

ANTHROPOLOGICAL WORKING PAPERS

A SERIES
ISSUED FROM THE PROGRAM OFFICE
OFFICE OF THE HIGH COMMISSIONER
TRUST TERRITORY OF THE PACIFIC ISLANDS
SAIPAN, MARIANA ISLANDS



NUMBER 7 & 8 (REVISED)

BREADFRUIT CULTIVATION PRACTICES and BELIEFS in the TRUST TERRITORY of the PACIFIC ISLANDS

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FEBRUARY 1964

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BREADFRUIT CULTIVATION PRACTICES and BELIEFS in the TRUST TERRITORY of the PACIFIC ISLANDS

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(FIRST PRINTING: MARCH 1960)

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FEBRUARY 1964

PUBLISHED BY LITERATURE PRODUCTION CENTER SAIPAN

THIS COMPILATION OF THREE PAPERS CONCERNING BREADFRUIT CULTIVATION PRACTICES AND BELIEFS IN THREE LOCATIONS: THE MARSHALL ISLANDS, PALAU, AND PONAPE OF THE TRUST TERRITORY OF THE PACIFIC ISLANDS, IS COMPOSED OF THE FORMER ANTHROPOLOGICAL WORKING PAPERS NO. 7. (FIRST ISSUED MARCH 1960), NO. 8. (FIRST ISSUED JUNE 1960), AND A NEW PAPER RECENTLY COMPLETED IN PONAPE.

RATHER THAN BRING THE NEW PAPER OUT AS A SEPARATE ISSUE, IT HAS BEEN DECIDED TO PRINT THIS COMPILATION IN ORDER TO ENHANCE THE OPPORTUNITY FOR RELATING THE PRACTICES CONCERNING BREADFRUIT FROM AREA TO AREA THROUGHOUT THE TRUST TERRITORY. WITHIN "MICRONESIAN CULTURE" FOR EXAMPLE, WE FIND THAT BREADFRUIT IS A PROMINANT PART OF THE DIET IN PONAPE, WHERE IT ALTERNATES SEASONALLY WITH YAM, AND IN THE MARSHALL ISLANDS, WHERE IT ALTERNATES WITH THE STARCHY TUBER MOGMOG (SOMETIMES POPULARLY CALLED "ARROWROOT"), BUT THAT IN MOST PARTS OF PALAU, PARTICULARLY THE HIGH ISLANDS, BREADFRUIT IS NOT GENERALLY CONSIDERED ONE OF THE PRINCIPAL STARCHES AND ONCE ATTRACTED ATTENTION MAINLY AS A ITEM AT SEASONAL HARVEST FEASTS AND AS A DELICACY, IN ITS PRESERVED FORM, FROM LOW ISLANDS.

AS WITH OTHER PAPERS IN THIS SERIES, THIS COMPILATION IS DIRECTED PRINCIPALLY TO THE TEACHER IN MICRONESIA AND TO THE AGRICULTURIST WHO IS INTERESTED IN LOCAL PRACTICES IN CULTIVATION. IT IS HOPED, HOWEVER, THAT THE SERIES MAY BE OF SOME INTEREST TO THE GENERAL PUBLIC AND UTILITY TO THE ANTHROPOLOGICAL PROFESSION.

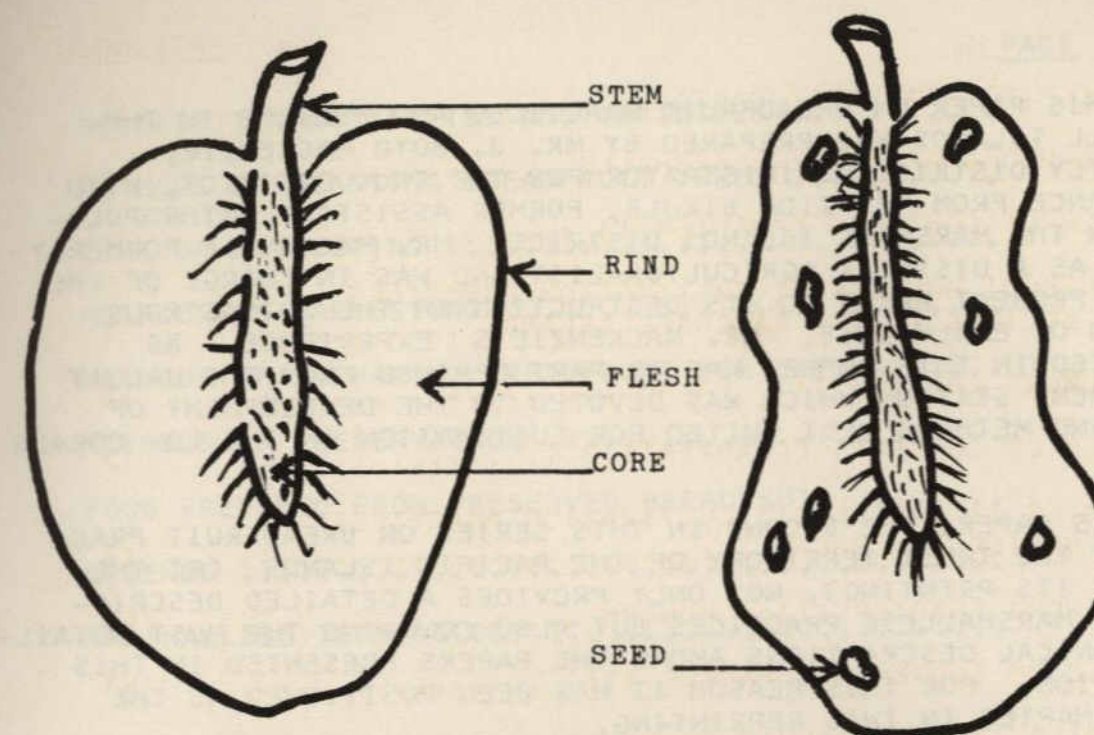
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DECEMBER 1963

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NAMES OF BREADFRUIT PARTS



SEEDLESS

SEEDED

<u>ENGLISH</u>	<u>CHAMORROW</u>	<u>MARSHALLS</u>	<u>PALAU</u>	<u>PONAPE</u>	<u>TRUK</u>	<u>YAP</u>
SEEDLESS	lemai	ma	meduu	mahi	mai	thow
SEEDED	lemai-dokdug	ma	meduueliou	mahikole	oneas	bigel
STEM	kalele	kolia	okul	mahi	popun	kol
RIND	lassas	kil	budel		unuchan	keru'
FLESH	sensin	bol	techel	kili	*tipan	thow
CORE	balasu	er	ulechel	purie	faran	uloch
SEED	dokdug	kole	dekar	kole	foun	bigel

* TIPAN is specific for flesh of breadfruit when cut away from fruit.
FUTUKAN is general word for "flesh".

FOREWORD CHAPTER I
MARSHALLS

THIS PAPER ON BREADFRUIT PRACTICES AND BELIEFS IN THE MARSHALL ISLANDS WAS PREPARED BY MR. J. BOYD MACKENZIE, CURRENTLY DISTRICT ADMINISTRATOR FOR THE TRUK DISTRICT, WITH ASSISTANCE FROM MR. TION BIKJLE, FORMER ASSISTANT ANTHROPOLOGIST IN THE MARSHALL ISLANDS DISTRICT. MR. MACKENZIE FORMERLY SERVED AS A DISTRICT AGRICULTURALIST AND WAS IN CHARGE OF THE JALUIT PROJECT PRIOR TO ITS DESTRUCTION IN THE DISASTROUS TYPHOON OF EARLY 1958. MR. MACKENZIE'S EXPERIENCE, AS REFLECTED IN THIS PAPER, WAS IN PART DERIVED FROM THE JALUIT EXPERIMENT STATION WHICH WAS DEVOTED TO THE DEVELOPMENT OF CROPS AND METHODS BEST SUITED FOR CULTIVATION IN THE LOW CORALS ATOLLS.

HIS PAPER, THE SECOND IN THIS SERIES ON BREADFRUIT PRACTICE IN THE TRUST TERRITORY OF THE PACIFIC ISLANDS (AT THE TIME OF ITS PRINTING), NOT ONLY PROVIDES A DETAILED DESCRIPTION OF MARSHALLESE PRACTICES BUT ALSO CONTAINS THE MOST DETAILED BOTANICAL DESCRIPTIONS AMONG THE PAPERS PRESENTED IN THIS COLLECTION. FOR THIS REASON IT HAS BEEN POSITIONED AS THE FIRST CHAPTER IN THIS REPRINTING.

[illegible]

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CHAPTER I

BREADFRUIT CULTIVATION PRACTICES and BELIEFS

in the MARSHALLS ISLANDS

DESCRIPTION OF SPECIES AND VARIETIES

Breadfruit is known in Marshallese by the general term "Ma". Additionally, there are many local names for specific varieties. The seedless breadfruit, Artocarpus altilis, var. Apyrena, is known by the following names: Bukdol, Bwilbwilkkaj, Kitroro, Maikwe, Madik, Majoklap, Maron, Majiloklok, Kibwedoul, Mabat, Maddak, Mejenwe, Maijokaar, Mamwe, Medak, Mejwa, Petaaktak, Mejidduul, Nonnon.

The seeded type of Artocarpus altilis, var. Seminifera, is known as Makinono, Makole, Majwaan and Metete.

General Description

The tree is called Kanma; the leaves, Bolok; the flowers, Ielme; the fruit, Ma; and the seeds, Kole. The leaves (Bolok) of the breadfruit tree usually are from one to three feet long, pinnately lobed or deeply cut. In color, the leaves are a dark leathery green and turn light brown when dry.

The flowers are unisexual. The male flowers are borne in club-shaped yellow spikes, usually six to twelve inches long. The female flower is a large round or oblong green head on a globose receptacle. The fruit, Ma, is roundish or ovoid, five to eight

inches in diameter. The rind ranges from a smooth to a rather warty texture. In the ripe fruit the rind turns brownish. The fruit has a sweet mealy pulp, the flesh color ranging from yellow to deep orange. Most varieties eaten for food are seedless.

A description of three of the seeded and three of the seedless varieties is given below:

Seeded Variety

Makinono - This is one of the four seeded breadfruit found in the Marshalls, although it is not one of the popular ones grown in the atolls. The distinctive characteristics are:

Leaves - Pinnatilobed and cut almost entirely.

Fruit - Ovoid with more transversal narrowing, very few seeds, usually found with one or two seeds, very seldom more.

Majwaan - Grown and found on almost all of the atolls in the Marshalls. This breadfruit is also the most resistant to brackish water and the hardiest grower.

Leaves - Trilobe, the center lobe is larger than the lateral lobes.

Fruit - More ovoid than the other seeded varieties, has many seeds, slightly rough rind.

Makole - This breadfruit is not found on very many of the atolls. It is perhaps the best of the seeded varieties but due to its scarcity is not as popular as the Majwaan.

Leaves - Pinnatilobed, deeply cut.

Fruit - Somewhat ovoid with a less pronounced transversal narrowing, has few seeds

Seedless Variety

Petaaktak - This is the most popular and sought after breadfruit. It is perhaps the largest of the breadfruit found in the Marshalls.

Leaves - Pinnatilobed, very large leaves.

Fruit - Ovoid, more spherical than others, seedless; color of flesh when ripe, light yellow.

Bukdol - Another of the favorites and one that is found on almost all the atolls. This is the second most popular of the breadfruit varieties.

Leaves - Pinnatilobed.

Fruit - Round, rough rind, pale yellow flesh, seedless.

Mejenwe - This seedless variety is very much in demand by the Marshallese although there are very few trees known in the Marshalls. The fruit is considered one of the best eating.

Leaves - Pinnatilobed.

Fruit - Ovoid, fairly smooth skinned; color of flesh when ripe, dark yellow.

METHODS OF PLANTING BREADFRUIT TREES

Propagation by rooted cuttings. "Enonajo"

This is perhaps one of the commonest methods used in the Marshall Islands. If this were done intentionally by the Marshallese it would be referred to as "layering", but none of this type of root propagation is known. Propagation from rooted cuttings is commonly known as the root-sucker method. A sucker is a stem which springs up from a root portion that is usually underground or in many cases from a root laying on the top of the ground. The suckers arise from the adventitious buds on the root. This root-sucker when it is one or two feet high is cut from the main root. It is carried to a new location and planted. When it is to be carried long distances, the Marshallese usually place it in a can or wrap it with leaves and keep the roots damp. The Marshallese name for the root-sucker is "enonajo" and for the root, "okar."

Propagation by branch cutting. "Rabut"

This is another common method of propagation used by the Marshallese. A branch about a half an inch to an inch thick is cut off from the breadfruit tree and stuck into the ground. This cutting is usually two or three feet long, although cuttings have been seen that are five to seven feet tall. Whenever they use cuttings that are longer than three feet, the cutting is secured by lashings that hold it in place. The small cuttings as a rule are not lashed.

Propagation by air-layering. "Rabut"

In this method of propagation a young shoot coming off of a branch is used. The first node above the branching is used. The bark around this node is stripped and damp coconut fibre is then wrapped around the stripped node, soil is usually added to the fibre, and this is all wrapped with coconut leaves. The mid-rib of the coconut leaf is taken out before being used as a wrapper. This is usually done during the rainy season so that the entire ball is kept damp. The branch usually takes about two to four months before rooting. The rooted branch is cut just below the ball and immediately planted. This method is called "Rabut" and the leaves wrapped around the fibre, "Kimij."

Propagation by seed.

The Marshallese do very little propagation by the seed method. It is very seldom that a seed is taken and deliberately planted. This usually happens when a visitor is returning to his home atoll or island and may take a seed from one of the breadfruit that he does not have on his island.

Usually, the Marshallese wait for the seeds to sprout under the trees, then dig the seedlings up and move them to a new location. They also let the young seedlings grow where they may come up. This method is usually called "Ine." The "Ine" is used preceding the name of the breadfruit such as "Ine Makole, or Ine Mejwaan", etc.

Ceremony found during the planting of breadfruit

Each atoll, island and family group has its own ceremony for the planting of breadfruit. The planting of breadfruit is usually done between seasons of harvest and mostly during the rainy season. The usual ceremony consists of a song which is sung while the people are engaged in planting. A song on Mejit is as follows:

"The breadfruit on Mejit comes and remains around the house;
The pandanus on Ailuk comes and remains around the house;
The ducks* on Milli come and remain around the house;
The breadfruit tree brings and brings numbers countless
as sand and gravel.
Cool, oh cool,
Use the best of my food."

*The word "ducks" in this song very likely means a seabird with webbed feet.

TIME OF HARVESTING

First harvest season.

The first and longest harvest season comes during the summer months, starting usually in the middle of May and ending in August. There are usually only a few ripe breadfruit at the beginning of the season. The heaviest part of the season comes during the end of June and through almost all of July. The season falls off the first of August and usually by the end of the month there are only a few scattered ripe breadfruit left.

Second harvest season.

There is a very light season during December and the first part

of January. Not all the trees bear during this period and usually there is only a quarter as much as the summer crop. There is barely enough breadfruit to go around, especially in the large villages during this period, and many of them depend on other islands supplying them with fruit.

METHODS OF HARVESTING

Popular method.

The most popular method of harvesting is to use a long pole with a forked end. This is called "Keinkom." The harvester stands on the ground, reaching up to knock the breadfruit from the tree to the ground. Using this method, anyone can harvest the breadfruit. The pole is usually of native wood and if there is none with a forked end, the harvester takes a smaller piece and ties it on the end of the long pole with sennit producing a forked end. The forked end is slipped between the breadfruit and branch, the stick is jerked in such a way so that the breadfruit is torn from the branch.

Other methods.

The younger men of the village usually use a climbing rope (Toinkomkom). It is a short rope tied together and is slipped over the feet. The climber puts his arms around the trunk of the tree, raises his feet upward, pressing the rope against the trunk and pushing at the same time by moving his arms up the trunk. The

rope is used to come down the tree. The fruit is usually thrown down from the tree to the ground or to someone who catches the ripe fruit.

METHODS OF PREPARING BREADFRUIT FOR EATING

Cooked breadfruit.

Most of the breadfruit in the Marshalls is picked for cooking when it is in the mature firm stage just before the fruit begins to ripen. The breadfruit at this stage has a bland flavor. The ripe breadfruit is sweet and not considered as good as the unripe fruit for cooking.

Kwonjin

Perhaps the most popular way of cooking breadfruit is that known as Kwonjin. A shallow pit is made and coral rocks which are heated red hot are placed in it. The green breadfruit is laid over these hot rocks and roasted for approximately two hours. It is then removed from the pit and the burnt outside rind is scraped off with a shell scraper (Jukke).

Ainbat

In this method the breadfruit is cut into halves and placed in a large pot of hot water. It is boiled for approximately an hour or until fairly soft. The cooked portions are then left to cool and are eaten with other foods.

Kobjar

In the method known as Kobjar, a pit about a foot deep is dug and coral rocks placed in this pit. The Marshallese call this an

"Um." The coral is heated and the whole breadfruit is placed on these rocks. Dry breadfruit leaves are then placed over the breadfruit. An old mat is placed over the dry leaves and covered with sand. The fruit is left in this ground oven for about two hours. It is then removed and left to cool before being eaten.

Breadfruit cooked with other ingredients.

Jakkob

A green breadfruit is cut into small pieces with the rind and core removed. The slices are placed in boiling water and cooked until soft. They are then mashed and mixed with the juice of grated coconut meat.

Boljei.

A mature breadfruit (immediately after it starts to ripen) is taken and the core and rind removed. The hole left by the core is filled with thick coconut juice. The fruit is placed in an underground pit and baked for about an hour, after which it is removed and cooled before being eaten.

Breadfruit seeds and flowers.

Seeded breadfruit is usually cooked in an underground pit over hot coals. The cooked seeds are also eaten. Another method is to take the core out of a ripe breadfruit, fill it with coconut juice, and bake it in the earth oven. This gives added flavor to the breadfruit seeds.

The flowers of the breadfruit tree (Ielme) are not eaten by the Marshallese.

METHODS OF PRESERVATION

There are only two known methods of preservation in the Marshalls.

Bwiru

The breadfruit is cut into halves and these are placed in a net-like bag (Drew). The bag is placed in the ocean and left to float on the surface of the water. It is left in the salt water for approximately 12 hours, then removed. The contents of the bag are placed on coconut leaves and covered with more coconut leaves for three nights. This makes the mass soft. A hole sufficient in size is dug for the amount to be buried, the inside of the hole being lined with dry breadfruit leaves. The soft breadfruit is placed in this hole and covered with dry breadfruit leaves. Flat coral rocks are placed on the dry breadfruit leaves to pack it. Everyday for two weeks, the breadfruit is taken out and the leaves renewed. At the end of this period the preserved breadfruit is ready to eat. It is usually packed in coconut baskets (Ieb) and replaced in the pit and covered with dry breadfruit leaves. These leaves are again replaced once every week or every two weeks until the preserved breadfruit is used up.

Jankwin

The core and rind are removed from the fruit and the fruit is cut into halves. The breadfruit is taken and packed in coconut

leaf baskets (Ieb). This is placed in an underground pit oven, covered with leaves and a mat, and left to cook overnight. The next morning the breadfruit is taken out and spread on mats in the sun. It is left until it is dried at which time it is rolled and pressed into a compact mass. This mass is rolled into pandanus leaves making a cylinder usually about 12 to 18 inches in length. This is tied with sennit and kept until ready for use.

FOOD PREPARED FROM PRESERVED BREADFRUIT

Ieok

The preserved breadfruit is taken out of the pits, washed and kneaded. It is mixed with coconut milk and a coconut syrup and wrapped in green breadfruit leaves and then placed in an underground pit and baked for about two hours. A similar dish with the addition of mashed pumpkin is also made. The cooked packages of breadfruit are left to cool before being eaten.

Bitro

A pot containing water and sugar is placed over a hot fire. When the water is boiling, little balls of bwiru (preserved breadfruit), are dropped in the pot and left for approximately two hours. Another method of preparation is to place little balls of bwiru in hot grease and fry until golden brown.

Chubwe

This is prepared the same way as Ieok, only instead of being

baked underground the preserved breadfruit is placed over hot coals in an open pit.

LEGENDS

How the Marshallese from Milli Atoll obtained the breadfruit tree.

In the old days, there was a woman staying on Milli Atoll at Bokorobban Island who had seven children, all of them boys. Each had only one eye except the youngest one. The older boys and the mother called the youngest one "Bwe Bwe" (crazy), because he had two eyes. They all treated him very badly except the sixth brother.

On the island of Bokorobban where the family lived, there were no breadfruit trees. The mother knew that on the island of Jelbon, across the lagoon from her island a breadfruit tree grew. There on a weto named Lojit (Sea Water) grew the only breadfruit tree in the Marshalls. The breadfruit tree was called Ma en an Kiru eo, (The dog's breadfruit tree). One day the mother told the older boys to go across and get some breadfruit. She told them where it was located but cautioned them that they were not to tell the youngest son about this. She told them that they were to make no noise of any kind when they were getting the breadfruit, especially not to talk loudly.

Early the next morning, while the youngest brother was still asleep, the brothers left by canoe for Jelbon Island. The youngest brother knew that they did not get the breadfruit from their island

and also knew that the brothers left Bokorobban early in the morning before he got up.

Early one morning before his brothers awoke, Bwe Bwe hid in the canoe and went to sleep. The brothers sailed off in the canoe not knowing their younger brother was on board. However, just before they reached the island of Jelbon, the youngest brother woke and yelled, "Give me the rope so that I can tie up the canoe to the reef." His brothers were very angry and told him to keep quiet. They went ashore very quietly and crept to the breadfruit tree. The oldest brother climbed the tree and passed the breadfruit down to the other brothers. The youngest brother yelled to his brothers that they were too slow and to hurry and pass it down to him. This woke the owner of the tree. He saw the boys stealing the breadfruit and chased them. They ran to their canoe and sailed back to their island.

When they reached their home island the youngest brother ran and told his mother what had happened. While talking to his mother, he saw a big dog running towards the house. He ran to the canoe and grabbed the mast. His older brothers, when they saw the monstrous dog coming, all fell down unconscious. The youngest brother killed the huge dog with the mast. When he looked around, he found that his brothers had all died from fright. He prepared them for burial but he kept the foot of his brother who had been good to him and planted it on the island and it grew into a breadfruit. He also took a branch from the dog's breadfruit

tree and planted it. When the branch grew into a tree, it was different from any others. It had the best tasting fruit, the best color fruit, and the tree never grew tall but always remained the same height. In this way, breadfruit trees came to Milli Atoll.

MARSHALLESE TERMINOLOGY

A. Breadfruit tree.

1. Tree	Karma
2. Leaf	Bolok
3. Root	Okar
4. Root-sucker	Enonajo
5. Branch cutting	Rabut
6. Air-layering	Rabut

B. Breadfruit

1. Fruit	Ma
2. Stem	Kolia
3. Rind	Kil
4. Flesh	Bol
5. Seed	Kole
6. Core	Er
7. Seedling	Ine

FOREWORD CHAPTER II
PALAU

THIS PAPER, THE FIRST ORIGINALLY ISSUED IN THE PRESENT SERIES, WAS PREPARED BY DR. ROBERT K. MCKNIGHT, CURRENTLY COMMUNITY DEVELOPMENT OFFICER FOR THE TRUST TERRITORY, MR. ADALBERT OBAK, FORMERLY ASSISTANT ANTHROPOLOGIST IN THE PALAU DISTRICT, AND MR. M. EMESIOCHL, AN ASPIRING STUDENT OF ANTHROPOLOGY FROM PALAU.

AT THE TIME OF WRITING, MARCH 1960, DR. MCKNIGHT WAS SERVING AS DISTRICT ANTHROPOLOGIST IN THE PALAU DISTRICT AND, IN THIS CAPACITY, WAS ENABLED TO ENGAGE IN VARIOUS STUDIES OF AN ANTHROPOLOGICAL NATURE, HAVING SUBSEQUENTLY RECEIVED HIS DOCTORATE DEGREE FROM THE OHIO STATE UNIVERSITY ON THE BASIS OF A STUDY OF COMPETITIVE SOCIAL FORMS IN PALAU-AN SOCIETY.

WHILE THE PAPER LACKS THE BOTANICAL SOPHISTICATION OF MR. MACKENZIE'S CHAPTER ON THE MARSHALL ISLANDS, IT REFLECTS, IN MANY RESPECTS, THE INTERESTS AND PERSPECTIVES OF AN ANTHROPOLOGICAL OBSERVER.

JOHN E. DEYOUNG
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SAIPAN
DECEMBER 1963

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CHAPTER II

BREADFRUIT CULTIVATION PRACTICES and BELIEFS in PALAU

Breadfruit, while at one time honored by a special feast at the time of first harvest, is not now, and perhaps never was, an aristocratic staple among the high island people of Palau.

Though quite important and prestigious among the low islanders of the Palau District, breadfruit does not compete in social prestige with favored taro varieties or with recently acquired tapioca in the high islands.¹ One preparation of the fruit, with the fried slices serving like the bread of a sandwich, is thought of as a food specially adapted to European taste, but it does not appear commonly at mixed Palauan-American feasts. Another, a fermented preparation which was among the first and most feted staples of the various low islands, once brought a high price when sold in quantity to high-island titled-elders, who would gift-distribute the food to village clans.

Quite commonly, breadfruit is thought of by Palauans as particularly important to the diet of other communities. Because of its secondary place in the common high island diet, there are Palauans who feel that breadfruit was introduced fairly recently, though in pre-Western contact years. As we will see later, however, the breadfruit tree plays a small part in one of the more

1. Anthropological Working Paper, No. 6. Taro Cultivation Practices and Beliefs, Part I The Western Carolines January, 1960

venerated and supposedly ancient myths of Palau.

BREADFRUIT VARIETIES IN PALAU

Under the general name meduu,² breadfruit occurs in Palau in six named varieties. These varieties, according to Palauan sources, breed true when root-suckers (or in one instance seeds) are used as planting stock.

Chebechab. This is a seedless variety distinguished by leaves that are deeply cut into many lobes and veins that radiate from the main stem that are quite pronounced on both sides of the leaf. The name means "to be sprinkled with ash", or more commonly "to be dusty". The fruit of this variety, best prepared by roasting over coals, becomes "sprinkled with ash" in the process.

Errud. Seedless, the name given this variety is related to the word mengerrud, used specifically in reference to a canoe that has had its outrigger placed on other than the original side. Such a canoe can hardly be distinguished from other canoes. The variety is similar to others: its leaf structure is similar to

2. In each case a "common" spelling of Palauan words has been used. The principal cautions to be used in reading the words are (1) letters may be treated as in the German alphabet; (2) "ch" always used arbitrarily to mean the local glottal stop, where the reader cannot maneuver this tonsular exercise, the "ch" is best dealt with as though silent. The rule has been followed to italicize (underline) Palauan words when they first appear, and where they are usually defined, in the text. In addition an attempt has been made to place each Palauan word (other than proper names) in the glossary following the text.

Chebechab, though not so pronounced; its fruit is heavily spiked, but not as thorny as the next variety, Etelulouch.

Etelulouch. The name of this seedless variety is composed of the nominative prefix ete and the word louch, meaning goose-bump. Reference is to the distinguishing sharp, hard spikes on its fruit.

Meduueliou. Literally the "breadfruit of below", this tree is found mainly in the Southern, "lower" (Eouldaub) regions of Palau. The fruit is well seeded and the meat of the seeds is eaten. The fruit is commonly used in the preparation of the local variety of fermented paste, telib.

Meriaur. According to Palauan sources, the name of this seedless variety incorporates part of the name Angaur and suggests its introduction to Palau proper from this island which is located just beyond the Southern extremity of the barrier reef. The leaves are somewhat larger than other varieties and the spikes on the fruit are very flat and soft.

Olekidel. This seedless variety produces fruit in clusters of four or five each (others seldom exceed three). The name, related to the word klekidel meaning cluster or collection, reflects this characteristic.

As suggested, the seeded variety, Meduueliou, is not common on the central high islands of Palau but occurs in numbers throughout the limestone rock islands as well as on the low islands of Kayangel, Peleliu and Angaur of the Palau archipelago,

and is traditional to the low islands of Sonsorol, Pulo Ana, Merir and Tobi located southwest of Palau. In the language of these latter islanders, related to Ulithian and Trukese, the variety name is Mail. According to some sources the Meduueliou is the most ancient of the various breadfruit in Palau.

The five seedless varieties are thought of as recent acquisitions and appear once to have been more common on the high islands of Palau (except for Meriaur in Angaur) but recent agricultural expansion has seen the spread of many varieties throughout the District. For example, Chebechab were planted by experimental Palauans near the bai in Kayangel some years before World War II.

According to E. Massal and J. Barrau³ the seedless varieties might be identified as Artocarpus altilis, var. apyrena, Hort., and the one seeded variety would then be Artocarpus altilis, var. seminifera, Hort. Other local distinctions are apparently not reflected in scientific terminology.

METHODS OF PROPAGATION

As one travels along the coast of large Babelthup island, the monotony of the shore-hugging mangrove swamp is here and there

3. Emile Massal and Jacques Barrau, "Breadfruit" in Food Plants of the South Pacific, South Pacific Commission, Technical Paper No. 94, pp 18-21. The assistance of Mr. Robert Owen, Trust Territory Staff Entomologist, is acknowledged in specifying the various other botanical names in the text.

interrupted by the irregular foliage, often somewhat taller and lighter green, of trees near a village or former village location. The commonest of the larger village trees are the coconut and breadfruit, both are important to a functioning village and are therefore planted and maintained in number near at hand.

The typical method for propagating the breadfruit is to cut a section of root a few inches to either side of a sucker and to use this as planting stock. An exception is the Meduueliou variety which may be propagated by the planting of its seeds. Typically no fertilizer is used in the planting of root-suckers or seeds, and ground conditions for planting appear to be a matter of little concern. There are a few obvious restrictions, for example, neither breadfruit trees nor most other plants will thrive on the bald, bauxite hills of Babelthuap, and breadfruit will not grow in Palau's marshy swamps, but the latter are usually reserved for taro anyway. The dry ground in and bordering cultivated taro swamps is a particularly likely spot to look for the quick growing and popular Meriaur variety. One variety, the seeded Meduueliou, is held to be more tolerant of salinity than are the other Palauan varieties. For example, the Chebechab that are planted on the low island of Kayangel are reportedly weakened by brackish ground water and salt spray.

Depending on local soil conditions and some differences among varieties, the Palauan breadfruit will bear fruit from as few as

four to as many as eight years after planting. Meriaur is reputed to be faster maturing than other varieties. In Palau, as in many other locations, the trees produce one main harvest period and a longer period of minor harvest throughout the year.

HARVESTING THE BREADFRUIT

The general word sim refers to a tree in the state of bearing fruit in Palau. After the trees bloom, generally in May, there is a main harvest, klouelsium which lasts from August until October. This main harvest season is followed by the remus, a word similar in sound and meaning to "remains," referring to the continuing minor harvest that may last until as late as February or March.

The ripe fruit may be spotted by a slight yellowing of the green color and the fact that the spikes are slightly flattened or soft. In general, all of the fruit of a particular cluster will not be ripe enough to pick at the same time - for example, it is quite common to harvest two out of a bunch of three, leaving the third for a later picking.

The fruit is harvested with the help of a bamboo ladder, consisting of a long stout stock from which the branches have been cut so as to leave stubs or "rungs". Ideally, harvesting requires two individuals, one up in the tree collecting, or

knocking off the fruit, the other below receiving the fruit and cautioning the climber repeatedly. In Palau, as elsewhere, the task tends to have its occupational risks. In 1957, a man fell in Ngaraard, and in 1958, a woman fell from a tree in Koror. The former died, and the latter suffered multiple fractures of her arm which was consequently amputated.

The individual in the tree makes use of an instrument called, in Koror and the high islands, a kaiu, and in Peleliu, an osunguul. The two are functionally similar though the latter is rather more elaborate. The kaiu may consist simply of a straight pole with which to knock the fruit from the branch. If only a few are needed for cooking, this technique is often used. Or the kaiu may be equipped with a cross-piece tied near the working-end at an angle; this instrument sometimes called an osang is inserted between the fruit and the limb, and the harvester is enabled to twist and break the stem and yet grip the fruit itself. The Peleliu osunguul is identical to the osang except that a bag is installed below the working-end in such a way that the fruit will be caught if it slips out between the pole and cross-piece. In either case, where the fruit is retrieved, rather than simply dropped, the climber has a basket into which he places the harvested fruit till the basket is full, then lowers it by rope to the man below.

While individual tree owners may well cajole the local gods to increase their harvest, or to ruin that of another, there would

appear to have been few rituals associated with the growth and yield of the trees. In the Southwestern islands of the Palau District there appear to have been fairly elaborate patterns of prayer for a large harvest and of first fruit distribution, with the first of the harvest of breadfruit going to the Tamol or chief and to the lesser chiefs before the general community engaged in feasting.

In Palau proper the time of first harvest, in August, was met by prayer in some places, by friendly inter-village visits in others. Thus in Peleliu, where the seeded Meduueliou was an abundant and prized food, an island-wide ritual attended the early ripening of the fruit, when the fruit was in that state of ripeness particularly attractive to the fruit bat. The women of each of the five villages of Peleliu would assemble at Ngerdelolk, the village of the powerful Palauan god Uodel, and render a prayer termed: "Close the Mouth of the Bird". (Palauan charm may be either bird, bat or animal). In contrast to contemporary drastic fruit-bat damage, say Peleliu elders, the power of Uodel on behalf of the island was sufficient to protect the entire harvest.

In the same season, at various locations throughout Palau, inter-village visits marked the ripening of the breadfruit. These visits, which came under the general class Klauklechedaol, or visit between affiliated groups, were characterized by the

serving of newly ripe, cooked breadfruit appetizers and were known by the descriptive term Omengal Mark, literally, "to eat the ripe (fruit)". Actually the word mark in this usage has the double meaning of "ripe" and "ready to eat after preparation". In the case of the Omengal Mark, the recipe is typically that called edellumel, in which the ripe fruit is stored for a few days, to increase the softness of the fibers, then boiled in water. Festivities were not elaborate, consisting of little more than the visitors being cordially hosted during their stay in the bai, where they were served edellumel along with conventional foods, and where friendly host-guest relations and visits obtained. After two or three days, the guests returned to their village with additional gifts of breadfruit which were distributed among them by clan and intra-clan rank.⁴ The last of these Omengal Mark, observed by an elderly source occurred when he was child around the turn of the century and consisted of a visit by the villagers of Ngerubesang in Melekeiok municipality to the neighboring hamlet of Ngesar. Another Omengal Mark, made famous by the treachery of the hosts, will be described briefly in later paragraphs concerning the place of the fruit in Palauan lore.

4. For a discussion of Palauan society in general and including such status-oriented distributions, see H. G. Barnett, Palauan Society, University of Oregon Publication, Oregon, 1949

PREPARATION AS A FOOD

According to one elderly woman, who heard it from her mother, ripe breadfruit was once eaten raw in Palau. Rather unthinkable now, the source felt that the eating of mark, or ripe, raw fruit was once necessitated by caution in wartorn pre-contact times. There would appear to have been periods in Palauan pre-history when the kindling of a fire involved considerable risk to the cook, and legends describe the difficulties of villagers who found themselves unable even to roast fish without the disastrous attention of human enemies or ravenous trolls.

However, the six recipes known to the sources all call for rather more elaborate preparation.

Perhaps the simplest preparation of breadfruit, and one of the commonest, is called omlul, a word meaning to burn or roast over hot coals. As suggested above, the preferred variety for this preparation is Chebechab.

The roasted breadfruit may be eaten as is or further prepared in a dish called elebesoi, which is the name given to a flat, pancake-like fish. In this recipe the roasted fruit is mashed into a paste, flattened into a cake about one-half inch in thickness and served with coconut milk as a topping.

For edellumel, mentioned in connection with the Omengal Mark village-visits, the whole fruit is placed in a cooking bowl, with a banana or taro leaf cover, and boiled in water. When sufficiently

boiled, the fruit is removed, peeled and cut into cubes for serving.

In the preparation called ilumel, which is a word meaning "drink", hence, "soup", the whole fruit is kneaded to pulpy softness, placed in a bag, formerly coconut-bark, now any coarse material, and pressed. The uliokl, or pulp-cake, is discarded while the filtrated liquid is heated, a pinch of salt added, and drunk.

Far the most intricate preparation known in Palau is called telib. The word itself has the common meaning in Palauan "plan" or "decision", with the additional meaning "built" or "put together". The apparent connotation of the name is that the complex preparation of telib is no mere recipe, but is comparable to a construction project. Peleliu is the traditional "home" of telib and, while the appellation "telib-eater" is highly stigmatic, it is said that in old times Palauan merchants from various telib producing areas would bring large numbers of packaged telib to high-island villages such as Koror, where the stock would be bought at a high price in Palauan money by local titled-elders for gift-distribution throughout the village clans.

The manner of preparation appears to differ throughout Palau. In this report, one style has been taken as a sample with brief comments on others. Since Peleliu is acknowledgedly famous for the preparation - elders of Peleliu claim to have invented the name telib - the Peleliu recipe has been selected.

If a generalization can be made, it appears that one style is common to the high islands, one to the low islands of Palau proper (i.e., Peleliu, Angaur and Kayangel).

As suggested, in Peleliu where the fruit is more coveted, rather special care is taken in harvesting. Upon harvest, the fruit is prepared by shredding off the spikes and peel, using a special shell, the kikoi, which was once gathered for this purpose from central Palau reefs. When peeled, the stem is removed and a sharp wood instrument, the ongeched, a little longer than the fruit, is inserted, pried, and the fruit is broken into two parts. The seeds are then removed from the split fruit. The fruit is now placed in a special coconut basket, called blokt, which has been lined with the large leaves of the poisonous tonget plant (Semicarpus sp.), and the basket is woven shut.

Baskets so prepared are then placed in the ocean for a period of two or three days. This is done by securing a long rope to a stake or heavy rock under water and stringing the baskets, as they are prepared, out along the rope. Here we find a point of difference with the high islands where the ripe fruit is simply stripped of spikes and cut in chunks which are directly tied to stakes under water for about seven days - the high island varieties are seedless, making the procedure possible, and, as the sources report, the water around Peleliu is extra salty,

accounting for the soaking-time difference.

Thus, in two or three days the first baskets deposited for soaking are removed, brought to a platform, odekel, near the dock and allowed to drain. After several days, the baskets are taken to the residence of the individual concerned, and the contents repackaged in a larger (about three times) coconut basket, oldekiaol, again lined with tonget leaves. In this basket, the telib is placed on a platform near the residence and on top of several baskets so prepared is placed a large board with heavy stones on top. The telib is stored in this condition. Here again is a contrast with high island procedure in which the telib, removed from the ocean, is carefully washed and buried in a leaf-lined pit for storage.

For eating, the telib is removed from one of the baskets, as needed, washed two or three times with sweet water and blended with coconut milk and sirup. This blend is wrapped in a neat package with banana leaves or the leaves of ochemaremark (an epiphyte) bound with twine and boiled in water. After the boiling, the telib is finally ready for eating.

In the Southwest islands of the District, a preparation similar to telib, there called haparifo, is the established recipe for breadfruit. The only other traditional preparation these islanders recognize is to cook the fruit on pre-heated stones, however, the writer has been served a simple preparation,

said to be of Palauan origin, of breadfruit boiled in coconut milk and sirup while visiting in Sonsorol.

In the seven or more extinct villages of the rock islands, between Koror and Peleliu, an important food item is reported to have been the fruit of the two trees Wosch (Ficus sp.) and Oseked (Ficum sp.?). Both trees produce a small fruit, practically seedless, which grows directly out of the trunk and main branches of the tree. If the fruit of the Wosch is eaten without scraping off the peeling-fuzz, a strong stinging sensation is felt on the lips and mouth, but otherwise, it is quite good. Mention is included because, according to contemporary Palauan sources, both of these fruits were once used by rock island villagers to make a preparation comparable (in recipe and function, though probably not taste) to telib.

As mentioned in the introductory paragraphs, one preparation of breadfruit, erredochod el meduu, is felt to be especially adapted to European taste. Apparently Europeans throughout the Pacific fairly early hit on the practice of frying breadfruit slices in coconut or pork oil, producing a fried potato effect. In Palau, credit is given to the legend-ridden German administrator, Winkler, for similarly frying breadfruit and using the slices for the "bread" of an egg sandwich.

The meat of the seeds of the Meduueliou variety is eaten in Palau. The preparation, properly called dekar (ebiei is used as

well but refers to the raw seed) consists of simply boiling the nuts in water. When the Meduueliou are seeded in Peleliu, as in the preparation of telib, the seeds are actually maintained in three different classes based on maturity: mechas (ripe, black stones) are considered best; elebiei, slightly lighter in shade are almost mature; emau which are whitish are merely headed in the direction of maturity. The meat or endosperm of the seeds may be extracted and eaten after boiling. However, for special guests and toothless elders, the meat is ground, mixed with shredded coconut and shaped into soft balls which are sliced for eating.

Finally, and perhaps not the least important, the white latex, uuid, or specifically udel a meduu, of the breadfruit tree is occasionally collected and chewed by Palauan children.

The only preparation of breadfruit capable of being stored for any length of time is telib which, properly stored, will easily last from one main harvest to the next, a year later. In olden times in Peleliu, it was common to see several storage platforms, prepared throughout the early months of heavy harvest with the paste removed occasionally from the oldest storage areas.

In the contemporary Palauan diet, cassava, or in Palauan, diokang, introduced during a period of food shortage in German times, has risen in popularity partly at the expense of breadfruit. In a preparation of cassava, called billum, the tapioca

is shredded, pressed into sausage shape, wrapped in various leaves including croton or young coconut leaves, boiled in water and served in an appearance that is similar to telib, though by no means as odorous.

While telib approaches a "classic" recipe for breadfruit, it was felt by one source that because the fruit is not a first food in Palau, it has been subject to fashionable change and disguise in recipe. Thus, unlike bread for the West or kukau, a taro variety, for Palau which may be eaten day-in day-out without variation, the source felt that Palauans would soon tire of a regular diet of breadfruit unless the form of preparation were varied.

OTHER USES OF THE TREE

The breadfruit tree, which reaches a height of 40 or more feet with a trunk diameter often exceeding two feet, is valued as a source of lumber both because of the attractively grained red core and because of its buoyancy. Typically the wood was used to make canoe outriggers and wooden bowls, though it was valued for boarding and, in the case of a large tree, it was quite suitable for the canoe itself. In the construction of the village bai, elders could, in theory at least, confiscate any suitable tree for use as siding and floor as needed. More commonly, however, only trees that seemed dead or dying - trees without leaves -

were utilized, the most prized being those which, when cut into with an adz, displayed only a thin layer of undesirable white wood beneath the bark.

Young, straight breadfruit trees were once raised specifically for their bark which, after about one week of softening in salt water, was cut away from the trunk core, rubbed and dried for use as a male loincloth.

Finally, while the flower is not eaten in Palau, the male inflorescence is reportedly used in two types of medicine. One of these is a simple application for cuts, the other, a complex medicine of many plants, was used in traditional Palauan medicine in the treatment of gonorrhea. The reason for use in this last specific preparation, while unknown to the writer, may be significant only for the reason by association that the word meduu (breadfruit) also is a slang term for testicle.

BREADFRUIT IN PALAUAN HISTORY AND LEGEND

Breadfruit participates indirectly in two prominent narratives of early Palau: one, in which breadfruit appears as a food, is a semi-historical explanation of a strong friendship bond between the villages of Ngerekesoaol in Koror and Ngeruluobel of Airai; the other, in which the tree only is mentioned, is an episode in the long origin myth, beginning with the giant, Uab, whose body became the Palau islands, and ending with the post-diluvian re-population of Palau by the offspring of Milad.

At some distant time, so the first narrative goes, the villagers of the subordinate village of Ngeruluobel were invited to attend Omengal Mark (breadfruit eating) at the politically powerful and somewhat tyrannical village of Ngerechemel. Perhaps because the villagers of Ngeruluobel had been restive subordinates, a faction of the Ngerechemel hosts set out to destroy their guests by confining them in the community house and setting the building on fire. However, before the fire reached dangerous proportions, some fishermen of Ngerekesoaol who were passing in their canoes stopped and rescued the hapless Ngeruluobel group. Since then the villages of Ngerekesoaol and Ngeruluobel have been strongly bonded by friendship.

As we suggested in the opening paragraph, there is some evidence in folklore that breadfruit existed, though in an unmentioned economic form, in very early times in Palau. The most prominent folklore reference to breadfruit is probably familiar to anyone who has seen more than a few Palauan storyboards, since about one out of every five of these modern version rafter-carvings concerns the Meduuribdal episode in the long epic of Illiuchel, better known by her final name, Milad. Illiuchel, mythological granddaughter to Latmikaik, who mothered the giant Uab, is the cultural heroine responsible, in the main, for instructing Palauans in their current technique

for cultivating taro. However, late in her demi-goddess life, when her name is Milad, she is the sole semi-human survivor of a great flood and her four children apparently repopulated Palau. It is when her main mission, re taro cultivation, is completed and Iliuochel (now called Dirrachedebsungel) is described as a very old, poor woman living childless at Ngibtal (off Ngiwal municipality) that she possessed the amazing breadfruit tree - the one depicted on so many story boards. As illustrated on the boards, this tree reached its hollow trunk down into the ocean and, when waves flooded up under the tree, fish were forced up the trunk and out onto the woman's yard. Jealousy on the part of local villagers eventually destroyed the tree and heavenly retaliation in the form of a high tide destroyed the one-time island. The escape of Dirrachedebsungel, then, became the beginning of another episode.

From the standpoint of this writing, the disappointing aspect of the Meduuribdal story is that the breadfruit tree is not mentioned as providing the poor woman with "a plentiful harvest of its fruit". One might assume from this either that it was not used for food in early times, or, probably more likely, its use as a food was accepted as so commonplace that no mention is necessary. This latter, coupled with the relatively unsung status of the fruit in Palau, no doubt explains the omission.

CURRENT AGRICULTURAL PROGRAM

While not a great deal is being done to promote this traditional food source - and in Palau pushing breadfruit into a really prominent place would be an uphill program - there has been some effort made to introduce new varieties in the Southwest islands of Tobi, Merir, Pulo Ana, Sonsorol, and even the uninhabited island speck at Helen Reef. Chebechab, Errud and Meriaur, among the Palauan varieties, have been introduced to the Southwest islands and, on a field trip within the last year, some of the trees appeared to be thriving. At some unknown time, perhaps by Japanese efforts, one unnamed variety, characterized by particularly large fruit, was introduced to Palau and, more recently, American agriculturists have introduced a new variety from Yap with cuttings distributed to Peleliu and the Southwest islands.

In general, however, while the use of breadfruit in Palauan foods is probably on a very gradual increase, and would increase more rapidly if imported starches (flour and rice) were made less accessible, breadfruit is almost hopelessly outdistanced by easily cultivated cassava which, as we have seen, substitutes for breadfruit in the classic telib recipe. While it may be logically pointed out that breadfruit provides a more healthful balance of proteins than tapioca, it is doubtful that this balance will be reversed without a direct, forceful program to accomplish this diet change.

GLOSSARY OF TERMS: BREADFRUIT

The following glossary of terms covers all of the non-English words used in the text with the exception of personal and place names. The definitions used, in many cases, are specific to the meaning of the words in the context of this paper, though they may have additional uses and meanings. Thus the word emau, here used in reference to a kind of seed, also means "facing toward" more generally. All but two entries are Palauan words and the exceptions, as noted, are Sonsorolese, used on each of the four Southwest islands referred to in the text.

Bai:	Village community house associated either with elder political groups, village clubs or guest facilities at estuary dock.
Billum:	Cassava preparation in which shredded tapioca is contained in a leaf, a betel nut spath, or currently a metal pan, and boiled for serving.
Blokt:	(1) Basket prepared from coconut leaves. (2) To have been unclosed.
Charm:	General term for animal, includes bat, bird, etc.
Chebechab:	Breadfruit, seedless (<u>Artocarpus altilis</u>), leaves characterized by deep-cut lobes and pronounced veins. Word means sprinkled with ash and refers to ash that litters roasted fruit.
Dekar:	Boiled seed of the Palauan variety of seeded breadfruit: Meduueliou.
Diokang:	Cassava or tapioca.
Ebiei:	Seed of the Palauan variety of seeded breadfruit: Meduueliou. Occasionally refers to the variety itself.
Edellumel:	Preparation of breadfruit peeled, cut in cubes and boiled in a bowl covered with banana or taro leaf.

Elebesoi:	(1) A flat, pancake-like reef fish. (2) Preparation of breadfruit in which roasted fruit is mashed, shaped into pancake, served with coconut milk topping.
Elebiei:	Nearly ripe seeds of breadfruit.
Emau:	Unripe seeds of breadfruit.
Erredochod el meduu:	Fried breadfruit slices, said to have been introduced to Palau in German times.
Errud:	Breadfruit, seedless (<u>Artocarpus altilis</u>), sharing characteristics of other varieties to a less pronounced degree. Name refers to this similarity.
Etelulouch:	Breadfruit, seedless (<u>Artocarpus altilis</u>), characterized by hard, sharp spines on syncarp. Name combines nominative prefix <u>ete</u> - with <u>Louch</u> : goosebump.
Haparifo:	(Sonsorolese). Breadfruit preparation on island of Sonsorol, Tobi, Pulo Ana and Merir. Salt-water cured, fermented preparation capable of storage.
Illumel:	Breadfruit preparation, a soup drained off mashed ripe breadfruit.
Kaiu:	Pole used to knock fruit off the branch.
Kikoi:	Clam shell once used for scraping, as peeling from fruit. Also used as a security voucher in a money loan, when equipped with a personalized broken hole. (<u>Cardium adulis</u>)
Klauklechedaol:	Community visit between friendly villages, etc; literally gathering of many (<u>klau</u>) affiliates (<u>klechedaol</u>) as friendly villages, clans, clubs, etc.
Klekidel:	Cluster of things, usually arranged for some specific purpose or function as reeds woven together for a shade, emphasis is upon state of being woven together in a functional arrangement,

e.g. not a cluster of stones or bundle of firewood, but two sticks bound together with string in a specific fashion, or poles of bamboo tied together to form a raft.

Klouelsim: Main harvest of fruit.

Kukau: Taro, Palauan variety of Colocasia esculenta.

Louch: Goosebump

Maii: (Sonsorolese) Breadfruit, seeded (Artocarpus altilis).

Mark: (1) Ripe fruit.
(2) Prepared for eating.

Mechas: (1) An elderly woman, usually head of household.
(2) Ripe seeds of the breadfruit, specifically in Peleliu.

Meduu: General term for breadfruit (Artocarpus altilis).

Meduueliou: Breadfruit, seeded, (Artocarpus altilis), said to resist salinity, characteristic of low islands in Palau.

Mengerrud: Act of reversing the position of the outrigger of a canoe, as well as all other features. Since some types of Palau canoes are uniform front and back, occasionally this act will be tried to get more speed.

Meriaur: Breadfruit, seedless, (Artocarpus altilis) characterized by soft, flat spines on syncarp.

Ochemaremark: An epiphyte, of large-leafed vine. Leaves are used to wrap prepared foods such as tapioca or telib for boiling in water.

Odekel: A platform for resting objects on, not a seat.

Oldekiaol: A large size coconut basket.

Olekidel: Breadfruit, seedless, (Artocarpus altilis), characterized by fruit clusters of four or five each. Name means collection or cluster.

Omechem: To bind or tie up with twine.

Omengal Mark: Community visit between friendly villages (klauklechedaol) characterized by serving of ripe breadfruit.

Omlul: Breadfruit preparation, roasted over hot coals. Name refers to roast or burn.

Ongeched: A pointed stick such as used to pry young coconut shoots out of the ground or a shorter one to split open breadfruit.

Osang: Short pole tied to harvesters pole (kaiu) at an angle for gripping fruit stem and retrieving fruit without dropping it on the ground.

Oseked: Fruit tree (Ficus sp?) found commonly in the rock islands: fruit is small, almost seedless, and grows directly from trunk and limbs of tree.

Osunguul: Instrument, used in Peleliu, to remove breadfruit from tree: a pole with a crosspiece tied at an angle near the working end and a basket tied on below the crosspiece into which the fruit is dropped.

Remus: Minor harvest of fruit, remainder of fruit which matures after major harvest season.

Sim: Harvest, or fruit tree in state of bearing fruit.

Telib: Breadfruit preparation in which salt cured, stored fruit is boiled and eaten.

Tenget: A large leafed tree to which many persons are allergic (Semicarpus sp). Leaves, carefully removed, are used to wrap certain foods.

Udel a meduu: White latex of the breadfruit tree.

Uliokl: Pulp cake, i.e., formed when liquid is pressed out of mashed fruit in a bag.

Uuid: Tree sap or latex.

Wosch: Fruit tree common to Rock Island (Ficus sp): fruit is small and, when eaten without scraping the peelfuzz off, leaves a sharp stinging sensation on lips and mouth. Fruit forms on trunk and large limbs.

FOREWORD CHAPTER III
PONAPE

THE FINAL PAPER IN THIS SERIES, PRINTED HERE FOR THE FIRST TIME, WAS PREPARED BY MR. PENCIL LAWRENCE, ANTHROPOLOGICAL ASSISTANT IN THE PONAPE DISTRICT, MR. MASAO KINSER HADLEY, WHO HAS SHARED WITH ANTHROPOLOGISTS VISITING PONAPE HIS REMARKABLE KNOWLEDGE OF PONAPEAN FOLK-HISTORY AND LORE, AND DR. MCKNIGHT (SEE FOREWORD CHAPTER II), WHOSE TASK IT WAS TO ORGANIZE THE DETAILED PONAPEAN FIELD NOTES ASSEMBLED BY MR. LAWRENCE AND TO TAP THE SEEMINGLY ENDLESS RESOURCES OF MR. HADLEY. SUBSEQUENT TO THE PREPARATION OF THIS PAPER IN OCTOBER 1963, MR. HADLEY HAS BEEN RETAINED BY THE TRUST TERRITORY GOVERNMENT TO SUPERVISE THE MAINTENANCE OF THE WORLD-RENOWNED NAN METOL RUINS ON PONAPE IN A PROGRAM DESIGNED TO PREVENT FURTHER DAMAGE TO THE SITE BY THE PERSISTENT TROPICAL JUNGLE.

JOHN E. DEYOUNG
PROGRAM OFFICER

SAIPAN
DECEMBER 1963

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CHAPTER III

BREADFRUIT CULTIVATION PRACTICES and BELIEFS in PONAPE

During the main fruiting season of breadfruit in Ponape, a part of the year from April through August known as rahk, food preparations tend to be dominated by the fruit of this tree. During the remainder of the year, while there are four additional minor harvests, the table is dominated by the prestigious yam. Thus, from the standpoint of actual diet, breadfruit in Ponape compares with its use in the low Marshall atolls where it is used in season and maggog, a tuber plant sometimes popularly called "arrowroot," is dug up from natural stands when breadfruit is not ripe.

During the rahk, or breadfruit season, there are four or five occasions when foods prepared from breadfruit enter into rituals of first-fruit offerings to titled chiefs. However, breadfruit in no way matches the importance of yam in social and political importance. Thus, while gifts of yams are traditionally used to seal relationships in response to gaining a title, the idea that breadfruit or a preparation of it might be used as a gift or compensation for a favor (outside of its use as a first-fruits offering) is at best a remote possibility.

In this paper, attention will be directed upon breadfruit with regard to its propagation, its preparation as a food, its use in rituals of first-fruit offerings, and its occurrence in Ponapean legends. First, however, a description of the plant in Ponape and its varieties is in order.

BREADFRUIT VARIETIES

The general term for breadfruit, both the tree and its fruit, in Ponape is mahi. Including both smooth and rough-skin types, there are over eighty names of varieties or sub-varieties recognized in Ponapean terminology.

In many instances, however, the variety is known in name only and sources are unable to relate the name to particular trees. The distinction between smooth and rough-skinned breadfruit is, of course, popularly known and used and the terms meinsahrek for the rough-skinned type and meiniwe for the smooth-skinned type are well known. The list of variety names, assembled from early German researches and pre-World War II Japanese references, as well as contemporary sources, is contained in Appendix #1. Where possible a translation of the variety name is given. The names given to the tree or fruit often derive from a place name, presumably the location where the variety was first distinguished with a name, but fruit names derived from fish, birds, and particular distinguishing features (e.g., "Soft Breadfruit") also occur. Some of the names are of particular interest because they would seem to suggest specific "best uses" for the respective fruits, such as "Crying Child Breadfruit" (Meinserih seng), being a variety which is known to cook to tenderness very quickly and, therefore, is recommended for a quick meal to still the child crying from hunger; "Sardine Breadfruit" (Meisaip) which may be especially suitable when served with this small fish; or "Luhk Forest" (Luhkual) characterized by a long season and fruit which remains in a state of ripeness for a long period without rotting on the tree, the name itself seems to be associated with a durable cultural hero called Luhk.

PROPAGATION OF THE TREE

The practice followed most frequently in Ponape with regard to the propagation of new breadfruit trees is apparently common throughout Micronesia. That is, a small section of root is cut a few inches from either side of a riser or young shoot that is between two and five feet in

in length. Risers may be encouraged, if necessary, by cutting and exposing a root. A general rule is to select a riser that is lower than the lowest branch of the main tree. After cutting off a length of green wood at the top of the riser, it is allowed to dry out for a period of two or three days. The top is then wrapped in a bundle of leaves, to encourage the growth of young shoots and to protect it from further drying in the sun, and the riser is buried at a depth between five inches and one foot. The place of planting is selected, generally, according to shading. Open, sunlit places are considered unfavorable.

While no clear formula exists with regard to season, it is generally accepted that rainy weather is preferable. Thus, if a man desired to increase the variety of breadfruit types available to him, he would likely be watchful of the weather prior to cutting the risers from an available source.

While the above technique is traditional to Ponape, a number of introduced techniques are finding popular use. Among these is the technique of encouraging root growth on a branch by wrapping it with Asplenium nidus L., then cutting the branch below the wrapping and planting this in much the same way as a common riser. Again quick results, with fruit in the second or third year, may be obtained by cutting a large section of tree trunk (from five inches up) and planting this section with adequate supports. Instances of propagating from seeds are unknown in Ponape, or are at least unusual.

No particular ritual attends the planting of breadfruit. Some persons, however, follow the common practice associated with planting of any sort, that is they avoid sexual intercourse on the evening before actual planting takes place.

PREPARATION AND FIRST-FRUIT OFFERINGS

We have already pointed out that the breadfruit season extends from April through August and that this season is called rahk. There are four additional, minor breadfruit seasons. The first of these, following the rahk, is called adihseu, in October and November, generally associated with the highest tides of this time of the year. The name of the season would appear to have reference to high tides, since the final sound seu means "to rise."

The second season is named soupar, occurring during January, again the name makes some reference to an extraneous factor: the first part, sou, has reference to "rising" or "sprouting", the second part, par, (or pahr) is the name of a tree Erythrina, which blooms during December. Soupar, therefore, refers to the sprouting of seedlings following the flowering season. Soupar is the term used, also, to designate the period of change from one year to the next, while the word sounpar (rising of the pahr) or simply pahr designate "year" corresponding to the Western calendar year.

The third season is called kating-en-angak and occurs during March. The fish sawi (Pectropomus sp. and Variola sp.) is known to assemble in certain locations on Ponape during March. This fact of assembling is called angak and the word kating appears to make reference to the meal taken by the fisherman when he goes to one of the known places to catch sawi. Since breadfruit is ripe at this time, the meal or kating may well include a preparation of this fruit and so the meaning of the season name is clarified.

The fourth season follows closely the kating-en-angak in March or April and is known as dilin or dilin rahk. The word dilin means "hunting,"

and the season name is often spoken dilin rahk which might be translated "to hunt the main fruiting season." Trees with ripe fruit at this time tend to indicate to the hunters where the major harvest locations will take place during the rahk and, additionally, the time of ripening during the dilin gives evidence of the time of ripening for the whole of the main rahk harvest: a late dilin rahk indicates a late rahk, etc.

During the rahk breadfruit is prepared in a number of different ways and each new preparation, during the rahk season, is served in the manner of a first-fruit offering first to the chief (Nanmwarki) of the district (Wehi) and second to the leader (Soumas en kousapw) of the section (Kousapw).

Such a first-fruit offering marks the beginning of the rahk in a ceremony called mwohnmèi, literally "before the breadfruit." This first offering comes about as a result of discussions held at the section level between the section-leader and the principle males (ohl) of his section. The food, in this instance, is a whole breadfruit that is nearly ripe. This is baked in an oven (uhmw) from the heat of pre-fired stones and is then delivered by the section-leader to the Nanmwarki. This fruit is broken in half by the Nanmwarki and, if the choice of fruit and cooking has been correct, the inside sections or flesh of the fruit stick to the inner core. This is an indication that the giver has "not been late in bringing this first fruit." If, however, the flesh falls easily away from the inner core, then the Nanmwarki is likely to observe that the fruit is quite ripe and, in all probability, the people of the section from which the fruit was received have already been eating the fruit of their trees. It would not

be unlikely, in such a case, for the Nanmwarki to hurl the ripe fruit at the section-leader and send him away in disgrace. This ritual, unlike many of those that follow, is not repeated at the section level; rather this offering heralds the opening of the rahk for the people of the section involved.

Kehmei, meaning "first bite," is a ritual gift which follows the mwohnmèi by a few days. In this instance the fruit is prepared by pushing a small hole down into the pulpy center of the fruit with a small stick made of Ficus (nehn). Into this hole is inserted a wilted portion of the stem of a Giant Swamp Taro plant. With the stem inserted, the fruit is covered overnight with leaves of Axonopus compressus (reh-maikol). The following day, after removing the taro stem, the fruit is cooked in a stone oven. This food, the whole cooked breadfruit, is then taken to the Nanmwarki for him to take the "first bite." A few days later, the same gift is repeated for the section-leader and following this the people may eat this preparation freely. The kehmei is still observed in most sections of Ponape.

Three following rituals, called pwatemei, meiawi, and pahini, are no longer observed in Ponape. In their traditional form, the giving of the offering followed the pattern of the kehmei: first to the Nanmwarki, next to the soumas en kousapw. The rituals for pwatemei and meiawi could not be determined at the time of this study and are rarely, if ever, followed today. Pwatemei may be translated "basket breadfruit," while meiawi would mean "delicious part." The third in this series, pahini meaning "coconut leaf," was prepared in the same way as the food for the

kehmei. Upon baking, several fruit would be placed in a container made from a whole coconut frond. When this container, with the breadfruit in it, was taken to the Nanmwarki it served as an "announcement" that the people of the section were about to begin to prepare lihli, pounded breadfruit.

Lihli: Pounded breadfruit is the most respected form in which the fruit is prepared for eating, and is regarded as a "first-class" food. On the first day of preparation, the ripe fruit is picked and the same steps are followed that pertain to the initial preparation of the kehmei ritual; that is, the core is punctured by a small stick, withered taro stems are inserted, and the fruit is covered over with leaves for the night. The following day the stone oven is prepared and the fruit is baked. The ohmw or oven used in this case is specialized to some extent. In usual stone-oven baking, the stones are preheated in a pile over a wood fire. When this fire dies down the stones are spread over the ground and the fruit is placed among the heated stones. In preparing breadfruit for pounding, however, the stones to be heated are built up over the firewood in the form of a low, truncated cone. The breadfruit are then placed on the platform thus formed and the fire is lit from below. Within an hour the fruit is removed from the oven, peeled, and placed neatly by a large stone on which the actual pounding will take place. Generally speaking the preparation of lihli is a section activity and the pounding is done by persons regarded as expert in their section.

In the local tradition, each lihli loaf is prepared from only two or three fruit forming a unit about one foot long and five or six

inches wide. Pounding for one loaf takes only a few minutes. This contrasts somewhat with the tradition in Truk where loaves take the shape of huge round "pillows" up to two feet in diameter and ten or more inches in thickness and require several hours of pounding. Also, while the food may be prepared to last over a period of several days at Truk, in Ponape the small loaves are consumed on the day prepared.

The size of the loaf in Ponape conforms in size to a woven container made by interweaving the blades of a two-foot long section of coconut frond. The inside of the container is first lined with banana leaves and one loaf of lihli is then placed in the basket, packaged for carrying to individual homes where it is usually immediately consumed. Generally the preparation takes place at the huge flat stone reserved for this purpose near the residence of the local Nanmwarki, with members of particular sections gathering for this purpose. Thus, again, the first portion is offered to the Nanmwarki. The Nanmwarki then will take four finger-helpings of the loaf in quick succession and a bystander will grab the loaf away from in front of him. This is significant in two respects: for one thing, four bites are traditional and serve as a signal to the assembled persons that general eating may now begin; secondly, however, and more important, a person is particularly vulnerable to destructive magic while in the act of eating in public and there are stories of several Nanmwarki who have been killed while partaking of this particular first-fruit gift. Thus the four bites are quickly consumed and the loaf dashed away before harm can be done to the Nanmwarki. (The same precaution attends to the drinking of kava

(sakau) which is usually a group affair, the drink is consumed quickly so that others may have little time to direct magic upon the drinker.)

The termination of the ceremony in which lihli is prepared consists of the making and drinking of sakau by the assembled adults. At the same time, the truncated-cone oven is flattened and other foods, generally meats such as pig or dog, are baked on the still hot stones. These, along with the lihli, are either consumed on the spot or carried away to individual homes for eating.

The next ceremonial feast in order of events during the rahk is called the sakalap or literally "the huge feast." Breadfruit, baked in the common form of stone oven, forms a main item in this feast along with baked meats, cooked fruits such as banana, and, of course, sakau. All of these foods are first prepared fully for eating and then packed on top of a litter (peikini) constructed on two long poles with light cross framework, interwoven with coconut fronds. This litter, sometimes as large as fifteen feet long and three or four feet wide, may be piled with as many as four or five roasted pigs as well as other foods, and is often carried on the shoulders of as many as eight men.

The litter is carried (or sometimes loaded on a canoe) to the residence of the Nanmwarki amid considerable merrymaking. This is the most festive of the feasts during the rahk, and both visitors and hosts indulge in songs and spontaneous dancing in a general atmosphere of informal gaiety. Of course, the formality of presenting the Nanmwarki with the first food is observed, though it is not required that this

food be consumed in public as at the lihli feast. While this feast generally lasts for a single day, should the festivities be particularly entertaining and the visiting group remain longer, those who have stayed behind may be expected to come with additional food and sakau the following day. This aspect of such a feast is termed the aluhmur ("following the footsteps") and may be viewed as a "follow up" by those who have remained behind to see that no harm has come to the earlier party. The aluhmur is not restricted to this particular feast, but may occur at any occasion where a party has visited another village and will usually take place when the Nanmwarki himself is involved in such a visit.

In order of events on the traditional scene, the next ritual feast would be kememen (literally: "to sweeten"). This ritual is no longer observed but, from the best information now available, it would appear that the fruit was prepared in the conventional way described in the kehmei, except that the fruit was permitted to remain covered with leaves for a period of two nights, rather than one, so that the "sweetening time" was longer. It is also possible that the name of the ritual has changed since there is still occasionally observed a ritual first-fruit offering consisting of breadfruit called maikol, literally "soft breadfruit." Maikol, thus, is prepared as above, remaining covered by leaves for two nights, and first portions are presented to the Nanmwarki; prior to the sakalap it is improper to prepare breadfruit in this fashion.

Preserved breadfruit, mahr, (or mahr-e-pwel, "ground-mahr"), is generally made toward the end of the rahk or main fruiting season. Since it can be eaten for years after, it serves effectively as an emergency source of food and the main stock of preserved food is simply added to each year as necessary.

While there are some variations in preparation, and mahr prepared by a skilled person is said to preserve better and to provide a safer food, the following general description may be given:

Breadfruit are collected, usually in numbers more than a hundred, by members of a section or (more recently) by individual families and the fruit are peeled by the persons working together. This peeling is done by a scraper fashioned from the back of a tiger cowry shell by removing the two ends of the shell and sharpening one side of the "bridge" remaining across the middle section of the shell's back. After peeling, the flesh is cut away from the core of the fruit and the sections of flesh are now ready to be placed in the pit where the preservation takes place. In some instances the flesh is first washed in fresh water or (if a particularly good form of preserve is desired) in ocean water.

The pit for storing breadfruit is cleaned out -- mahr remaining from previous years is removed and the leaves, usually dry banana leaves on the outside, green ones on the inside, are removed and replaced. The dry banana leaves (tehdak) are placed with the outer extremity of the leaf reaching across the bottom of the pit and the

stem extending above the lip of the pit. Green banana leaves (tehlap) are cut away from the stem and placed in a circular pattern, tending to form the wall of the pit. Additionally, and as an inner wrapping, leaves of tumeric, Curcuma (aulong), are used -- the name given this leaf is also tehlap. When the pit is thus relined, the newly made mahr is formed with the old and the whole is returned to the pit. Today's practice generally calls for the newly made mahr to be placed in the bottom of the pit, so that the old mahr is eaten first. In earlier times, it is said, the old was not actually removed from the pit, rather the new simply was added on top. In this way, mahr has been found to be still usable as long as forty or fifty years after its first preparation. After the addition of this batch of mahr to the pit, the leaves, in the order mentioned, are used to cover over the mahr, the pit is leveled over with dirt and stones are piled in a mound over the spot.

Two weeks following this preparation, a second batch of fruit is readied, the pit is opened again and some of the contents are removed for eating and for use in a first-fruit offering named tehte. To prepare the food for eating, the portion of mahr removed is first kneaded to increase its consistency, grated coconut is added, and it is wrapped in banana leaves for baking in a stone oven. The first portion baked, of course, is given to the local Nanmwarki. After this, mahr may be removed for preparation as needed by the individual family.

Another preparation of mahr (called mahr-en-lang, "mahr of the air") which is occasionally practiced is to wrap a ripe fruit which occurs near the main trunk of the tree with the conventional leaves used in a mahr pit. The bundle thus formed is tied to the branch of the tree and the whole permitted to ripen and season in place. After a few weeks the fruit turns into a form of mahr. There is a certain amount of prestige attached to this form of mahr and it is said that a man who prepares a number of fruit for this type of mahr may well be looked upon favorably as an intelligent and reliable person by the Nanmwarki.

An interesting feature of mahr as a food is that it was once deemed sufficient for a warrior, in time of village raiding, to subsist on mahr and sakau. According to the stories that have drifted down from such periods, an enemy on killing a man in battle would sometimes take the opportunity to examine his intestinal track. Should this be full of a variety of foods the man would have gained the post-mortem reputation of a poor warrior and a glutton, if the contents of the intestines revealed that he had been eating only mahr and sakau, then he would be thought of as a true warrior.

The final first-fruits offering during the rahk is termed umwen-luh-en-mei, literally "the last baking of the breadfruit." Breadfruit is baked in the conventional way and a portion is taken by section members to the section-leader and, after this, such fruit as remains for the harvest may be eaten as desired by the people.

This final food-offering generally just precedes the season for harvesting of yam, and so offerings continue with this food as the main

item. The final feast of the year during which yam is featured is termed karismei, "the breaking of the branch of breadfruit." This feast, which occurs during the final minor harvest of breadfruit (dilin rahk), is the occasion for the symbolic presentation of a breadfruit branch which contains one ripe fruit and one tiny, immature fruit. This branch is placed atop the leaves which will be used to cover the stone oven on which yam will be baked, the ripe fruit will be broken off and placed stem up on the leaves and the direction of flow of the white sap from the stem will be carefully observed: this direction will point toward the region that will experience the greatest harvest of breadfruit during the coming rahk. The broken branch, with its immature and ripe breadfruit on it, symbolizes both the life-cycle and the fact that the lean months of wanting for food are nearing an end, for the rahk is evident in the immature fruit.

LEGENDS IN WHICH BREADFRUIT IS MENTIONED

While there is no story pertaining to the origin or introduction of breadfruit, the food plays a part in much lore, as we have seen, and the tree gets occasional mention. Two legends of the latter type come to mind and may be briefly summarized:

The Story of Lies-en-Malaue

At one time in the section of Roi-en-Kiti, perhaps because the soil was so poor, there could be found none of the smooth-skinned varieties of breadfruit. However, it happened that a woman once went

fishing and returned with the fish to a place called Salapuk and gave the fish to a priest named Saum. In return, the priest tried to give her food, but she could not carry the bulky gift. The priest, therefore, gave her a small, soft stone from a place called Pohn-Malaue and over which he had performed certain magic. The woman took the stone and put it down at the place called Roi-en-Kiti and rich soil was seen to come from the stone. Eventually a breadfruit tree (Meiniwe, "smooth-skinned breadfruit") grew out of it. It was said that the stone was named Lies-en-Malaue and for this reason the place known as Roi-en-Kiti, as well as the place called Pohn-Malaue, were both called Malaue-paiei.

The Story About the Eel of Heaven

There was a place called Niue which was in the air where lived a married couple. The husband's name was Souniue and the wife was named Kadiniue. This couple had a daughter and they would bring her fish to eat daily; however the daughter did not develop, even with the best foods, into a normal person. The parents did not know this but the reason for this was that, while they were out looking for food, an eel living nearby would come to the house and make love to the girl.

The parents carefully questioned the girl to find out why she did not grow properly when she was receiving so much of the best foods. The girl at first did not respond to their questions. Finally, after they had questioned her many times, she told them about the eel. On hearing the circumstances, the parents prepared a strong string with which to catch the eel.

Before the parents were able to catch the eel, the girl met it once more and the eel said: "If I am caught by your parents and they should decide to eat me, please ask them to eat all but my head. You take my head and bury it and something will grow from it."

When the eel was finally caught by the parents and before it was cooked the girl asked for and received the head which she buried. Later three things sprouted from the ground where the head had been buried: a smooth-skinned breadfruit tree and two different types of banana tree. This was said to have been the first of the many varieties of smooth-skinned breadfruit and it was called meiniwe, after the place Niue, where the story took place. The two banana types were ut-en-iap (Yap banana) and ut-mwot (short trunk banana).

TYPES OF BREADFRUIT: NAMES AND MEANINGS

Meanings are given where known, and the authors have not hesitated to do a little guessing in this latter regard. It is unfortunate that, at this time, it has not been found possible to relate the type names in Ponapean to known scientific names; this certainly should be attempted in a later edition.

Smooth-Skinned Types (Meiniwe: "Breadfruit of Niwe," the place where it was found by the title holder Souniwe.)

1. Kirimwot: "Short-stemmed."
2. Meiais: "Parinarium glaberrimum breadfruit," reference is to similarity in color between fruit and Para Oil Nut.
3. Meiarepe: "Arepe breadfruit," referring to excessively soft heartwood of this type called arepe.
4. Meikidi: "Dog breadfruit."
5. Meikuet.
6. Meikalak: sub varieties: (a) Meikalak-en-meiarepe
(b) Meikalak-en-meikuet
(c) Meikalak-en-meisei
(d) Meikalak-en-meinwe
7. Meipwiliet: "Cardinal Honey-eater breadfruit," after bird.
8. Meipwuhleng.
9. Meinihwe.
10. Meisapwahpw: "Soursop breadfruit."
11. Meisei: "Porcupine Puffer Fish breadfruit."
12. Meitehid: "Attenuated-leaf breadfruit."

13. Meiti: "Bony breadfruit."
14. Meitikapau: "Cold command breadfruit."
15. Meiwehwe: "Soft breadfruit."
16. Meiauleng: "Tumeric Breadfruit", leaves of this type used for wrapping mahr (preserved breadfruit).
17. Meikapas: "Stone-oven recipe breadfruit," regarded as best type for this preparation.
18. Meiolodung.
19. Meise: "Fish-pass breadfruit," or "Don't-know breadfruit."
20. Meikimwer.
21. Meinihwer.
22. Meiepil: "Mulloidichthys (?) breadfruit," after fish by this name.
23. Meiketieu: "Ixora casei breadfruit," after tree by this name.
24. Meipoang.
25. Meipwetepwet: "White breadfruit."
26. Meinmwelihtik: "Mwelihtik breadfruit," from place name.
27. Meioang: "Tumeric Coloring breadfruit."
28. Meinahndor.
29. Meinpohtakai: "On the stone breadfruit," Pohtakai being a place name.
30. Meintakai: probably same as #29.
31. Meinpeimwas.
32. Meinpwuht.
 - 32a. Meilwmahni: "Lwmahni breadfruit," from place name.
 - 32b. Meinpwuht en sokehs: "Meinpwuht of Sokehs," from place name.
33. Meinserihseng: "Crying baby breadfruit," type cooks fast so "is best for serving a child that is crying from hunger."

13. Meisaip: "Sardine breadfruit."
14. Meiuhp: (consisting of two types, one small and long, other larger and rounder)
15. Meikipal.

Rough-Skinned Types (Meinsahrek)

1. Animwure: possibly "Holding a diety" as in animireh.
2. Nahnmwai.
3. Lehtemp: "Fall in pond," reference is to falling of immature fruit from cluster with one remaining till maturity.
4. Lipet.
5. Luhkual: "Luhk forest" possible reference to an enduring culture hero named Luhk, this type remains in season throughout the rahk.
 - 5a. Lukiamwas: "lesser luhk" reference made to taste quality.
 - 5b. Lukielel: "Best luk" again reference to taste.
 - 5c. Opohp: word may mean "middle value" with reference to taste.
6. Meikole: "Seeded breadfruit."
 - 6a. Meipa: "Below breadfruit" (seeded)
 - 6b. Meiuid. (seeded)
 - 6c. "Paramitsu": word and type introduced by Japanese (seeded).
 - 6d. Meikolehmwot. (seeded)
7. Meimarahra: "Fast breadfruit," referring to short, rapid fruiting season.
8. Meimwed.
9. Maitamwarok: "Ctenochaetus Breadfruit," after the fish by the same name.
10. Meiluhr.
11. Meiweke: "Pulling breadfruit."
12. Meikewelik.

34. Meinpwehr: "Rowing breadfruit," probably from place Pwehr.
35. Meinpeisahle: "Aiming the sling breadfruit," probably from place called Peisahle.
36. Meipohnoulal.
37. Meinuhsar: "End of continuing breadfruit," probably from place called Uhsar.
38. Meinmwakot: "Favorite place breadfruit," Mwnakot is a common name used to designate favored or fertile land.
39. Meinpohnle: "Above the pond breadfruit," Pohnle is a place name.
40. Meinpohnsakar: "Above the dock breadfruit," Pohnsakar is a place name.
41. Meinpeipei: "Floating breadfruit."
42. Meinimpei.
43. Meinseniak: "Seniak breadfruit," Seniak being a place name.
44. Meinweli: "Rock-pile breadfruit," Mweli is a place name.
45. Meinpohnkoatoa.
46. Meinpoakod.
47. Meinsapwehrek: "Place of all things breadfruit," Sapwehrek is a place name.
48. Meinutuhn: "Upper breadfruit."
49. Meikatakot: "Stringy breadfruit."
50. Meinpadahk: "Teacher breadfruit."
51. Meinenguhp.
52. Pwumpwum: "Falling breadfruit."
53. Sangkamawahu.
54. Meinsanipwur.
55. Mainpohnkeweneie: "Fire harbor breadfruit," from place name.
56. Meinmesehl: "Love magic breadfruit," from place name.
57. Meitoal: "Black breadfruit."

- 57a. Meitoal ehume katik: "Meitoal that is bitter."
- 57b. Meitoal sohte katik: "Meitoal that is not bitter."
58. Meikitik: "Rat breadfruit," reference is to small fruit.
59. Meinwol: "Forest (or wild) breadfruit."
60. Meimuhle: "Twisting cord by hand breadfruit," or "Sigamus sp. (?)"
from fish Umuhle.
61. Meikiol.
62. Meiupenserek: serek means "sail".
63. Meinanihnmwoll: "Sea-snail (mwoll) poison breadfruit."
64. Meipuillipuil: "Sticky (as in paste) breadfruit."
65. Meitempap: "Low root breadfruit."