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MINISTRY OF INTERNAL AFFAIRS
HISTORIC PRESERVATION OFFICE
ALELE MUSEUM

Traditional Medicine in the Marshall Islands.

Carmen C.H. Petrosian-Husa

Alele Report 2004/1

Majuro Atoll, 2004

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Forward.

The following report is the result of an intensive literary research in early German sources and some insight gained during meetings with members of the 'Marshall Island Society for the Protection of Traditional Medicine' as well as some observations during field research on Wotho Atoll. This project was sponsored by the Republic of the Marshall Island's Historic Preservation Office and funded by the Historic Preservation Fund, National Park Service, Department of the Interior.

My thanks go to our colleagues at the National Park Service, Paula Falk Creech, Mark Rudo, and David Look for their assistance and guidance. I could not have performed this research without the assistance of many individuals. I want to thank

The late Rington Jelke on Wotho Atoll;
the Library of the College of the Marshall Islands helped with books and scanning maps;
Frank R. Thomas, Historic Preservation Office, Ministry of Internal Affairs for proof reading this report;
Willy Rada, Division of Lands & Surveys, Ministry of Internal Affairs provided maps as well as a pdf version of this report, and
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I specially want to thank the members of the 'Marshall Island Society for the Protection of Traditional Medicine', who accepted me in their group. I am indebted to Maria Kabua-Fowler, Carmen Milne-Bigler, and Dr. Irene J. Tafaaki, who never tired answering my questions, as well as Rosina Jetnil-Korean and Hanako Term; they knew no restrictions in talking medicine with a *ripelle*;

My further thanks go to the Minister of Internal Affairs and the Chairman of the Advisory Council for Historic Preservation, the Hon. Rien Morris, as well as to the Secretary of Internal Affairs and Chief of the Historic Preservation Office, Mr. Lenest Lanki;

to all of you - *komol tata*.

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Carmen C. H. Petrosian-Husa
Majuro Atoll, Marshall Islands
September 2004

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I. INTRODUCTION.

1. 1. Project Objectives.

The initial project was planned in 2002 but started in October 2003, when the author and current anthropologist arrived in the Marshall Islands. Then it was discovered that the 'Marshall Island Society for the Protection of Traditional Medicine' (MISPTM) had been founded.

The work on this project [MISPTM] began in 1998 when two visitors from Fiji came to share skills for making solar ovens and smokeless stoves with women on Majuro, Arno, and Ebeye. As wood was sawn and cement mixed, ... a Fijian herbalist would ask questions like, "what do you do when your children have toothache?" Informal conversations led to a sharing of knowledge from both Fiji and the Marshall Islands about the medicinal uses of the trees, shrubs and other plants. Serious concerns that the knowledge might not survive into the future were also expressed.

With the initiative of Maria Kabua-Fowler and Marylou-Foley, Dr. Irene Taafaki of the University of the South Pacific Center in the Marshall Islands, the encouragement of Ione DeBrum then Manager of the women's desk at the Ministry of Internal Affairs and the support of Carmen Bigler and the national Council of Women, a grass roots project began to collect information on the medicinal uses of plants of the Marshall Islands. Together they organized the First Herbal Plant Workshop, which was held in the Melele Room, Outrigger Marshall Islands Resort from November 8-9, 2001.

Over the next two years a working group of interested women healers and others met weekly at the University of the South Pacific Center in the Marshall Islands.

A second workshop was held in 2002, attend by over 40 healers from different atolls of the Marshall Islands. During these meetings recipes for the treatment of various diseases had been collected, and, by the time the author heard about the society, the project was in its final stage, being edited, getting ready for publication in 2005.

The invitation to join MISPTM had been gladly accepted and the following 'joint venture' was agreed to: the Alele Museum would produce a report, based on an extensive library study, depicting the topic from the German period in the Marshall Islands. An extract of this report will be published in the forthcoming book on traditional medicine by MISPTM. The National Park Service of the United States will be acknowledged for this cooperation and some copies of the publication will be send to Washington. In a final process a small publication in English and Marshallese will be produced, to be used as reading material in Marshallese schools to provide young Marshallese with some of their own traditional medical knowledge.

Currently Maria Kabua-Fowler is president, Carmen Bigler secretary, Rosemary Kandell is treasurer, and Rosina Korean and the University of the South Pacific are also on the board.



Fig. 1. Maria Kabua-Fowler, President of MISPTM.



Fig. 2. Dr. Irene J. Tafaaki, Director of the University of the South Pacific, Marshall Islands.



Fig. 3. Carmen Milne-Bigler, secretary of MISPTM.



Fig. 4. Hanako Term, one of the healers.



Fig. 5. Rosina Jetnil-Korean.

1. 2. Evaluation of Research Design and Methods Used.

As stated above the entire research was a background research. In the past the Historic Preservation Office had acquired 482 articles, papers, and books written in German about the Marshall Islands. This was the pool from which the data of this report were extracted. In addition the anthropologist attended meetings of the MISPTM, and thus became acquainted with today's Marshallese medicine, and some of the modern physical and mental medical needs of the Marshallese.

1. 3. Limitations of Research.

From an anthropological point of view this research is just a glimpse on the vast topic of traditional medicine. In order to conduct a reliable field investigation there was not enough time, as the entire Republic should be covered. It would be desirable to have this subject thoroughly researched by field research conducted in both Ratak and Ralik Chains.

Gathering first hand information on the islands and atolls could provide a better understanding of the implementation of traditional medicine on the Outer Islands of the Republic. The situation on Majuro is certainly not applicable for the entire Republic.

Therefore, foreign researchers, from the anthropological side as well as from the clinical should be encouraged to come and do research in the Marshalls.

1. 4. Previous Research.

During the German colonial period there were some government officials, doctors as well as missionaries, such as Filbry, Schnee, and Erdland, who showed an interest in Marshallese medicine and related topics.

The 'Deutsche Südsee-Expedition, the famous German South Seas Expedition researched the German colony in Micronesia and dispatched Augustin Krämer to the Marshall Islands. Krämer had been in the Marshalls before and was not only an ethnographer but also a physician and thus showed interest in Marshallese medicine. But his sojourn in the Marshall Islands was far too short to do extensive research. Thus the best source today is Erdland, a Catholic missionary. He wrote about N., a reckoned sorcerer of his time:

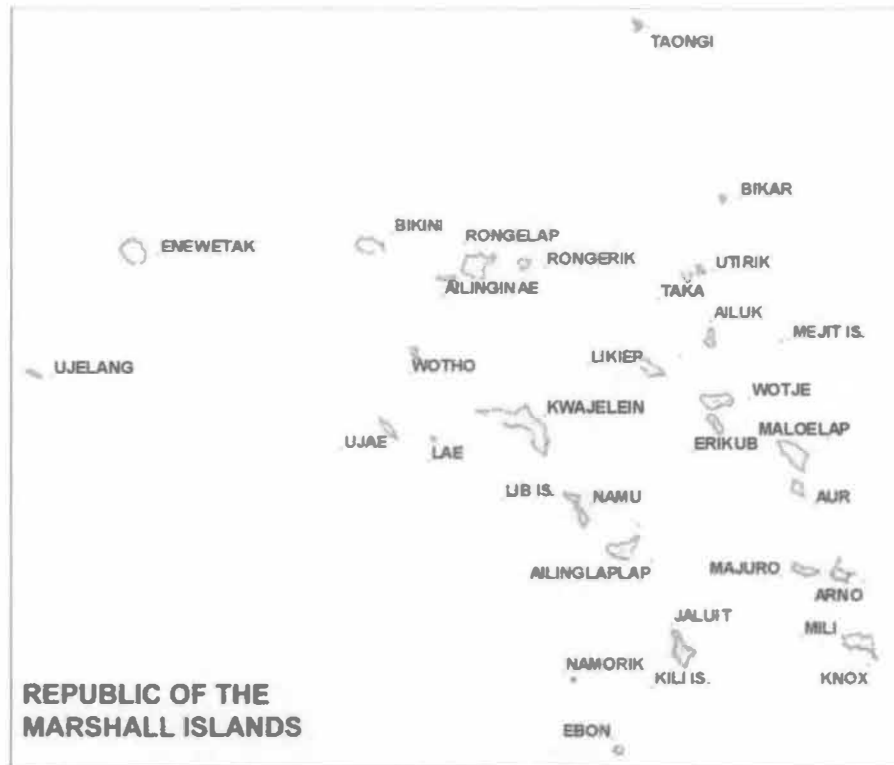


Fig. 6. August Erdland.

A few years ago, because of stormy weather, I took shelter and stayed overnight in the hut of this famous spiritist. I really regret not having met his benevolent or malevolent spirit friends.¹

In his writings Erdland often appears like a father observing the doings of his children. He sometimes questions their beliefs but never with criticism.

¹ Erdland, 1914: 331.



Map 1. Republic of the Marshall Islands.

1.5. History of the Marshall Islands.

First there were two serpents or worms. They stayed in a shell where they developed into a human form. The male was called Wulleb and the female was Lehman, Woman Rock. In order to enlarge the world Wulleb used a stick and lifted the arch of the shell. Thus he expanded the sky to its present height and the ocean to what we know. From a boil on Wulleb's forehead emerged Lewoj and Lanej, who were sent to the sky to establish the stars. Lejman also had two female offspring, Lino, the tidal wave and Ni, the coconut.²

There are many variations of creation accounts. Despite their differences they introduce the key characters important to Marshallese cosmology, such as Wulleb, Letao, etc.

The people of the Marshall Islands refer to their parallel-chained archipelago as *Aelon Kein*, "These Atolls." According to folklore the first discoverers and settlers were a handful of wayfarers seeking an uninhabited autonomous area where they could live.³

² Raymond, 1899:9.

³ Hart, 1992.

What little we know about early Marshallese comes from oral history and early accounts of explorers.

Marshallese autonomy was threatened when the first of eight known Spanish ships passed through the area. The first recorded sighting, probably Bokak Atoll, was made by Alonso de Salazar, commanding the *Santa Maria de la Victoria*, but no contact was made.⁴ In 1529 contact was made by Alvaro de Saavedra of the *Florida* which laid anchor to take provisions at Enewetak or Bikini and stayed for eight days. He also discovered Utrök, Taka, Ujelang, and made landings at Rongelap and Ailinginae. The Spanish flagship *Santiago* and five other ships in the expedition under Ruy Lopez de Villalobos is credited for the western discovery of Wotje, Erikub, Maloelap, Likiep, Kwajalein, Lae, Ujae, and Wotho. Landings were made on some of the islands.⁵

In 1565, Alonso de Arellano of the Legaspi expedition sighted Likiep, Kwajalein and an island thought to be Lib⁶ while Legaspi himself is credited with sighting Mejit, Ailuk and Jemo. Some trading was done at Mejit.

The following year the mutineer Lope Martin commanding the *San Jeronimo* made several sightings and was eventually stranded in the Marshall Islands, probably on Ujelang. Two years later the Spanish ships, *Los Reyes* and *Todos Santos*, under Alvaro de Mendana went ashore at what is probably Ujelang. Namu was also thought to be sighted.⁷

Fifty seven years passed before another vessel is reported to pass through the Marshall Islands' chains. The Dutch ship *Eendracht* and ten other vessels of the Nassau fleet commanded by Admiral Gheen Schapenham sighted Bokak.⁸ In spite of Spain's annexation of the Marshall Islands in 1686, the Spanish established no trading post, trade routes, or left any lasting influence.

In 1767 Captain Samuel Wallis of the British ship *Dolphin* sighted what is thought to be Rongerik and Roneglap.⁹ Even though the Spanish were the first known westerners to see the Marshall Islands credit is given to Captain William Marshall, commander of the *Scarborough*, and to Thomas Gilbert, commander of the *Charlotte* for

⁴ Levesque 1992a; Sharp, 1960:12.

⁵ Levesque 1992a; Sharp, 1960:28.

⁶ Sharp, 1960.

⁷ Levesque, 1992a.

⁸ Hezel, 1979.

⁹ Sharp, 1960:108; Hezel, 1979.

the discovery or more appropriately the rediscovery of the Marshall Islands in 1788. Marshall and Gilbert mapped these island groups and traded with the various atolls. They are the first westerners to sight Mili, Arno, Majuro, Aur, and Nadikdik.¹⁰ They also sighted the previously discovered Wotje, Erikub, Maloelap, and Ailuk and called these newly found islands after the 1. Lord of the British Admiralty 'Lord Mulgrave-Islands'.

Captain Henry Bond aboard the British merchantman vessel *Royal Admiral*, sighted Namdrik and Namu in 1792. Two years later the British ship *Walpole*, under the command of Captain Thomas Butler, sighted Enewetak. Thomas Dennet was the first westerner to sight Kili as well as reporting on Ailinglaplap, Lib, and doing some trading on Namu in 1797. Other vessels sailed through the area, including the British ship *Hunter*, the British brig *Nautilus*, the ship *Ann & Hope* of Providence, *Ocean*, *Herald*, and *HMS Cornwallis*, to name a few. These ships sighted atolls and islands that had been previously reported but did not stop and trade. Jaluit was sighted by the *Rolla* in 1803 and again in 1809 by Captain Patterson of the British merchant brig *Elizabeth*, both of which landed and did some trading.¹¹

The first scientific exploration of the Marshalls was conducted by a Russian, Otto von Kotzebue, in 1816-17 and 1824. It is during this time that first significant contact between Europeans and Marshallese was made. Von Kotzebue and his crew spent several months in the Ratak Islands in 1817 and 1824, specifically Wotje, Maloelap, and Aur Atolls.¹²

The account left by this expedition provides the first early ethnographic material including an interesting description of how Kotzebue was urged to help Lōmade defeat Latete, a powerful southern Ratak *Irooj*, and become *Irooj* of all Ratak. Although Kotzebue declined the offer, his influence was noted. Traditional warfare practices began to change soon after Kotzebue's first visit. Metal hatchets given as gifts were attached to wooden poles. Lōmade's troops used these new weapons to defeat the powerful *Irooj* and establish control over the Ratak Chain.¹³

Other ethnographic observations come from Lay and Hussey (1828), who survived the *Globe* mutiny at Mili Atoll, and Paulding (1831), a U.S. Navy lieutenant, who helped to retrieve Lay and Hussey. These early observers published accounts, which

¹⁰ Sharp, 1960:154.

¹¹ Sharp, 1960:173, 178, 183, 191; Hezel, 1979, 1983.

¹² Kotzebue, 1821; 1830; von Chamisso, [1836] 1986.

¹³ Erdland, 1914; Krämer und Nevermann, 1938.

give us an insight to traditional personal appearance, manners, food, dwellings, and to a lesser extent, facets of political and social organization as reflected by traditional practices.

Prospects of profitable trade lured German entrepreneurs into the Marshall Islands in the latter part of the 19th Century. Subsequent contact with Europeans gradually increased as whalers concentrated their activities in the region. They were hunting to provide lamp oil to meet European and American demands. With disruptive and intolerant whalers as well as English blackbirders, both being in search of cheap labor to work the mines and plantations in the New World and Australia, encounters turned hostile. Numerous ships were attacked by the Marshallese and the crews killed; brutal retaliation followed. The mood of contact in the first half of the 19th Century was one of confrontation.¹⁴

The treacherous reefs, reduced numbers of whales and the new method of distilling of kerosene from crude oil soon put the whalers out of business. The blackbirders however continued their raids until the 1870's.

In 1857 two American missionaries from the American Board of Commissioners for Foreign Missions, Congregationalists from the New England area, succeeded in setting up operations on Ebon (where as recently as 1852 a ship from San Francisco had been attacked and the entire crew killed).¹⁵ The Marshallese *Irooj* opposed the missionaries and the establishment of new congregations throughout the 1860s because it eroded their power. This loss of power was somewhat alleviated by the establishment of permanent trading stations, as the demand for copra rapidly increased. The chiefly power base gradually shifted from control over the land to control over the trade between the Marshallese and the foreigners.¹⁶ Ebon remained the mission center, from which occasional trips were made throughout the southern atolls, until in 1880, when the station was moved to Kosrae in the Eastern Carolines.

Changes in the Marshallese way of life had been rapid and extensive. The dominant contact with the outside world had been through missionaries sent or trained by the American Board. Yet virtually no ethnographic description is to be found among the voluminous records kept by the missionaries. Instead they were "not only indifferent, but supremely scornful of the religious beliefs [of the Marshallese]. They tried to extinguish

¹⁴ Hezel, 1979, 1983; Dye, 1987.

¹⁵ Hezel, 1979.

¹⁶ Dye, 1987.

them completely and to destroy every trace of them.¹⁷ The ethnography summarized by the Germans, Erdland (1914) and Krämer and Nevermann (1938), coincided with major structural changes in the Marshallese way of life. Writing in about 1905, the German ethnographer and priest Erdland commented, "the present generation no longer has any exact knowledge of the inner coherence of the ancient traditions."¹⁸

Other factors also influenced these changes. The copra trade dates from about 1860 in the Marshall Islands and American, Australian and German firms often had resident traders on the various atolls. Beachcombers added to the resident white population, often filling the role of trader as well.

A) German Time.

In 1885 the Marshall Islands became a protectorate of Germany, as the Marshall Islands were not under the sovereignty of any civilized state".¹⁹ During the German era,



Fig. 7. German 'Reichsadler'.

which lasted until 1914, the atolls were visited regularly, by traders, missionaries, and administrative officials. Administration of the area was carried out by the German trading company, *Jaluit Gesellschaft*. This firm which resulted from a merger of companies active in the area, Robertson and Hensheim, and *Deutsche Handels - und Plantagengesellschaft* (D.H.P.G.) (formerly *Johann Godefroy und Sohn*), had exclusive trading rights in the Marshalls. Despite complaints about this monopoly by the Australian firm Burns Philip and Co., the New Zealand company, Henderson and MacFarlane, and others, the German government

continued to act on the advice of the *Jaluit Gesellschaft* until 1902 when it assumed direct administration of Micronesia.²⁰

This form of administration, with primarily an economic focus, had little impact on the health and educational level of the Marshallese. In this regard, the missionaries were of greater importance. Select groups of Marshallese were educated in the German language to serve as interpreters and the services of a doctor were available on occasion.

¹⁷ Knappe, 1888.

¹⁸ Erdland, 1914:307.

¹⁹ Pauwels, 1936.

²⁰ Hezel, 1983.

Copra was the main product of the Marshalls and production was stimulated by taxes assessed through the traditional leaders as well as through the availability of Western goods. This form of indirect rule strengthened the traditional political organization of the Marshallese, while the German administration dealt mostly with conflicts between foreigners and the *Irooj*.²¹

Warfare between the island *Irooj* was eliminated, an act which froze the relative social positions of the *Irooj* and their *jowi* (clan) and created a condition of inflexibility in the social system; in addition it allowed increased trading and missionary activity and thus contributed to more rapid cultural change.²² German ethnographers were active in this period and it is largely through their efforts, especially in the many publications of Augustin Erdland, that much is known of the traditional way of life.²³

B) Japanese Time.

In 1914 at the beginning of World War I, the Marshall Islands were taken from Germany by Japan. They shifted to a system of direct rule through a set of community officials and the administrative staff was expanded. Traders of other nationalities were excluded and the Japanese attempted to expand copra production. Protestant and Catholic missionary activity was allowed to continue unhampered, and in the general the Marshallese appear to have gotten on well with the Japanese.²⁴ The Japanese did conduct ethnographic research, however most of this material has not yet been translated into English.

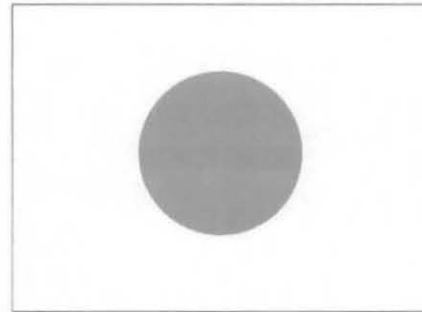


Fig. 8. Japanese flag.

The Japanese military, through the South Seas Defense Corps, governed the Marshalls until 1918. From 1918 until 1920, a combined civilian and military government was in charge. In 1920 Japan was awarded Micronesia as a Class 'C' mandate by the League of Nations (although they continued to submit annual reports through 1937). After 1933, the Japanese considered the Marshalls and the rest of Micronesian mandate an integral part of the Japanese Empire.²⁵ During the Japanese era,

²¹ Hiery, 1995.

²² Spoehr, 1949.

²³ Augustin Erdland, was a priest who lived for many years on the Marshall Islands.

²⁴ Spoehr, 1949.

²⁵ Peattie, 1988.

the administration had several goals; the economic development of Micronesia, the use of the islands as an immigrant settlement for Japan's rapidly increasing population, the Japanization of the islanders through education, language training, and enforced cultural change, and eventually, the use of the islands for military bases in anticipation of World War II.²⁶

For the Marshallese improvement in health and sanitation were minimal. The "availability of adequate medical care was directly related to one's ability to pay" and despite a sliding fee scale, "the poorer and generally unhealthier native received less care".²⁷

Education was also segregated and of differential quality. Ethnic Japanese were offered a school system identical to the one in Japan, while the Marshallese received three years of primary education consisting mostly of Japanese language instruction and ethics classes, with an additional two years for the more promising students.²⁸

The Japanese administration also attempted to make a number of changes in the Marshallese social and political organization. They appointed non-*Irooj* Marshallese leaders, which was contrary to the existing political structure, thus weakening the position of the traditional leader.²⁹ The Japanese also attempted to change the Marshallese social organization of matrilineality to conform to the Japanese system of patrilineality, more like their own system, with little success.

In the early 1930s, Japan began to construct fortifications on Kwajalein, Enewetak, Jaluit, Wotje, Mili, and Maloelap. Marshallese were conscripted to labor on these buildings and were resettled.³⁰ World War II started in 1941. In 1944, U.S. forces concentrated on gaining supremacy in the Pacific. Kwajalein, Majuro, and Enewetak were captured within one month. All of the other atolls except Wotje, Maloelap, Mili, and Jaluit were checked for Japanese in the next two months. In those bypassed atolls, the Marshallese escaped or were removed under cover of night and resettled temporarily on Majuro, Arno, or Aur atolls.³¹ The U.S. fortified Enewetak and Kwajalein atolls as military bases.

²⁶ Peattie, 1988.

²⁷ Shuster, 1978.

²⁸ Hezel, 1995.

²⁹ Bryan, 1972.

³⁰ Peattie, 1988.

³¹ Smith, 1955.

C) US Trust Territory of the United Nations.

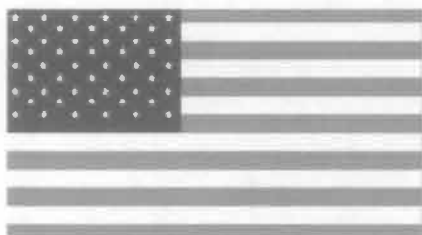


Fig. 9. American flag.

After World War II, the United States took over trusteeship of the Marshall Islands. In this time extensive ethnographic research was conducted in the Marshall Islands. Beginning with Spoehr's work on village life in Majuro (1949), ethnographers have concentrated on community studies. The primary sources are Mason (1947, 1954) whose focus is economic organization; Kiste (1967, 1974) who deals with resettlement issues, Davenport (1952, 1953), and Chambers (1969, 1972) who concentrates on oral traditions.

During this period, from June 30, 1946, to August 18, 1958, the United States also conducted 67 underwater surface and atmospheric tests of atomic and thermonuclear weapons in the Marshall Islands.³²

	Date	Site	Type	Yield (kt.)	Operation	Test
1.	6/30/46	Bikini	Airdrop	21.00	Crossroads	Able
2.	7/24/46	Bikini	Underwater	21.00	Crossroads	Baker
3.	4/14/48	Enewetak	Tower	37.00	Sandstone	Xray
4.	4/30/48	Enewetak	Tower	49.00	Sandstone	Yoke
5.	5/14/48	Enewetak	Tower	18.00	Sandstone	Zebra
6.	4/7/51	Enewetak	Tower	81.00	Greenhouse	Dog
7.	4/20/51	Enewetak	Tower	47.00	Greenhouse	easy
8.	5/8/51	Enewetak	Tower	225.00	Greenhouse	George
9.	5/24/51	Enewetak	Tower	45.50	Greenhouse	Item
10.	10/31/52	Enewetak	Surface	10,400.00	Ivy	Mike
11.	11/15/52	Enewetak	Air Drop	500.00	Ivy	King
12.	3/1/54	Bikini	Surface	15,000.00	Castle	Bravo
13.	3/26/54	Bikini	Barge	11,000.00	Castle	Romeo
14.	4/6/54	Bikini	Surface	110.00	Castle	Koon
15.	4/25/54	Bikini	Barge	6,900.00	Castle	Union
16.	5/4/54	Bikini	Barge	13,500.00	Castle	Yankee
17.	5/13/54	Enewetak	Barge	1,690.00	Castle	Nectar
18.	5/2/56	Bikini	Air Drop	3,800.00	Redwing	Cherokee
19.	5/4/56	Bikini	Surface	40.00	Redwing	Lacrosse
20.	5/27/56	Enewetak	Surface	3,500.00	Redwing	Zuni
21.	5/27/56	Bikini	Tower	0.19	Redwing	Yuma
22.	5/30/56	Enewetak	Tower	14.90	Redwing	Erie
23.	6/6/56	Enewetak	Surface	13.70	Redwing	Seminole
24.	6/11/56	Bikini	Barge	365.00	Redwing	Flathead

³² U.S. Department of Energy, United States Nuclear Tests, Nuclear Claims Tribunal.

25.	6/11/56	Enewetak	Tower	8.00	Redwing	Blackfoot
26.	6/13/56	Enewetak	Tower	1.49	Redwing	Kickpoo
27.	6/16/56	Enewetak	Air Drop	1.70	Redwing	Osage
28.	6/21/56	Enewetak	Tower	15.20	Redwing	Inca
29.	6/25/56	Bikini	Barge	1,100.00	Redwing	Dakota
30.	7/2/56	Enewetak	Tower	360.00	Redwing	Mohawk
31.	7/8/56	Enewetak	Barge	1,850.00	Redwing	Apache
32.	7/10/56	Bikini	Barge	4,500.00	Redwing	Navajo
33.	7/20/56	Bikini	Barge	5,000.00	Redwing	Tewa
34.	7/21/56	Enewetak	Barge	250.00	Redwing	Huron
35.	4/28/58	Nr Enewetak	Ballon	1.70	Hardtacki	Yucca
36.	5/5/58	Enewetak	Surface	18.00	Hardtacki	Cactus
37.	5/11/58	Bikini	Barge	1,360.00	Hardtacki	Fir
38.	5/11/58	Enewetak	Barge	81.00	Hardtacki	Butternut
39.	5/12/58	Enewetak	Surface	1,370.00	Hardtacki	Koa
40.	5/16/58	Enewetak	Underwater	9.00	Hardtacki	Wahoo
41.	5/20/58	Enewetak	Barge	5.90	Hardtacki	Holly
42.	5/21/58	Bikini	Barge	25.10	Hardtacki	Nutmeg
43.	5/26/58	Enewetak	Barge	330.00	Hardtacki	Yellowwd
44.	5/26/58	Enewetak	Barge	57.00	Hardtacki	Magnolia
45.	5/30/58	Enewetak	Barge	11.60	Hardtacki	Tobacco
46.	5/31/58	Bikini	Barge	92.00	Hardtacki	Sycamore
47.	6/2/58	Enewetak	Barge	15.00	Hardtacki	Rose
48.	6/8/58	Enewetak	Underwater	8.00	Hardtacki	Umbrella
49.	6/10/58	Bikini	Barge	213.00	Hardtacki	Maple
50.	6/14/58	Bikini	Barge	319.00	Hardtacki	Aspen
51.	6/14/58	Enewetak	Barge	1,450.00	Hardtacki	Walnut
52.	6/18/58	Enewetak	Barge	11.00	Hardtacki	Linden
53.	6/27/58	Bikini	Barge	412.00	Hardtacki	Redwood
54.	6/27/58	Enewetak	Barge	880.00	Hardtacki	Elder
55.	6/28/58	Enewetak	Barge	8,900.00	Hardtacki	Oak
56.	6/29/58	Bikini	Barge	14.00	Hardtacki	Hickory
57.	7/1/58	Enewetak	Barge	5.20	Hardtacki	Sequoia
58.	7/2/58	Bikini	Barge	220.000	Hardtacki	Cedar
59.	7/5/58	Enewetak	Barge	397.00	Hardtacki	Dogwood
60.	7/12/58	Bikini	Barge	9,300.00	Hardtacki	Poplar
61.	7/14/58	Enewetak	Barge	Low	Hardtacki	Scaevola
62.	7/1/58	Enewetak	Barge	255.00	Hardtacki	Pisonia
63.	7/22/58	Bikini	Barge	65.00	Hardtacki	Juniper
64.	7/22/58	Enewetak	Barge	202.00	Hardtacki	Olive
65.	7/26/58	Enewetak	Barge	2,000.00	Hardtacki	Pine
66.	8/6/58	Enewetak	Surface	Fizz	Hardtacki	Quince
67.	8/18/58	Enewetak	Surface	0.02	Hardtacki	Fig

Table 1. List of atomic tests in the Marshall Islands.

The most powerful of those tests was the "Bravo" shot, a 15 megaton device detonated on March 1, 1954, at Bikini atoll. That test alone was equivalent to 1,000 Hiroshima bombs. While the Bravo test is well known, it should be acknowledged that 17 other tests in the Marshall Islands were in the megaton range and the total yield of the 67 tests was 108 megatons, the equivalent of more than 7,000 Hiroshima bombs. From 1945 to 1988, the U.S. conducted a total of 930 known nuclear tests with a combined yield estimated to be 174 megatons. Approximately 137 megatons of that total was detonated in the atmosphere. In other words, while the number of tests conducted in the Marshall Islands represents only about 14% of all U.S. tests, the yield of the tests in the Marshalls comprised nearly 80% of the atmospheric total detonated by the U.S.³³



Fig. 10. Detonation of Bravo.

Numerous Marshallese have suffered from cancers, leukemia and other life-threatening diseases directly connected to nuclear radiation poisoning.

In 1960 the US Army announced that Kwajalein had been given 'a brand new lease of life'. Once again, Marshallese land was to be used for military experiments to try out the accuracy of missiles. Kwajalein was to be used as target practice for intercontinental ballistic missiles (ICBMs), fired from Vandenberg Air Base in

³³ <http://nuclearhistory.tripod.com/testing.html>.

California, 4,800 miles away. Testing of intercontinental missiles continues today. Under the terms of the Revised Compact of Free Association the United States will retain rights to the Kwajalein atoll until 2016.³⁴ At the time of writing the Kwajalein landowners are reluctant to renew the lease for Kwajalein under the former conditions.

The American Trusteeship of the Marshall Islands brought preparation for greater self governance: the Congress of Micronesia, schools with an English curriculum, and Peace Corps Volunteers. Until 1996 hundreds of volunteers are dispatched to the remotest atolls and islands.

D) Republic of the Marshall Islands.

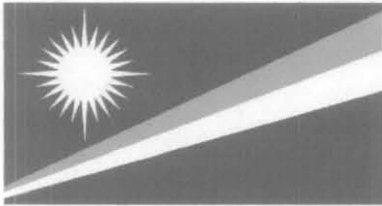


Fig. 11. Flag of the Republic of the Marshall Islands.

In 1979 the government of the Marshall Islands is officially established and the country becomes self governing with *Iroojlaplap* Amata Kabua elected as the first president of the Marshall Islands. One year later the Airline of the Marshall Islands (AMI) begins operation serving eight locations; Enewetak, Bikini, Kwajalein, Mili, Likiep, Maloelap, Wotje, and Majuro. In 1982 the official name is changed to the Republic of the Marshall Islands (RMI).

In 1983 voters in the RMI had approved the Compact of Free Association with the United States, in 1986 the U.S. Congress approved the Compact, which granted the RMI its sovereignty and provided for aid and U.S. defense of the islands in exchange for continued U.S. military use of the missile testing range at Kwajalein Atoll. In 1990 the UN Security Council terminates the RMI's trusteeship status, and, in 1991, the RMI joins the United Nations.

1988 the Nuclear Claims Tribunal started addressing personal injury and property claims resulting from the nuclear testing in the Marshall Islands.³⁵ In 1994, the U.S. Department of Energy began releasing thousand of previously classified nuclear test era documents, many of which confirmed the wider extent of the fallout contamination in the Marshall Islands, and a five-year study of 432 islands in the Marshall Islands showed that 15 atolls and single islands - almost half of this nation - were dusted by radioactive fallout from the U.S. nuclear weapons tests of the 1950s.³⁶ As a result of this officials of

³⁴ http://www.umc-gbcs.org/getinvolved/viewarticle.php?csa_articleId=205.

³⁵ <http://nuclearhistory.tripod.com/testing.html>.

³⁶ <http://resourcescommittee.house.gov/106cong/fullcomm/99may11/debrunt.htm>.

the Marshall Islands testified before President Clinton's Advisory Committee on Human Radiation Experiments in Washington, D.C., stating that fallout exposed many more than the four atolls acknowledged by the U.S. government, and that islanders were purposefully resettled on contaminated islands so the U.S. could study the long-term effects of radiation.³⁷ In 2004, at the time of writing these compensation claims have not been settled. Today, as a result of American testing, about twenty percent of the land of the Marshall Islands is unavailable to the people, because of toxic radioactive wastes due to the nuclear testing, and because of continued use, principally at Kwajalein, by the United States.³⁸

Amata Kabua died in 1996, serving his 5th term as president of the Republic of the Marshall Islands, and his cousin Imata Kabua was selected to finish the term. In 2000, Kessai Hesa Note was elected as president. Under his term the First Compact of Free Association expired, and, in 2003, the Second Compact of Free Association came into effect and Kessai Hesa Note is reelected as president.

³⁷ <http://resourcescommittee.house.gov/106cong/fullcomm/99may11/debrumt.htm>.

³⁸ http://www.umc-gbcs.org/getinvolved/viewarticle.php?csa_articleId=205.

II. ENVIRONMENTAL SETTINGS.

2.1. Physiographic and Biological Setting.

Located in the central Pacific between 4° and 15° north latitude and 160° and 173° east longitude, the Republic of the Marshall Islands consists of 29 low lying coral atolls and five coral islands, of which Lib Island is one. Twenty-two of the atolls and four of the islands are presently inhabited. The atolls and islands are situated in two almost parallel chain-like formations. The eastern group is the Ratak (Sunrise) Chain and the western is the Ralik (Sunset) Chain, which together extend about 700 miles (1,130 km) north to south and approximately 800 miles (1290 km) east to west. Surrounded by ocean, the Republic is more than 2,000 miles (3,230 km) from the nearest trading centers, Honolulu and Tokyo. Its nearest neighbors are Kiribati to the south and the Federated States of Micronesia to the west.

There are approximately 1,225 islets spread across an area of over 750,000 square miles (1.2 million square km). With a total land area of over 70 square miles (110 square km), a mean height of 7 feet (2 meters) above sea level, and soils that are nutrient poor, the nations agricultural base is limited. The marine resource base, however, is extensive. The combined lagoon area totals 4,037 square miles (6,511 square km). Coral reefs fringe the atolls and serve as the only defense against the ocean surge. The clearance of the reef in the sections that are covered by water is usually no more than a couple of feet.¹

Generally speaking, an atoll consists of a series of low lying islets and submerged reefs arranged about a central lagoon, which mixes with the open ocean via one or more channels and/or shallow passes. In the Marshall Islands, the islets composing an atoll usually form an oval shape around a central lagoon of 150 feet (45 m) average depth. The surrounding ocean depth plunges to over 5,000 feet (1,525 m) within two miles (3 km), and to 10,000 feet (3,050 m) within ten miles (16 km) of the typical atoll.²

Dye³ suggests a probable development history for the Marshall Islands; he states that approximately 70 million years ago the volcanic cores of the Marshall Island atolls erupted forming new volcanic islands. The islands, slowly subsiding but standing above sea level, were colonized by species of reef-building corals, and the process of reef flat construction began approximately 40 million years ago.

¹ Permanent Mission of the Republic of the Marshall Islands to the United Nations, 1992.

² Fosberg 1990; Wiens 1962.

³ Dye, 1987.

Underwater ocean maps show that there is also an abundance of underwater seamounts, some of which reach almost to the surface, such as Keats Bank east of Mili Atoll. Most of these guyots are aligned along the same axes as the Ralik and Ratak Chains, so that these underwater features as a whole have recently been termed Ralik and Ratak Ridge.⁴

All atolls and islands in the Marshall Islands have *joorāne*, land signs, as well as *joormeto*, sea signs, which indicate a location on an island or on the ocean, as well as the relationship between the land signs or the land itself and the sea sign. Erdland⁵ describes this Marshallese marker system:

The configuration of these beings, which are on their respective atolls either lifeless objects, birds or fish, which I am going to present might look at first sight as a simple list. Of course some of the names might be without meaning now, because the history of the respective person does no longer live in the memory of the seafarers. Though many of them allow us a deep glimpse into the beliefs of the Marshall islanders and further on they represent a part of the unwritten history of the islanders. Because these names have a special value for the localization of myths and fairy tales. Some of them are mentioned in the legends therefore they can be considered historic to a certain degree. ... It is remarkable that some of these *akejab* localized on land have children on sea, ... These children of the *akejab* are birds or fish or other lifeless drifting objects which stay at a certain distance to the atolls

Due to the persistence of these signs they served the old navigators as points of orientation, so that they knew – besides the waves, and other indicators – where the atoll was located to which the respective bird or fish belongs. In order to imprint these sea signs into the memory of the young navigators, the old ones have composed sayings or rhymes, which show a close connection between the sea sign and the land.

Long before the atolls of the Marshall Islands have been discovered and charted by European and American ships, Marshallese had already put their archipelago, atolls and waterways 'on the map' indicating them in Marshallese stick charts.

⁴ Spennemann, 1993.

⁵ Erdland, 1914:346-347; see also p. 30, 83.

...., sea charts are made of straight and curved small mid ribs of palm fronds. Small white sea shells (Cypraea or Melampus) indicate the islands. The maps do not indicate the exact geographical position of the islands but give information about the condition of the sea between the islands, in particular the condition of the surf besides of other matters of significance for the course. There is no regulated system for the sea charts and one school does not know the teachings of the other. Thus a sea chart can only be interpreted correctly by its maker ⁶

19

2.2. Climate.

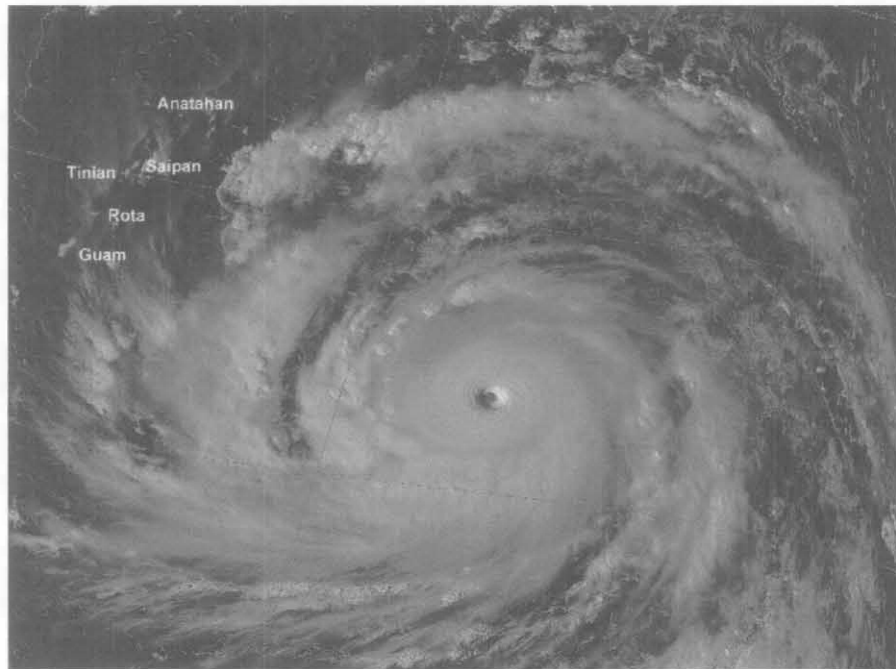


Fig. 12. Typhoon Paka, 1997.

The climate of the Marshall Islands is predominantly a tradewind climate with the tradewinds prevailing throughout the year. Minor storms of the easterly wave type are quite common from March to April and October to November. The islands are not generally considered to be in the Typhoon belt, but because they are low with small land masses they are easily subject to flooding during storms. Tropical storms are rare but do occur. The first typhoon recorded for the Marshall Islands happened in the 1840s. It devastated Likiep Atoll and cost the lives of the greatest part of the population. Then the German administration had been caught unprepared as they had considered themselves outside of the typhoon belt.

The only atoll for which complete weather data exists is Majuro, where the U.S. National Oceanic and Atmospheric weather station is located. Annual rainfall varies considerably from north to south; the southern atolls receiving 120-170 inches (300-400 cm), and the northern atolls receiving 40-70 inches (100-175 cm).⁷ The highest rainfall generally occurs during the *añõn rak* season, also known as breadfruit season (June to October). Precipitation is generally of the shower type; however continuous rain is not

⁷ NOAA, 1989.

uncommon. During the *añōn ean* season, also known as the pandanus season (January to March), the rainfall decreases with February noted to be the driest month of the year.

One of the outstanding features of the climate is the extremely consistent temperature regime. Daily temperatures for both northern and southern atolls fluctuate between the high seventies and mid eighties with no seasonal variation. The range between the coolest and the warmest months averages less than one degree Fahrenheit. Nighttime temperatures are generally 2-4 degrees warmer than the average daily minimum temperatures, which usually occur during heavy showers in the daytime.

In spite of this the weather is always hot and humid with an average temperature of 81° degrees Fahrenheit all year round.⁸

2.3. Vegetation.



Fig. 13. Beach and lagoon Wotho Atoll.

There is no record of the original vegetation of the Marshall Islands. The precise date when plants first occurred in the Marshall Island atolls is still debated.⁹ It is possible that 44 species of plants, including various herbaceous species, seeds of shrubs, and trees

⁸ Permanent Mission of the Republic of the Marshall Islands to the United Nations, 1992.

⁹ Dye, 1987.

drifted to the southern Marshalls before the arrival of man.¹⁰ The early inhabitants probably altered the vegetation of the atolls by introducing new species. During the twentieth century coconut plantations, developed by German, Japanese and American administrations replaced most of the original vegetation of many atolls.¹¹ Today as much as 60 per cent of the nation's land area is covered with coconut (*Cocos nucifera*).¹²

Many areas not dedicated to coconut plantations have been put to other uses such as cultivation of taro and other plants. Species that have been introduced are reliant on the presence of humans for propagation.¹³ The vegetation that grows in the Marshall Islands include mixed broadleaf forest composed of a small number of tree species (*Tournefortia argentea*, *Guettarda speciosa*, *Pisonia grandis*, *Pandanus tectorius*, *Allophylus timoriensis*, *Cordia subcordata*, *Hernandia sonora*); a few shrubs (*Scaevola sericea*, *Suruana maritima*, *Pemphis acidula*, *Tournefortia*); and a layer of ground cover consisting of several species (*Lepturus repens*, *Thuarea involuta*, *Fimbristylis cymosa*, *Polypodium scolopendria*). Several mono specific forests occur in the Marshall Islands (*Neisosperma*, *Pisonia grandis*, *Turnefortia argentea*).¹⁴ Shrubs such as *Pemphis acidula*, *Suriana maritima*, and *Scaevola sericea* typically grow along shorelines while herbaceous plants occur mainly under forests. Limited strands of mangroves (*Bruguiera*) occur on larger islands of the wet southern atolls¹⁵ and are found in swampy areas containing brackish. Several of the cultivated plants (*Musa*, *Cocos nucifera*, *Artocarpus altilis*, *Cyrtosperma chamissonis*, *Pandanus tectorius*) are commonly found on the inhabited islets of the Marshalls. These various plants serve as windbreakers, salt spray repellents, food, and are used by Marshallese for plaiting and medicinal purposes.

On most of the islets there is a strip of natural shrub forest along the seaward coast that serves as a windbreak. This mainly consists of mixed broad leaf forest and shrub with *Scaevola* on its outer edge.¹⁶

¹⁰ Hatheway, 1953.

¹¹ Fosberg, 1990.

¹² OPS, 1991.

¹³ Fosberg, 1990.

¹⁴ Fosberg, 1990.

¹⁵ Stemmerman, 1981.

¹⁶ Fosberg 1990.

2.4. Sea Level Changes.

Due to being so low in elevation, the recent sea level rise caused by global warming or "greenhouse effect" is a critical threat to the Marshall Islands. The rising of the sea during the last two decades has devastated the low-lying atolls economically and culturally. It is estimated that the normal trend for sea level rise has been approximately 1.3 inch to 3 inches increase over the span of 100 years. However, it is figured that within the next 50 years there will be a 1.7 inch increase alone. As predicted by scientists (global warming red alert), the islands of the Marshall's are among the Pacific nations that will be affected by the rising of the sea level within the next fifteen to twenty years. Under normal conditions, coral and the other components of the coral reef can maintain a healthy landmass. At present, visibly eroded scrublands are along the coastline and most of the vegetation growing in this area will soon be washed away by the incoming tides. Any archaeological sites that are located within this area will vanish and their significant historical value will be lost to the tides.

For many years the Marshall Islands Government has been concerned with the issue of global change. As the Marshall Islands lie in open ocean and are very close to sea level, the vulnerability to waves and storm surges is, at the best of times, precarious. Although the islands, have by no means been completely free from weather extremes, they are more frequently referred to in folklore as '*jolet jen Anij*' (gift from God), the sense that the Marshall islands are a god given sanctuary, away from the harshness of the other areas, is therefore a notion that is part of the sociocultural identity of the people. When any variation of the weather hits the Marshall Islands, the effects can be severe. When typhoon Roy passed over Lib in late 1988, the islands and its people were hard hit and outside food had to be brought in. The El Niño induced drought, in 1998, brought consequences that caused the entire Marshall Islands to be declared disaster areas, and emergency water making equipment and food supplies were shipped in from outside.

Given the physics of wave formation and the increasing frequency and severity of storms, the Marshall Islands will likely be at even greater risk of total inundation. The relative safety that the islands have historically provided is now in jeopardy. The impacts are not limited to the Marshalls and its immediate neighbors. The Marshall islands are often referred to as the "front line state" with regard to the climate change issues. It is important to realize that once the potentially catastrophic effects begin to appear, it is likely too late to prevent further warming that will threaten virtually all of the world's coastal regions.¹⁷

¹⁷ Permanent Mission of the Republic of the Marshall Islands to the United Nations.

III. Society.



Fig. 14. Marshallese, ca. 1815.



Fig. 15. Marshallese, ca. 1815.

Marshallese society is generally matrilineal and composed of a number of matrilineal *jowi*. The most important descent group is the *bwij* lineage. This is a matrilineal system in which all land rights are passed down through the mother's side. Therefore the whole group is descended, mother to daughter, from a common ancestor or *jowi*, clan. There were at least forty-four clans spread over the atolls and though no one remembers how members of a *jowi* were related by blood, members still consider themselves related. The *alap*, the lineage head, usually the eldest male of the senior line of the lineage, is steward of the lineage land holdings.

With slightly less than 70 square miles of land in the entire archipelago and prime settlement areas being extremely limited, land has long been the most highly prized possession in the Marshall islands and control of land is the central theme of Marshallese culture. The basic land division of the Marshall Islands is a *wāto*, is a strip of land that ideally runs from the lagoon to the ocean side of an island. One or more *wāto* are held and administered by a matrilineage line. Title is divided and shared by several levels of the society. In the pre-Christian era, the Marshallese social system distinguished between two major classes: *irooj*, chiefs, and *kajoor*, commoners. The *irooj* hold title over an island or atoll. Among the *irooj* the *iroojlaplap*, paramount chief, were the ones with the most power while the *iroojiddik* of the lesser chiefs, shared the power and many of the privileges, but to a limited degree. Today the term *kajur* is not used so often as the class has been divided into the *alap*, land managers, and the *rijerbal*, workers. The *alap* organizes and directs lineage activities and allots lands for use to different descent lines within the lineage. The *alap* and the *rijerbal*, workers, make up the subjects of the *kajoor*, commoners, and render services to the *Irooj* in exchange for the use of land. The *Irooj* managed the land in a way that not only provided themselves with food but also

provided for the *kajoor* (*alap* and *rijerbal*). The *kajoor* in return cultivated the land, harvested the water surrounding the atoll, and performed *ekkan* (tributes to the *Irooj*). The procedure is a cycle that has been repeating itself for hundreds of years. The common members of a lineage have land rights, although the *alap* and the *rijerbal* change land ownership. The *Iroojlaplap* is the only individual with permanent land rights, unless defeated in war.

Historically one *Iroojlaplap* (paramount chief) was able to extend his control over most of the Ralik Chain (except Enewetak and Ujelang). Periodically the *Irooj* visited these islands to collect tribute. The Ralik Chain was subsequently divided into two districts, one including Namu and the north islands, the other Jabat, Ailinglaplap, and the islands south. Although all of these islands were owned by the *Iroojlaplap* he rarely visited those further north than Kwajalein and Ujae, because they were isolated and somewhat impoverished.¹ Within the northern atolls, stratification was less elaborate, in comparison to those in the south. Ratak was likewise structured but far less centralized. The whole chain was never integrated under a single *Iroojlaplap*, although the *Iroojlaplap* of Maloelap was able to put the islands to the north (except for Mejit) under his rule. Majuro and Arno broke away from this union, however, and again became independent political entities. The Ralik and Maloelap associations were unstable and varied in size as local lesser *irooj* tested the strength of their islands against that of the *Iroojlaplap*. This trend towards instability encouraged the *Iroojlaplap* to move his residence from island to island to make his control evident to the local lesser *irooj*.

Today traditional rights of land tenure are unequivocally preserved in the Constitution, and the traditional requirements of consensus decision making, in which all persons with land rights to a certain *wāto* must agree, on questions of land transfer is retained. The traditional land tenure system confounds Western-style efforts of historic preservation. Public or government land is non-existent and private landowners are accustomed to exercising ultimate control over land use and access, and are therefore incepting of regulations which might restrict the usage of their property.²

¹ Alkire, 1977.

² Williamson, 2001.

IV. ORAL TRADITIONS.

Prior to the introduction of a written language, Marshallese culture was an oral society where information was maintained through oral traditions. Elder generations passed down beliefs, values and philosophies by telling stories and chants to the younger generations. Many places in the Marshall Islands, which have special cultural significance, offer a wealth of folklore associated with their pasts. Traditional sites are natural features in this environment to which oral traditions are attached. Each atoll and island has its own history and its stories relating to people, settlements and topographical features.

Mc Arthur¹ states that while islanders can usually recall the names and basic events of the demigod of their atoll, very few can identify the names and stories of those from other atolls with the exception of Loktanur and Jebro for Ailinglaplap, Limejokeded, Jemeliut and Letao of Majuro and the female Lijenenbwe of Namu. Loktanur, Limejokedad, and Lijenenbwe are said to be sisters. Lijenenbwe was the 'mother' of Liwatonmour, who was believed to have remained at Namu, in the form of a basalt rock. Some accounts suggest that she had originally come from the Ratak Chain in the east and that one of her sisters, Lidebdebj, remains as a basalt rock on Aur Atoll. The Ijjidik *jowi* were the first descendants of the Lijenenbwe to emerge as a clan and that later the Erroja *jowi* became dominant. Johnson and Johnson² include a story in their collection that claims that the Ralik and Ratak Chains were peopled from basalt pillars, one for each chain of islands. Liwatonmour, a pillar in Namu, supposedly bore the first Ralik chief and her sister Lidebdebj, on Aur Atoll, the first Ratak chiefs.

There are many variations in the creation accounts. Regardless, the different versions introduce key characters important to Marshallese cosmology. According to Erdland's sources the Ralik version of the creation begins with the a being Lowa (or Loa) who lived on the sea, which was bounded by an extensive, low table reef in the south and a swamp in the north. Lowa spoke to the sea, 'See your island reef' and reef formation appeared. Then he said, 'See your sand', and the earth appeared on the reef. Again he spoke, 'See your plants', and plants were growing. Again he spoke, 'See your birds', and they appeared. One of the birds, white gull, flew up, and while circling, spread out the sky, like a spider weaving its web between two bushes. When Lowa finally said: 'See your human beings', four human beings appeared, one in each direction: Iroiiddrikrik in

¹ Mc Arthur, 1995.

² Johnson and Johnson, 1980.

the west; LoKomraan or Lakameran (Daymaker) in the east; Lorak or Rerik in the south, Lajiminanmen, Lajbuineamuen, or Lalikian in the north.

Then a boil grew on the leg of Lowa, from which, when it bursts open, emerged Wulleb and Limdunanji. Limdunanji gave birth to two male beings: Lanej (Master of the heights) and Lewoj (Master of the Middle of the Island).

One day Wulleb and his sister's children sat on a stalk of arrowroot, which grew up to the vault of the sky and enabled them to ascend. Their peaceful companionship, however, was of short duration. Soon the brothers plotted to kill their uncle, and Wulleb, Lanej and Lewoj waged war in the dome of the sky. After they had observed each other mistrustfully for several nights, Wulleb's retina tore and he fell down from the dome of the sky on Imroj. Thus matrilinearity begins.

When he sighted aloud as the result of this fall, Iroiijdikrik awoke, came to him and spoke: 'Well this is Wulleb, and he has fallen from the sky!' Wulleb answered, 'My nephews and I we watched one another by night; then when my retina tore, I fell down.' Iroiijdikrik then spoke, 'Let us go into the hut'. They went in and three months passed.

When Wulleb had spend some time with Iroiijdikrik, a large and extremely painful boil developed on the extensor of this leg. After it became ripe it broke open; two little boys issued from it, the elder of who was called Jemeliut, and the younger Letao.

Wulleb sent them to Lijebake (Tortoise Woman) on Bikar Island, in order to get magical tortoise shell from her. Lijebake - who with her granddaughter Lijwei, had come from the Gilbert Islands - gave Letao a magical potion, which he drank despite all his disgust. In doing so he became a crafty hero who not only conquered several atolls, but also embittered the life of his brother Jemeliut, that the latter settled on Majuro Atoll, married there, and finally changed into a silver tree. Letao went everywhere seeking adventure and met sudden death in the Gilbert Island.

According to Raymond³ in *Das Weltall*, the Ratak version of creation starts with two serpents (or worms), the male was called Wulleb and the female, Lehman (Woman Rock). They developed into human form in a shell. To make a larger world Wulleb lifted the arch of the shell using a stick to expand it to the present height of the sky and width of the ocean.

³ Raymond, 1899.

From a boil on Wulleb's forehead emerged Lewoj and Lanej, who were sent to the sky by Wulleb in order to put up the stars. Lejman also had two female offspring, Lino (tidal wave) and Ni (coconut).

Then Wulleb collected in a coconut shell the blood from a cut on his leg, and from this blood came Letao (one with the white eyebrow, the powerful, the crafty, the favored one) and Jemelud (father of the rainbow). They went out to conquer. Prior to the conquest of the islands they had already ascended to the vault of heaven in order to defeat their older brothers. That their ascent in the north was successful is clearly shown by the fact that the Northern Hemisphere is less far less inhabited (studded with stars) than the Southern Hemisphere. A bird flew to tell one of the sky gods their plans to defeat their brothers. This god captured Letao's small son, set him impossible tasks, which the son accomplished, finally he lowered himself to earth on a thread. Letao had settled on Mejit. Bikar was formed by a rock that Letao threw at the bird, which had come to spy on him.

Lowa			
	Wulleb	Limdunani	
Jemeliut	Letao	Lanej	Lewoj

Table 3. The cosmological genealogy of the Ralik Chain.

Wulleb Lejman					
Jemeliut	Letao	Lanej	Lewoj	Lino	Ni

Table 4. The cosmological genealogy of the Ratak Chain.

Other accounts add information, though some are quite contradictory. According to Knappe the first being was Wulleb who lived with his wife on the invisible island of Eb. One day a tree grew from Wulleb's head, split his skull, and out came Letao and Jemelut. Letao quarreled with his father and went away flying through the air with a basket of earth, some of which spilled through a hole, so that the islands came into existence in the sea. Then Letao planted the land, created land and sea animals, and married his mother. Then the bird Babuk came with the first female sexual organ in his beak. Letao hid it. Lejman found it and put it on. Neither wore clothes at this time and but Lejman became ashamed and took two mats as covering (beginning of clothing).

From their union came the first people. In this version it is Letao who is credited with the creation of animals and plants. According to Knappe, the woman was not ashamed because of her nakedness, but because she had an incestuous relationship with her son.

In other writings, there are claims that it was Iroijrikrik who married the woman Lijebake of Bikar.⁴ Erdland⁵ tells of a story in which Jemeliut has an aunt Limejokeded. After stealing bananas and being caught by her Jemeliut become an ogress and gives birth to mosquitoes, flies, mudfish and the warrior Toltoliben.

Davenport's version states that Lowa sent a man who put all the islands in a basket and arranged them, first the Carolines, then the two chains of the Marshalls, Namorik was dropped out of order. The basket was eventually thrown down too, and became Kili.

In several versions, Lowa sent two men to tattoo (on Ailinglaplap) all the living creatures, thus giving them colors and markings.⁶ Lowa sent two men down to Bikini with measurements for the first canoe.⁷ A woman bore a son and a coconut. At his request she buried the coconut, which grew into the first coconut tree. Again at his request she husked a coconut and the husks floated to Iroijirilik, who made sennit with them. The sennit was taken by a bird. It flew into the air with the rope, thus making a net and widening and raising the sky, as well as holding it up. Rain is water separated into drops falling through this net.⁸ Everyone went to Namu to honor Liwatonmour, the founder of the Irooj clan. From this gathering came all clans, with Irooj as the highest.⁹

Before the arrival of the Missionaries a myriad of supernatural beings inhabited the Marshall Islands. Each of them could be named individually and was outfitted with special characteristics, life circumstances, and associated stories. Today this pantheon of the netherworld is usually subsumed under the name of *timon*. Traditionally medicine was closely related with the spiritual world of the Marshallese. Spirits could cause sickness and could also help in the healing process. In dreams they would reveal cures to healers and would guide the healing process when asked by *bubu*, divination.

⁴ Krämer und Nevermann, 1938.

⁵ Erdland, 1914:

⁶ Davenport 1953, Chambers 1969, Buckingham 1949.

⁷ Buckingham 1949, Davenport 1953.

⁸ Krämer und Nevermann, 1938; Chambers 1969; Buckingham 1949.

⁹ Chambers 1969.

4.1. *Kajin Majel* - Marshallese Language.

All people of the Marshall Islands speak *kajin majel*, Marshallese. In former times there were two distinctive dialects, the Ratak Chain dialect and the Ralik Chain dialect. Due to the urban centers Majuro and Ebeye in the Ratak Chain, today these two dialects are merging with the Ratak dialect having more speakers and seeping into Ralik speaking communities. The English language is another strongly felt influence. English as a second language is taught in elementary school, as well as in High School and education in the Marshall Islands College is entirely in English. Many Marshallese attend school in the United States or live abroad for some time. The effect of this exposure is that English is more and more a necessity for many people and the Marshallese language has many English loanwords.

There is no accepted orthography for the Marshallese, consequently a considerable variation of spellings for one word can be found in the literature. The spelling employed in this report tries to follow the Marshallese-English Dictionary. Names and place names are written according to the local Government. In general, this text represents the Marshallese language in *italics* (except in cases of place names or proper names) and presents the English translation or equivalent after the Marshallese.

V. Traditional Medicine in the Marshall Islands.

The inhabitants of the Marshall Islands, spent roughly 2000 years on their atolls, developing a unique culture and their own traditions, before being 'discovered' by European seamen. In this prehistoric time they considered themselves as one ethnicity, one group of islands and one group of people, belonging to two different island chains, the Ralik and the Ratak Chains. They speak one language, share the same beliefs and the same fears - spirits, sickness and death. In order to ward off these threats many different tactics were developed and employed.

The earliest references concerning traditional Marshallese medicine can be found in German sources, written by government officials, missionaries and traders. Being citizens of the German empire and born into the 19th Century they felt not only superior to their colonial subjects and entitled to guide and educate them, but at the same time they had a rather romantic idea of their colony in the south seas. The Governor of German New Guinea defended the acquisition of Micronesia in the German Reichstag with the following words:¹

"Admittedly Germany is unlikely to gain much economic advantage from the island territory. But I still think that we can pursue a highly idealistic purpose there. This is to preserve the Polynesian [Polynesians] are proud but peace-loving people and Germany should take pride in preserving and gradually civilizing them. Germany should hold tight to the idea that this purpose alone is enough to justify keeping and administering these islands." At the end of the speech, German parliamentarians from all sides joined in with lively cheers of 'bravo'!

During the German colonial time some of the cleric as well as government personnel stationed on Jaluit Atoll had a vivid interest in everything Marshallese. They published their observations and these articles and books form which this report has been compiled. The author most cited in this report is Augustin Erdland, a Catholic priest and keen ethnographer of Marshallese culture. Born in Germany in 1874 he came in 1900 to the South Pacific, spending 10 years in the Marshall Islands where he was leading the Catholic mission. He compiled the first dictionary and published numerous articles as well as one book about the way he experienced the Marshallese people and their islands.² The second important source was Augustin Krämer, who was a physician and anthropologist. He had visited the Marshall Islands and together with his wife Elisabeth accompanied the German 'Südsee-Expedition', which ethnographically surveyed all Islands of the German Micronesian Colony.

¹ Hiery, 1995:2.

² Burgmann, 1955:931-932.

5. 1. The Spiritual World.

The mythical island Eb³ is regarded as the residence of Wulleb, the most influential spirit or god of the prehistoric Marshall Islands. Some songs indicate that in the past Marshallese fishermen reached Eb, but the exact position of this island is unknown except that it is located in the west.

The westerly location follows from the fact that this is the direction of the annual migration of birds, either to nest there or to molt there. The spirits living on Eb greatly appreciate the molting for it relieves them of the burden of plucking the birds. The great schools of fish, too, at a certain (spawning) time each year move westward, where they pay their tribute to Wulleb. Among them the parrot fish species *kilkil* (yellow tail parrot fish) and *belbilekeo* are sacred to Wulleb. ⁴

The Marshallese dictionary has one entry under spirit, which is *jetōb*, a word that is also used in the Christian context for Holy Spirit *Jetōb Kwōjarjar*. Looking under ghost the dictionary reveals three entries *eakeak*, *mōkade*, and *timon*, of which the last is the adopted English term demon.

In 1914 Erdland, reported that the Marshallese language had only two words for higher spiritual beings *akejab*, or *kejab* and *anij*.

Äkejab comes from *ä* (*a*), affix of duration, *ke* causative particle and *jab*, end, side and means the one, who constantly confines, limits. The *äkejab* are beings who surround and constrain the island region through their physical and moral influence. This is actually the case as they occupy the chief points of the compass. This explanation is no less true for the later *äkejab*, i.e. for human beings, who after death were transformed into stones, trees fish, and birds. The latter live on or near the individual atolls and the living human beings are constraint by their presence, be it through the prohibition against setting foot on the island inhabited by the spirit or against uttering certain words, be it through their influence upon the persons themselves.

Accordingly the first mentioned *äkejab* of higher or lower rank had to be distinguished. Among those spirits known on all atolls and islands of the Ralik and Ratak Chains were Wulleb, Lejman, Lajbuineamuen, Irojilik, Lorork, Lewoj, and Lanej, whose effluence of power was called *ädduelin*, that striking from above, whereas that of the other *äkejab* was called *naij an äkejab*, spirit power. All, without exception, were thought of as *armij käbdada*, real human beings. As such they were seen in dreams by curers and sorcerers. The only advantage these higher living beings had was that the second kind, evil spirits, or so-called *anjilik*, were under their power. *Äkejab* could send them out to bring illness to people and even to abduct the soul from the body.

³ Some claim Eb could be Yap Island in the West of the Marshall Islands.

⁴ Erdland, 1914:315.

These *anji*, spirits, were regarded as harmful and instilled fear.

In the broader sense of the word, *anji* can include all terrifying beings, such as sea monsters (*anjin lojit*), poisonous fish, and morays. From this point of view sorcery (*anijani*), too, as machination injurious to man, is connected with the word *anji*.⁵

Among these last mentioned *anjilik* or *anjinrilik* we find a wide range of spirits that afflicted Marshallese in a physical or mental way. They were the most feared evil forces, of which the principal ones are

Labakkijet: the spirit of the sea, *anjijet*, *anji in jat* or *lojit*;

Larndakbar (*la mädak bar*) — the one who causes headache;

Lakejarub (*le kejar ub*) — the one who brings chest pain;

Lawulleb — the one who causes headache;

Lakejär — the one who watches, to see whether anyone eats something baked before going fishing;

Laluaua — the one who looks out of a hiding place to see that laws are obeyed;

Leroro — he one who punishes with coughing;

Laranran — the one who beats pandanus leaves, so that no woman does this work and so that is done exclusively on the side of the hut where the sleeping places are;

Lajibuinmal, the one who guards the under support when coconut fibers are beaten, so that no women touches it;

Lajbuito, the one who guards the *to*, the sacrificial pond to keep women from bathing in it;

Labento, the one who dwells in the water hole;

Limenölöl, the one who causes death by bewitching the head;

Lawilele, the one who guards the old fish weirs, made of palm fronds, and

Lalibjet, the one who guards the long fish weirs, until the collapse by themselves.⁶

When Wulleb commanded these malevolent spirits to enter a human being they were perceived approaching in a sailing canoe.

In order to free the sick person, the sorcerer lights a fire, fills a dry pandanus leaf, folded in the shape of a canoe, with the tip of fiber that protects the seed covering when the shell is removed from a young coconut and puts it out to sea, while saying: "*Judak o lägage lägage dowaj i Eb*", that is "get up, oh raise, oh drag him away drag him westward to Eb". If Wulleb hears the supplication, the sick person sees the evil spirit sailing off, otherwise he will soon die, since the spirit has already left with the soul.⁷

Krämer reports that *anjilik*, evil spirits, cause among others the following diseases: headache, chest pain, coughing, and magic infliction of the head. In order to

⁵ Erdland, 1914:313.

⁶ Erdland, 1914:313-314.

⁷ Erdland, 1914:314.

make somebody sick these *anjilik* arrive on board of a canoe and penetrate the person. The doctor treats the sickness with the model of a boat made of pandanus leaves, which is placed on the water while reciting a magic spell. Then the patient should see the *anjilik* sailing away to Eb Island.⁸

In contrast to these evil spirits there were bush spirits *anjinmar*, also called *nonieb*. They were good natured, little beings, men and women, who dwelled in dense brush or bushy grass. One could hear them speak or laugh close by, but could not talk to them. Sometimes they married human beings and bestowed all kinds of miraculous gifts upon them, even children.

In this category were also *rimogaio* or giants, who lived only on Kili Island and spent the six months of the trade wind period in sleep, as well as the myriad of humanoid creatures of the sea and of the land, which, as told in countless stories, interacted with human beings, as for instance *riijiket*, spirits of the sea, *koujinmeto*, mermen, or those of unknown abode such as people who have *ekkol*, special powers, *anitta* spirits, who during their lifetime were associated with dangerous magic, etc. Usually spirits were night active and therefore sighted at night, often appearing in form of a human being in people's dreams, which was a much feared occurrence.

In the Marshallese pantheon of the *anij*, spirit world, there were some, who gained a notorious reputation with their infamous actions. Among those were Lomokein, Kaibuki, and Linjiri. Linjiri was Kabua's⁹ great uncle and much feared because he himself had swallowed the clouds in the north and the south.

Lomokein was a close relative of chief Kabua, too. She died in childbirth. During the preparations for her burial the sennit cord, to bind the body and the mats broke, which was considered a bad omen.

The first divination revealed the body could not be buried on land, as all humans would be swallowed by her. The second divination disclosed that her immersion in the sea within the bonito zone was harmful as well. Even a third divination was unsatisfying, thus people had to give the body to the ocean over the horizon.¹⁰

But even this sea burial was only successful after some *roro*, incantations, had been chanted. Already when the canoe was still on its way back Lomokein was sighted hanging in the trees of the island. Later she terrorized the entire population of her native

⁸ Krämer und Nevermann, 1938:235.

⁹ Kabua was the *Iroojlaplap*, paramount chief of the southern Islands.

¹⁰ Erdland 1914:327.

island and was frequently sighted. One day she turned into a stone that was swept away by a storm around 1870. But nothing changed and when Erdland recorded her doings, in 1914, she reputedly enjoyed the favors of paramount chief Kabua, helping him by inflicting sickness to unruly subjects.¹¹

Because of possible spiritual presence nobody slept alone, nor walked by himself to the beach on the ocean side or any uninhabited place because the fear to be attacked and caught unaware by a spirit was omnipresent. However, there was spiritual and human interaction.

When spirits appeared on their own, the names of some dead were called out and when the right one was named the spirit answered by some noise like a flute. In the same way they also answered questions. In this way a chief once investigated about his ship that was late in calling and learned from the medium that it was on its way but fighting heavy weather. When the ship finally arrived the answer proved to be correct for the day when the question had been posed.

But spirits also interacted with the real world by throwing stones.

Spirits attract attention by throwing stones on the pandanus thatched roofs of the houses. As this is done quite frequently by the natives to lure a girl or a woman out of the house ... this belief has to be looked upon more skeptical. But, nevertheless, the Marshallese, who know their own secretive ways best, believe that in certain circumstances stones are thrown by spirits. I know of one occasion, when a white trader, together with chief Lakeri or Jitam from Mille, heard stones being thrown not far from his trading station. By the way, this trader had a reputation to be quite a crafty devil, he convinced himself, that there was nobody in the direction from where the stones were thrown. When he turned to the chief with the question who was throwing the stones, the answer was, "this is N's soul, who is furious against me. But let him throw, he cannot harm me." The soul in question was the one of a chief who had died some 2 years beforehand. He reputedly had had an intimate relationship with the spirit world. In 1905, because of this relationship, the flooding waves had not harmed his possessions, whereas the lands of all other chiefs had been completely destroyed.¹²

For direct contact mediation between the Marshallese and the spirit world priests were responsible.

The main occupation of the priests, (*drikanan*), is divination. Because the *anis* appear in front of them and tell them about the future. At the time when they converse with the god, they usually refrained from eating for one or two days. They never ate or drank from used cups and also broke the ones they had used. Their advice was sought

¹¹ Erdland 1914:328.

¹² Erdland, 1914: 330-331.

concerning war and travel, harvest, wind and weather, sicknesses and other topics. The head end of your sleeping place was dedicated to your guarding spirit and the first bite of every food was thrown to this place in his honor. ... Some trees, places, animals become taboo and thus cannot be used by all the people or by some Marshallese. People believe in life after death and hope then to reside on islands with a surplus of everything.¹³

Erdland reports in connection with the word *monmon* the existence of mediums, who are employed to receive answers from the spirit world, but he also notes that it is virtually impossible to get more information concerning this subject.¹⁴

To make a long story short, the Marshallese shared their islands as well as the sea with supernatural beings with which they had to live in harmony. Otherwise their lives and health as well as those of the members of their family were endangered. In addition life on small atoll islands was not easy - resources were scarce, the weather unpredictable, and warfare not unknown. Thus, it could be opportune to keep a congenial relationship with the netherworld. Therefore it can be assumed in prehistoric time, life on the Marshall Islands held many threats and fears for its inhabitants, in daily life, in health, and in illness.¹⁵

A) Veneration of Spirits.

According to the literature no temples or shrines existed on the Marshall Islands. However the Marshallese had a fearful and respectful veneration of their spirit world. They *rej kadok jemen ak jinen*, left sacrifices for the spirits of the dead, placing them directly onto the grave or leaving them on *lqlōn*, the holy back side of the hut, where nobody was allowed to walk, obviously thinking the spirits would partake of the food. While throwing the food people say, "*Kijen L., jo na ijueo*".¹⁶ If the grave of the dead was on the island, then the food was wrapped to a pole and planted on the grave.

5. 2. The Marshallese Soul.

The Marshallese had a precise idea of the soul. The *anjilik*, malevolent spirits, *du kage*, would dive, for the soul, in turbid and murky water, just like fishermen dive for clamshells. But everybody's soul was endangered by Lewoj and Lanej, some *äkejab*, who would come to eat the soul, if the human beings were ignoring instituted taboos.

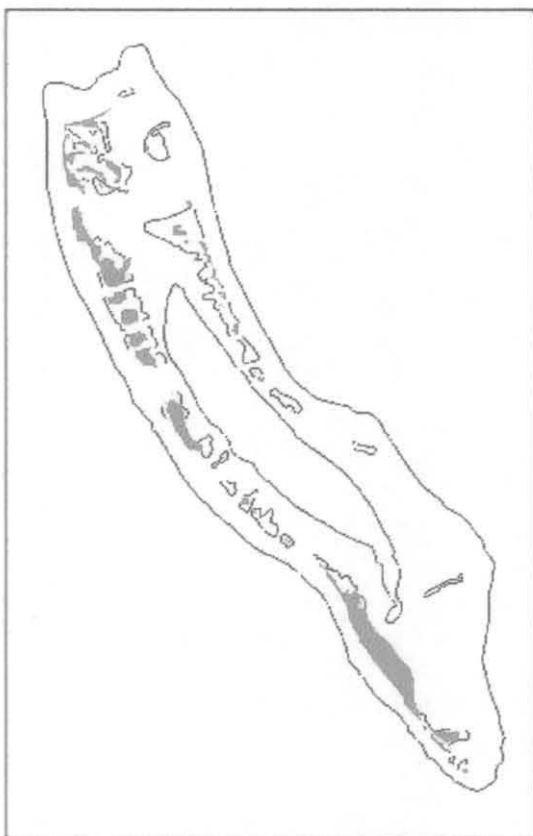
¹³ Kurze, 1887:127.

¹⁴ Erdland, 1906b:189. On the other hand in Abo et al., 1976:209 *monmon* means haunted, having supernatural powers, taboo.

¹⁵ Erdland, 1914:326.

¹⁶ His food for L., ... No precise translation available.

Thus, the soul is considered a limpid being deeply hidden in the interior. But it does not represent an absolute principle of life, because it can be separated from the body without causing it to disintegrate, on the other hand it can be united with the body without having a reviving influence. The first case we have when women fly out of distress ... according to the natives the flying being is nothing else than the soul. This can also be explained by the lightweight of it, as flying persons sit on the tips of palm or pandanus leaves without falling off. Further on, in many stories the spirits have carried away the soul when the body is still functioning, though no longer spontaneous.



Map 3. Nadikdik or Knox Atoll.

After death, the soul of every person remained six days in the grave and loud noise was the only thing that could wake the cadaver of a recent dead. Only after six days the soul *jerkak*, got up, and became aware of death. It immediately started its trip to Nadrikdrik Atoll. Its arrival was announced by some noise. She now has to cross the southern reef where Lörök lives, then turns to the north and passes the habitation of the malevolent spirit Lajbuineamuen, before finally turning to Eoerök, the islands of the dead.¹⁷

The souls arrived on the island of the dead in form of an outrigger canoe. The human beings on Eoerök considered sighting a big canoe as a sign for a soul, which would continue to exist as a *jitöb*, spirit. It could come on shore and continue to subsist by feeding on *malaner*, red roe of crabs. Whereas a small canoe was considered *jitöbrara*, a quiet spirit, that

could survive until its final deletion by feeding on sea cucumbers. No indication was given to point out the preferable state for the soul. After death the soul was not judged according to the life of the human being.

¹⁷ Erdland, 1914:323. The day after the arrival of a soul, the natives would find a piece of *jepage* or *buil*, turtle shell, under a bush, it was part of the necklace of the soul and consider a powerful remedy for all sicknesses. According to personal communication with Len Lenja Mayor of Mili Atoll, on July 16, 2004, the soul has to cross a channel in the reef, called *kilime*, and this is the moment when its arrival is announced with a big bang or grumble. The final destination is Nago, the southernmost island of Nadrikdrik Atoll and the Ratak Chain.

In Majuro, on Mönkötem *wāto*, is the place where souls enter the ground for their final journey to Nadikdik Atoll. (personal communication with Maria Kabua-Fowler, July 27, 2004, Majuro)

These souls that *monamon*, manifest themselves, after death are called *jitöb* and those that after their separation from the body no longer *jimonamon*, display any existence are called *jitöbrara*. Among the *jitöb* can also be good-natured ones and they are venerated as protective spirits of the family but nonetheless are also feared.¹⁸ Therefore food is offered to the dead in order to pacify their shadows and to prevent disturbances at night.¹⁹

The concept of the soul was also closely related to the clan totem.

The word for totem is *wunenak*, a word composed of *wun* or *un*, basis, foundation, source, *e* is an euphoric apposition; *nak* is tradition (from *naknök* family tradition): the basic idea in *nak* is 'new'. Thus, the word *wunenak* means the origin of the tribe or of the tribal tradition. The same tribe distinguishing meaning has the descriptive description of totem, *men eo muorair*, which means the one that points out its kind.

The original totem of the tribes of the Ralik Chain is a basalt rock. In the presence of this stone ordinary subjects can walk with their back straight in front of the chiefs.²⁰

Clan totems are either, animals and trees or stones, the same things the souls of the dead are often turned into. Thus, 'totemism seems to be related to metempsychosis'.²¹

Metempsychosis, in other words the doctrine of the transmigration of souls, teaches that the same soul inhabits in succession the bodies of different beings, both men and animals. It was a tenet common to many systems of philosophic thought and religious belief ²²

The Marshallese believed that any pain inflicted on the totem would hurt the human soul related with the totem. The totem was also considered to be a sort of guarding spirit of the family.²³

¹⁸ Erdland, 1914:328.

¹⁹ Erdland 1906b:188.

²⁰ Erdland, 1913:251.

²¹ Late Latin, from Greek *metempsychosis*, as META- + *en* in + *psukhe* soul: see -OSIS|. Transmigration of the soul; esp. the passage of the soul of a person or animal at or after death into a new body of the same or a different species (a tenet of the Pythagoreans and certain Eastern religions). The New Shorter Oxford English Dictionary, v.1 p.1757.

²² Personal communication with Margit Wolfsberger.

²³ When Erdland reported about totemism in the Marshall islands he wrote, "As I recognized the existence of totemism only a short time before my departure, and as the idea of it was already vanishing, I could not investigate it properly.

5. 3. The Marshallese Perception of the Human Body.

Marshallese perceived the human body differently, which is clearly shown in many expressions of the Marshallese language. *Bun*, for instance, meaning the onset of wind is also used for feelings, as for instance in

... *bun buruð*, my throat opens [which means] I am enjoying. *E bun köloa*, the onset of anger [which means] I am getting angry. *E bun anen*, wind in the interior starts [which means] somebody is getting excited. By the way air in the interior is the expression for mood.²⁴

Buru, the throat is considered the seat of feelings and emotions. Thus, in matters of the heart Marshallese will point to their throat. This is also reflected in the language.

To make somebody sad is called *kabuil buru* [meaning] to make the throat hot or burning. As if the throat had been cut, which is the equivalent of our being stabbed into the heart.²⁵

Krämer collected even more examples in the Marshallese language, such as *burubijbij*, a flat throat, which means to be undecided, or *burujibil*, a dividing throat, meaning divided by disagreement, and when you say *burukaru*, short throat, it means to be slightly excited, *buromuij*, cut throat, means to be very sad, ...²⁶

While the throat is considered the seat of emotions, the stomach is looked upon as the 'brain' while the gall is the center of life.

Lolu, the stomach is considered the seat of understanding and activity. *E bob lolu*, my stomach is getting tight [meaning] I am getting courageous.

In the stomach lies the source of thinking and action, because during great emotions you can feel a pulling and a rumbling there.²⁷

atäjinemjin. According to believes of the natives great power rests in the gall, actually the principle of respiration and thus the ability of life itself. Thus, if there is a child without close relatives, its gall is getting restricted, the family misses the principle of reproduction and dies out.²⁸

²⁴ Erdland 1906b:185.

²⁵ Erdland 1906b:185.

²⁶ Krämer und Nevermann, 1938:236.

²⁷ Erdland 1906b:189.

²⁸ Erdland 1906b:183.

A) Prehistoric Ailments and Sicknesses.

The greatest health threat for the inhabitants of the Marshall Islands in prehistoric time was famine. In an ecosystem as delicate as an atoll island, drought, storms, typhoons, and tsunamis can devastate the environment for years to come.

[Then] Out of sheer poverty the already consumed pandanus keys were collected and beaten in order to get the small kernel that has no taste whatsoever. The natives also felled young pandanus trees in order to consume the juice of the soft stem. After the flood on Likiep Atoll people had to sustain on grass and fish. When survivors from Mejit drifted there they were deceived and killed, in order to keep the amount of people small.²⁹

The earliest mentioning of the health condition on the Marshall Islands is from Chamisso, who was a member of the Kotzebue expedition that sailed in the Ratak Chain in 1817.

In general they have their teeth spoiled, the front ones often broken off, by the nature of their basic foodstuff, from chewing the fruits of the pandanus with its wooden fibers.³⁰

Before the arrival of *ripelle*, white people, the Marshallese hardly knew any malignant diseases, with the exception of leprosy.³¹

Otherwise they complained about tooth and belly pain, blindness, mumps dysentery and a mild form of ringworm, which grew towards the extremities and disappeared by itself. The sort of ringworm which formed scales and the foul-smelling ring worm were brought by Jibe and Lamare from Kusaie (in the east Carolines). Mites and their relatives were known to the ancient Marshallese. From the Gilbert Islands came yaws and a skin disease that covered the entire body with suppurating wounds.³²

In 1905 Krämer, who was an ethnographer as well as a physician, reports the following sicknesses from the Marshall Islands.

Even though they live on islands made of sterile limestone, the Marshallese are not a healthy nation plagued by many skin diseases. This is caused by their lack of fresh water.³³

Krämer recorded two forms of ringworm, *Tinea circinata*, and *Tinea imbricata*, as well as filaria and leprosy. At the time of his visit three leprosy patients lived secluded

²⁹ Erdland, 1906b:184.

³⁰ von Chamisso, 1986:275.

³¹ The Marshallese had no remedy for leprosy. But fortunately it was rare and due to the separation of the patients on Jaluit Atoll its numbers were declining. The Germans saw a connection between leprosy and the habit of eating raw fish. Erdland, 1914:15.

³² Erdland, 1914:14.

³³ Krämer, 1905:216-218.

on Jaluit, but in the following years the German government found more than a dozen cases on different islands and atolls. He also recorded Syphilis.

Finally I have to mention syphilis, which unfortunately is spreading among the natives. [The former government doctor] Steinbach ... estimated that on the most afflicted atolls Djalut, Ebon, and Madjuro 50% of the population has syphilis. It seems this contagious disease was brought by the whalers.

According to Steinbach some Marshallese, who had drifted to Kosraie had imported the disease around 1850.³⁴ Chamisso, who had visited the Marshall Islands in 1817 did not mention it. It seems that the disastrous effects of syphilis started only to be noticeable in the end of the 19th century. As no other disease, it inflicted the Marshallese and their society.

The amount of miscarriages and premature deliveries ...is surprisingly high. ... I only saw a few babies who did not display signs of hereditary syphilis, and even the older ones displayed signs of this disease. Many marriages remain barren, nearly every day women ask me for remedies to make them fertile.³⁵

The semi-nomadic lifestyle of the Marshallese, who not only moved around their atolls, but also in-between atolls and islands, supported the spread of syphilis. But the missionaries involuntarily helped its spread, too.

Lately the so-called missionary festivities seem to have provided a ground for the spread of the sickness. On these occasions hundreds of people come together living several days in the vicinity of the mission, singing, praying and also performing traditional dances and games.

The last festivity of this kind, which I myself have experienced, happened on December 25, 1890 on the island Imrodj in the lagoon of Jaluit and was attended by about 1000 people. At that time I had hardly seen any primary syphilitic afflictions, but in the last half of January 1892 these cases got more and more. Asking the patient about the place where the infection happened, I heard nearly only 'in Imrodj'.

What I came to see in due course in Dr. Bartel's hospital was incredibly sad. Patients, old and young, in all stages of the sickness. They had come from all parts of the archipelago.³⁶

Erdland also reports tiredness and exhaustion in the legs, even rheumatism, due to the humid climate.³⁷

³⁴ Erdland reports this incident in 1880.

³⁵ Krämer, 1905:221-222.

³⁶ Krämer, 1905:222-223.

³⁷ Erdland 1906b: 184.

Krämer cites illnesses according to their cause:

- *Majoliñer*, caused by the influence of the moon, for people sleeping under the open sky.
- *Rile*, caused by incest, when there is already another sickness, but also *ālok*, this means by any sexual contact which makes the sickness worst.
- *Kijek*, caused by magic, or due to the influence of evil spirits.
- By staying in a house where you got sick, which will cause further sickness.
- Due to outside influences (wounds, broken bones, famine, etc.). The treatment (*marmuir*) starts when the doctor (*rūno*) rubs (*kilmur*) the patient with the juice from the leaves of a shrub *kedak*, and with some coconut oil. In order to obtain the Juice the leaves are pounded with a 30 (1 foot) long wooden, stick-like pounder, which, just like a cone has one wider end (Berlin VI 18113, collection Bartels) on a hollowed piece of coral. From this moment on the sick person, as well as the their married partners and the doctor are no longer allowed to have sexual intercourse. In case on of these three untouchable (*āmo*, *mā*, *āmo*) persons breaks the taboo, then the sickness will worsen (*mader*, *ālok*), or will cause death. Further treatments (*uno*) are, drinking warm water, placing a cooling leaf on the painful body part, treatment (*tabuk*) with warm herbs, treatment with the juice of the shrub *karr* (S.) for headache, parts of the *Bohemeria nivea* as a general remedy, massage (*man*, *ānñor*), treatment of swellings (specially tumors) with palm oil or herbal juice, treating broken bones with splints (*kabab*) made of the sheath of the coconut leaf, ...³⁸

B) Mental Sickness.

According to the Marshallese, emotions, and this includes sadness and fear, are related with the throat, and the throat actually 'is' what in the western concept is ascribed to the heart. To be afraid is called *buromoj* and means the throat is restrained. Thus many Marshallese will refer to matters of the heart by pointing to the throat. For the concept of *lōrro*, flying women, the throat is responsible.

Erdland, with his keen interest in the Marshallese perception of the world, regretted never to have seen a *lōrro*, a flying woman.

Unfortunately I have not been able to see a flying woman myself. I also disputed with the natives a woman's ability to fly. They pitied me because of my disbelief and thought the white man would not be able to understand deeply felt love. Then they cited the names of many women, who had been seen flying and would not budge from their point of view.

According to the natives, a flying woman looks like a spirit like fairy, she has a stretched body, long wavy hair and keeps her hands on her back. In this posture she glides through the air and is clearly identifiable as a human being. She usually flies toward uninhibited parts of an island where there are many trees. There she rests on the

³⁸ Krämer und Nevermann, 1938:23.

tips of pandanus or palm leaves, without falling off. There she also sings songs. During this state the lamenting woman is on the beach and cries.

Tobin reports the story of a *lōrro*, flying woman, from the Japanese time.

On Roñlap atoll there were two old people. Their [life] being together was very good. The man was gone one day and the woman was very sad and did not eat and did not drink. And she did not talk with people, but just meditated. After six days people looked around again to go to feed her. She was gone, and they searched for her all day long. But they did not find her.

That night they again searched for her. They searched for almost two weeks. But they did not find her. And they ended their search.

But she was not there because she had flown to Wotto and turned away to where there was a group of people on Wotto. And the woman appeared to all of the people on Wotto. And the people looked for where she would land there.

But she did not land. And the people on Wotto looked for her but she was gone.

The *lōrro*,³⁹ the depressed flying woman, continued her flight all over the Marshall Islands. All the people saw her and confirmed it. At the end of the story people from Rongelap saw her and seized her. Marshallese medicine provided treatment and cure for such a state of mind.

In order to bring her [the flying woman] back the medicine man gives her a remedy, made of herbs and beetles, which makes her vomit. This clears the throat of any anxiety and the woman no longer feels sad. Thus, the astral appearance as well as the ability to fly is gone.⁴⁰

Another mental sickness is caused by *rue*, incest. This sickness also inflicts chiefs, who often are exempt from rules and regulations that would afflict their subjects.

There are still some families in the Marshall Islands where intercourse between family members of the first descending degree is quite common. It is permissible for chiefs, though these, too, just as well as common people, will be afflicted with a certain disease which is called *rue*. In former times when a chief was sick from *rue*, the magician was called, who put a mat over the patient and dropped the liquid of *ajbuirök* pandanus fruits on the body. In doing so the following words are spoken, "*Jatilinköre, bijlok, bijlok enbuinnuum!*" According to this sickness are actual cramps of the woman, causing a penis captivus. The separation of the bodies starts as soon as the fruit juice has been emptied. — As medical science does not know any sickness caused by close relatedness and in case there are no other infections then this sickness is quite probably

³⁹ Women who are *buromoi*, afflicted with an acute melancholia like condition. People always run and try to seize them before they can fly away. Tobin, 2002:262.

⁴⁰ Erdland, 1914:120-121.

caused by a psychological influence, due to the raising feeling of guilt. It is worth noticing that this sickness usually happens when brothers and sisters have a relationship, but is not as common when there is a relationship between parents and children.⁴¹

In Marshallese folklore there are many references to incest. The words spoken as an incantation are a reference to a story recorded on Bikini Atoll, that tells of an incestuous relationship between a brother and a sister. In this story the incest is immediately punished, when the canoe, where the couple is on board, dissolves and sinks. According to Krämer and Nevermann, the psychological misery that follows incest is treated with herbal medicine.⁴²

5. 4. Medicinal Treatments.

Medicinal knowledge involved four ways of treatment. *Bubu*, divination, *uno*, medicine, *ekkapit*, massage, and *roro*, incantations. All of them were performed by specialists. Decisions were made by *ribubu*, people knowledgeable in *bubu*, divination. healers were called *riuno*, and experts in massage were *ripitepit*.

On many occasions all three were employed, massage to ease swellings, herbal remedies to relieve pain and to improve the health condition, as well as *roro*, incantations to fight malevolent spirits coming for the soul of the patient.

These specialists needed long and careful training. After being painstakingly chosen by a *riunu*, healer, the *rikatak*, apprentice, was trained in identifying plants and preparing medicine. Crushing plants in a mortar to prepare the *o*, the medicinal pouch, which holds the herbs in order to squeeze and strain them to extract the juice.

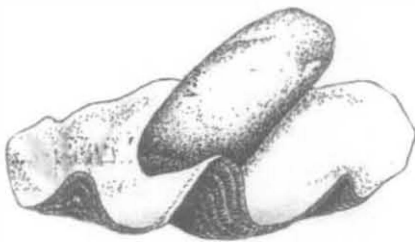


Fig. 16. Mortar and pestle.

In the medicinal trade the mortar and the pestle were highly valued heirloom objects, passed on from healer to healer down the generations. The mortar was half a clamshell and the pestle one of the smooth stones that can be found on the reef.⁴³

⁴¹ Erdland, 1914:165.

⁴² Krämer und Nevermann, 1938:235.

⁴³ Preface of the forthcoming publication of the 'Marshall Islands Society for the Protection of Traditional Medicine'.

One of the earliest first hand accounts describing the Marshallese way to deal with sickness is from Eisenhart, a sailor, who was shipwrecked on Ailuk Atoll and stayed there eight months.

As soon as a native gets sick, no matter what illness befalls him, he is separated from the others and moved to the sickbay in the interior of the island. An old medicine woman is on office, who is considered capable to ban any sort of evil. One of her universal remedies is a drink of herbs and fresh water, which has a bitter taste. [The companion] Dick sometimes suffered stomach cramps and once got some of this remedy. Later on he kept on saying that the effect was not to be disregarded.

During the sickness the medicine woman mediates between the patient and the relatives, which have to stay away from the house of the sick. One day I missed Rina and learning from Lamatshua that she was sick I hurried to visit her. Once I arrived in the vicinity of the sickbay my presence aroused quite a commotion but the medicine woman allowed me to sit down in a respective distance and to confer with Rina.⁴⁴

In 1887, Hemsheim reports with some skepticism.

The medicinal knowledge of the natives is mostly hot water and the placement of a cooling leaf on the painful spot. A lot of massage is applied by old women, who do it with great diligence and knowledge. Quite understandably their doing is accompanied by a lot of hokuspokus and they claim the healing power primarily on the murmured incantations. Sometimes, in case of a long time patient, a change of location is ordered, then friends, standing around his sickbed, fold long pandanus leaves. From the left over ends the place can be divined where the patient will be brought to increase his health.⁴⁵

At around 1900 Dr. Bartels was stationed on Jaluit. His hospital consisted of a dozen huts along the lagoon on the northern end of the island. He recorded the following diseases.

Ruk, yaws, seems to have been introduced to the Marshall Islands a long time ago, as many people thought 'it had always been here'. It was a well-known disease, considered harmless, and held in the esteem of a children's disease, which every child would have to suffer. Then skin is irritated and big welts, up to six centimeters, form. They disappear on their own and without any scarification.⁴⁶

⁴⁴ Eisenhart, 1880:225.

⁴⁵ Hemsheim, 1887:301.

⁴⁶ Bartels, 1897/98:165.



Fig. 17. Rington Jelke gathering bark for medicine, Wotho Atoll.

The Marshallese had developed their own treatment of *ruk*, yaws. Hot stones and leaves were thrown into a bathing hole in the reef, warming the water. There the patient was bathing in the saltwater as hot and long as he could. When the first *ripelle*, white foreigners, came they introduced the blue-stone (cuprum sulfuricum) which was used for treatment.⁴⁷

Ringworm, *Tinea imbricata*, is very common in the Marshall Islands. According to my estimation about 10% of the population is suffering from it. The vernacular name for this sickness is *gogo*. The natives of the Marshalls did not know any treatment. Since the coming of the white people, they learned to produce a sort of ointment from flowers of sulphur and coconut oil, rubbing it on the wounds and with good results.⁴⁸

Certain medicinal practices were common knowledge and everybody would know how to treat a gash or a cut, nausea, head and toothache, etc. On the other hand real medicinal knowledge was and still is kept in certain families and considered secret. The knowledgeable curers practiced their profession with outmost secrecy.

Nakrik - just like in Germany there are certain secrets here which are handed down in the family from one generation to the next. This is especially true for medicine.⁴⁹

⁴⁷ Bartels, 1897/98;166.

⁴⁸ Bartels, 1897/98;167.

⁴⁹ Erdland 1906b:189.

The lore of medicinal plants and the necessary *roro*, chants, were considered a prized family possession, which also brought rewards when the patient was successfully treated and survived. Erdland called this *jelä kur*.⁵⁰

The patient was rubbed with oil, sand, and seawater. From this moment onwards neither the sick person nor the medical practitioner or the spouse of the patient are allowed to have sexual relationships. Disregarding this ban can cause worsening and even death. Each new crisis as well as each relapse are related to disregarding this taboo. The commandment of sexual abstinence is enforced until the patient has completely recovered. The cure of a patient is celebrated with a feast together with presents for the medical practitioner. Though this does not free the patient from his obligation towards his life savor. The debt only ends with the death of the patient or of the medical practitioner.⁵¹

On another occasion Erdland writes:

Alok [means] when the treatment of a patient starts, the doctor rubs [the body of the patient] with *kedak*-juice (*kilmur*), from now on sexual intercourse is prohibited. The person is now *amo*.⁵²

A) *Bubu*, Divination.

If the healing will be successful or not is divined with the help of *bubu*, plaiting a pandanus leaf in equal parts. In case the last part remains longer than the others the patient is brought to another house, in order to heal him by the change of location, which is called *kejborānjat* or *jeborānjat*.⁵³

B) *Uno*, Medicine.

Traditional Marshallese medicine was quite often prepared from a collection of different plant material, which was pound together and placed into an *uno*, pouch, made of coconut textile in order to squeeze the juice out. A few drops of medicine were often administered twice a day for three to six days.

Kwōd, were containers in which liquid medicine was stored which was used in order to sprinkle it on the patient. A *kwōr* was made of an immature coconut, which was left to rot until the inside kernel could easily be removed.

⁵⁰ Erdland, 1906b:188.

⁵¹ Erdland, 1914:14, 336.

⁵² Erdland, 1906b:183.

⁵³ Krämer und Nevermann, 1938:235.

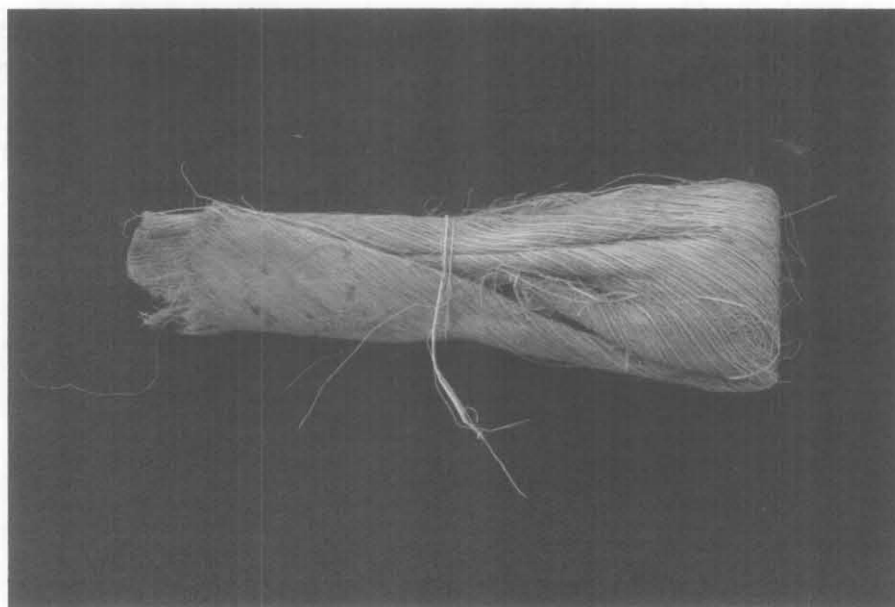


Fig. 18. *Uno*, medicine pouch.

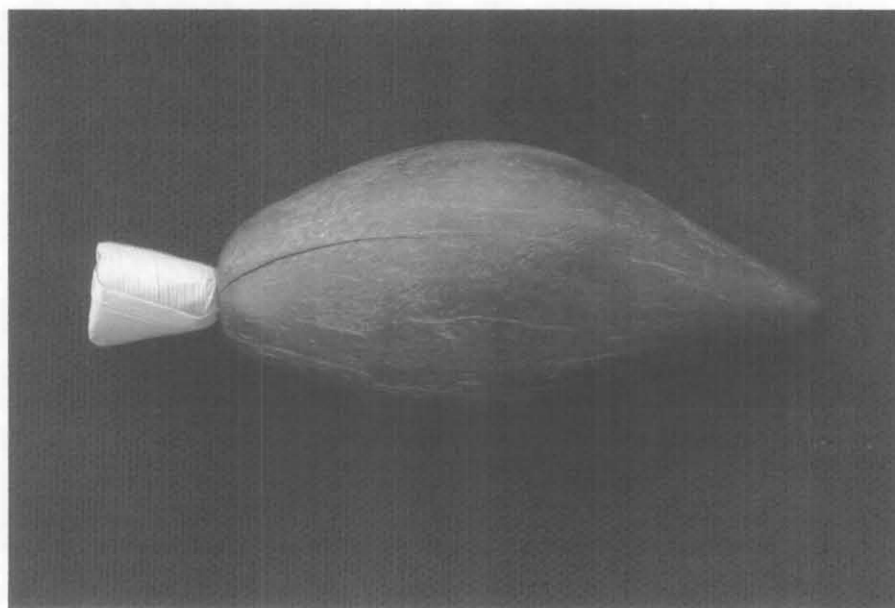


Fig. 19. *Kwōd*, container for medicine, made of coconut shell.

C) *Ekkapit*, **Massage**

In 1906 Erdland writes about massage:

aanor or *man* means to massage. The massage is a very popular medicinal treatment, to heal any sort of swelling especially those of a tumor. ... Massage is either done with coconut oil or some herbal juice.⁵⁴

D) *Roro*, **Incantations.**

But leaves and ointments were only part of a Marshallese treatment, because of equal importance were *roro*, magic chants to counter fight Wulleb and his malevolent helpers who inflicted illness and death. To do so the Marshallese developed many devices. Once somebody got sick it was important to spirit away the illness.

*Lawulleb, kuon juen wä-
lok jani (jen) li e,
i wulliki
wore likum*

Lawuleb, go away
away from this woman,
I make her untouchable,
I place a charm around our neck.

The charm consists of a cord, where young fruits of the 'Chinahanfstaude'⁵⁵, young palm fronds and baste of *triumfetta procumbens* are inserted. As long as this garland is worn no *anjilik* will dare to approach this person.⁵⁶

E) **Pregnancy and Birth.**

Marshallese medicine offers a big variety of remedies for pregnant women, women giving birth, as well as for young mothers and their babies. The baby was considered vulnerable to spiritual influences. Therefore the pregnant woman was not allowed outside her hut with the onset of darkness.⁵⁷

Already during pregnancy remedies were available to secure health for mother and child and the *rikōmour*, the midwife, was well versed to help during labor as well as in the days after birth.

Placenta and afterbirth are pounded and either buried or thrown into the sea to make sure they do not return into the womb of the mother.

⁵⁴ Erdland, 1906a: 223:537-538.

⁵⁵ It was not possible to identify this plant.

⁵⁶ Erdland, 1914:338.

⁵⁷ Erdland, 1914:338.

To help a young mother to regain her shapely form, and not to loose the tightness of her flesh, her entire body is kneaded and trodden on with the feet. There is a special massage for the head, and during this time nobody is allowed to touch her food.⁵⁸

F) Other Methods.

Special food was prepared for patients such as boiled *mokemok*, flour of arrowroot, which is considered easily digestible and thus excellent food for the sick, as well as pandanus juice, extracting it from fresh pandanus keys.⁵⁹

Patients who did not recover in a hut, were transported to another one. Once their condition changed and got better it was said that *jebor air jat*, 'the surface of their sea has calmed'. Just as the pull of love, especially in charms, is compared to *ää in mödo*, the current of the sea, the healing process is like a balm for the tortured soul.⁶⁰

Treating severe dysentery, the patient is turned upside down and with the help of an oiled radius of a bird warm water is filled in. This neck-breaking treatment lasts three to four weeks.⁶¹

Besides herbal treatment of internal pains Erdland also reports *kabab*, the treatment of broken bones, by supporting them with the midrip of the coconut.⁶²

Camisso reported Marshallese put a lot of strain on their teeth by chewing incessantly on raw pandanus keys. Some sources suggest that this fibrous fruit helped to floss teeth and actually was a sort of Marshallese dental care program.⁶³ In any case Marshallese had tooth problems and one way of treatment was taking out the roots of the sick teeth with the help of a chisel while the patient bit on a nut.⁶⁴

G) Restrictions and Regulations.

As already mentioned sexual abstinence is a prerequisite for Marshallese medicine. Women in general seemed to have had an ill-fated relationship with spirituality.

⁵⁸ Erdland, 1914:338.

⁵⁹ Erdland, 1914:38-39.

⁶⁰ Erdland, 1914:338.

⁶¹ Erdland, 1914:15.

⁶² Erdland, 1906b:188.

⁶³ Merlin, 1994, 34.

⁶⁴ Krämer und Nevermann, 1938:235.

In the morning no woman is allowed on the beach, when divination is about to be conducted, because the pandanus leaves would lose their power and could not provide the right answer. The sorcerer is only allowed to have intercourse with his wife after the involved leaves had been thrown into the sea and he had taken a bath. In case the divination happens on board of a canoe (to see if the trip will be successful: *bubu in wulief*) no woman is allowed to move around on board.

By leading a careful, law-abiding life, conflict with the spirit world was avoided and health ensured. Nevertheless, there were a myriad of dos and don'ts, which also had to be considered.

Nobody should eat two sorts of fish at the same meal, because the spirits (winds) of the fish will have a conflict in the stomach.⁶⁵

Those who have eaten raw fruits, cannot eat turtle meat afterwards, this would cause teeth to get brittle. But in case it happens, the tip of a young coconut leaf is wound around the wrist, while citing some magic incantation, to void off the expected consequences. The charm is, "*Klaðmuðrmuðr builok niin lele*, caused by this mixture even the tooth of the Balistes (carolensis) breaks off.⁶⁶

Those who eat the ripe bread or pandanus fruits that have fallen to the ground, will fall and break a limb when climbing a tree.⁶⁷

Once the ban on fruits has been lifted, those who eat from them have to attach a string on their wrist in order to prevent any harm (*unanmij*).⁶⁸

Those who point with their finger to a rainbow will get a crooked finger.⁶⁹

5. 5. Sorcery, *ākkābel*.

In the Marshall Islands a distinction is made between *ākkābel*, black magic and *anjin wullebo*, white magic. While white magic usually is defined by using it in a positive way, *bonjen* is an involuntarily magical way of inflicting illness on somebody.

Certain sicknesses are closely associated with certain families. They can be transferred to other people as quickly as they can be removed. This monopoly on a certain sickness as well as healing procedure is called *bonjen*. This sickness can be acquired, by sitting next to the head end of the sleeping place of a person, or by talking with a relative in the hut, while the respective person is in the process of doing some

⁶⁵ Erdland, 1914:338.

⁶⁶ Erdland, 1914:339.

⁶⁷ Erdland, 1914:339.

⁶⁸ Erdland, 1914:339.

⁶⁹ Erdland, 1914:339.

magic or a divination. As quickly as these sicknesses can be transmitted as easily they can be removed

The *bonjen* of my old seafarer is for instance the nail infection. Other families can transmit mumps,⁷⁰ fistulae, etc. They fail when the other person is protected by a *loa*, *loaö*, *loam*, *loan*, a talisman. In any case the ability to transmit and remove a disease is connected with the *jitöb*, protective spirits of the family.⁷¹

Even at the time when Erdland lived in the Marshall Islands, the inhabitants still feared people with such powers and refrained touching their bags, fearing to contract a disease by the hidden spine of a stingray. In former times people were not helplessly exposed to the pranks and tricks of the spirit world. Even though feared, controlled contact with the spirits was not only possible but seems to have been quite frequent, by means of specialized mediums, diviners or healers.

Besides this involuntary or haphazard way of causing sickness, there were also those persons who had magical powers and could use it at their will - *rikabel*.

Erdland reports about *robarob*

In former times witchcraft and sorcery must have been in great demand. The much feared wizard *Läjak* is still living on the island Ebon. If he says to a man, "You are very strong", he will loose weight in a short time. Or if he says about a breadfruit tree, "This one has many fruits", it soon will only have barren branches. You can get vaccinated against witchcraft, but as soon you brake the related regulations you have to die.⁷²

According to Senft, a magician exercising his powers is not punished, because it is commonly believed that he has no power over the chiefs. The *armidj*, the common people, can do nothing against a magician.⁷³ At the time of writing, despite strong Christian missionary influences, some people are rumored to possess special powers.

Erdland had the following impression of Marshallese magic.⁷⁴

In the Marshall Islands the magnetic power of the soul can be increased through the influence of the sun. Whoever wants to become a magician has to spend hours lying on his back showing his tongue to the sun. Only after the rays of the sun have been absorbed for some weeks, the tongue is capable to send rays to humans and animals alike.

⁷⁰ Peroditis epidemica.

⁷¹ Erdland, 1914:329.

⁷² Erdland, 1906b:190.

⁷³ Senft, 1903: 451.

⁷⁴ Erdland 1914:332.

This magic power is enhanced by the characters that inhabit animals and plants. Though in most cases the use of exterior devices helps only to empower the magician ...

Erdland notes the difficulty to obtain information concerning this topic. Only with the help of the *irooj* Ujilañ some magic objects were made for him. He describes them as 'consisting of strangely plaited and woven palm and pandanus leaves as well as fiber yarn'.⁷⁵ Magicians could inflict sickness and death, but could also help and cure, as well as influence the weather.

In case of sickness it was important to make the spirits leave their sick victim. Preferably spirits are attacked in an olefactic fashion, coercing them to move away. In order to achieve this the body is rubbed with rotting fibers of coconut husks.

The main effect of this and similar rubbings is that the 'blood vessels do not flee' (*ke jen ele*), which means that the blood, which is churning, drives the sickness or the spirit away.⁷⁶

Illnesses that can be afflicted are protrusion of the intestines. To cure this a warmed palm frond is held underneath, which lets the rectum retreat to its normal position.

Women feared very much that sorcery could cause a hemorrhage, which was also a moral threat. According to Erdland sorcerers and chiefs used this magic in order to intimidate women and bend them according to their will.

In order to cause hemorrhage the sorcerer places a small piece of a palm frond in a pandanus fruit or under the mat material, thus giving the woman a warning. In case the woman touches on of these objects the sickness will take its cause. But in case the sorcerer wants to inflict a certain woman with this evil, then he sets on a sea cucumber and crushes it, while saying the name of the respective woman. In order to remove the sickness again the woman is beaten with a small piece of palm fronds which has been place into the water of a young coconut (*ubleb*), or she is showered with the water of the nut, where the piece of palm frond is in. While doing this, the sorcerer says certain words mentioning (porous) corals, north and south as well as boys giving offerings.⁷⁷

There are many ways to harm a person.

A palm rib broken in 6 small pieces and placed into the hair of a person will cause his emaciation (*moñout*).

If a thief does not pay attention at the palm fronds or the climbing loop attached to the trunk of the tree, then he will fall (*jereiabuñ*) when climbing it.

⁷⁵ Erdland 1914:333.

⁷⁶ Erdland 1914:333.

⁷⁷ Erdland, 1914:333, citing P. Jak. Schmitz.

If a pufferfish is stepped upon and magic is put on him, then the cursed person has to die, after his body has been bloated (*kowatwar*).

The following magic spell shall call you back into life: "*I kar ðaŋin am. I kar jaruk am ijo iāñu, ijen raktū, ijen lañū ijen jatū, ijo ko mij ie, ijo, ko lir ie: ruij(ae) le, ruij im ettir. This means: I guided your soul, I animated your soul, there in the north of me, there in the south of me, there in the middle, there on the surface of the sea, there where you have died, there where your head was bent: wake up, wake up and run!*" (*anjin mōur*).⁷⁸

Magic can also bring courage, much needed in times of war.

Jorur e jañ(a) I turilan, kōlom(a) e ʔele ʔābijik, a ren ađlij euk, iou (?) jāban mare, mau in tue euk, mau loñaj euk, mau inje, mau en :ko bāran, bōgo in iedak jōū! This means thunder is rolling on the horizon: your courage; lightning: (the enemy) has been hit by the spear; when you appear people should ask about you; this parrot fish beats you, this parrot fish lifts you up, this parrot fish; you are courageous: that shark is swimming up and down (looking for prey)!" — The parrot fish is mentioned here, because when he sees a fellow fish wriggling on a hook, he charges with such vehemence, that he does not care about the approaching fisherman.

Weather magic also existed in the Marshall Islands. *Ripako*, the shark people could influence and divert storms. But there was also special rain magic (*buine*).

In order to bring rain by magic, a spell is cast on a palm frond and it is thrown into the sea. After 6 nights the palm frond has become black, and the sky starts to cover with clouds. If has rained too much, the palm frond is brought to shore, where it dries and the rain will cease.

Quite a different sort of magic is *kajin ek*, fish talk, luring fish to bite. Even though this is also considered secret, it nevertheless is common knowledge and employed by all fishermen, each, using his own spells, enticing the fish to bite his hook.⁷⁹

⁷⁸ Erdland, 1914:333-334.

⁷⁹ See also Petrosian-Husa, 2004:68.

VI. Traditional Medicine Today.

Once you are aware that you have a left elbow means something is wrong, because a healthy person does not consciously perceive its elbow, only slight or acute pain brings this awareness. Translating this into Marshallese perception of its traditional culture, one can notice acute pain.



Fig. 20. Baby with medicinal pouch attached.

Asking about traditional Marshallese medicine the general notion is, 'it is still around', which can be understood as it is still used. On the outer islands it is probably a more important issue than in the urban centers of Majuro and Ebeye. Even in Majuro's hospital it is tolerated when relatives treat a patient with traditional medicine in addition to the care taken by the official medical services.

Riuno, traditional healers are often the first ones to be consulted and the hospital or dispensary is the second choice. Traditionally such a treatment would be compensated with food and if the patient is healed he could adopt the healer, thus, expressing his gratitude. Today, traditional Marshallese medicine can be costly if the healer is not a family member. In addition to bringing needles or knives,¹ quite a fee can be asked, and sometimes also the use of a car to go around and look for the respective plants. If the treatment fails to bring any results, then help is sought with the doctor. But traditional

¹ Any sort of gift for the healer that is sharp will help the healing process.

medicine is for many also the last resort when western medicine fails to fight the ailment then relief is sought with *uno*, Marshallese medicine.

But, when looking at traditional medicine there is generation gap between the old and the young. Among the elders there are still quite a few *riuno*, who know more than the commonly well known remedies. In Marshallese society such knowledge was and still is a secretive subject, not even openly discussed within the family. In the past a healer would therefore look for a suitable apprentice among his family members. In addition to being family the future disciple also needed to be a person who deserved to be taught, thus, somebody who was respectful and caring. In case no appropriate successor could be found, some healers died without passing on their wisdom. Of course non-family members could also request to be taught, but they could never be sure to receive all there is to know. Even learning by observing what components make a medicine would not make you a healer, as many remedies required *roro*, chants. Finally and most important a healer needed his teacher's *kemelim*, blessing and final approval.

The *kemelim* involved the teacher spitting onto the hand of the apprentice, and using their hands to rub their saliva into the palms of the apprentice. After this anointing, the apprentice would rub both hands together — and the transmission of knowledge is symbolically complete.

Today healers often cannot find any interested person at all. The younger generation encounters traditional Marshallese medicine only from the perspective of a patient and most of them are no longer or not yet interested in the customary ways to treat sickness. When asked about their future most would not consider a career as a traditional *riuno*. This shows quite clearly today's status of a healer - needed and respected but also somewhat 'out of date'.

Traditional medicine, a cornerstone of the classic Marshallese knowledge, can be looked upon as a vital representative of Marshallese culture itself. But it stands for the past, whereas the Marshall Islands, a young republic looking forward into a future in the 21st Century, encounter challenges and obstacles, that presumably will not be solved while looking back. At the moment, so it seems, past and future cannot be merged, and traditional Marshallese medicine is endangered of extinction. The 'Marshall Island Society for the Protection of Traditional Medicine' a non-governmental organization (NGO) saw the warning signals. The findings of their workshops will be published in form of a book, which hopefully will encourage wider interest.

VII. GLOSSARY.

Marshallese	Old Sources	English
A		
	<i>aäduelin</i> Erdland, 1914:313.	power striking from above
	<i>aä in mödo</i> Erdland, 1914:338.	the current of the sea
	<i>aanor</i> Erdland, 1906a: 223:537-538.	massage
	<i>äänñor</i> Krämer + N., 1938:23.	massage
<i>ad</i>		our
<i>aelon</i>		our atoll, our country
<i>aelon kein ad</i>		our islands
	<i>ajbuirök</i> Erdland, 1914:165.	juice of pandanus fruits
	<i>äkejab</i> Erdland, 1914:346-347.	idol
	<i>äkkäbel</i> Erdland, 1914:329.	sorcery, black magic
<i>alap</i>		lineage head
	<i>alok</i> Erdland, 1906b:183.	to start the treatment of a patient, placing patient, and family as well as doctor under a taboo
	<i>älok</i> Krämer + N., 1938:23.	sickness caused by any sexual contact which makes the sickness worst
	<i>ämo</i> Krämer + N., 1938:23.	untouchable persons, person under a taboo
	<i>ämo</i> Krämer + N., 1938:23.	untouchable persons, person under a taboo
	<i>anijanlj</i> Erdland, 1914:313.	sorcery
<i>anij</i>	<i>anji</i> Erdland, 1914:313.	harmful spirits
	<i>anjilik</i> Erdland, 1914:313.	second kind of spirits under the power of <i>äkejab</i>
	<i>anjin lojit</i> Erdland, 1914:313.	sea monster
	<i>anjinmar</i>	bush spirits
	<i>anjinrilik</i> 1914:313-14	harmful spirits
	<i>anjin wullebo</i> Erdland, 1914:329.	white magic
<i>anitta</i>		spirits, who during their lifetime were associated with dangerous magic
<i>aññon ean</i>		pandanus season (January to March)
<i>aññon rak</i>		breadfruit season (June to October)
	<i>armidj</i> Senft, 1903: 451.	common people
	<i>atäjinemjin</i> Erdland 1906b:183.	the gall, the center of power
B		
	<i>bonjen</i> Erdland, 1914:329.	involuntarily magical way of inflicting illness on somebody
<i>bubu</i>		divination
	<i>buil</i> Erdland, 1914:323.	turtle shell
<i>buine</i>		rain magic
	<i>bun</i> Erdland 1906b:185.	the onset of wind, mood

<i>buru</i>	<i>bun buruö</i> Erdland 1906b:185. <i>burubijbij</i> Krämer + N., 1938:236. <i>burujibil</i> Krämer + N., 1938:236. <i>burukaru</i> Krämer + N., 1938:236. <i>buromoj</i> Tobin, 2002:262. <i>buromuij</i> Krämer + N., 1938:236.	my throat opens, I am enjoying throat flat throat, to be undecided, a dividing throat, divided by disagreement short throat, to be slightly excited the throat is restrained, sad cut throat, means to be very sad lineage
<i>bwij</i>		
D	<i>du kage</i> Erdland, 1914:326.	to dive
E		demon
<i>eakeak</i>	<i>e bob lolu</i> Erdland 1906b:189. <i>e bun anen</i> Erdland 1906b:185. <i>e bun köloa</i> Erdland 1906b:185.	my stomach is getting tight, I am getting courageous. wind in the interior starts, somebody is getting excited he onset of anger I am getting angry
<i>ekkan</i> <i>ekkapit</i> <i>ekkol</i> <i>etto im etto</i>		tribute to the <i>Irooj</i>, chief massage special power a long, long time ago
G	<i>gogo</i> Bartels, 18:167.	ringworm
I		
<i>irooj</i> <i>iroojiddik</i> <i>iroojlaplap</i>		chief lesser chiefs paramount chief
J		
	<i>jebor air jat</i> Erdland, 1914:338. <i>jeborānjat</i> Krämer + N., 1938:235. <i>jelä kur</i> Erdland, 1906b:188. <i>jepage</i> Erdland, 1914:323. <i>jereiabuñ</i> Erdland, 1914:333-334. <i>jerkak</i> Erdland, 1914:323.	'the surface of their sea has calmed', the condition of a patient changed and he got better change of location, for the patient to help him get well lore of medicinal plants and the necessary <i>roro</i>, chants turtle shell to fall climbing a tree the spirit becomes aware of death.
<i>jetöb</i> <i>Jetöb Kwōjarjar</i>	<i>jimonamon</i> Erdland 1906b:188. <i>jitöb</i> Erdland 1906b:188. <i>jitöb</i> Erdland, 1914:329. <i>jitöbrara</i> Erdland 1906b:188.	spirit Holy Spirit display an existence spirits or souls that manifest themselves after death protective spirits of the family quiet spirits, souls that do not become

jolet joorane joormeto jowi K	<i>kabab</i> Krämer + N., 1938:23, Erdland, 1906b:188. <i>kabuil buru</i> Erdland 1906b:185.	spirits present, gift land signs sea signs clan
<i>kajin</i> <i>kajin ek</i> <i>kajin majel</i> <i>kajoor</i>	<i>karr</i> Krämer + N., 1938:23. <i>kaar</i> Spennemann, 2000. <i>kedak</i> Krämer + N., 1938:23.	treating broken bones with splints to make the throat hot or burning, to make somebody sad. language fish talk, luring fish to bite Marshallese language commoners, <i>alap</i> and <i>rijerbal</i> , <i>Premna corymbosa</i>
<i>kein</i>	<i>kejborānjat</i> Krämer + N., 1938:235. <i>kijek</i> Krämer + N., 1938:23.	liquid medicine these change of location, for the patient to help him get well sickness caused by magic, or the influence of evil spirits
<i>kemelim</i>	<i>Kilime</i> Erdland, 1914:323. <i>kilkil</i> Erdland, 1914:315.	a teacher's blessing and final approval channel in the reef of Nadikdik Atoll yellow tail parrot fish
<i>koujinmeto</i>	<i>kowatwat</i> Erdland, 1914:333-334. <i>klimur</i> Krämer + N., 1938:23.	merman to be bloated
<i>kwōd</i>		to rub containers where liquid medicine was stored, which was used to sprinkle on the patient.
L	<i>Labakkijet</i> Erdland, 1914:313-314. <i>Labento</i> Erdland, 1914:313-314. <i>Lajbuito</i> Erdland, 1914:313-314. <i>Lajibuinmal</i> Erdland, 1914:313-314. <i>Lakejarub</i> (<i>le kejar ub</i>) Erdland, 1914:313-314. <i>Lakejār</i> Erdland, 1914:313-314. <i>Lalibjet</i> Erdland, 1914:313-314.	the spirit of the sea the spirit who dwells in the water hole the spirit who guards the sacrificial pond to keep women from bathing in it. the spirit who guards the support when coconut fibers are beaten, so that no women touches it. the spirit who brings chest pain the spirit who watches if any taboo is broken the spirit who guards the long fish

	<i>Laluaua</i> Erdland, 1914:313-314. <i>Laranran</i> Erdland, 1914:313-314. <i>Larndakbar</i> (<i>la mädak bar</i>) Erdland, 1914:313-314. <i>Lawilele</i> Erdland, 1914:313-314. <i>Lawulleb</i> Erdland, 1914:313-314. <i>Leroro</i> Erdland, 1914:313-314. <i>Limenölöl</i> Erdland, 1914:313-314. <i>loa</i> Erdland, 1914:329. <i>loam</i> Erdland, 1914:329. <i>loan</i> Erdland, 1914:329. <i>loaö</i> Erdland, 1914:329. <i>lqlön</i> Erdland, 1914:326. <i>lotu</i> Erdland 1906b:189. <i>lörro</i> Tobin, 2002:262.	weirs, until the collapse by themselves the spirit who looks out of a hiding place to see that laws are obeyed; the spirit who beats pandanus leaves, so that no woman does this work and so that is done exclusively on the side of the hut where the sleeping places are the spirit who causes headaches the spirit who guards the old fish weirs, made of palm fronds the spirit who causes headache higher ranking commoner the spirit who punishes with coughing the spirit who causes death by bewitching the head good luck charm good luck charm good luck charm good luck charm the holy back side of the hut stomach, the seat of understanding and activity. a sad woman whose astral body is flying through the air
M <i>majel</i> <i>meto</i> <i>mökade</i>	<i>mader</i> Krämer + N., 1938:23. <i>majoliñer</i> Krämer + N., 1938:23. <i>malaner</i> Erdland 1906b:188. <i>man</i> Krämer + N., 1938:23. Erdland, 1906a: 223:537-538. <i>marmuir</i> Krämer + N., 1938:23. <i>mō</i> Krämer + N., 1938:23. <i>mokemok</i> Erdland, 1914:338. <i>monamon</i> Erdland 1906b:188. <i>monmon</i> Erdland, 1914:326. <i>moñout</i> Erdland, 1914:333-334.	sickness gets worse Marshallese sickness caused by the influence of the moon, for people sleeping under the open sky. medical treatment massage red roe of crabs the sea, stick chart untouchable persons, person under a taboo demon arrowroot, flour of arrowroot to manifest yourselves, after death medium emaciation

N		
	<i>naijan äkejab</i> Erdland, 1914:313.	spirit power
	<i>nak</i> Erdland, 1913:251.	tradition
	<i>naknik</i> Erdland 1906b:189.	secret medicinal knowledge
	<i>naknök</i> Erdland, 1913:251.	family tradition
<i>ni</i>		coconut
<i>noniep</i>		good natured, small people, that humans cannot see
R		
Ralik Chain		Sunrise chain of islands
Ratak Chain		Sunset Chain of islands
<i>ri</i>		people
<i>riijiket</i>		spirit from the sea
<i>rijerbal</i>		worker
<i>rikabel</i>		persons with magical powers who use it at their will
<i>rikatak</i>		medical apprentice
<i>rikōmour</i>		midwife
<i>rimogaio</i>		giants living only on Kili Island
<i>ripako</i>		shark people, clan, they could influence and divert storms.
<i>ripelle,</i>		white foreigner
<i>ripitepit</i>		expert in massage
<i>riuno</i>		traditional healer
<i>roro</i>		incantation
	<i>rüe</i> Krämer + N., 1938:23.	sickness caused by incest
	<i>ruk</i> Bartels, 18:165.	yaws
	<i>Rüno</i> Krämer + N., 1938:23.	doctor
T		
<i>timon</i>	<i>tabuk</i> Krämer + N., 1938:23.	treatment with warm herbs
	<i>timon</i> Tobin, 2002:106.	demon
U		
	<i>ubleb</i> Erdland, 1914:333.	water of a young coconut
	<i>un</i> Erdland, 1913:251.	basis, foundation, source
<i>uno</i>	<i>uno</i> Krämer + N., 1938:23.	medicine, medical treatment, medicinal pouch
W		
<i>wāto</i>	<i>wun</i> Erdland, 1913:251.	land parcel
	<i>wunenak</i> Erdland, 1913:251.	basis, foundation, source, totem

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