedition is directed against Kiti, another time against Matolenim. The role of Selbas, later Nepartak, is noteworthy. He is the chief hero in the Kusae story, in the Ponape story however, it is a warrior of Iso Kalakal. Nan paratak is the hero who can throw the large stones which since then have been kept in Itet.

Although the origin and beginning of Nan Matol and its end as a royal city are veiled in myth, some natives believe they can make more definite statements about when the conquest expedition of Iso Kalakal took place. Thus they tell that twelve Sau Telurs, have ruled Ponape before Iso Kalakal. The first is supposed to have been the nephew of the great, magically gifted Lapona of the Tip u lap, and, after Iso Kalakal to 1910, some seventeen Nanamariki are supposed to have resided in Matolenim. Accordingly, the age of the structures would be fixed at 500 years, which is probably in agreement with the state of preservation.

In the version by Krümmer about the war expedition against Ponape, he tells of the death of the conqueror in the end (Sarfert Kusae I, p. 377). The Ponape people tell of a more dramatic death.

How Iso Kalakal Died

After he had subdued the state of Matolenim, he arranged everything so that
all were satisfied. One day he went for a walk on Pan Katara. He wanted to go to Pe'ikap. He first went to the sealike reef hole of Nam u ias. There he looked into the water and noticed that he was becoming an old man, because his hair was turning white. Then he was ashamed before his people. He immediately went back to Pan Katra. And now he made a kind of rope, a teriok en Gatau. He killed himself with it. The next morning he was found dead. Naneken was informed. He carried him to Nan pei nias in Pan Kitel and buried him there. Then the grave was consecrated, no commoner, no noble, neither tsopeiti nor seriso, was allowed to go there.

Story of a Turtle
(cf. Table 2, 4)

A turtle lived in Nan Molusai. While it lived in Nan Molusai, a fish came there. The turtle said to it: "Fish, where do you want to go?" The fish answered: "Master, I want to take my first breadfruits to Pankat'ra (below the high places)!" Then the turtle also added: "Come here and sing something to me!" So it went to Nan Molusai and sang the song:

"We do not go, we do not go
in the boat, on the back;
the one comes, the other goes;
refuse, refuse, refuse!"

Then the fish went to Pankat'ra; the other was satisfied. A flat fish appeared, to which it said: "Flat fish, where do you want to go?" It answered: "Master, I bring my first breadfruits to Pandat'ra." The turtle also told it to stay and sing something to it. So it sang another song.

When the song was ended it went on to Pankat'ra. While it was there, a crab came. The turtle asked it: "Crab, where are you going?" It did not answer, but
rather wanted to fight with the turtle. It repeated its question once more: "crab, where do you want to go?" The crab became terribly angry and replied: "Boaster, I want to bring my first breadfruits to Pankat'ra!" Now the turtle also became very angry at the words of the crab, and the turtle said: "Crab, why are you behaving like that, shall we beat each other?" It answered: "Certainly, I want to fight." Then the turtle laughed: "All right, come on, we will fight." So it went towards it, and they fought for a long time. When the tortoise wanted to kill it, it occurred to it that it still had two claws; it drew one out and cut off the head of the turtle with it; so it had to die.

Then it went further to Pankat'ra and took the turtle with it. It threw it away at the wall in front of Itet, so that the people should know that it had killed the turtle. For that reason, men and fish are afraid of the crab. And turtles and crabs still are hostile to each other until the present day.

Story of Peikap

Once four women, lived in Peikap; they were called Li en piterok, Liol, Luaktakeron and Limaroulan. They could do what they liked; Li en piterok was their paramount head, and so she celebrated her festival everywhere in Matolenim. So she went to a place in order to rest. There she caught a swarm of fish called tuik. She gave them to the people of the place. Then the people gave her a great festival, and when it was over, she again went to Peikap. She used to do this in several places. One day they all were in Peikap and discussed with each other what they wanted to do. While they were together, Lapona appeared. He scolded them; he was angry with Li en piterok, because she had festivals given for her all over the country. He ordered them to procure two stones. Then Li en piterok and Luektakeron changed and became two stones which are still today in Peikap. The other two women, Liol and Limaroulan became two trees; Liol became an ikoik, Limaroulan changed into an ui. The two trees perished when the typhoon destroyed Ponape.
The Story of a Sau Telur

Once a Sau Telur ruled. He was very bad and evil; he heard of a fish which was supposed to be found everywhere outside Ponape. The scales of the fish were similar to the shell of the turtle. It was not to be had, because it did not exist in Ponape, because it lived in the high sea, in places where no man could get to, for they were quite difficult to reach. Now Sau Telur ordered a man named Satogouai to set out and bring him scales of the fish. Before he departed, he looked around in Ponape and sought a medicine, until he found a medicine which was suitable for the undertaking which he wanted to carry out. Then he appeared again at his place in Matolenim, until he wanted to leave. He jumped into the passage of Auenkap', went out to sea to the place where the fish stayed. There he asked a man about the fish scales which the man possessed; the man looked like a shark and not a man. He presented him with a small little piece of the tortoise shell scale. Then he asked, he would like to return. The man put Satogouai into the stomach of a shark which was supposed to bring him to Ponape. The shark took Satogouai to the entrance of Auenkap'. There Satogouai crept out of the belly of the fish, went to the Sau Telur in order to give him the scales of the malupuro, as he had ordered. Then he went to his dwelling place and ordered his whole sib in Ponape to assemble with him; he put them all in a house, barricaded it and set fire to it, then he himself jumped into the fire. They were all burnt to death, for they wanted to be free of the Sau Telur; none of them remained, they all perished. That is why this family no longer exists in Ponape, because they were all burnt to death. They were called Sau en Taman. The family was very beautiful and capable, and they could carry out many a magic deed.

Above (p. 38) the remarkable "stones" in the ruins have been mentioned. For two of them, the texts referring to them are given by me here.
Of the Sakriu Stone

Nan Japue left Pankatera, he came to the stone, sat down on it, got up again and called the stone, Sakriu. Then he came to the passage, Mueit en Nan Japua and named it Mueit en Nan Japue and went to the mountains of the Nan Japue and called them Nana en Nan Japue.

Story of Nan sau en set

Once in old times there lived a spirit in POnape, called Nan sau en set. This spirit always stole women whom he liked; he killed them, because in former times one always wanted to marry other women. He administered them something that made them ill and of which they died, so that he could easily fetch others again, when they were dead. This demon always lived in the mangrove bushes. He was named Nan sau en set. Now when he had made a woman ill, some people who understood conjurations, went to the woman, drove out the spirit, so that she was freed from him and got well again. Nowa days there no longer are many people who know the medicine; they are no longer numerous, and there are becoming fewer and fewer, for the people of the kind who understand about the medicine are different; and their medicine is more valuable and more difficult to make. One used to drive out the spirit, but the spirit was very gifted with magic, and thus they said that he was a spirit who had developed out of himself, who had not been born, because he was so gifted with magic. So this spirit killed many women in former times. Today this spirit no longer appears, nor does he kill many people any more; today the spirit loves the women.

It has been shown above that Nan Matol has been a magnificently laid out place of worship. But we have learnt little about the religion itself. Only the legends and a dry report, with a few occasional, accidental statements can give information.
The impression is created that at least two religions were carried on. Of the religions, the stories in the form of sagas reported on the giant lizard perhaps a large crocodile according to the shape of the outline in the Nan lolo river, but nothing else about it was discovered because my excellent informant, the Nanaua en Tol a kap, died too early. Others knew only a little about the temple of the Nan Kiel mau.

The Story of the Large Lizard

Once there was a reptile called large lizard which gave birth and had two girls. The animal lived in the state, Tsokes. Thus it gave birth to two girls; both grew up. Both then went to Matolenim. Both appeared in Pankat'ra before the Sau Telur. He married them both; but thier mother, the lizard, loved them dearly and longed for them, for they had not seen each other for a long time. One day the lizard gathered some women around it. Then they went on the lagoon water. Now when they got to the lagoon water, some people of the country who had seen that, went out in the boats, because they thought, there were fish. Then when they noticed that it was the lizard, they turned back again. While it set forth, it made all the channels, which lie outside of Matolenim in the lagoon water, all the channels which still exist today. So they came to Pankat'ra. The women were glad when they met their mother. Both asked the Sau Telur to give a large house in which their mother could go, for she was very large. So the Sau Telur gave a large house; then she lay down in the house, for Sau Telur had not been able to see her, because it was night. Sau Telur thought that the lizard looked like a person. The next morning Sau Telur brought food, for he wanted to see her. When he appeared there, he found that she was no person, but rather a large lizard. After Sau Telur had seen the lizard, which filled the entire house, he became afraid. He quickly went away from the house, fetched fire and went to the house with it; there he took the fire and set fire to the
house. And the lizard died.

When the women had seen that Sau Telur had set fire to the house in which their mother was, they both ran up and jumped into the fire; thus both died with their mother, the lizard. When both had jumped into the fire, they both died in it. When Sau Telur then saw that his wives, the two women, had died in it, he also jumped into the fire. So they all perished, the large lizard, the women and also Sau Telur; they all together burnt in the fire. This is the wonderful story which happened in old times.

The Story of the Crocodile, Nan Kiel mau

Nan Kiel mau was born at the place, Epanilan in the region of Nan pon mal. She looked like a crocodile; when she was still little, she made a hole for herself and lived in it; but she grew, became bigger and had to creep out of the hole. She made a new, larger one; but she did not like the place. She wandered down from the mountain and in doing so, made a bed for the river, le punepun. There she bore two girls; the one was called Li terepuo and the other, Literari. She took her two children with her and wandered further in the river, nan lolo, until they came to the waterfall, pan mekia (see vol. I., Plate 8, 2) and into the water basin of the same name. She filled this basin completely with her body; the head was above the water and she had to hold it up to the waterfall. She did not like this, and she went on. She wandered to the sea; in doing so, all the waterways of today were made on her way, thus the Tau en Koe, the Kapin Tau en Koe, the Tau en Paniap. With this, she had reached the sea. She now ran along the shore; and in doing so, the Tau en palioze and the Tau en men lapalap originated. Finally she arrived to the place, Lonon ni Merup and from there to Palikir to the river, len matata. Here she met the centipede, the matata, who had settled down there. But she drove it away and remained there herself with her daughters.
Daily they rubbed themselves with keyon, i.e. yellow root; and when they bathed then, the color came off. The water became yellow, and one day it flowed to the dwelling place of the King of Ponape, Sau Telur, to Pankatra. He sent his servant, Sau Kampul, in order to find out the cause. And when he heard of the two girls, he liked them so well that he wanted to marry them. And that also happened.

One day the mother wanted to visit her daughters. So she set out and swam around Not and U through the Tau lapalap to Matolenim. All people saw her, and because the water spurted and splashed like this, they thought there were many fish there and set forth to catch them. But the crocodile called to them: "Go home, I am a person and have two daughters, who I want to visit." Thus she came to Matolenim, and through her originated the large entrance, the Kapetau telur. She wandered further to the reef, and there the two channels, Tau zokela and Tai Kiel originated. Then she went to Pankatra. She lay down on the shore. Soon a man noticed her; he went into the house and said to the two daughters: "Nan Kiel mau is there, she is at the shore." The children went to their mother who said to them: "Ask your husband where I am supposed to live." Sau Telur said: "Let her live in the small house." But the two women replied that the house would be much too small for their mother. Then he gave them a house which was ten fathoms long (see Plate 9, 6). The crocodile went into this house and filled it completely with her body; she had to stick her head out of the roof. Then the two daughterw went fishing, and Sau Telur asked them what he should cook for his mother-in-law. They told him; so he cooked and wanted to bring it to the crocodile.

When he came to the house, he could not see her, he only noticed the size of her body. Helplessly he looked around and did not know what to do. Then Nan Kiel...
mau called down from the roof: "Why do you look for the face of your mother-in-law?" When the king heard this and saw the face of the woman, he did not answer; he was afraid and silently put down the food. He fetched fire, set fire to the house, and the crocodile, who could not free herself from the flames, had to burn to death. A scale jumped off the shell and fell down near the children who fished on the reef; they turned around and noticed that thick smoke rose in Pankatra. Then they quickly ran back there; and when they saw that the house with their mother burned, they too jumped into the fire. When some people told the Sau Telur of it, he too did not want to live any longer. He too threw himself into the flames, and so all of them perished.

(Nanaua en Tolakap)

The text 101 of the Nanpei en Matolenim gives us information about the most important festival instituted in Nan Matol. The report is more detailed than that given by Friederichsen in his lecture about the ruins of Nanmatol in 1874. It also gives a very important explanation about the end of the religious and sacrificial service in Nan Matol, which had happened not long before the appearance of O'Connell in Ponape.

Nanusunsap' (The Holy Turtle)

This is what happened with the turtle, a sea animal to which we people of Matolenim once used to sacrifice, and that we called Nanusunsap'. We set out to hunt; when we had one, we brought it here and put it into a pond near Usentau, which is called Paseit. There we kept it until shortly before the sacrifice. When the day of the sacrifice had come, some priests travelled to Paseit in the canoe, fetched the turtle and took it to Tsamuin, to the place at the shore of Sakarena. There it was washed very clean; coconut oil was fetched and the turtle was anointed with it. Then they hung cords and ornamental items on the animal. Then they
placed it upright in the canoe. Two men sat down and supported it, one from the right, one from the left. These two priests were Arun maka and Sopan. Tauk Matolenim stood in the canoe and held the shoulders of the turtle firmly. He had to look at the turtle steadily, so that both would wink their eyes at the same time, because when the animal winked its eyes, Tauk had to wink too. The boat's crew consisted of Nalaim, Nansaum, Nanekai and Nanapas. They travelled to Nanuei with the canoe; there they lifted the turtle up and threw it down on the stone; they did this once. Now they went to Itet. A cooking fire was ignited on the Tol en Itet (cooking hill). Then they fetched the turtle out of the canoe and took it into Itet. Nanekai took a wooden club and broke the throat of the turtle; it died. Now it was cleaned. In the following way, it was cleaned: Nansaum fetched a stone from the hearth and put it on the breast of the turtle, so that the shell would get soft. Then he took a pearl-shell and cut it open with it, because formerly there were no iron knives in Ponape. They made their knives from pearl-shells. Then all the intestines were taken out. The cooking hearth was prepared and the turtle was laid in it. Then the hearth was covered. Now the hearth was left alone until the animal was done. Nalaim then fetched the roasted intestines and brought them to the stone setting of Itet, in order to feed Muan samol with them. When Nalaim brought the roasted intestines of the turtle and Muan samol came out of its hole, Nalaim first said some conjurations so that it should be well disposed to them. Then it crept back into the hole. Nalaim now gave it all the intestines. It ate them. When Nalaim came back from the stone setting, the oven was opened. After opening it, they took the animal to Isibau (paramount chief and head priest). Nanapas and Nalaim rose in order to cut it up. When the breast was taken off, they put the turtle upright.
The Nanamariki said a prayer. Nalaim lifted the breast of the turtle high and swung it four times in the air. Then he put it down in front of Isibau. Now the pieces of the turtle were distributed. Nanapas and Sopan distributed the pieces to the Nanamariki and all the priests. Only the priests were allowed to eat some; also no common man or woman was allowed to enter the meeting place, for they were very sacred people. Thus the sacrifices were made at all times up to the rule of an Isibau, whose death name was Luk en Muei'u. Since that time the sacrifices in the tribe of Matolenim have ceased, because at that time they began to abolish making further sacrifices. One priest, namely, who had the title of Nanekē, one day received no bite of turtle. He got angry about it. Howling he left the place and went to Kapina above Takai'u to the place, Pison. He considered going out on the reef to the place called Uap near the breakers, and killing many eels. He then carried them to Kapina; here he cooked them and ate them. Some chiefs heard of this. They got angry, because Naneki had destroyed their sanctuary, because no one had been allowed to touch the fish, since ancient times. They assembled and agreed to dissolve their alliance which Naneki had already destroyed. Since that time, the sacrificial festival in Matolenim had ceased. Four years later Naneki died. Sacrifices are no longer made in Matolenim up to the present day.

See volume II, chapter: Boat and Navigation about the festival "Arbungelap," reported by Jubary, more correctly "Epen e lap," the great boat consecration which was still held during the European time.
Footnotes

1. Nan Tauas
2. 27.87 sq. meters, too low an estimate.
3. 1.22 m. to 1.52 m.; 4.57 m.
5. 6.10 - 7.62 m.
6. Breastworks on the inner side of the surrounding wall: 2.13 m.; 3 m.
7. 9.14 m.
8. 6.10 m.
9. 9.14 m.
10. Na Kap harbor.

1. Outer wall of Nan Molusai.
2. 4.57 m.
3. 4064.19 kg.
4. Nan Tauas.

2. Probably the layout of Na Kap is meant, which lays under water at high tide.
3. The report of the Novarra Expedition of 1858 (cf. Vol I, p. 167) is an excerpt out of Cheyne, referring to the structures and the other details.
4. Nan Tauas.
5. Itel is probably read incorrectly from Itet.
6. In map Illustration 9, 50 has only one entrance noted.
58 1 Stone with drawings = petroglyph.
59 1 Small man and large man.
63 1 Sun.
67 1 Fishing with lures.
68 1 South point of Tsamuin.
2 See Plate 6, I. on Lukop Karian.
70 1 Channel of the fire.
72 1 Name of the pastry.
2 Entrance of Matolenim.
3 Small coral island on the reef.
73 1 A high priest.
74 1 Kital en pil, a small blue, fresh water fish, which the natives did not catch and did not eat.
2 Kubary writes Idzi-Kolkol.
83 1 A young palm was bent down, on which it was fastened to the end of the rope, while the other was placed tightly around the penis. By springing up suddenly the penis was torn off and the suicide victim bled to death. Besides the cutting down of palms, it is a little used method of ending one's life.
84 1 Actually: large eyes.
85 1 Tiny fish.
2 Great magician.
86 1 Plate 2, 5.
88 1 Black basalt block, also uanit en Sau Telur, named.
2 Reef name at Nan Pulak.
Stone in the ruins of Matolenim, (coral block) Lilé Katau.

At the house of the Nos.

To the stone Likon pa lan.

The Nan Japue sacred muraena.

Since then there have been three Nanamariki in Matolenim.

Disappeared in the typhoon of 1905. It lay in the entrance of the Matolenim harbor.
98 1 Missionary.
99 1 At Nnipein.
100 1 Place in Uone.
103 1 Landing place in Uone.
2 Residence of the Nanamariki.
3 Small coral island on the barrier reef at the entrance in Mutok harbor.
107 1 Morning glory.
2 Not like Christian around 1882. Cf. in addition Text 15, p. 113.
3 The same names are found for the structures in SelataX in U. (cf. Plate 11).
111 1 From Uona of the Lipetan family.
112 1 Better Sau Kisa.
II. THE OTHER BUILDINGS OF THE ISLAND.

The most magnificent, complete, and most carefully built structures are doubtless those of Nan Matol. But they are not the only ones. Not without justification do the people of the Carolines call the island Tanu pei =Land of the stone enclosures, and the inhabitants themselves gave the name, sacred Pon pei on the stone enclosures, to their native land. The "sacred stone enclosures," are meant, stone enclosures in particular which are used everywhere by the Polynesians in order to distinguish their sacred religious sites, stone enclosures which are otherwise foreign to Micronesia in this form.

The structures of Ponape, except in Nan Matol, fall into three groups:

1. Religious sites.
2. Graves.
3. Fortifications.

Occasionally religious sites and fortifications are joined together. The map (fig. 60) shows that there are several such structures on the island. And I doubt that all the structures are entered, as not all places could be visited during the short time from March 22 to September 21, 1910. The stone enclosures of the religious sites, mostly consecrated to the local protective deities, were called "lōluṇ."

A Stone Enclosure

A lōluṇ is a stone enclosure which was formerly erected by the people; first a stone enclosure was erected outside and called pei, then a small stone enclosure was erected inside which also provided an entrance. Charms are said over four stones and they are put down at the four corners in order to consecrate the place thusly. Because the people who died formerly, were gifted with powers, and when demons found them, they entered and dwelt in them. In order to enter the sacred stone enclosures, certain people, who know the sacred things, first said their charms before they entered. When they had entered, they drove out all the spirits which were in the enclosure, then they removed the sacredness which had been inside since olden times.
Thus the stone enclosure was no longer a sanctuary from then on.

Besides these "lōluŋ," there were specially enclosed, simple stone enclosures, merei, which have special names and are places in memory of the dead, to some extent. (cf. text 272 in vol. II chapter; Death and Funeral). The merei correspond to the well-known marae of the Polynesians. Thus such a merei, the merei en Leoui, is also connected with the lōluŋ and lies distant from the lōluŋ of the Limoteleŋ.

In Tsokes there are the pei Tsokola of the female demons, Luei in pei and Līmuats Tsokola (cf. text 315).

In Palikir, on the hill of Paniop, there is a pei of the female demon, Likand en Paniop (cf. text 301).

In Rentu, in the district of Uona, the female twin demons, Ilake en soneip and Ilake en en pikila have their places of worship (cf. text 66 and 196).

In Anipein in Uona, Liland en Pei en Anipein has her religious enclosure, Nan Tiuen, also named Tiuom (cf. texts 147 and 222).

In Tsokes, in Nan pon mal, the two dreaded female demons, Likand Ina onaram and Likand Inas have their places of worship (cf. text 20).

In the entrance into the Tauak harbor, on the coral or rather, reef island of Tauak are the places of worship of the demons which spread leprosy, Pei en tuketuk and Pei'n tin uaita (cf. text 280).

Various other Pei were also ascertained; at Palaŋ and at Tomorol an in Palan, on the island of Ranini in Matolenim which was fished out of the sea, (cf. plate 14, I), on Auatik and in Selatak in U, on the island of Tepek, at Auak and Tsountin in Not, without the meaning of these pei being made clear.

These structures are, in part, very well preserved and untouched, when they lie bush. They were once all built most carefully, like the structures of Nan Matol, predominantly from basalt columns.

I did not see the large cemetery, sausau, of Uona, which is located in the bush near Anipein. There are three of them: Nin lē puel, cemetery for the high title holders; Onon makot, cemetery for the tsopeiti and seriso, the high nobility; and the Kitan manika, the cemetery for the mānor, subordinate title holders.
holders. On the other hand, the graves of the "dwarfs" were shown to me, those men of small stature who have become demons in the myth, who play all sorts of tricks on people. Actually they are probably concerned with the first, perhaps also Melanesian settlers of Ponape, whose remnants we still meet today in the population of Palan and Palikir (cf. vol. I, p. 366). Two texts report on these "dwarfs":

Of the Dwarfs

The dwarfs are another kind of small spirit. They originate from abroad and came to Ponape. They settled in Uona. They lived in many communities in Uona. There they learnt that there was a place Pue sia. Therefore they agreed to emigrate there, for they liked the name. Some went to Puesia, others to Olapel, in order to celebrate a festival there. The Tsaukisa got angry about this and wanted to drive them out of Olapel, because they destroyed everything, when they were drunk with kava. They danced and sang and beat the drum in addition. This is the reason. Thus he was angry with them and pelted stones at them. So they all set forth one night and left. They lit many torches. They went into the high mountains and went straight to Palikir; there they got into boats and travelled or the high sea. But many have remained in Ponape until today. And some, who had arrived at Palikir, later settled in Palan. These spirits are evil demons, who take possession of people and kill them.

Of the Dwarfs

Thus the dwarfs are supposed to have begun in Ponape. In very ancient times, one has seen them. But we heard that the dwarfs have came from abroad and have settled in the state of Kiti. After their arrival, they lived in Uona in the place, Rentu. Their holy places, which we name Pankatara, were there.

They looked like this: they were like people, but they were much smaller and shorter; the legs were completely tattooed. They had beautiful voices and shouted loudly for joy. When their number increased greatly, they settled in Rentu, Olopel and Nateuta. These are their places where they always celebrated their festivals;
and there was also a small place near Olopel called Pānupots.

They always lived under the earth; when people walked over the ground, they heard them beat their drums under the earth. However when one day the dwarfs who lived in Olopel celebrated a festival, they stole the yams of Sau Kisa. They roasted them for the festival. Sau Kisa got angry about it and threw stones at them. Then all the dwarfs were seized by fear and emigrated.

They left during the night, they went via Pān Ais; during their march they made the valley which is still there today. When they emigrated, some settled in Puesia, but most of them went on and remained in Auak. There they formed a group, the Momot en Auak. They always sat together in the galleries of the meeting houses, with their backs turned to the wall of the king; nobody disturbed them. And when they increased, they populated all of Ponape. And in Uona their number also became very large. And when they meet people, they take possession of them and kill them. And until today they also rove around Pilap; but when it rains they creep into the earth. And when they take possession of a person, the people must conjure him and give him medicine, so that they will leave the man again and he will get well.

This grave place, the only one which could be shown to me of the tsokelai, is not far from Nan Tamuroi, and is on the place of Pōn ial (above the path). A basalt column wall, approximately 1.20-1.50 m. high, which is accessible on the west side and measures 30 by 35 meters, forms a rectangle. In the interior, it contains, three platforms in which the small stone box graves, 1 to 1.30 meters in size, lay embedded; unfortunately, they are all destroyed (cf. Plate II, 4). They were originally covered with basalt columns, which were rolled away by Christian, who rummaged these graves with little result. (see Christian: The Caroline Islands, p. 115).

According to the legend, very huge men settled on Ponape after the small growing elements. As on Kusae and the islands around Truk, stories are told of a
light-colored giant race, Kona, who came from the south and ate men. They are said to be buried in the "graves of the giants," one of which was shown to me at Kipar in Kiti (cf. Plate 14 and 2), another at Tsap o takai. (cf. map). These graves are earthen walls, 20 to 25 m. long, 2.50 to 3 m. high, and 4 m. wide. An examination was unfortunately not possible because of a lack of the necessary tools in this remote heath. The giants play a large role in the legends and stories. At several places a rock is explained as "head of a giant." (cf. Plate 14 and 6 and vol. I, plate 7 and 4).

The ruins of a cemetery enclosure are shown to us by Kumunlai in Not, Plate 14 and 4 O'Connell knows how to describe what it was originally like and which celebrations took place there (see vol. I, p. 40).

How special men of the Ponape natives were buried is illustrated Plate II, 3 the grave of the Luk Makaira on Mutok. It is a stone box grave put together from platelike basalt. The cranium from it was given to me and is at present in Hamburg.

Luk makaira.

A long time ago there lived a prince in Mutok who was brave and cunning. He lived on the small place, Peinapue on Nutom. There he watched over the canoes which sailed past Mutok. Then he killed the boat's crew and completely ransacked the canoes. So the people of Uona went fishing on the reef. They caught many fish. On the way home, the prince who had set out from Mutok, took all the fish away from them, beat some people and destroyed their canoes. So they had to go empty-handed to the Nanamariki. The Nanamariki was not angry about it, for the prince was subject to the Nanamariki. One day a fleet travelled from Matolenim to the Nanamariki of Kiti. They cast anchor at Sau en Keroun; and then they went to Alenian to the Nanamariki. The prince was not present at Mutok when the fleet came to Uona, but he was at Paniau. Then he heard from some of his people that a fleet had arrived from Matolenim. He chose two men called Sūpen iak and Nān Timau o who were supposed to accompany him. They went to Sau en Keroun, and there took away three
canoes and the sails belonging to them. And when the people of Matolenim wanted to leave the next day and went to the shore, they noticed that three of their canoes and also the sails had gone. So they again went to the Nanamariki and told him. The Nanamariki gave them a very large canoe, a Keilon, and also some sails in place of those which the chief had taken away. Moreover, he commissioned a lesser chief, who had the title, Matau, to take some people with him and to accompany the Matolenim fleet from the Mutok region and to take care that the prince did not kill any people, too. Moreover, the Nanamariki ordered the fleet not to travel during the day; they were supposed to wait until evening and then set forth. When night came, the fleet sailed off. Matau accompanied it until it was beyond Lot. Then he left it and returned to Uona to the Nanamariki. The people of Matolenim were very angry because the prince had harmed them so. They wanted to attack the Kiti people. But that was not possible, for Isibau and Nanamariki of Kiti were good friends at that time. Now there were some evil people in Matolenim; they performed evil magic, also said incantations so that the prince should die. The man fell ill also and died. So they thought, that the magic of the Matolenim people had killed the prince. When he had died, the Mutok people carried him away and buried him at the place where the princes of Uona were buried. But when it was night, the Mutok people set forth, dug the prince out again, took him with them, and did not bury him, but rather carried him around Mutok. Then they arranged a great festival, the otak. Then they built a small grave chamber on the place, Peiopue; they laid him in there. Then they made the place taboo, and no one goes there up to the present day.

During the revolt under the Spanish and German administration, the natives were found to be clever makers of fortifications: breastworks, trenches, dug-outs, palisade walls, stone houses, etc., in which they cleverly knew to use of the natural enviroment. Therefore there are enough fortifications of the most recent, as well as of pre-European time to be able to give an insight into the fortifications
of the Ponape people.

Fortifications on the Tsokes island. For photos, see Garfke: Der Aufstand in Ponape (Off-print of the Marinerundschau, 1911).
Fortifications in paiap, Ibid.
Fortifications of Auak. From Spanish times.
Fortifications on the Tol marau in Matolenim, From the Spanish times.
Fortifications on Lon takai in South Matolenim at Nan Tiati.
Fortifications on Tsap ue takai, 200 m. high, in SW Kiti
Fortifications on Tol e tiketik, at Palan in Palan, 50 m. high.

In addition, the following was told us:

The story of the Fortress Lon Takai

"We carefully climbed up the slippery wall of the structure and then stood above on the stone pile on a platform which lay approximately 15 feet over the stone wall surrounding the structure. On the ocean side, the platform is 48 feet long; its width comes to 20 feet. Tradition tells that many years ago, Nos, the chief of the Nan Tamoroi and the Nan Tiati districts built this bastion, and above on the platform, which closely resembles one of the Mexican Teokatl or a truncated pyramid, erected a large meeting house. Because he did not pay the tribute or nopue, the King of Matolenim attacked him in his mountain bastion. Yet he was pushed back two or three times with heavy casualties. Because the besiegers doubted that they could take the fortress by storm, they devised a trick and withdrew their forces. Soon afterwards from the valley of the Sapalap river, the rumor spread that a tribal war had broken out and one of the favorite cousins or the brother of the defender was in danger. The brave defender of the mountain fortress immediately decided to take his best warriors with him and to hurry to the aid of his hard pressed relatives. When he came with his relief force into the village, as would happen, the people who he wanted to help who knew, however, of the treacherous arrangement, assaulted the dismayed visitors and killed him and all of his followers. Another group stormed Lon Takai (Lar-Takai) and killed the old men, women, and children left there. Only two or three women were spared in the massacre and incorporated
into the harem of the conqueror. Their descendents still live today in Matolenim,

Tsap o takai, the old Ruler's residence in Kiti

"A one hour climbing party led us to the rim of a high plain, which lay directly under the old fortress, where a hundred years ago, a great battle occurred between the King of Kiti and Sau Kisa, and the chief of Uona. He besieged the King in his fortress, took it and killed him, all his many chiefs and warriors. The circumvallation almost forms a rectangle, whose northwest corner protrudes a little.

The north side, along the Takai ririn path was defended on a Palisade row, which is supplied with margroves, ak, the principal material for the fortification method. These estacades de mangle caused the Spanish much trouble on the two eventful battle days of November 22 and 23, 1890, before they could take the strongly fortified Kitam. At Kitam, they were 11 feet high, 680 ells long and 1 foot thick. The layout of Tsap o takai and Kitam are almost made in the same way and the Ponape people of the older and recent times were not bad masters of types of fortification and the skills of war.

Approximately 30 steps along the southeast side of the wall, one comes to a wide gap, through which, according to reports, the troops of Sau Kisa finally made a path, when they were repulsed on the other side. Without a doubt, excavations here would reveal all sorts of interesting fragments, like the per mada pan, the stone buildings, similar to the "mere" of the Maori; battleaxes, which were made from the hinge part of the large Tridacna shell; head decorations and neckbands, which are similar to the north american "wampum," with which the warriors abundantly loaded themselves before they went into battle. Lampoi en sapal is named as the builder of walls.

On the Takai ririn path, we visited the site of the old village on the northwest side. Very close to the former residence of the unlucky King of Kiti, we saw a raised platform, which is named mol en nanamariki, where during the siege, the King used to sit with his advisors and warchief, Kaeka in a ceremonial gathering. Some of the
basalt blocks of which the platform consisted, were almost 4 feet thick. The site of the King's house was occupied by a modern cookhouse, which was recently covered with sago palm leaves. All around, signs of fresh cultivation were noticeable and revealed a practical and industrious owner. There one saw breadfruit groves and well-weeded rows of plantains. Kava cuttings were planted and flourished. Yam tendrils everywhere wrapped themselves around the tree trunks. Many garlands were already brown and yellow and showed that the buried tubers were ripe for digging up. From the northwest corner there was a beautiful view of the wide, notched outline of Ant Island and the three long islands of Pakin appear a little to the right of it.

Exactly at the place where we sat, the King of Kiti had offered the final resistance with his best warriors. On the northwest and southeast sides, the walls of the fortification were built either higher or had remained in better condition. Some blocks that were inserted in the structure are an ell high, an ell deep and four feet long. The height of the walls varies from 6 feet to 12 and 14 feet. Yet here also the destruction is relatively advanced. The ground before us is strewn with fragments which from time to time have crumbled off. Judging from the quantity of fragments which have fallen down, the walls must have once been considerably higher. The greatest height is found on the southeast side, where a mountain ledge which falls off steeply on the ocean side, turns into a thickly wooded slope. Here one notices a high watchtower, im ruk en tsilepa; consequently, this side appears to have been quite well protected from the approach of daring enemy, who venture upwards through the thicket lying below.

The interior of the fortress is occupied by a wilderness high grasses, ferns, bindweed, weeds and blossoming shrubs, among which the pleasant red and yellow thorns of the Katin (Ixora), the large, white bells of the wind and the magnificent, blue calyx of a rough-leaved bush named mateu are particularly noteworthy.

After our visit, we went inland from the northeast side, where our leader wants
to show us still other ruins. We arrived at an old stone platform, lempantam, which was overgrown with wild ginger. On it a wide and flat piece of basalt lay, that looked like a long table and is hollowed out deeply in the middle. Previously, Kava was pounded for the King and his followers in it. Here it is called pel en mau, that "consecrated to the good purpose" or the "house of joy;" the everyday name for the instrument is pat a lap or the "large stone."

Close nearby in 1839, a small bronze canon was found and taken with by the owners of the "Larne," whose condition threw some light on the, ipse dixit, Spanish, who maintained that the ruins in Ponape are the work of pirates or old navigators of their country. The people of this vicinity in Kiti possess the tradition of a band of men clothed in iron, who landed on the island and although they were attacked in great number, they defended themselves a long time and proved themselves able to be wounded by axes, clubs, throwing speers and slingshot stones. Finally the native destroyed them by driving their long lances through their eyes into their skull. From this Kiti tradition, one can conclude with certainty the annihilation of a landing party of armed men, who had arrived in these waters on one or more ships of an earlier navigator.

A bit further, we arrived at 5 round stones, pai' n uit, good luck stones, that looked like canon balls and lay next to each other in a pit. "I see the eggs and the nest," I said to Au in the picturesque way that the natives appreciate, "but where are the birds who laid them? Do you believe they will miss one, if I acquire one for myself?" The old man giggled quietly, but then assumed a serious note: "The birds," he said, "are nearer than you think." He pointed out to me that the air is full of invisible spirits which can see us and that would serious consequences would occur if we concerned ourselves with the stones, which, as it appears are used now and then for a type of divination. The place is named Itet and the circumuallation, Pan Katera, a stone work near Nan Tauas, three names that are borrowed from the sacred places on the other side of the border of Matolenim. Do we not see how history actually repeats itself? Kiti is jealous of the sacred
places of its hated competitor, Matolenim and makes itself a consecrated place to where one makes pilgrimages and can pray under the sacred names of the old, traditional designations, the same names which, to a certain degree, have an appearance not more closely described,

The circumuallation, which is named Pan Katera and does not resemble the spirit-filled and comfortless prototype in Matolenim, is bordered by kava beets and shaded by some beautiful karit trees. Nan Tauas is the wall work which was erected of the usual basalt blocks. It is 10 feet high, 30 feet long, 30 feet wide and densely overgrown with bush.

Earlier it was a sacred place. In the middle up high, there are two 8 foot deep holes. They are the graves of the unlucky King of Kiti and his advisor, Kaeka, who were buried here after the great battle in which they fell. The wall work is erected in the same way as its cousin-in-name in Matolenim. Yet, as often the case with an imitation, the work is carried out in a smaller scale and is unfinished. On Ngatik island which lies approximately 30 miles further to the west, there is another Pan Katera, a rough stone harbor, that in part was destroyed by vandel's hands of ne-phyte natives in later times.

Several years ago the flat cover stones of these graves were moved aside by treasure hunters, who looked for moni vaitata or red money, i.e., gold. Some fool or another, who perhaps wanted to make a joke, had spread the rumor of a fairytale of buried treasures. Their search however, only unearthed a few decayed bones. And if they had found money, it would not have been worth their efforts."

The Story of the War between Kiti, Pe1an, and Uona.

A man with the title, Nān sau set en Pe1an went to the Nanamariki en Kiti to Tsap' ue takai. The Nanamariki gave him a banquet, then he slept in the Nanamariki's house. Tauk Kiti needed a merer fish. They ate it, then evening came. Both lay down. But Nan sau did not sleep, but rather went out of the house several times in order to meet the people of Palan, because he had made an agreement with them, that
they were to come in order to kill the Nanamariki. For that reason Nan sau had
gone to the Nanamariki. Shortly before daybreak Nan sau again went before the house
and met his people who had come; he said to them they should not be late and miss
the Nanamariki, who slept, and he had only a few people with him. So they came,
entered and speared the Nanamariki. In the morning they killed the people. One
of the people hurried to the Nan matau en Pelan and informed him that the man had
been caught. Nan matau came, they made him the Nanamariki and took all titles also.
Then they remained in Kiti.

A chief went away from Not, he had the title of Nan sau set en Not and came
to the Tsau Kisa to Uona. In the evening, he went to Alenian. Tsau Kisa took him
with him to his house. Both sat down and told each other all sorts of things, until
it grew dark and Nan sau set en Not was full of praise for Tsau Kisa. But the
chief did not say anything; thus the time passed until the morning star appeared,
then he asked the Tsau Kisa about the event in the state of Kiti, why the Tip en
pepe had taken it, and furthermore, why the Tip en man, who after all, were so many,
did not fight and had not taken revenge. Tsau Kisa answered that he had also al­
ways thought about it. "But I do not want to abandon my sacrifice; when my sacrifice
is finished, I want to conduct the war." Nan Sau set en Not now asked the Tsau
Kisa when he would be finished with the sacrifice. And both made an agreement.
Nan sau set en Not travelled to again to Not and counted the nights until their
agreement. Then he assembled his people around him and went to Kiti; they an­
chored in front of Esil and waited until Tsau Kisa began the war against Tsap ue
takai. The people of Nan sau set en Not became impatient. But Tsau Kisa did not
appear. Then Nan sau set en Not said to them: "Do not hurry, for Tsau Kisa
cannot come tonight, he will come during the day." Then Tsau Kisa and his people
set forth, left Uona and reached Mant; they divided, formed two groups, on under
the chief, the other under the nobles. Then they went to Tsap'ue takai. The was began. They fought very bitterly on that day. The man who began the fight, named Nansau set en Pelan, sat down and asked about the condition of the fight. His people answered him that it was very difficult. Now he demanded that a man named Masor appear. When he had come, they informed Nansau set en Pelan that the man had appeared. Then he stood up, took his spear and went away in order to see him. Then he said to his people that he was no match for him. He threw his spear at him. But the man bent down; the spear flew on, as far as a merup tree. Now Masor arose, threw his spear and hit his arm; then he took him and threw him on his back, over the wall and ordered his people to kill him, and they should take care of his head wreath. Then he jumped over the wall; all the people were very frightened, they ran away, none remained.

They ran down to the shore and swam to Pelan. Nau sau set en Not pursued them with his people in order to kill them, and some escaped. Then they turned back again, came to Tiati, carried him up and went to the Tsau Kisa to Tsap'ue takai. There they made Tsau Kisa the Nanamariki and also gave him the other titles. They gave the title, Tsau en Kiti to Nan sau set en Not, and they also gave him the district of Tamorolan. So the state of Kiti again belonged to the Tip en man.

Berg reports about Palan and Kiti on December 18, 1903. Palan was not always weaker than Kiti. Over a hundred years ago, the highest chief of Panan, whose title is "Nan matau," fought the paramount chief of Kiti in Tsapuetakai, who bore the highest title, "Nanamariki," and acquired his land and title. Then the head priest from Uona, whose title was "Saukiso," turned against the Nanmatau; he belonged to the Tip en man,
like the Nanamariki of Kiti. He conquered the Nan Matau and claimed the
secular title, which is now continued, as well as the land of Kiti. During
the election ceremonies, the sacred titles have remained. Even so, the next
in rank to the paramount chief, although he is a Christian, at least during
the election when the goddess Ilake sits down on his shoulders, with his
renewal, would call out to the god Nan Zapue:

"I Saukiso er" = I am now Saukiso.

Saukiso, the same as Takosa on Kusae and Pingelap.

Ilake, the same deity as the Sinlake (female creator of all things)
in Kusae. ¹²/₃

The Story of a Man

A long time ago, a man called Lanue'itit lived in Kiti. This man was
very strong. Now a ship left the country of the whites and anchored in the
entrance of Roi en Kiti. One day the crew carried out a great shooting. The
man on the land heard the shooting from the ship, he went in the water,
climbed up on the ship, fetched the cannon, put it on his shoulder, climbed
into the water, went on land, carried the cannon away and put it down on a
mountain called Tsap' takai, until he died.

The cannon remained on the mountain for a long time up to the time when
the Ponape people became more enlightened, understood all the whites and
were no longer afraid of them, because formerly the Ponape people had been
greatly afraid of the foreigners. And one day when a ship came, which also
came from the country of the whites, and cast anchor in the entrance of
Roi en Kiti; they looked for the cannon again, and when they had found it on
Tsap' o takai, they again took it with them abroad.