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THE ENEWETAK ATOLL PEOPLE

A SPECIAL REPORT FOR THE RADIOLOGICAL SURVEY OF 1972-73

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TABLE OF CONTENTS

Maps

- Figure 1        Micronesia  
Figure 2        The Marshall Islands  
Figure 3        Enewetak Atoll  
Figure 4        Ujilang Atoll

Part I

Historical Background  
Attitudes of the Enewetak People

Part II

Probable Pattern of Living of Returnees  
to Enewetak

The Population

The Gene Pool

Settlement Pattern

The Diet

Agricultural Rehabilitation

Possible Proscription of Use  
of Islands

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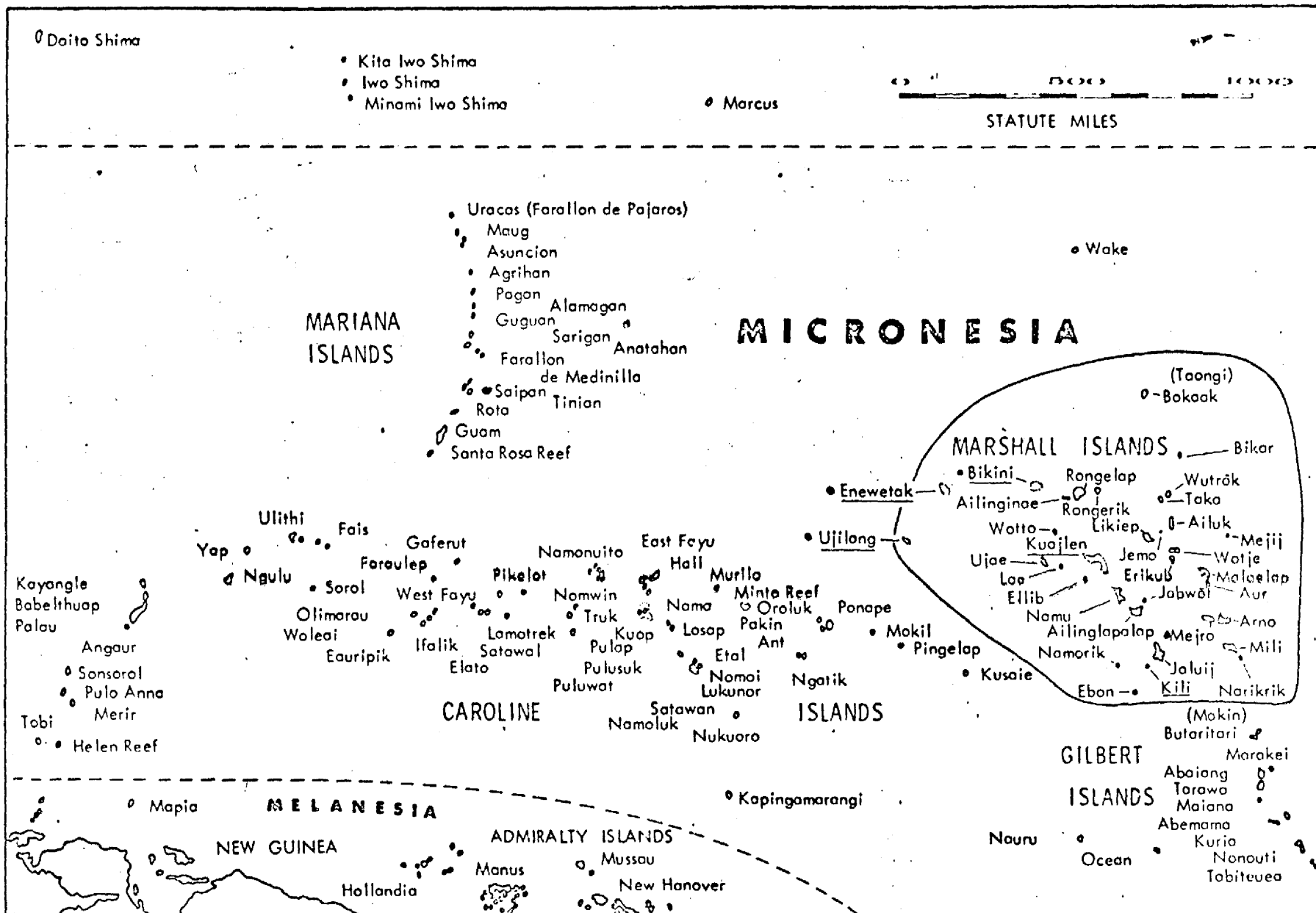


Figure 1.

Adapted from Bryan (1946: 4)  
 by Tobin (1961)

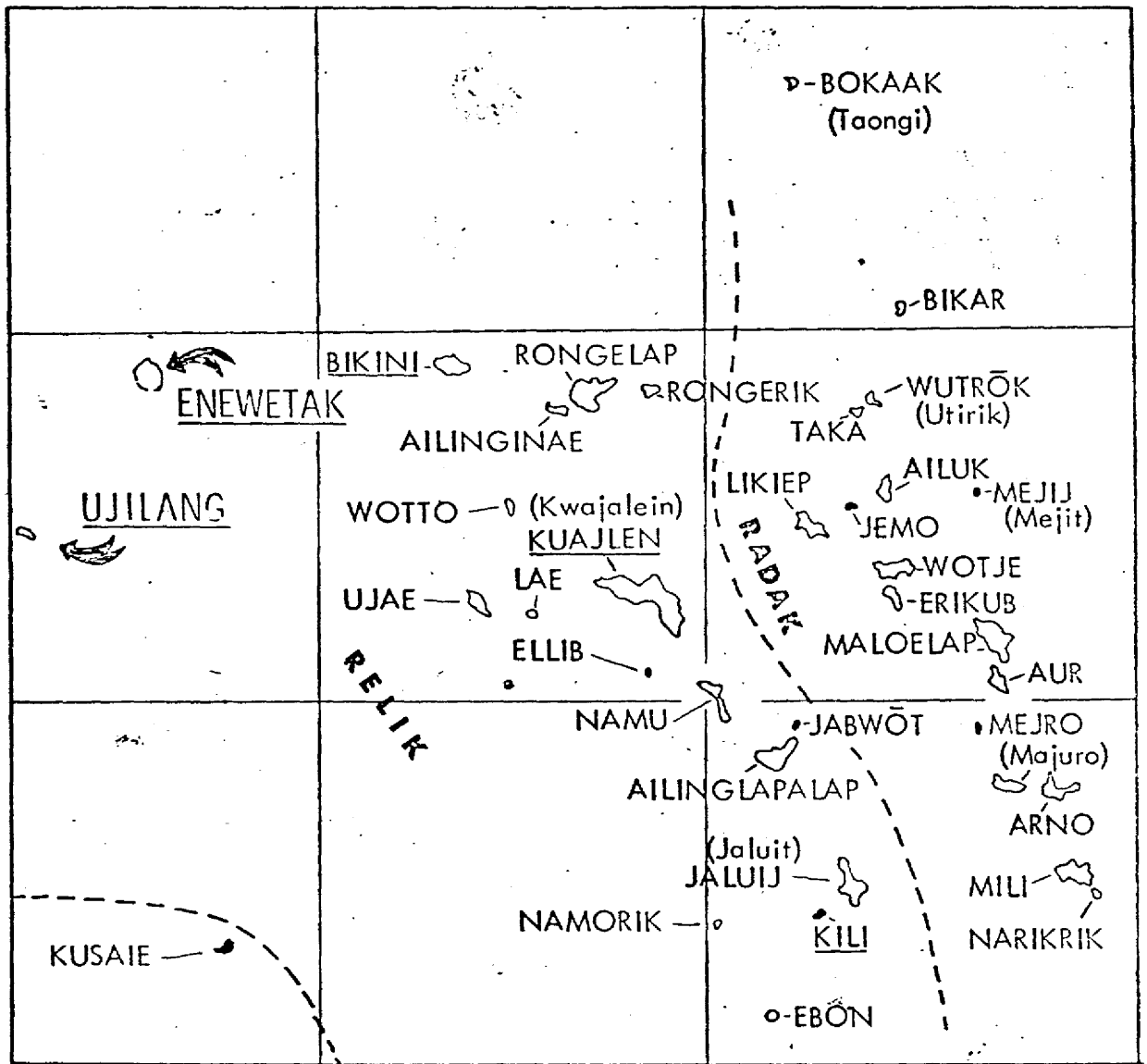


Figure 2. The MARSHALL ISLANDS

Adapted from Street  
(1960: 3)

By Tobin (1967)

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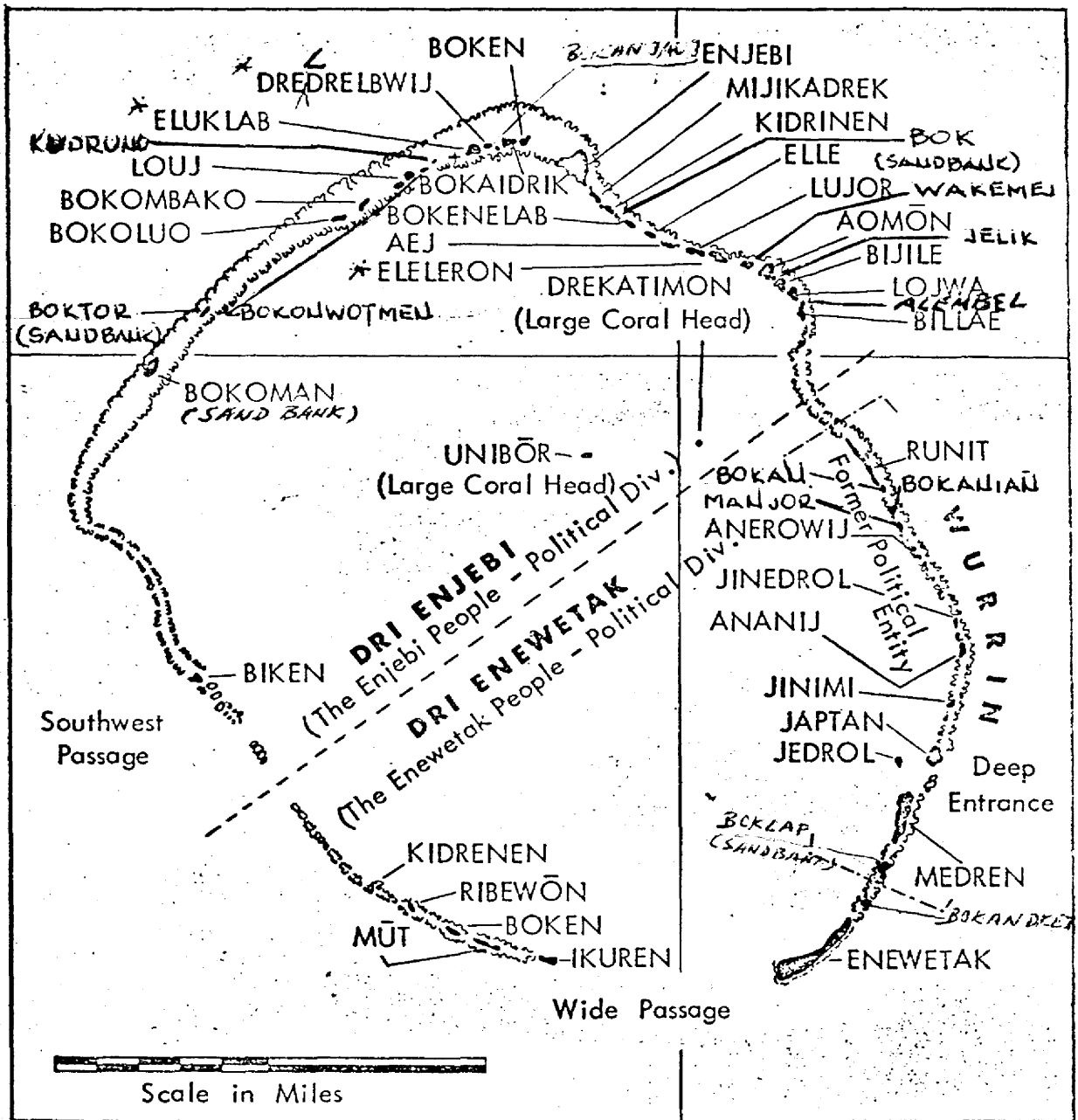


Figure 3. ENEWETAK ATOLL

Adapted from Street (1960: 5)

Total dry land area: 2.67 sq.mi.  
Lagoon area: 387.99 " "

By Tobin 1967

\* DESTROYED

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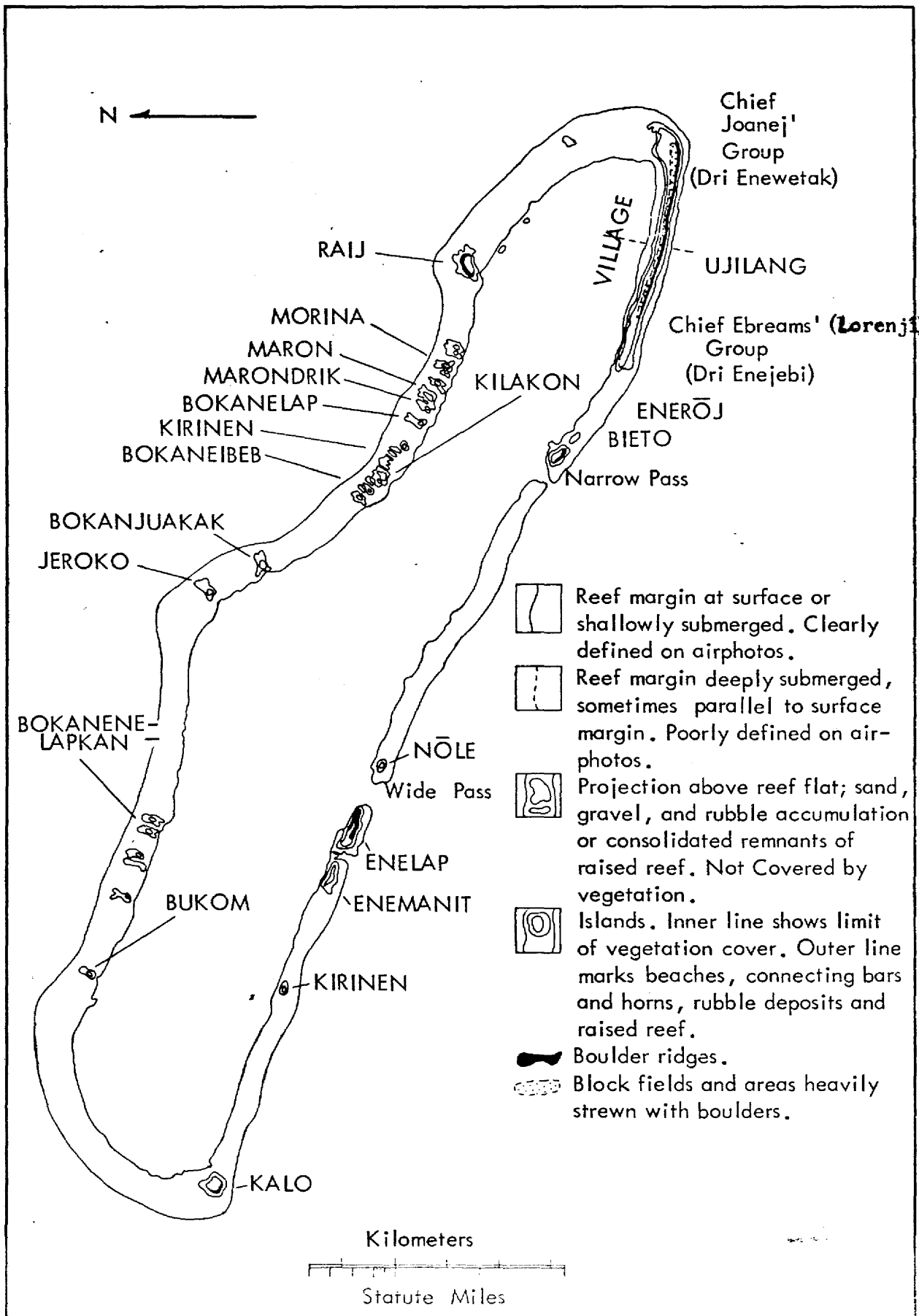


Figure 4. UJILANG ATOLL

Total dry land area: 0.67 sq.mi.  
Lagoon area: 25 " "

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Adapted from Military Geography of the Northern Marshalls, (1956: 48)

## THE ENEWETAK ATOLL PEOPLE

### Historical Background

The present inhabitants of Ujilang Atoll are the former inhabitants of Enewetak Atoll. More than twenty-five years ago they were moved en masse from their home atoll to make way for the testing of nuclear weapons by the United States. In order to understand the present situation, we must examine the history of this group, and how they arrived at their present location. A summary of pertinent events is herewith presented.

The Enewetak People say that they have always lived on Enewetak Atoll as far as they know, and that "there have always been two chiefs (iroij) and two groups, because there are two big islands: Enjebi and Enewetak." (At one time in the distant past there was a third socio-political unit on the southeastern part of the atoll, called Wurrin. This was absorbed by the Enewetak group). The people state that they are the people of Enjebi Island and the people of Enewetak Island who lived on the atoll of Enewetak. They claim that the two groups have never warred against each other but have always cooperated very closely.

(For all practical purposes the Enewetak People are one group today. This is due to intermarriage over the years and the intense in-group feeling the people have).

According to those who know the history of their people; the chiefs, the wise old men and women, and those few of the younger people who have learned the ancient lore from their elders, four separate groups of Marshallese arrived on Enewetak Atoll before the coming of the Europeans. These came from the atolls of Bikini, Ujae, Wotto, and other atolls many miles to the east of Enewetak. These invaders, apparently castaways, either fought the Enewetak People, or merely remained a while before returning to their home atolls. Apparently none of them remained on Enewetak.

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Enewetak was apparently discovered quite by chance by European ships passing through the area enroute to the Orient. Krämer and Nevermann (1938:2) state that: "... Alvaro de Saavedra found Enewetak on the first of October, 1529." There is no evidence or tradition of contact between the Spaniards and the Enewetak People then or at any other time. It seems unlikely that significant contacts occurred before the nineteenth century.

The sighting of the isolated atoll was next reported in 1792 by Captain Bond in the English ship Royal Admiral (Finsch 1893:1). Sightings followed and were duly reported by other English captains during the remainder of the century.

These eighteenth century contacts are not a part of the oral tradition of the Enewetak People, and as far as can be discerned, had very little, if any effect on their culture. There may have been some genetic admixture as was often the case when European ships visited Pacific Islands. This, however, must remain within the realm of speculation.

The early infrequent contacts were followed by more frequent and purposeful visits especially in the latter part of the nineteenth century. The islands of this part of the Pacific were opened up for trade and missionization during this period.

The Germans formally established their administration over the Marshall Islands in 1886 (Finsch 1893:14), and had been trading in the area for years previously.

Enewetak informants tell of how a German warship put into Enewetak Atoll shortly after the acquisition of the Marshalls, and confirmed the two chiefs in their authority, giving them medals of office.

German traders followed, brought in coconut seedlings and asked the chiefs to tend them and sell the copra which would be made, to the Germans. Trade goods were advanced the chiefs against the equivalent in future copra production



The Enewetak People thus became involved in the economy of the outside world. They began moving from a subsistence economy to a mixed cash and subsistence economy. This brought changes in the work pattern and in the consumption pattern.

The Germans did not station any agent on Enewetak, nor were there any resident Europeans or other aliens. Foreign visitors to Enewetak were infrequent during the German period apparently, and the inhabitants were left pretty much to themselves.

The Japanese seized Enewetak, along with the rest of the German possessions in Micronesia, in the fall of 1914. A few Japanese naval officials arrived at Enewetak in 1920 and 1923 according to informants. They brought some Japanese traders, and then departed for Japan. Japanese warships arrived later from time to time for short visits, but no resident administrators were appointed.

Enewetak (and Ujilang) unlike the rest of the Marshalls, were administered from the Branch Bureau of the South Seas Administration (Nanyo Cho), on Ponape Island in the Eastern Carolines. Infrequent trips were made to Enewetak for administrative and commercial purposes. The contact with the Japanese was very slight as had been the contact with German officials. There were no Japanese officials of any kind stationed on Enewetak. There were however a Japanese trader and two Japanese assistants.

The Japanese established no schools on the atoll but several of the young people were sent to Ponape to attend government and Protestant mission schools.

A weather station was established on Enewetak in the late 1930s and seven observers were stationed there.

In the late 1930s the Imperial Japanese High Command decided to make Enewetak an important link in their strategy for the conquest of the Pacific area. During the years 1939-1941 thousands of army, navy, marine, and engineer corps personnel, and Korean and Okinawan laborers poured into Enewetak. Elaborate fortifications were installed, and a large airfield was constructed on Enjebi Island. Marshallese youths from all over the Marshalls were later pressed into service as laborers on the fortifications on Enewetak. The local people were also conscripted.

These fortifications were assaulted and overcome when United States forces invaded Enewetak in February of 1944.

The Japanese had refused to allow the remaining Marshallese and Enewetak People to leave the two main islands of the atoll. It is presumed that they feared the islanders would contact the enemy forces and furnish them with information of military value. Some of the islanders had already fled to the smaller islands and others were able to flee when the bombardment started. It is said that they did provide information of military value to the invading forces.

A number of Marshallese laborers, and natives of Enewetak Atoll were killed or wounded during the bombardment that preceded the actual invasion of the atoll, and during the subsequent fighting. The traumatic experience is recalled with sadness, and memories of great fear.

After the Americans had secured Enewetak the Marshallese laborers who so desired, were sent home as soon as possible. The local people were fed and housed by the Navy. They look back on this period of free and lavish supplies of food and clothing, such as they had never seen before, as the Golden Era.

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The U.S. Navy continued in the occupation of Enewetak Atoll; they cleaned up the debris of battle, and established a huge advance base on the atoll as the war in the Pacific continued.

The Navy continued feeding, clothing, and housing the Enewetak People on Aomōn Island, on their home atoll, until 1946 when they were moved to Meik Island on Kwajalein Atoll, over 200 miles to the southeast, in preparation for the atomic tests to be held on Enewetak.

The Enewetak People remained on Meik for a month. They were then returned to Aomōn Island where they remained for less than one year. The U.S. Government had decided to move them to Ujilang and to use Enewetak as a permanent testing site for atomic weapons.

Ujilang Atoll, which was uninhabited at the time, had previously been selected as the relocation site for the displaced Bikini People, whose own home atoll had been appropriated earlier for atomic experiments.

Their leaders had been taken to inspect Ujilang, and plans had been made for the removal of the Bikini People to the atoll after the brush had been cleared and a village constructed. The Bikinians were now told that they would not be resettled on Ujilang but would have to go elsewhere.

The Navy continued the work of clearing brush and constructing a village of wooden, sheet-metal roofed structures.

The Enewetak People were told to prepare to leave their atoll and relocate on Ujilang. Many of them have told me "We did not give the Navy any trouble when they told us to leave Enewetak. We hated to go, but we obeyed." One must know the deep emotional attachment which all Marshallese feel toward their ancestral homes to appreciate the difficulty the Enewetak People experienced in planning to leave their homeland for perhaps forever.

On December 21, 1947, 142 Enewetak People came ashore to take up permanent residence on Ujilang. The main island, the village site was not yet completely cleared of brush but was completed labor.

The coconut trees planted by the Germans and Japanese were still standing and bearing. Seedlings of breadfruit and pandanus were brought ashore and planted. Thus a new life began for the uprooted Enewetak People. No American official remained on Ujilang, nor was there radio communication with the outside world. There were to ensue long periods of complete isolation, and privation.

The former Enewetak inhabitants attempted to adjust to their new location. They had, and still have, several formidable problems with which to cope.

The most obvious problem, and one which they have uppermost in their minds, is the great disparity in the size of Ujilang and that of Enewetak. The total dry land area of Ujilang Atoll is only 0.67 square miles and much of this is rocky and poor. The area of the lagoon is only 25.47 square miles.

On the other hand, the total dry land area of Enewetak Atoll is 2.26 square miles, much of which was well suited for agricultural use.<sup>1</sup> The total lagoon area is 387.99 square miles. (Bryan 1946:2). Both figures are obviously considerably larger than those for Ujilang. These figures are reflected of course in the much less abundant production of food, and the food potential, especially from the reefs, lagoon, and surrounding sea on Ujilang.

Logistics is another major problem. The geographical location of Ujilang in relation to the sources of needed imported foodstuffs and other commodities is unfavorable.

The trend toward increase in population size and the consequent pressure upon the natural resources has been a matter of concern.

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Less of course the islands that have been destroyed by nuclear weapons testing or damaged in the course of the testing.

The administration has attempted to upgrade copra production and subsistence agriculture for the past several years. There has been a noticeable improvement. However the Enewetak People certainly do not have the economic advantages which they would have had if they had not been uprooted from the larger atoll.

The unfavorable economic situation and the persistent desire to return to Enewetak finally stimulated aggressive action by the people. They threatened to evacuate the atoll in 1967 and in 1968 the leaders petitioned the United Nations for assistance in returning to Enewetak. In 1968 they again threatened to evacuate the atoll and come to Majuro. Economic help was given them by the administration. Relief shipments of food were sent to the community. An ex gratia payment of \$1,020,000 was made them in 1969. This was placed in a trust fund, the interest of which has helped. Monies were also allocated for the construction of badly needed public facilities on the atoll. The Ujilang community assumed the responsibility for doing the actual labor involved.

These efforts to ameliorate the situation, while welcome, did not lessen the desire of the people to return to their ancestral homeland. They continued to press for this goal. Discussions and meetings were held with government officials. The long awaited answer reached Majuro on April 19th 1972 when the High Commissioner informed the District Administrator that Enewetak Atoll would be returned to its former inhabitants in 1973.

This marked the beginning of a new and better life for these displaced people, and an end to their long years of exile.

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CONCLUSION

Attitudes of the Enewetak People

The atoll of Enewetak, from which the inhabitants were uprooted over a quarter of a century ago, is a "paradise lost" to these exiles. The Enewetak People, who now live on the much smaller and much less productive atoll of Ujilang desperately want, indeed yearn, to return to their ancestral homeland. They have stated that they wish to send an advance party to the atoll to help with the work of rehabilitation as soon as the program begins.

The people are naturally greatly concerned, indeed disturbed, about the damage and destruction to the atoll. Entire islands are missing, destroyed completely by nuclear testing. Others have been reduced to sandspits, and still others have been severely damaged.

They are very worried about the threat of additional damage and destruction by the PACE Program (Pacific Cratering Experiments). A program which they have unanimously and unequivocally denounced and rejected. However they have a positive approach to the rehabilitation of the atoll. They want the work to be started as soon as possible.

The relinquishment of Bikini Atoll by the military, the cleanup and agricultural program there and the planned future return of the exiled Bikini People to their home atoll have deepened the discontent of the Enewetak People with their lot over the past few years. The official announcement of the relinquishment of Enewetak this year and the preliminary discussions and meetings regarding the rehabilitation of Enewetak have intensified the attitudes of the Enewetak People concerning return to their atoll. They feel that their return to their ancestral homeland is long overdue.

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The Probable Pattern of Living Of Returnees to Enewetak  
The Population

All <sup>of</sup> practically all of the Enewetak People will want to return to the atoll. The leaders have so stated on several occasions. Those few who have jobs and interests elsewhere may leave after a visit but they will want to establish their old land claims and see what the atoll looks like after twenty-five years. These people will visit the atoll at intervals, as they visit Ujilong today, and will eventually retire on Enewetak. The return of everyone should therefore be anticipated and planned for.

The leaders have asked that an advance party be allowed to move to Japtan Island (David) to prepare the island for habitation and to be available for the rehabilitation of the atoll. They have asked that about fifty people to be sent to the island. The facilities available, scope of work, and mutual agreement of all parties involved (AEC, DOD, TIPI, and the Enewetak leaders) <sup>of course</sup> can determine this.

A complete and up-to-date census made in early November 1972 produced the following data:

Enewetak People Now Living on Ujilang Atoll.....	340
" " " " " Majuro Atoll (DOD).....	31
" " " " " " (Rongrong I.).....	18
" " " " " Maloelap Atoll, Marshall Is. ....	3
" " " " " Killi Island, " ".....	7
" " " " " Ponape, Eastern Caroline Is.....	5
" " " Crew Members on Trust Territory Ships.....	4
" " " Residing in the United States.....	3

Total Enewetak People: 411

People Who Have Married Enewetak People and Who Live on Ujilang; 21  
(They are an integral part of the community).

Grand Total: 432

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Number of Claims.....	230
" " " Possibilities.....	204
Sex Not Reported.....	2

Grand Total: 432

The population is, as can be seen, about evenly divided as to sex. It is a young population with many young children and very few old people. A complete census with the name, age, sex, and location of each person as of November 1972 is attached to this report. These data can be used for more detailed statistical breakdown and evaluation if so desired.

The Enewetak population shares the upward population trend of the rest of the Marshall Islands and Micronesia. This is clearly seen in the census record as follows:

<u>Year</u>	<u>Total</u>	<u>Source</u>
1920	104	Japanese Consul-General Honolulu 1966,
1925	96	" (Personal Correspondence)
1930	108	"
1935	81 *	"
1947	142	U.S. Navy (At time of removal to Ujilang).
1952	169	J.A. Tobin on Ujilang.
1955	189	J.A. Tobin " "
1971	231	TPI official census (On Ujilang only).
1972	432	J.A. Tobin (Total, Ujilang and elsewhere).
"	340	(On Ujilang only).

With the present population configuration and the birth rate greatly exceeding the death rate, future population increase can be anticipated.

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There are no available data which would explain the marked fluctuation in the population. However, members of the community left the atoll for extended periods, at different times to work on the copra plantations on Ujilang, and to visit Ponape, from which Enewetak was administered. The population of Enewetak was also increased when workers returned from Ujilang permanently with Ujilang spouses.

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### The Gene Pool

As far as we know the gene pool of the Enewetak People began changing, after centuries of isolation, during the German period. Contact was made with the people of Ujilang, some of whom married into the Enewetak group and moved to Enewetak with their Enewetak spouses and children. Marriages with other outsiders, mostly Carolinians from the Ponape District followed, especially during the Japanese period. Several males from the Ponape District took up residence on Enewetak and remained there with their spouses and children.

Improvement of transportation facilitated travel. A number of Enewetak Atoll children went to school on Ponape. There was an increase in visitors to the atoll from the Marshalls and from the Ponape District. These factors contributed to outmarriage and change in the gene pool, as they do today. It is highly probable that this trend will continue. (The census data included in this paper reflect this trend). Non-Micronesian Mongoloid and Caucasoid components which are not tabulated in the census data have also been added to the Enewetak gene pool.

There has been a marked increase in movement outside of the atoll of Ujilang with residence elsewhere within the past decade or so. A small group of Enewetak People live on Majuro, and a number of children attend schools on that atoll. Outmarriages have resulted from this change in residence. This trend will also probably continue. However the majority of the people live permanently on Ujilang Atoll today. It is highly probable that they will follow the pattern of remaining together after return to Enewetak.

Those who do not have permanent jobs on Majuro will probably return with their non-Enewetak spouses and their children which will bring about additional change to the Enewetak gene pool in the years to come.

Settlement Pattern

Land use rights are possessed by people in more than one piece of land and on different islands throughout the atoll. These rights are owned and held by kin groups. The land parcels are worked by the members of the lineage which holds these rights which are inherited at birth primarily. The traditional pattern of habitation is for households (family groups) to live on their land, not in a village cluster. That is, to live in a scattered pattern. The community buildings, church, school, dispensary, warehouse, and the like are however normally centralized for convenience and access to all.

This pattern is obviously desirable from the point of view of environmental sanitation and public health. It is the pattern followed on Ujilang today and will probably be perpetuated on Enewetak.

The typical Marshallese land holding, or wuto, consists of a strip of land stretching across the island from lagoon to ocean, and varying in size from about one to five or more acres in extent. The resources of all of the ecological zones of the island are thus available to each corporate land holding group, the lineage, as well as ready access to both lagoon and ocean beach. This method of equitable distribution of natural resources is analagous to that involved in strip farming in medieval Europe.

A similar allocation of resources prevailed in aboriginal Hawaii, and exists on other Micronesian atolls today.

Infrequently, the land parcel is divided into two or more portions with transverse boundary lines. This usually occurs when the island is a very wide one. The wuto boundaries are marked by lily plants (Crinum asiaticum), red leafed shrubs (Caesalpinia bicolor), or frequently by slashes on the trunks of coconut trees. Large rocks on the beach can also be used to fix

the position of the land holdings. This has been done by the Bikini People after practically all other markers had been obliterated. The returning Enewetak People will presumably do likewise.

The location of boundaries is common knowledge within the community, and "boundary pushing," which is practiced in other parts of Micronesia, is practically unheard of in the Marshalls. Each land parcel has its own name and history of the circumstances under which it came into the lineage which now controls it. This information is also a very important part of the corpus of knowledge of the atoll community. It is not written down but is transmitted orally from generation to generation.

At the Enewetak Rehabilitation Planning Conference held in Honolulu, February 21-22, 1973 the following statement regarding future village settlement pattern was made by Ujilang (Enewetak) Magistrate Smith Gideon:

" We [the Enewetak Atoll People] held three meetings prior to my departure from Ujilang for this meeting. We decided what the settlement pattern, the village locations would be on Enewetak in the future. The are: one on Enjebi Island, one on Medren Island (Parry), and one on Enewetak Island. Japtan (David) will be a temporary location from the beginning of the program. The workers from Ujilang will be housed there. They will wait on Japtan, and will live there until the rest of the atoll is ready for occupancy."

The Magistrate, and Scribe John Abraham also made it clear that while the village sites would be as indicated, all of the islands (and reefs) of the atoll would be used and exploited after the people have returned to Enewetak.

They emphasized the fact that the decision of settlement pattern had been reached by the community on Ujilang following a series of lengthy meetings.

I predict that the "temporary" settlement on Japtan, at present a very pleasant island with good facilities, will become a permanent settlement.

If the amount of radioactivity on Enjebi should prevent habitation at this time, and for a significant period of time in the future, the establishment of a settlement there of course will not be possible. The Enjebi People may decide to live on Enewetak Island, this is most probable, because of the excellent facilities there, or on another island in the northern sector of the atoll within their traditional sphere. It should be noted that this sector has suffered the most damage from the nuclear weapons testing program.

It should be noted that the Enewetak Atoll People have lived together in one settlement on one island on Ujilang Atoll as a matter of expediency. for over a quarter of a century. A boundary was set through the middle of the main island with half of the island and half of the satellite islands allocated to each group. (See Map Number 4). The community buildings: church, school, dispensary, meeting (council) house, and warehouses are located on the common area near the dividing line. This arrangement has apparently worked out very well.

The definitive answer to the question of settlement pattern upon return to Enewetak, if any obstacles to the present planning occur, must of course come from the people themselves.

Pattern of Exploitation of the Natural Resources  
Economic Potential

The coconut trees and other food bearing trees and plants have been almost completely destroyed on Enewetak Atoll. Most of the islands have become overgrown with vegetation, and are littered with debris which must be removed before replanting can begin. This will be a formidable task which will extend over a long period of time. The Enewetak leaders have expressed their desire to be involved in this work, and indeed they should be. This will provide a cash

income, some skills training, and a tremendous psychological boost to them. It will be of great value to the planners and directors of the rehabilitation program as well.

The Enewetak People will want all available areas of the atoll to be cleared and planted as soon as possible. This will hasten the rehabilitation of the people on their home atoll, and should be expedited.

The larger islands such as Enewetak and Enjebi have the greatest economic potential in terms of copra production. The smaller islands were also valuable sources for food and copra in the past and should be in the future providing of course they are safe from a radioactive point of view.

Unfortunately several of the islands have been completely destroyed or ruined for agricultural purposes as a result of the explosion of atomic weapons.

The smaller islands and islets of the atoll which were not used for agricultural purposes to any significant extent will continue to provide seabirds and turtles and their eggs. These are important in the diet.

The surrounding reefs of the lagoon teem with fish and other marine fauna as well. This is an extremely important factor in the local economy and the well being of the Enewetak People. It will be crucial in the successful relocation of the former inhabitants of the atoll. The abundance and variety of the marine fauna on Enewetak is invariably central to any discussion of that atoll by its former inhabitants. The rich natural resources of Enewetak are always compared with the unfavorable situation on Ujilang.

#### Pattern of Exploitation

The traditional pattern of habitation and exploitation of the natural resources is to live on a main (large) island in the atoll, or as in the case of the Enjebi people in the past, on several islands. The people

make copra (the cash crop) and practice a non-intensive type of agriculture. The marine resources of sea, lagoon, and surrounding reefs are exploited intensively.

A semi-migratory form of exploitation of the natural resources is followed in that the other smaller or satellite islands of the atoll are visited from time to time. The holders of land rights in these islands make copra and gather breadfruit, pandanus, coconuts, arrowroot and other vegetable foods in season. Clearing of brush and planting is also done during these visits. The marine resources are also exploited. Special expeditions are also made to gather turtle and seabird eggs and to capture these creatures.

Houses and water catchments usually of a fairly simple nature are found on the more economically important of these smaller islands.

The visits to these islands vary in duration according to the amount of work to be accomplished or the amount of food available on the island. Weather conditions are also a determining factor. Travel to or from the main settlement is sometimes unfeasible due to unfavorable weather.

It should be emphasized that this is a highly mobile population, as are most Marshallese. There will be a great deal of travel between all of the islands of Enewetak Atoll throughout the year and every year.

The Enewetak People are highly oriented toward the sea and lagoon and like to travel. This orientation and pattern will undoubtedly continue after the return to Enewetak. I believe that curiosity stimulated by a more than quarter of a century absence on the part of the older generation and of complete ignorance of the atoll, except through hearsay, on the part of those who remained, will result in a great deal of travel in the initial period of resettlement.

### The Diet

It is difficult to estimate the degree of utilization of local versus imported foods. One can say however that the Enewetak People will use imported foods to a much greater degree than they did before they were moved from the atoll. This is the trend throughout the Marshalls. It is seen in the orientation toward a cash economy, based upon copra production and wage labor. The Enewetak People have a cash income from trust funds of over \$60,000 per year with which to buy imported foods and other items. The proceeds from copra sales are also used for these purchases.

Rice, flour, sugar, coffee, tea, canned meats, canned milk and other items are staples in the diet of the Enewetak People and have been for many years. They cannot be considered to be luxuries. Rice is eaten in large quantities often three times a day.

It is likely that the abundance of fish and shellfish on Enewetak will mean a reduction in the purchase of canned fish, and even canned meat. The availability of pork and domestic fowl locally would also probably affect canned meat purchases.

The use of wildfowl and turtles will also probably mean a decrease in canned meat purchases. It should be noted that canned meats and fish are quite expensive in the Marshalls. These, and other consumer goods must be imported over vast distances. This is reflected in the cost to the consumer on the atolls, especially the outer atolls.

There will probably be a marked increase in the amount of marine products eaten because more will be available. This is of course because of the much larger size of the lagoon and greater extent of reef or lagoon area compared to Ujilang. The produce from the land should also be increased eventually, commensurate with the much large land area of Enewetak Atoll.

It is anticipated that a great deal more imported foods such as rice and flour will be consumed to replace the amounts of local vegetable foods that will not be available on Enewetak for a number of years.

It will more than likely be necessary to institute a supplemental feeding program to supplement these needs as part of the rehabilitation program.

As indicated earlier coconuts, pandanus, arrowroot and breadfruit are the main vegetable foods used. Bananas, squash, and papaya are used but to a lesser extent. Pandanus and arrowroot were especially important on Enewetak and grew in large numbers. Breadfruit and taro and bananas were rare but the people have developed these plants on Ujilang. They like them and will want to have them upon their return to Enewetak.

One can safely assume that if local foods are available, as they will be eventually, the people will eat them, as well as the imported foods. They enjoy both kinds of foods and will not allow any of it to go to waste. They possess techniques for processing and preserving surplus crops such as breadfruit, pandanus, and arrowroot.

The agricultural resources on Enewetak Atoll today, in dramatic contrast to the marine resources, are practically nonexistent. There are a very few bearing coconut trees. There are to my knowledge no edible varieties of pandanus. There are no breadfruit trees, nor any other food bearing trees or plants with the exception of a negligible amount of arrowroot.

Various kinds of plants are used in the preparation of medicines. These are used both internally and externally. The Marshallese pharmacopoeia includes the ubiquitous Tournefortia, Messerschmidia, argentina, Scaevola frutescens, the leaves and shoots of coconuts, pandanus, banana, and many other plants.

Plant materials of all kinds are used for handicrafts, construction of shelters, implements, and the like. They are obviously important in the economy and the culture.



Of special interest to the marine biologist is the fact that practically all marine products are eaten by the Enewetak People (and the rest of the Marshallese). There are a few exceptions however. These include: Sea cucumbers (Holothuria), and rays of all species found in the Marshalls. Puffer fish (Wat) are recognized as deadly poison and are never eaten.

Ciguatera is found on Enewetak Atoll (or was when the people lived there) according to reliable informants from that atoll. The fish affected include: Ban (Red snapper), Iöl (Mullet), Mao (Blue parrotfish), Jawe (Bass), Iikmouj (Pink parrotfish), Utöt (?), Ewai (?), and Drep (Moray Eel).

Informants have told me that the poisonous fish on Enewetak Atoll were found on the windward side primarily. They were allegedly found in the Enjebi area and islands on the eastern (windward) side of the atoll. It is said that the leeward side, toward the south and west of the atoll was relatively free of fish poisoning. Poisonous fish (Iik karek) are said to live in both the ocean and lagoon reef area.

(Identification (English names) are from Report of a Survey of the Fish Poisoning Problem in the Marshall Islands, US DPHEW PHS, Jan. 1959, Mimeo.)

The heads of fish are considered to be delicacies and the internal organs (heart, liver, and brain) are eaten. The intestines of fish are not eaten but the intestines of turtles are consumed, after cleaning and washing and either boiling or baking.

All kinds of shellfish are eaten and everything but the "black part" of clams is consumed. The best area for clams and other shellfish is said to have been in the area destroyed by the nuclear tests, in the northwestern sector of Enewetak Atoll where the islands of Eluklab and Dreldrelbwij formerly existed. Informants say "It is gone now, it is destroyed and one half of our food supply is gone."

Sharks are eaten by the Enewetak Atoll People. They learned how to prepare them and eat them from Carolinians during the German period.

Porpoises are eaten. They are a delicacy as in the rest of the Marshalls. They were caught in droves or surround method (jibuki). The porpoises would come into the lagoon through the Bikor Island pass. It was their most usual entry point. When sighted, the men would go out in their large sailing canoes and herd the animals into the beach area. Some of the men would jump overboard and clap stones together under water. This would frighten the porpoises in to the beach where they would strand themselves and be captured.

Whales were very occasionally stranded on Enewetak. They were eaten when and if the people could get to them before the meat spoiled.

It should be mentioned that the Enewetak People and the rest of the Marshallese do not like food that is "high", that is, that has started to spoil. Their fish, meat, and other foods are eaten only if fresh. This is in contrast to the Trukese for example who have a taste for food that is "high."

The Enewetak People and other Marshallese, and other Micronesian groups eat their fish raw as well as cooked. Marine products are also preserved by sun drying, salting, and smoking.

The monitor lizards (Varanus indicus) which were imported by the Japanese to curb rodents were never eaten by the local people or by other Marshallese.

Some of these reptiles have been reported on Japtan Island within recent years. The people dislike them and are afraid of them.

The Enewetak People eat the coconut crab (Birgus latro) which is considered a delicacy. Other species of crabs are used for fish bait only.

All species of birds are eaten by the Enewetak people. However, some species of birds are not eaten however.

DOE ARCHIVES

Some of the Enewetak People eat dogs. They also learned this from Trukese and Ponapeans while at school on Ponape. The younger people mostly eat dogs. Other Marshallese do not eat these animals.

The intestines of pigs are eaten by the Enewetak People. They are cleaned and washed and either boiled or baked. This was learned from people from Truk and Ponape who had learned to eat pig intestines from Filipinos living on their islands. The Enewetak People also learned to eat the heads of pigs. Previously they had discarded the heads with the intestines. This is true for other Marshallese as well. <sup>The</sup> internal organs: brain, liver, kidneys and heart are eaten by the Enewetak People and the rest of the Marshallese.

### Agricultural Rehabilitation

As mentioned previously, the Enewetak returnees will undoubtedly want all of the islands to be planted wherever possible. This means that all debris will have to be removed, as was done on Bikini Atoll. All brush will have to be cleared except for the important shelter belt on the ocean sides of the islands, and other protective vegetative cover as deemed necessary by the agricultural experts.

The Enewetak People will, of course, want the surface of the atoll terrain to be restored to its original condition where possible. This means of course that gullies and depressions and large holes must be filled and leveled as was also done on Bikini in the course of the "cleanup" program of 1969.

It is expected that coconut groves will be planted initially as has been done on Bikini. This is the most important and arduous part of the agricultural rehabilitation.

All of the food plants mentioned previously will be desired by the people, and others, such as lime trees may be introduced to supplement the diet.

The Enewetak leaders have stated that the Enewetak People wish to become directly involved in the work of Agricultural rehabilitation of their atoll, as of course they must be. It will be to the obvious advantage of the Administration to have these well organized and enthusiastic people do the work rather than to bring in outsiders.

It will be of mutual advantage to have the Enewetak People help to rehabilitate their atoll.

The project can also afford continuing training in improved agricultural methods.

**DOE ARCHIVES**

Possible Proscription of Use of Islands

Although the Enewetak People will want to visit all of the islands and islets in the atoll and to exploit their natural resources, I believe that if any of these areas were found to be hazardous because of remaining radiation, the people would comply with the restrictions which would be necessary for their safety. This would be a matter of local policing by the community itself. A thorough explanation should be made to the entire community in language that they can understand so that the reasons for imposing such restrictions would be clearly understood and appreciated by everyone. This same procedure should apply to any restrictions against eating certain foods produced on Enewetak.

Mr. Tommy McCraw did an excellent job in explaining the radiological hazards and prohibitions on Bikini to the Bikini exiles on Killi Island in 1968. His advice should be solicited if the situation on Enewetak should warrant it.

**DOE ARCHIVES**

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**DOE ARCHIVES**