CHARLIE'S CHARTS

of

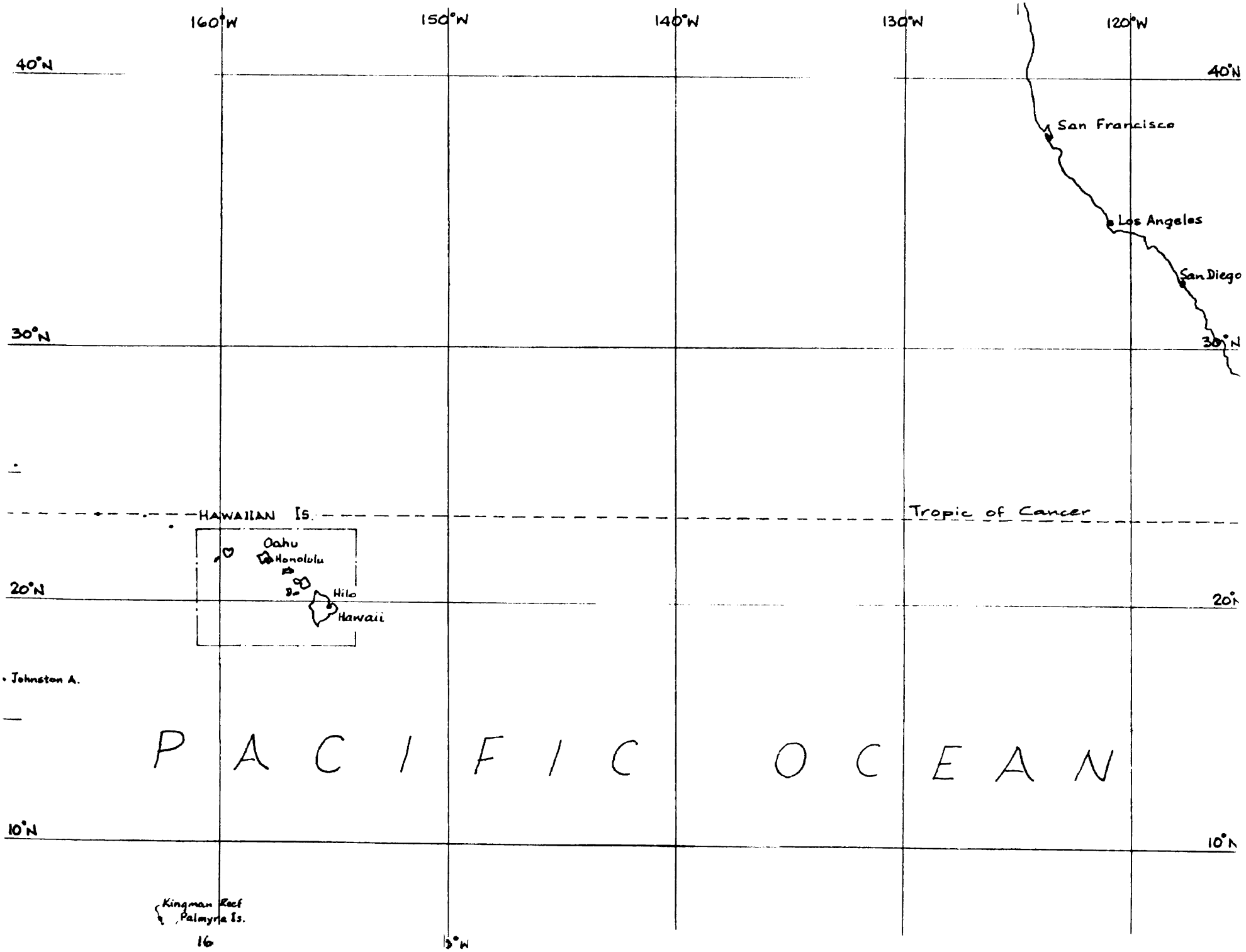
POLYNESIA

(The South Pacific, east of 165°W. Longitude)

THE BAY OF VIRGINS, FATU HIVA, MARQUESAS ISLANDS

By

Charles E. Wood



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CHARLIE'S CHARTS of the HAWAIIAN ISLANDS
*CHARLIE'S CHARTS of the U. S. PACIFIC COAST

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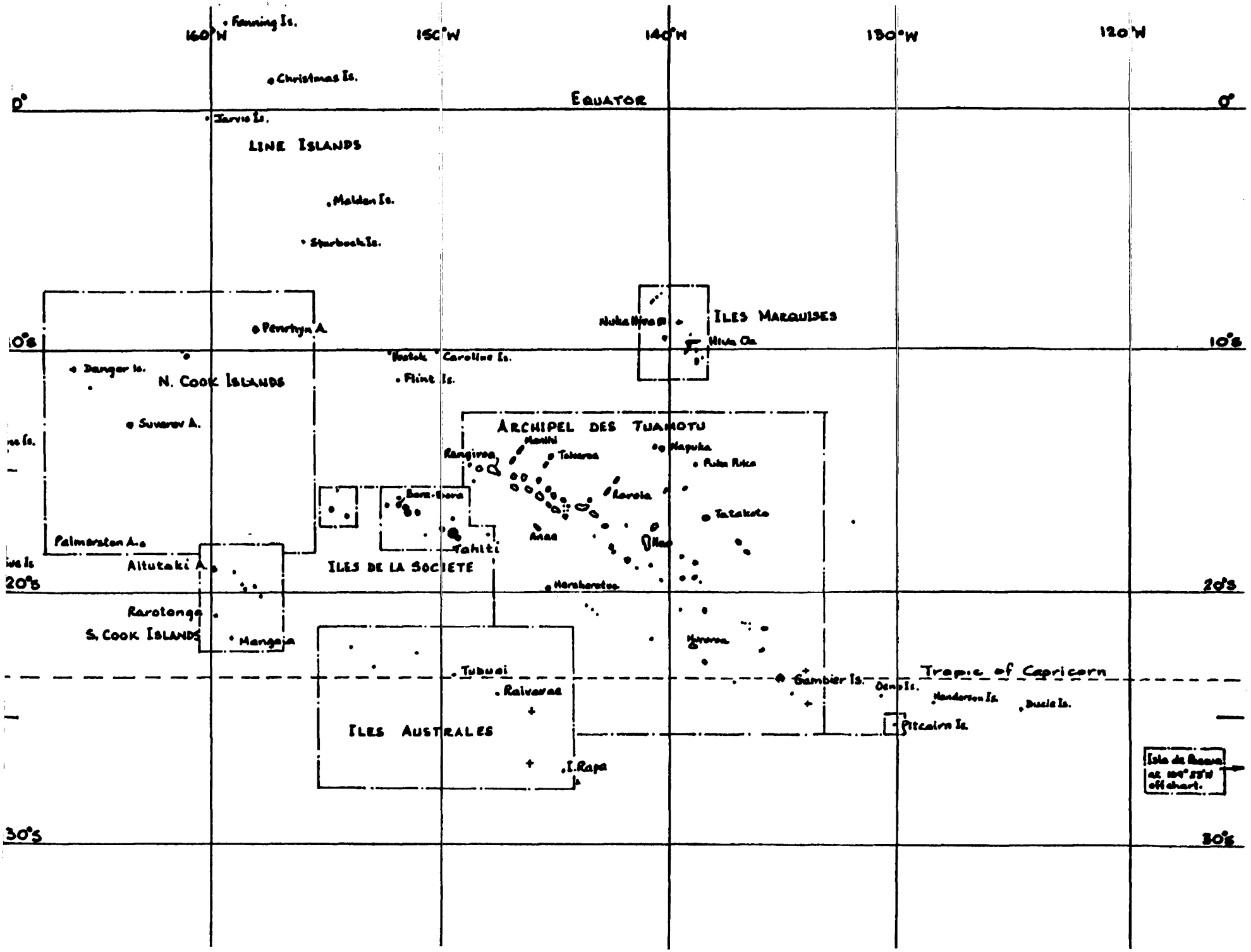
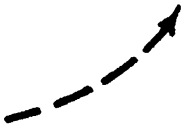


CONTENTS

SYMBOLS


Recommended approach


Leading range and bearing


Anchorage


Reported anchorage


Rock or reef underwater


Dangerous rock or reef


Barrier or fringing coral reef (exposed or awash)

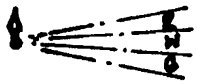

Coral reef at shallow depth

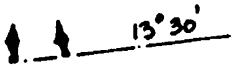

Exposed coral heads


Submerged coral heads


Navigation lights


Beacons, not necessarily lit


Sector light



Lights in line with true bearing


Shoal


Sandy beach

6, 3f
Depth in fathoms

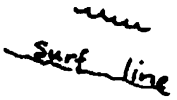

Coconut palms

s
Sand bottom

co
Coral bottom

m
Mud bottom

r
Rocky bottom



Surf, absence does not indicate a lack of surf


Cliffs of makatea


Breakwater


Rocky edge

ACKNOWLEDGEMENTS

Although my husband, Charles Wood, passed away in 1987 it had been his intention to revise the Polynesian cruising guide. Because I was unable to cruise the area and personally obtain the information necessary to do a first-class job of updating this publication I was afraid that I would have to let this guide pass into history. However, I was most fortunate in being able to contact John Neal who kindly agreed to provide the information necessary to bring this guide up to date.

My sincere appreciation goes to John Neal and Barbara Marrett for the wealth of information which have made this revised edition possible. As he is an acknowledged authority on cruising in the South Seas I could have had no better advisor, as users of this guide will no doubt agree.

I would also like to thank Dr. Claude Briot of the yacht "Spaciba," for sending information which made valuable contributions used in updating addenda for the first edition.

It would be remiss of me if I failed to mention my appreciation of the number of sincere compliments that have been received from cruising sailors from many parts of the world regarding this guide. Each of you have in your own way helped to persuade me that continuing with its publication is making a valuable contribution to safe cruising.

Finally, I should like to acknowledge not only the genuine encouragement but also the constructive criticism and much appreciated corrections which have been generously given by Nick and Jenny Coghlan of the yacht "Tarka the Otter," as they passed through Pacific waters during their recent circumnavigation. They have forwarded data which has been used in this revised edition of CHARLIE'S CHARTS of POLYNESIA and in CHARLIE'S CHARTS of MEXICO.

Margo Wood

DISCLAIMER

The word, "CHARTS," in the title of this publication is not intended to imply that these hand-drawn sketches are sufficiently accurate to be used for navigation. They and the accompanying text are meant to act solely as a handy cruising guide to assist sailors in identifying and entering passes, harbors, and anchorages. With the passage of time, new aids to navigation, marina development, and other changes in the areas covered by this book make it inevitable that some of the material may become inaccurate and out-of-date by the time it is used.

The use of National Ocean Survey (NOAA), British Admiralty, French or other official charts is mandatory for safe boating. DO NOT USE ANY OF THE DRAWINGS IN THIS BOOK FOR NAVIGATION. CHARLIE'S CHARTS and POLYMATH ENERGY CONSULTANTS LTD. are in no way responsible for loss or damages resulting from the use of this book.

INTRODUCTION

The South Pacific is almost every sailor's cruising dream. It is an area of increasing activity with more and more yachts from far places enjoying what may well be the last area where some of the old cruising style remains. The area is politically stable, still fairly friendly, reasonably free of excessively strict regulations (a matter of opinion), and filled with an intrinsic beauty of land, sea, and weather that make it a lodestone to sailors.

But the polluting fingers of our "civilization" have begun to touch this last free cruising area. The lagoons of parts of Tahiti and Moorea near the hotels are not as clean as they once were; there are now hotels operating on some atolls and the effect they have on the knife-edge ecologies is not good; a steady drift of people to the single urban area of Papeete keeps basic island populations falling while the birth rate has been rising; and in a demonstration of futility and stupidity the French continue to test nuclear weapons in this otherwise nuclear-free zone.

It is, inescapably, a major offshore voyage to get there; then to cruise its myriad islands; and a major voyage home again. It can be a Pacific circuit, a New Zealand hop, or a round-the-world odyssey. In any case it requires a large commitment in time to accomplish it; and this is the criterion that does more to separate those who just dream it from those who do it. Though a rushed voyage to the South Seas and back could be done in three months there would seem little enjoyment for anyone in that prospect. In fact, taking into account the controlling weather conditions, one should not plan on less than a year to allow for some appreciation of the area, and more time would be even better.

This guide is oriented to sailing from North America, presently the source of the largest number of visiting yachts. Thus the routes, the weather, and the order of the guide through the islands are given from this standpoint. However, the guide can be used as well by those approaching from other places, though it may not be quite as well arranged for them.

Some general introductory material on important facets of cruising this type of area is given first. Thereafter, each section describes a particular island group, and includes brief notes on history, weather, winds, currents, or other data. These notes are a generalized precis of conditions and by no means are descriptive of what you might actually encounter--that lies with the gods. For additional material on these important subjects refer to the official Sailing Directions, Pilot Charts, or other references.

The sketched "charts" illustrate anchorages and the approaches to them. They owe much to nautical charts, maps, other yachtsmen's comments, and my own material; they are my own in sketching, content, and presentation. While they may be deficient in artistic merit or in true geographer's style at least I had enough material that I did not need to follow Jonathan Swift's satirical verse:

So Geographer's, in Afric-maps
With savage pictures fill their gaps;
And o'er uninhabitable downs
Place elephants for want of towns.

PURPOSE AND LIMITS OF THIS GUIDE

This guide is intended to assist in the choice of and identification of small boat anchorages in the eastern part of the South Pacific. Roughly, the area covered is that commonly known as the "Polynesian Triangle," with the exception of the Samoa Islands, i.e. it includes the Hawaiian Islands, Society Islands, Easter Island, Pitcairn Island, all east of 165°W Longitude. Thus though the Hawaiian Islands are north of the Equator and are found in detail in Charlie's Charts of the Hawaiian Islands, they are part of the South Pacific and the main harbors of interest to onward journeying yachts are included.

A guide such as this helps by showing small anchorages in larger scale and detail than can be done on the small scale needed on most coastal charts. In the case of the South Pacific the land masses are small, and the special difficulties of navigation in the area means that there are more large scale charts available, though not as many as one would like.

The sketches are all hand-drawn, and are specifically done so even when large scale charts are available as a reference. This is done to stress that these sketches are not meant to be accurate surveys or meant to be used in a navigational way. The proper nautical charts should be used for all navigational purposes, and the sketches are intended to provide supplemental information only.

The sketches may include land form details in symbolic form, contour lines, depth lines or individual soundings, lights, or some navigational data such as leading ranges, etc. In the area covered by the guide, with coral reefs and low-lying atolls, the most important information may be related to the identification of, and detail of a pass through the reef rather than a specific anchorage. The practice of giving the view from seaward on approaching a coast is of great help, although it is disappearing from many current official charts as a consequence of an increasingly technological big ship era.

Moreover, in many cases no detail can be shown of the complexities of coral heads and shoals once through the reef's pass. Any navigation to an anchorage within the lagoon must be done by eye, in the best light and from as high as possible. Thus a sketch might show the detail of an entrance and merely indicate the anchorage across the lagoon. This does not mean a yacht can go blindly across in the belief that there is a channel. Any passage may involve much maneuvering to thread a route through the coral heads and shoals in between. The responsibility for safely navigating one's vessel through the pass and to any anchorage remains with the skipper, and this guide cannot be held responsible for the safety of a vessel in any way. A good seaman is always prudent.

When I began this guide it was with the laudable intent of describing all anchorages from personal experience only. I discovered, reluctantly, that this would greatly delay them, and otherwise limit their usefulness if I kept to this. So in a few cases I have had to compromise and include anchorages I have not personally visited, e.g. some Tuamotu atolls, Pitcairn, and Easter Islands. In such cases the information presented has been searched out and compiled from the descriptions of other yachtsmen, pilots, and so on.

Every effort has been made to present correct and current information, but errors can easily occur and changes in facilities are to be expected over a period of time. Hence it will be helpful if omissions and changes are forwarded to the author. In this way future editions can be updated and improved.

PLANNING AND PREPARATION

A South Pacific cruise is an offshore voyage that will last over several months. The area is tropical and generally healthy in climate. It has a warm and friendly people. It is, however, expensive and much of the region is remote and isolated. Though connected by air and sea to the crowded world to a far greater extent than formerly, there are many deficiencies in the supplies available and in the facilities for repair and replacement of modern yacht equipment. In the regions covered by this guide only Honolulu and Papeete have reasonable facilities. Whangarei and Auckland in New Zealand, Suva in Fiji, and Pago Pago in Samoa are further away.

The vessel must be a well found, seaworthy, and able boat. It will not only be your home but it will also be your primary means of survival. Sails and engine should be in good condition as they are your method of transportation. Anchors and rodes must be well tried for they will be essential to the safety of the yacht. Most tropical anchorages are in fairly deep water, and since chain is the best to use in coral waters an anchor winch can be a backsaver.

Carry sufficient funds for the immediate major stage of the voyage, mostly in traveller's checks of small denominations. Limited cash should be taken, but it is useful to have some of it in US currency, to use for small payments and emergencies. Bank drafts and evidence of funds for transfer are the best way to handle the special demands for financial responsibility of some countries, and for renewing funds for the next stage. Credit cards are useful only in cities.

Replenishing major food supplies is only possible in Hilo, Honolulu, and Papeete, though small quantities may be obtained at other places. In addition to being expensive, you may be doing a disservice to local inhabitants by taking on supplies in a small atoll. Coconuts, fresh fruits, and produce are available in season.

Water can be obtained at most places. The amount available may be limited and its source and purity are unknown. Replenishmlent is best done at ports in the Hawaiian Islands or French Polynesia. The water in most atolls or small islands is usually collected rain water, only occasionally is it drawn from a well. All water taken aboard should be boiled or treated to ensure purity.

Fuel availability follows a similar pattern. Since supplies of diesel or gasoline at small centers caters primarily for local needs there may be little left over for visitors. Major cities are the best places for refueling. In some places like Hilo or in the Marquises where no fuel wharf is built, arrangements for supply must be made but they will require transportation aboard in your own containers.

Vessels in tropical areas should be well ventilated, and if your boat does not have opening ports a wind scoop would help. An important item is a cockpit canopy or even just a tarpaulin that can be rigged to provide the cooling shade you will need.

Charts are discussed in a section following. A particularly helpful item for planning are the Pilot Charts of the North and South Pacific. They give information regarding weather, currents, storm patterns, and other factors crucial to the region in which you will be cruising.

ROUTES AND PASSAGE TIMES

The major routes in use today to the South Pacific are shown on the accompanying chart. From North America the basic choices are either to go directly for the the Marquises, or to proceed there via Hawaii or Mexico. All three routes have their advocates, and in any year vessels travel on all of them. These choices are shown as (1A), (1B), and (1), (2), or (3).

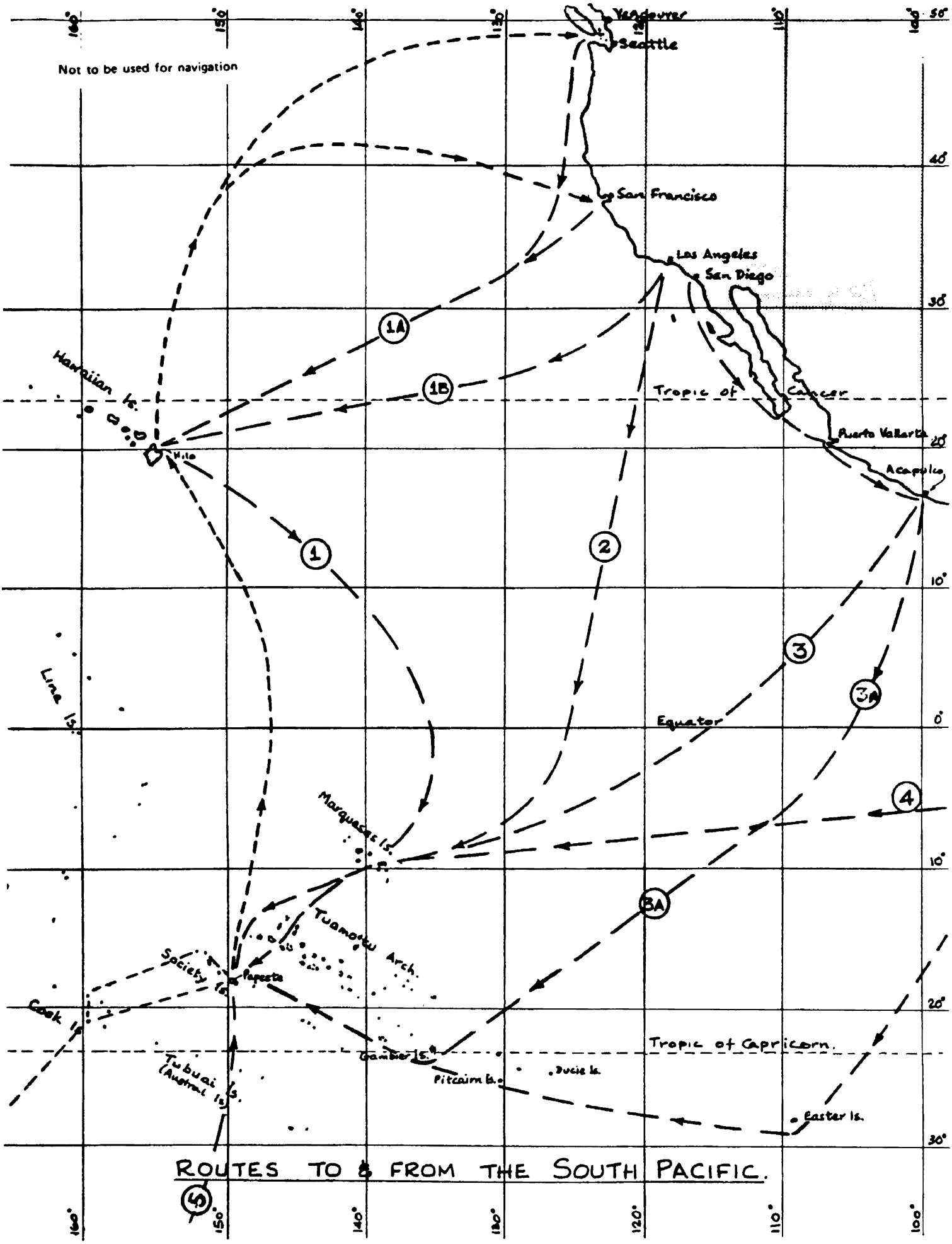
From Europe or South America the passage via the Panama Canal, or directly from South American ports, is illustrated by (4), and few today follow the oldest sailing route around the Horn and thence for the Society Islands. The later explorers from Europe and the barques of the last century rounded the Cape of Good Hope, made their easting in the Roaring Forties and climbed up to the South Pacific Islands when once at their longitude.

From New Zealand the passage is either directly for Papeete, or via Rarotonga in the Cook Islands, thence to Papeete. Most modern vessels can make the windward passage adequately. The older route, sometimes still followed, makes the maximum easting south of, or around latitude 40°S to about 155°W before hauling slowly northwards into the trades and then going directly for Tahiti.

Passage times are merely guides based on averaging the past history of many differently sized and designed vessels travelling similar routes. There are so many factors that can alter the times that these times should not be considered a target to aim at, and a wise skipper will provision and handle his vessel for a comfortable and safe passage, merely using the times given as a help in his planning. The following table gives an average time for a typical 35' to 40' sailing vessel and any skipper using it is cautioned to allow for at least half as much time again in his planning to provide for unforeseen delays and emergencies.

Route	Port of Departure	Destination	Distance in Naut. Miles*	Avg. No. of Days
1A	Seattle or Vancouver	Hilo, Hawaii	2,400	27
1A	San Francisco	Hilo, Hawaii	2,050	22
1B	Los Angeles/San Diego	Hilo, Hawaii	2,200	23
1	Hilo, Hawaii	Iles Marquises	2,100	21
	Iles Marquises	Tahiti	750	7
2	Los Angeles/San Diego	Iles Marquises	2,850	28
	Seattle or Vancouver	Iles Marquises	3,650	38
3	Acapulco, Mexico	Iles Marquises	2,900	27
3A	Acapulco, Mexico	Tahiti (via Gambier Island)	3,700	38
4	Panama Canal	Iles Marquises	3,850	40
5	Auckland, New Zealand	Tahiti	2,200	22
	Tahiti	Hilo, Hawaii	2,350	22
	Hilo, Hawaii	San Francisco	2,050	24
	Hilo, Hawaii	Seattle/Vancouver	2,400	27

*Approximate Great Circle distance -- not necessarily the actual distance via the route a yacht may follow to avoid the Pacific High Pressure areas



ROUTES TO & FROM THE SOUTH PACIFIC.

WINDS, WAVES, AND WEATHER

The main island groups of this guide are within the latitudes of the Tropics of Cancer and Capricorn, essentially the tropical region of the earth. In these regions the trade winds predominate almost throughout the year, being mainly northeasterly to easterly in the northern hemisphere, and southeasterly to easterly in the southern hemisphere.

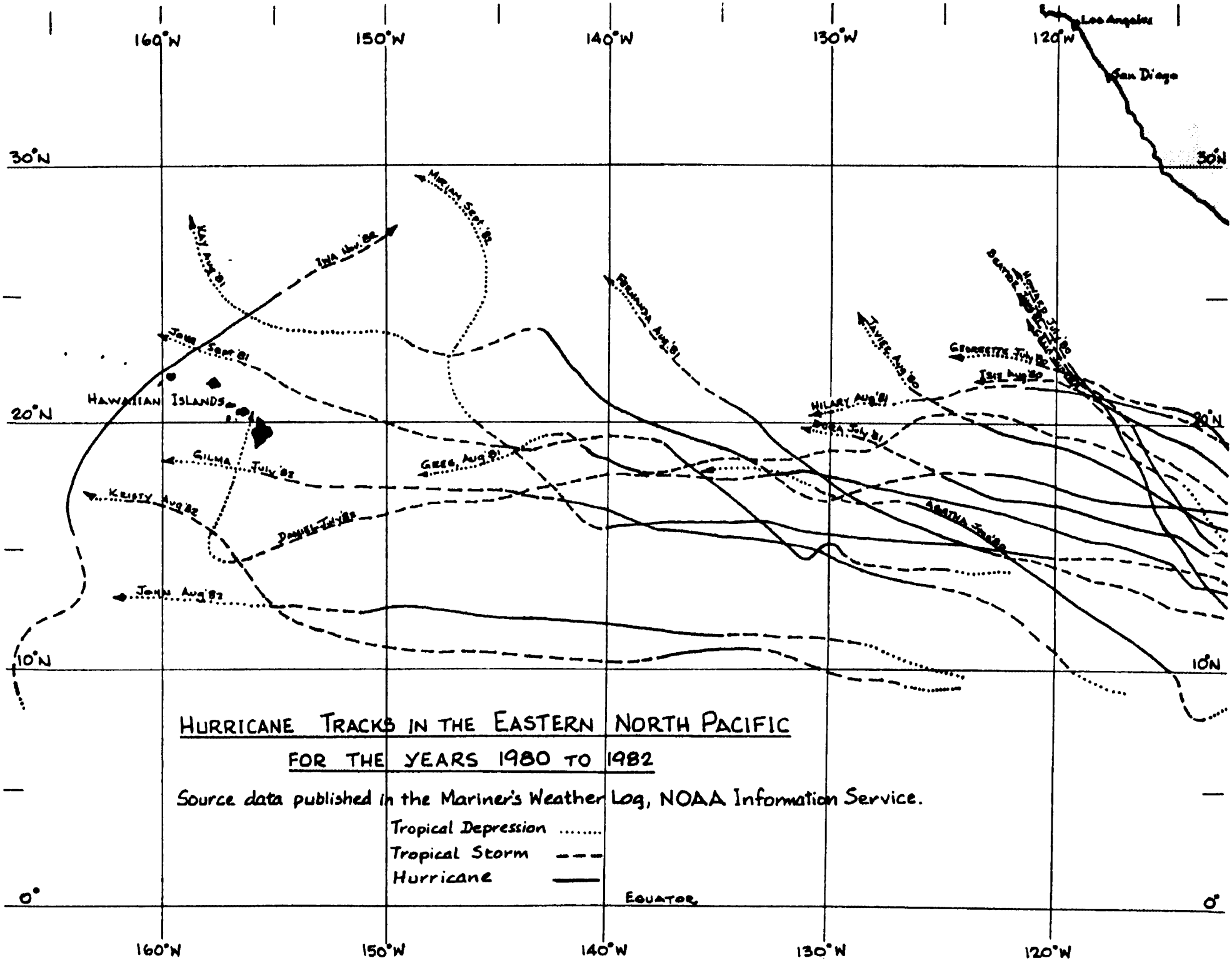
Generally speaking, north of the equator the NE Trades extend above 30°N at all times of the year within the limits of this guide. They blow stronger during the northern winter, i.e. November to February. South of the equator the SE Trades normally extend at least to 20°S, but in the southern summer, i.e. December to February they may still be dominant as far south as 25°S. They blow strongest from June to September, the southern winter months.

There is no regular doldrum belt between the trades. There is an Inter-Tropical Convergence Zone where the two trade winds converge. This zone is marked by extensive cloud and rain squalls, and has some features of the doldrum zone.

Weather information of most significance to sailors in these areas, excluding major storms, is the positions of the the two dominating high pressure areas -- the North Pacific High and the South Pacific High, and the intervening tropical low pressure area. The positions of these features can be read on almost any daily weather map in some form or other, and they shift in seasonal fluctuation with the sun. Their importance to most sailors arises from the need to avoid the actual high pressure area and obtain sailing weather by staying within isobars that offer good winds for passage making. There is an annual, roughly predictable pattern of movement of the highs, and they are reasonably stable in average season positions. But there can be considerable actual daily variation in their positions that can be slightly confusing to the skipper trying to plot them from radio weather data in order to determine his best course.

Within the band of 20° on either side of the equator there is only a very small diurnal variation in pressure, and this is a twice daily 1 1/2 mb. above and below the monthly average. This is a help, for any major change in this pattern, i.e. one exceeding 3 mb. from the monthly average can be taken as a warning presaging a tropical depression or major weather change.

The overall, fairly stable weather patterns of this tropical area can be affected by tropical depressions. Among the smaller, slower moving disturbances in the pressure field are easterly waves, i.e. a small drop followed by a small rise then back to normal with the position of this surge moving from east to west. In some cases these develop into closed isobaric systems that become tropical depressions, with winds to Force 7 (33 mph). This is all warm tropical air; there are no hot or cold fronts such as those found at higher latitudes. If they intensify to include winds of Force 8 to 11 (34 to 64 mph) they are tropical storms, and when they reach Force 12 (over 64 mph) they are called hurricanes, typhoons, or cyclones (all terms for the same thing).



HURRICANE TRACKS IN THE EASTERN NORTH PACIFIC FOR THE YEARS 1980 TO 1982

Source data published in the Mariner's Weather Log, NOAA Information Service.

Tropical Depression .....
Tropical Storm - - -
Hurricane ———

The major hurricane areas in the Pacific occur as follows:

1. On the eastern side of the North Pacific concentrated near the Mexican coast, generally curving up NW'ly east of 140°W. A few penetrate further west.
2. On the western side of the North Pacific, generally well to the west of 180° and thus these "typhoons" are not of concern to our region.
3. In the southwest corner of the South Pacific they occur to the west of 180° and those that occur east of 165°W have normally been few in the last 30 to 40 years. The following statement referring to Polynesia is quoted from the Pacific Islands Pilot, Vol. II. It gives a reasonable picture of the normal situation of past years:

> Tropical storms are not frequent in this part of the Pacific, and hurricanes even less so. Parts of this area, however, are notably deficient in observations so that it is quite possible that storms have occurred that have not been reported. Tropical storms are not expected within about 4° of the equator. Moreover, they are not known to have occurred in the southern hemisphere east of longitude 135°W. Otherwise there is no part of this region where there is not some liability for such storms, even though over most of this region they are very rare.

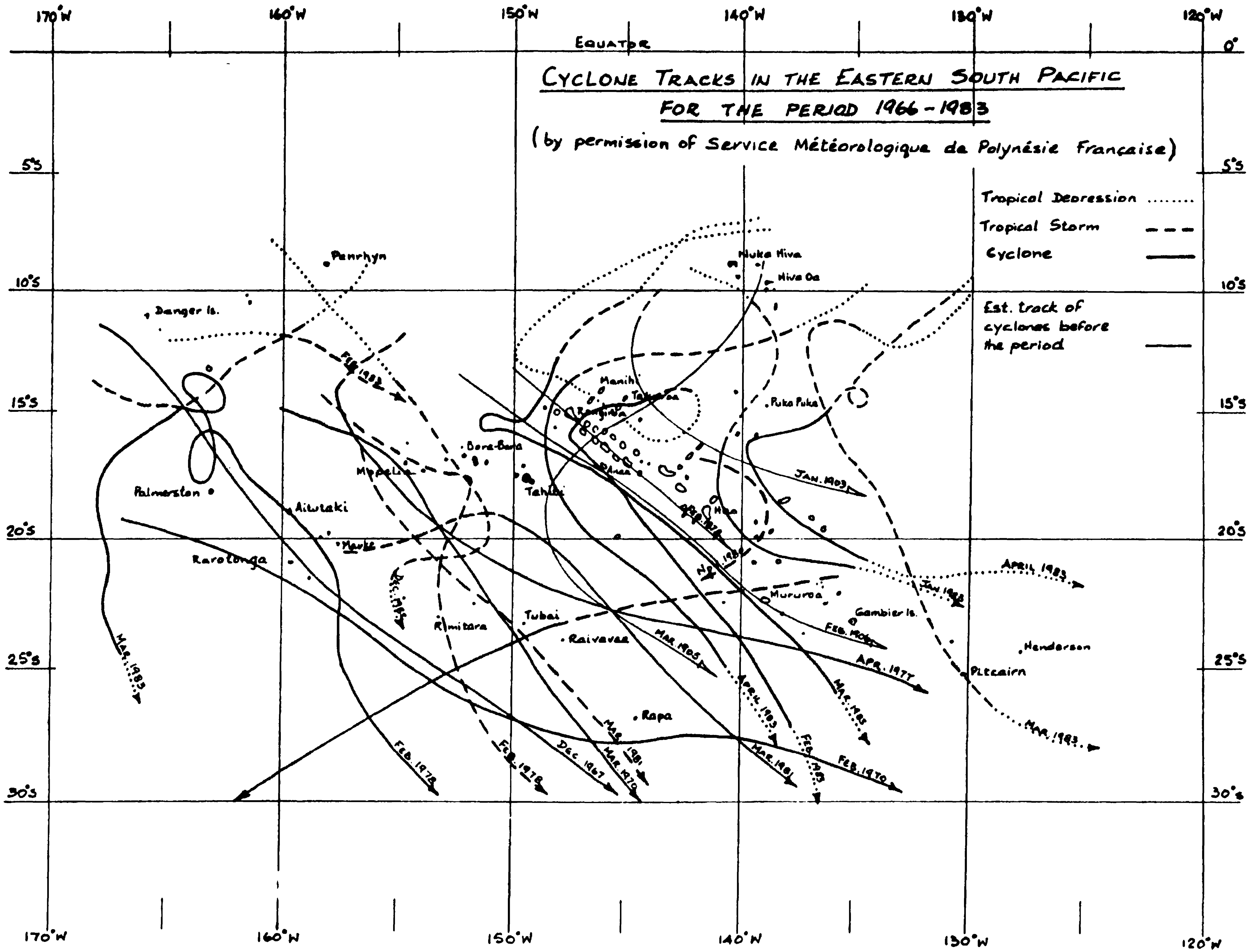
A glance at most charts showing tracks of tropical cyclones and hurricanes supports the above view, and this benign situation was an attractive feature for cruising this area. However, there has been a change in the overall weather pattern of these storms in recent years that might indicate some change in the expected pattern of weather, and it is best to be prepared.

During the last decade, several hurricanes of the eastern North Pacific, originating near Mexico, have travelled westward beyond 140°W. Many have reached and affected Hawaiian waters where they were once rare occurrences.

An even more startling change has been seen in the South Pacific where, as the quote above shows, cyclones were even rarer. A number have been experienced in the last few years, some even originating and passing east of 135°W. Tracks of these storms are shown on sketches on pages 7 and 9.

The cause of this change, which is related to the major climatological events occurring recently in many parts of the world, may be the weather phenomenon called "El Nino." This is a vast oscillation of air and water patterns across the Pacific, known to have occurred about 8 times in the last 40 years. They are caused by a reduction in the drive of the currents westward, allowing a warming of the water in the eastern Pacific. One theory by meteorologists is that the clouds of dust released by recent large volcanic eruptions could weaken the heat received from sunlight, slowing the trade winds and their associated currents by enough to trigger an "El Nino."

The unknown cause of these "El Nino " may possibly be linked to the 1981 and 1982 volcanic eruptions, particularly that of El Chichonal in Mexico which sent a cloud almost 3½ miles wide into the atmosphere. This enlarging and dissipating cloud travelling around the world could have weakened the heat of the sun on the tropical Pacific by up to 2%, enough to have slowed the trade winds and triggered "El Nino." This is a speculative theory that has gained some ground with major meteorologists of NOAA and other departments.


CYCLONE TRACKS IN THE EASTERN SOUTH PACIFIC
FOR THE PERIOD 1966-1983
(by permission of Service Météorologique de Polynésie Française)
Tropical Depression
Tropical Storm
Cyclone
Est. track of cyclones before the period
EQUATOR
170°W
160°W
150°W
140°W
130°W
120°W
0°
5°S
10°S
15°S
20°S
25°S
30°S
Penrhyn
Danger Is.
Nuka Hiva
Hiva Oa
Manihi
Takaroa
Rangiroa
Puka Puka
Bora-Bora
Mopelia
Tahiti
Hao
Palmerston
Aitutaki
Rarotonga
Mauke
Rimitara
Tubai
Raivavae
Mururoa
Gambier Is.
Henderson
Pitcairn
Rapa
JAN. 1983
APRIL 1983
MAR. 1983
APR. 1977
FEB. 1978
DEC. 1967
MAR. 1970
MAR. 1981
FEB. 1970

CURRENTS

The influence of the trade winds causes the oceanic currents in these tropical regions to flow westward across the Pacific. These are the North and South Equatorial Currents. They are not equally spaced about the equator. The South Equatorial Current extends a few degrees north of the equator, and between it and the North Equatorial Current there is a region of an east-flowing Equatorial Counter-Current.

The limits of the counter current can be fairly firmly fixed at times, the southern edge being about 4°N Latitude all year, while the northern edge varies slightly between 8°N and 10°N. However, the boundaries of the main equatorial currents are less defined, and they tend to decline into variable currents as latitude increases pole-ward.

The North Equatorial Current is fairly uniform at a rate of about 1 knot. The counter-current is also fairly steady at around 2 knots, but cannot always be assumed as running constantly easterly. The South Equatorial Current is less predictable. Rates of 1 knot are frequently exceeded and 2 to 3 knots have been noted. East of 136°W longitude some rates exceeding 3 knots have been known.

The general set of a current can be disturbed by an island group, especially being likely to be deflected and accelerated in their vicinity. In the Tuamotus, in particular, the currents can be irregular and the greatest caution and care should be exercised in approaching and passing through the area. Navigators in these waters should allow for a rate of 1 to 2 knots to the current in the day's navigation. The more open oceanic areas near the Society Islands and the Cook Islands have a steadier westerly set and a rate of about 1 knot (there being fewer obstructions).

The major swell in this area is a SW'ly one, driven by the great winds and seas of the Roaring Forties. When this swell is heavy and it meets the strong outgoing currents from the atoll passes it almost always culminates in steep, heavy rips and tidal races at the entrances to coral reef lagoons.

NAVIGATION IN CORAL WATERS

Approaches

In the Tuamotus the southern sides of the reefs tend to be submerged or awash. They also constitute a lee shore because of the swell set in motion by the powerful storms of the far Southern Ocean which crashes heavily on or across the reefs. It is a good idea to approach these atolls, therefore, to a point 25 to 30 miles to the north (or safe side) of the destination, provided no other atoll or restriction is in the way. The ideal approach would be to arrive at the desired point at dawn to allow for a multi-body celestial fix to determine a fairly accurate position and, most importantly, to allow a daylight approach to the destination. A vessel can heave-to, drift, or use shortened sail to control her position well off the destination and wait for dawn rather than to press on. This procedure can be used even if one is only transiting through the chain of atolls enroute elsewhere. Do not be in a hurry. A slower and navigationally secure run will get one to a destination in a safe manner. Abort the landfall if there is any major question as to position and move to open water even if it is necessary to by-pass the atoll.

Special care is needed because the Tuamotus are very low. The height of a coconut palm on a low sandy atoll will rarely exceed 40' to 50'. From the deck of a small yacht this means your horizon is not more than 3 miles away and for even the tops of the palms to be visible you will be as close as 7 or 8 miles. The high volcanic islands are visible much further away--a normal assumption for visibility is 20 to 25 miles, but in good conditions Tahiti can be seen 60 miles away; Hawaii, at 100 miles. However, even in these cases atmospheric and weather effects can drastically reduce the actual sighting. Clouds and mist can regularly obscure Tahiti's peaks, and it is astounding that one can sometimes be only 20 to 40 miles from the 13,700' peak of Mauna Kea when it is hidden behind a light cloud and one seems to be sailing into an open ocean.

It is difficult to identify atolls initially. Motus with palms on them look the same from atoll to atoll. It is a combination of confidence in navigation and position, of the run of and bearing of the atolls's perimeter, or the glimpse of a village that add up to a tentative identification. In a few cases, long-lasting wrecks offer confirming knowledge.

It is slightly more difficult to identify a pass into a lagoon. Not all gaps between motus harbor an opening, especially a navigable one. An atoll must be positively identified before one can proceed to determine the true location of a pass.

Running The Passes

For the deeper channels the best time for entry, assuming calm weather, is at low water slack. At this time the reefs and shoals awash are most readily seen and the channel is perhaps more clearly defined. Furthermore, if one should ground the rising tide will help to float the vessel free. But keep in mind the low tidal rise.

Do not attempt any entry if a very strong current is running against you, especially if your vessel is an under-powered auxiliary with a low maximum hull speed. Strong currents make themselves visible by the breaking seas and rips occurring outside the entrance to the pass. In such cases it is best to wait for the slack, or the change to flood (indicated by calmer sea conditions), before entering the pass.

Once past the entry into the pass, the turbulence diminishes and it is generally easier on vessel and crew alike. It is necessary to maintain speed for control, especially if you are going with the tide, with the result that the vessel will be travelling very rapidly over the bottom. Any errors in judgement can result in great damage. Thus it is better to err on the side of caution. Have the anchor ready to let go, and have plenty of chain or cable free to allow one to drop it quickly for an emergency stop.

Estimating Slack Water

Tidal effects are small in the Tuamotus. The tides are predominantly diurnal, and an amphidromic point (or node where tides are almost negligible) is assumed in tidal calculations to be near Tahiti where spring tides are only about 8".

The Pacific Islands Pilot gives the following data to determine the flow. "Under normal conditions, the approximate time at which the stream in a pass changes direction can be estimated as follows:

One hour before moonrise - slack water of very short duration; outgoing stream begins
3 or 4 hours after moonrise - slack water
4 hours after moonrise - ingoing stream begins
1 hour after moonset - outgoing stream begins
3 or 4 hours after moonset - slack water
1 hour before moon's lower meridian passage - ingoing stream begins"

These times could well be altered by heavy southerly swells or stronger prevailing winds, which by increasing the inflow of water over the reef can alter the ingoing and outgoing streams, even to the extent of sometimes maintaining a continuous outflowing stream.

Navigating by Eye

Once within the reef areas the best piloting is accomplished by eye. The higher the position of the lookout the better and the sun should be behind the observer to nearly overhead (not in front). The best position on most vessels is at the first spreader. Since one may spend some time aloft conning ahead it should be easy to get up and comfortable to stay there.

Ratlines on the lower shrouds enable one to climb to a perch on a spreader, or for short passages to just go up several feet. Ratlines may be of the old-fashioned type lashed by seizing to the shrouds, or they can be of oak strips clamped to the shrouds. Rope ratlines are easier to make, climb, and have less windage, but they are tiring to stand on for long periods as they sag and cut into the feet. If a perch is made here, rather than at the spreader, the perch itself can be a piece of oak.

The glare reflected off the sea is considerable. Sunglasses prevent eye-strain and fatigue, and make it easier to see underwater obstacles. Polaroid sunglasses have been found very helpful to make bottom features clearer. The choice of tints should help reduce the ultraviolet and infrared rays, but should not alter color perception.

A hat or vizor also help to block out unwanted glare and make the viewing easier. In tropic waters the heat of the sun on one's head can be intense. Hats (or vizors) should be well fitted to stay on in any breeze. Binoculars can be hung around the neck. Glasses should have safety straps. Clipboards for maps or diagram sheets should have a line and snap hook.

The angle of the sun is important for visibility. It should be behind the lookout, and at an angle to the water. Best results are obtained from about 2½ hours after sunrise to 1 hour before local noon when going in a westward direction, and the reverse (1 hour after noon to 2½ hours before sunset) when going in an easterly direction. The position of the sun, whether north or south of your position alters the quadrant of visibility south or north of you.

A flat, glassy calm is a poor viewing condition, as it is difficult for vision to penetrate the surface glare. But even a slight ripple on the surface makes viewing easier. Vision continues to be good even with some wave action, unless there are many whitecaps or too disturbed a surface.

Deep water is seen as a deep blue (in other parts of the world, a dark green). As the water shallows the blue lightens. As long as one stays in at least light blue, one is in reasonable depths for safety. As more white appears, depths are reducing below 6'. Pale white with only the slightest tinges indicates the shallowest water over white coral sand, generally only a foot or two in depth.

Brown or purple patches mark coral heads. Reefs may be yellow or yellow-brown. All these signal danger and should be avoided, though it is often difficult to judge the true depth over the coral heads. But if a clearer passage exists it is safer to thread a path following the clearer water indications.

The type of bottom and the amount of cloud overhead can affect the conning. White sand bottoms are the best for viewing. Black volcanic sand or olive green lava sand or rock can greatly reduce the amount of light and reduce apparent visibility. Clouds also cause similar effects as they cast shadows, so that especially when looking ahead to search out a reef a cloud shadow can be misleading. Cloud shadows nearer to one can darken shades of apparent water color to alter depth perception. The light becomes flat and colors weaken, sometimes to an extent that all ability to navigate by eye is lost.

Coral barrier reefs and atoll reef perimeters tend to be essentially sharp in edge and outline, so that fairly close to them there may still be deep enough water. On the other hand, uneven bottoms with many large hemispherical coral growths reaching up towards the surface occur within some lagoons and reef zones forming the most dangerous type of contours to attempt to find a passage through. But sailing vessels, often without power, have travelled coral waters without any special instrumentation other than the eyes of its crew and the leadline, and so can you.

MARKERS AND BUOYS

Buoyage systems are not standardized around the world, so sailors must face the unfortunate need to keep alert for changes when travelling. The United States uses a modified Lateral System based on an International Conference of 1889. One might characterize this as red right returning. Some European countries, including France and thus French Polynesia, use a Uniform Lateral System, recommended by a 1936 League of Nations committee, which can be characterized as red left returning. There are other differences in shapes of buoys, topmarks, etc., but the difference in color of the buoys is the immediate one of significance to any mariner coming into harbor from seaward. The following synopsis notes the major points of each system. This allows a skipper to review each system when he first enters a new area. The Uniform System includes some of the special features used in French Polynesia.

Uniform Lateral System

This is the system used in French Polynesia, with some special features. The buoys are referred to and marked in reference to a vessel returning from seaward. This system is illustrated in Appendix I.

Buoys marking the starboard side of a channel are conical and colored black or black and white checks. They may be numbered in odd numbers commencing from seaward, but this is often missing in Polynesia. Lights on them, if any, will be white or green. They may have topmarks associated with them, generally conical (triangular), black, or diamond shaped, black, either on a black and white banded post. Diamond shapes are not used at the channel or pass entrance. Within a lagoon these topmarks continue their significance, and may be in combination, and some special topmarks are also used.

Bouys marking the port side of a channel are can-shaped and colored red, or red and white checks. They may be numbered with even numbers, commencing from seaward, and again may often be unmarked in Polynesia. The light on them, if any, will be red or white. Topmarks are can (square) or T-shaped, in red and mounted on red and white banded posts. T-shapes are not used at channel or pass entrances. These shapes continue their significance within a lagoon, and may occur in combination, and some special topmarks are also used.

Middle ground marks are spherical buoys, or a circle when used as a combination topmark. The buoys are painted in red and white horizontal bands, and the circles in red, if the channel is either to the right or if either channel is of equal importance. Topmarks allow differentiation: T or square for a preferred right channel, cross or circle if either channel is equal. When the main channel is to the left the spherical buoy is painted with black and white horizontal stripes, and the topmarks are cone, diamond or circle, all painted black.

Mid-channel buoys or fairway marks are optional in shape other than spherical, can, or conical; and will have vertical red and white or black and white stripes.

Wrecks are marked by green buoys, with green lights, whose shapes designate the channel. Can buoys are to be passed on the port hand; spherical to be passed on either hand; and conical to be passed on the starboard hand.

Special Topmarks for French Polynesia

The standard can, T-shaped, vertical up-cone and diamond shapes are used at reefs as they would be for normal seaward approaches. In addition, once within the lagoon the landward sides are marked by a red hemisphere (with the flat diameter downwards) placed on a yellow and red barred spar; and the reef side by a downward pointing cone (triangle), also on a yellow and red barred post. However, in many places in French Polynesia these special marks or beacons, and the regular ones, may be sometimes worn or appear unpainted, and the colors may not be distinguishable. The shape of the topmark, if still in place, can be identified. Be aware, however, that beacons and markers mentioned in this and other sources may be missing and not replaced because of weather or other reasons.

Ranges and Entrance Beacons

A few of the major ports in this area have lighted ranges or colored sector beacons to indicate the correct approach through the pass. In Papeete there is a pair of well lit ranges to take one through the pass and towards the quays. The lights are green, occulting (3), placed on red and white banded pylons that have a white topmark for daylight use. The pass itself has red and white lit buoys to mark its sides.

At Moorea, Fare (Huahine), Bora-Bora, Baie Taiohae (Nuka-Hiva), and Autona (Hiva Oa) there are colored sector beacons to guide the entry. The bearings of each harbor light will differ but they are arranged so that green is to the right of the correct white sector and red is to the left, i.e. they tell the sailor which side of the best course he is on as he enters from seaward.

Regardless of these lights, and others, it is recommended that no night entries be attempted by the newcomer to French Polynesia, at least until he has become very familiar with the harbors, problems, and dangers. Enough mistakes are made even in daylight as witnessed by the many wrecks that have occurred.

United States System

Buoys are marked according to the side of a channel taken in reference to a vessel returning from seaward. In cases where channels may not be clear as to a specific seaward direction there are certain arbitrary assumptions as to which is the correct orientation. This is taken in a clockwise sense, for vessels in channels proceeding south along the Atlantic coast, north along the Pacific coast.

Buoys marking the starboard side of a channel, and buoys on wrecks or obstructions that must be left to the vessel's starboard hand (the right hand entering) are colored red and are conical in shape. They have even numbers commencing from seaward painted on them. The light shown can be white or red and may have varied characteristics. Quick flashes indicate particular caution.

Buoys marking the port side of a channel or on wrecks or on obstructions that must be left on the port hand (the left side entering) are colored black and are can shaped. They have odd numbers painted on them in white. Lights on them can be white or green and have varied characteristics. Quick flashes indicate particular caution.

Buoys marking the center of a channel are painted in vertical black and white stripes and have no particular significance to the shape. They are not numbered but may have letters marked. If lighted the light is white. They should be passed close-to.

Buoys marking a mid-channel obstruction which has a channel to define to either side are painted in red and black horizontal bands. A can buoy indicates that the preferred channel is to starboard of the buoy (as seen from seaward), while a cone buoy indicates the preferred channel is to port.

Large buoys used for any cause may not conform exactly as to shape but will agree as to the color and markings. Special buoys that can be encountered are as follows:

White buoys mark anchorage areas.
Yellow buoys mark quarantine areas.
White buoys with green tops mark dredging or survey areas.

An illustration of the U.S. System is shown in Appendix II.

REFERENCES AND CHART LISTS

Books

The following books provide information that supplements this guide:

Cruising Guide to Tahiti and the French Society Islands by Marcia Davock is an excellent guide which gives much detailed information for the area covered.

Landfalls of Paradise by Earl Hinz covers the whole of the Pacific Basin islands. Data is given regarding formalities and facilities as well as radio frequencies, historical notes, and general information.

Cruising Guide for the Hawaiian Islands edited by Arlow W. Fast and George Seberg covers such topics as anchorages, marinas, ports and the ocean crossing.

Charts and Official Publications

Many better charts are available for the Pacific area than there used to be. This is, in part, a consequence of the Second World War, and because hydrographic departments have been making continued and effective efforts in charting the world. For this, South Pacific sailors owe special thanks to the French Naval Schooner "Zelee" which has made lengthy efforts in surveying the dangerous waters of the Tuamotus. Zelee used to be a familiar sight in Tahiti. But if more charts are available, the restrictions of space aboard small yachts, and the rising costs of charts have kept the number of charts carried by yachts at about the same number as before. Chart prices have increased by over 400% since the 1960's and continue to rise. Some individual British and French charts may now cost $20 or more. U.S. charts cost about half that figure.

Selection of charts is always an individual choice. They can be ordered directly from each country's hydrographic department or from sales agents found in most large ports. The following assessment is a personal one:

U.S. charts and publications are good, and marked in familiar terms of feet, fathoms, miles, etc. convenient for U.S. yachtsmen; but they vary considerably in size and are printed on thin paper stock. Charts for U.S. waters, which include Hawaii, are put out by a separate department, the National Oceanic and Atmosphere Administration, and thus are numbered differently. They can usually be ordered through the same agents as for overseas charts.

British charts and publications have advantages for waters outside the U.S. They are generally uniform in size and on heavy paper stock. They are presently converting to metric measurements. Pilots are book size, bound (not loose-leaf).

French charts are the most detailed for the areas of French Polynesia, though only a few need to be obtained for places not covered by either of the two other sources. They use metric measurements and are printed in French. They tend to be the most expensive on an individual basis.

A typical, but not all inclusive, list of N.O. charts is given on the opposite page. They give a general idea of selection, but actual choices should be made in reference to your planned cruise.

LIST OF DMA CHARTS

Iles de Marquises

83 BHA 83207	Nuku Hiva
83 BHA 83218	Hiva Oa, Tahu Ata, and Motane
83 ACO 83020	Iles Marquises

Archipel des Tuamotu

83 ACO 83022	Ile Makemo to Ile Tatakoto (Omega)
83 ACO 83023	Tahiti to Iles Rangiroa and Makemo (Omega)
83 BHA 83251	Iles Gambier

Iles de la Societe

83 ACO 83021	Ile Manuae to Ile Tahiti (Omega)
83 ACO 83255	French Polynesia
83 AHA 83382	Tahiti and Moorea
83 AHA 83383	Moorea
83 AHA 83385	Papeete Harbor
83 ACO 83392	Ile Huahine to Ile Maupiti, Manuae, Maupihaa, and Motu One
83 BHA 83397	Bora-Bora

Cook Islands

83 BHA 83425	Islands and Anchorages in the Cook Islands
Brit. Ad. 979	Additional Cook Island Anchorages: Rakahanga, Manihiki, and Danger Islands
Brit. Ad. 1174	Suwarrow Island
Brit. Ad. 997	Tongareva or Penrhyn Island

Hawaiian Islands

NOAA 19320	Island of Hawaii (Loran-C)
NOAA 19324	Hilo Bay
NOAA 19348	Island of Maui, Approaches to Lahaina
NOAA 19347	Channels between Molokai, Maui, Lanai, and Kahoolawe
NOAA 19381	Kauai (Loran-C)
NOAA 19383	Nawiliwili Bay

Pilots and Sailing Directions

Publication 26	Sailing Directions for the Pacific Islands, 3rd Edition, 1988
Coast Pilot 7	California, Washington, Oregon, and Hawaiian Islands

FORMALITIES

The area covered by this guide includes French Polynesia, the Cook Islands (a self-governing nation in free association with New Zealand), Pitcairn Island, Easter Island, and the Hawaiian Islands (the 50th state of the United States of America). Each country has its entry requirements but there are some courtesies common to all.

Basic Entry Procedures

Yachts should fly a courtesy ensign of a country at the starboard spreader all times while in that country. At the same time, a vessel should fly its own national ensign at the stern. Flag etiquette requires that this national ensign be hoisted at sunrise and lowered at sunrise.

On first entry into a country the yellow quarantine or Q flag should be hoisted under the courtesy ensign of the country being visited. This should be done whether the officials board a vessel for clearance, or the skipper goes ashore to inform them of one's arrival. As soon as a vessel is cleared the Q flag can be taken down and need not be hoisted again while in that country.

Officials from Customs, Immigration, Health, Agriculture, Police, and the Harbormaster or Port Authority may be involved in the vessel's clearance. In almost all countries an attempt is made to streamline the procedure. It is important to realize that the crew and the vessel must be cleared first for health, then by Customs, Immigration, and Agriculture before any person other than the Captain can go ashore for <u>any reason</u> whatsoever.

The documents that must be aboard include:

For the Vessel	For Each Person
Boat registration or Documentation	Individual valid passports
Crew List	Visas or Tourist Permits (as required)
Outward bound clearance from the last port	Onward airline tickets or funds to cover such bonds as required
De-ratization certificate (in certain areas)	

All firearms should be declared, and may be sealed and impounded by the authorities during the period of one's stay. The Customs inspector has the right to search any vessel to determine if it carries arms, contraband, or other legally forbidden items. One cannot object as it is generally done efficiently and impersonally.

Anchor or moor in areas designated for entry purposes. The skipper should report the vessel's arrival by radio or shore telephone to the Harbormaster or controlling port authority (who may be the local gendarme). He will either inform one how to get in touch with the other authorities in correct order or may do this for you. Avoid entry into ports at times other than the normal working hours Monday to Saturday, for otherwise one will be charged overtime. Sunday is usually a fairly rigorously observed Sabbath day of rest in Polynesia.

Leaving

Clear with the Harbormaster first, and pay all moorage bills. Also, clear with Immigration and retrieve your passports or other identification; collect weapons from the Police (these are generally returned to you only within an hour of sailing), and lastly, clear with Customs and obtain your outward bound clearance to be used for entry to the next place. If for any reason you cannot proceed to sea within the hour, stay aboard and inform Customs. They may extend your period of stay. If the delay becomes excessive you may be required to re-enter all over again.

Special Requirements for Different Areas

French Polynesia

Papeete is the only true Port of Entry for all of French Polynesia, and all final documentation and clearances must be done there. However, the entry system has been made more flexible to suit down-wind travel routes for yachts, in that informal entry can be made at designated ports in the different island groups, provided you have all the requisite material you will later need at Papeete. The usual authority in these places that you report to is the local gendarme. These subsidiary entry ports are:

The Marquises - Baie de Taiohae in Nuka Hiva, Atuona in Hiva Oa,
The Tuamotus - Rangiroa, Apataki, and Mangareva in Iles Gambier
The Society Islands - Tahiti, Moorea, Raiatea, Huahine, and Bora-Bora
The Austral Islands - Rapa, Raivavae, Tubuai, Rurutu, and Rimatara

It is essential that you report to the local gendarme as designated in any island group before you visit anywhere else. Violations of this rule are viewed unfavorably. In the Marquises, for example, it is reported that a fine of $20 is levied if the yacht does not first enter and clear at one of the specified entry points noted above. When particularly annoyed by persistent disregard for this rule gendarmes have sometimes refused permission for visits in their group and insisted on the letter of the law--that proper official entry be made in Papeete, a ruling which could spoil your proposed cruise. As they are usually very helpful and friendly, the thoughtless and inconsiderate yachtsmen who annoy them deserve this reaction.

If your total stay in French Polynesia will exceed 30 days each person aboard will require a visa. This applies whether you arrive by yacht or airplane. The visa must supplement a valid passport that will not expire during the term of one's visit. Exceptions to the visa rule are French residents and nationals of African countries in the French Community.

Apply for the visa when you arrive in French Polynesia. You will have to supply 4 passport photos and pay a fee. It is generally possible to receive a three-month visa within a week of arrival at your first Port of Entry. It is usually necessary to go to Papeete to extend your visa for an additional three months. A request for an extension can be made by letter in French addressed to the Governor or as otherwise advised by the Immigration Department. It may take 4 to 8 weeks to get approval for a 3-month extension, so apply for it early. Six months is the absolute maximum length of stay for any non-French citizens. All foreign cruising boats must leave the territory by October 1st as it is not possible to spend the hurricane season in French Polynesia.

In an understandable aim to prevent beachcombers and freeloaders from congregating on the islands the authorities require either the posting of a refundable bond or evidence of an onward airline ticket for each member of the crew. Posting the bond is the simpler option, as it is often difficult to cash in a ticket when leaving the territory. The amount of the bond is equal to the cost of a one-way open-dated airline ticket to your home country, for example: approximately $800 for Americans to Hawaii; $1,200 for Canadians to Vancouver; and $2,000 for French, English and European sailors. In addition, all crew members must show monetary self-sufficiency of up to $350 per month for the duration of the requested visa. Families are treated as a unit. This places a fairly substantial demand on most travellers' financial resources. The requirements appear to have been unevenly applied, so that at times they seem to have been relaxed slightly. It is best to be prepared to meet these demands.

For yachtsmen chartering in French Polynesia only the passport, visa (if a long stay is intended), and proof of return travel with an airline ticket are all that is required.

When arriving in Papeete from countries such as Fiji, the Cook Islands etc., the yacht may be fumigated by the Port Authorities to control pests. It is best therefore, to anchor out before the Quay on first arrival from these Western Pacific areas and clear all formalities before tieing up at a moorage.

No special inoculations are required other than one for yellow fever if you are arriving in Polynesia within 14 days of leaving, or transiting infected areas. It is suggested that one obtain a polio booster and in certain cases have a gamma gobulin inoculation for protection against hepatitus A. Diseases that were once of concern in the area (such as elephantisis and leprosy) are now successfully controlled and treated. Venereal disease, brought to these islands by early European visitors and other travellers, is as contagious and as significant a problem here as elsewhere. There are several excellent hospitals in Papeete, and some smaller medical centers in the outer islands.

The impounding of firearms has been mentioned. They must be declared on entry. The ban on firearms includes .22 caliber or other shells which some yachts used to take as trading goods. The penalties are severe for not declaring such items, and the least that will be done is to have the yacht suffer expulsion from Polynesia.

In the Tuamotus there is an area restricted to all vessels, described in that section. Special permission is needed to transit this restricted zone. The French requirement for such requests stems from their nuclear tests at Mururoa. Regardless of your attitude towards nuclear tests, if you desire merely to visit and enjoy French Polynesia it is essential to conform to the regulations. You can lobby against nuclear tests in your own country.

The Cook Islands

The official Ports of Entry are Rarotonga, Aitutaki, and Penrhyn. In Rarotonga all yachts must clear at Avatiu Harbor, flying the Q flag and remaining at anchor outside the small harbor. If the vessel is arriving from Tahiti, Fiji or areas considered infected by the rhinoceros beetle it will be searched and/or fumigated. Similar procedures are followed at Aitutaki.

Temporary visitor permits allowing a 14-day stay for the yacht and crew are given on clearance. Extensions for a longer stay have to be applied for at Rarotonga, and if granted, fees amounting to about $15 per passport are charged for the application. Evidence of financial ability may be requested in the assessment of this extension. Tourists arriving by air must have a valid return or on-going ticket, and confirmed accommodations before arrival.

Similar to Tahiti, this is a healthy part of the world and no special inoculations are required. There is an excellent hospital in Rarotonga and smaller medical facilities on some of the other islands.

Firearms must be declared and will be impounded. The importation of firearms, cartridges, and fireworks is expressly prohibited.

Yachts may be allowed to moor Tahiti style to the concrete quay in the small basin harbor of Avatiu which was made by blasting out the coral of the fringing reef. The space for yachts is limited due to the small size of the harbor (500' across) and the moorage required by inter-island vessels. On occasion, yachts must leave or move to make room. When mooring stern-to the breastwork use at least one strong anchor to hold the vessel out from the wall, for the relatively open basin can become very uncomfortable if the wind shifts northerly, as it does every 7 to 10 days.

A small daily fee is charged for the use of the harbor, and it is collected by the Immigration officials when they give outward clearance. Showers, toilets, and potable water are available at dockside. Upon leaving the Cook Islands an exit fee of $20 per person is charged.

NZ

The Hawaiian Islands

All yachts, including US vessels, must enter the Hawaiian Islands at one of of the following Ports of Entry: Hilo in Hawaii, Kahului in Maui, Honolulu in Oahu, and Nawiliwili in Kauai.

Procedures for entry and for leaving the Hawaiian Islands are essentially US standard procedures, but it is done in a more detailed and consistent manner than is practiced on the mainland. It is important to comply with these formalities as they are applied for they are done in this manner in order that yacht movements about the Islands should be safe, and to control the illegal contraband that affects the Islands.

Entry into United States occurs as soon as one has anchored or moored alongside and are in US waters. Do not anchor at any place other than at a Port of Entry before coming into one, as considerable fines are imposed for violations. After entry, no person who is aboard can go ashore except for the skipper, or his representative, who reports the vessel's arrival to the Customs office. The skipper must return to the vessel immediately after reporting.

Customs will inform the other departments - Immigration, Agriculture, and Health and they will arrive to board the yacht. Generally the Customs officers handle immigration and health requirements at the same time. In Hawaii the forms and papers to be filled are the same for yachts as for large vessels, which is a little different from US mainland practice.

For US citizens the immigration procedure is simple and brief. All other persons are considered as aliens and must have valid passports, with visas where this is applicable. Canadian citizens have very little more trouble than US citizens as long as their passports are valid. Complete requirements for entry into the US can be obtained from the nearest US consulate, and visas obtained for those countries where this need applies. It is important for the skipper to realize that he stands responsible for any alien crewman in his crew, and that they must have the proper papers for entry, or the skipper could be charged with aiding an illegal entry.

Agriculture is concerned in Hawaii with any meats, citrus fruits, and other vegetable material being brought in. Most yachts have few problems here for their fresh provisions will likely be used up. There is also a strictly enforced quarantine for any pets aboard. They will be taken to the Animal Quarantine Center in Honolulu where they will be kept for 120 days, paid in advance. If you leave Hawaii before the end of that period the pets will be released to leave with you, and you can apply for a refund of the unused balance. There is no relaxation of these rules.

The United States has reciprocal arrangements with some countries for cruising licences. These countries include Argentina, Australia, the Bahamas, Canada, West Germany, and New Zealand. Yachts from these countries will be given a cruising permit, valid for 6 months which allows the yacht to travel in the specified waters. The skipper is responsible for notifying the Customs (by telephone) when arriving at certain major ports. Other yachts have more complicated procedures and regulations to comply with. (An important point, often misunderstood, is that Mainland Cruising Permits are not applicable in Hawaii, for the overseas passage takes one out of US waters.)

Firearms are to be declared. Even if licensed in your country or state they must be declared and registered in Hawaii. Permits for firearms may or may not be issued by the police.

Customs allowances are the same as for any traveller returning to the US. An important fact concerns foreign made equipment bought for personal or yacht use, such as cameras, sailing instruments, etc. If these items were purchased in the US they should be protected against duty by having them listed and certified by US Customs before leaving the US, or by having receipts that show the place of purchase. If this is not done you can be liable to a customs assessment on any item not clearly defined, and you may have to pay duty on them prior to recovering it by application to the Customs.

When leaving the Hawaiian Islands, whether to return to the US mainland or elsewhere, <u>all</u> vessels must clear with US customs and obtain an Outward Bound Manifest. Do not neglect this procedure or you will find on arrival at your destination that the vessel is on the customs list as uncleared and subject to seizure.

<u>Pitcairn Island</u>

There are no entry formalities for Pitcairn. All visitors are welcome. There are no health restrictions or problems, but as the people are isolated it is unwise for any yacht with any illness aboard or which has had recent contact with a major disease to land there and transmit the vector to the island.

Radio communication is possible with the island to inform them of your plan to visit, and thus to arrange to be landed by the Pitcairn surfboat. Do not attempt to land in rough weather on your own. Lastly, when leaving thank these generous people for their hospitality by performing some service, or by leaving useful material such as rope, blocks or school supplies (not ammunition or alcohol).

Easter Island

Easter Island (Isla de Pascua) is a colony of Chile, and it is administered by a Governor from the Chilean Navy, together with a local major of Hanga Roa. Spanish is the official language, but there are some people who speak a little English, French, and German. The local language is a form of Polynesian.

There are few entry formalities. Valid passports are required for each crew member, but no visa is needed at present. Customs clearance and tourist cards can be obtained on entry at Hanga Roa, the Port of Entry. Report and clear with the same authority on leaving.

A FEW WORDS OF POLYNESIAN

English	Tahitian	Rarotongan	Hawaiian
Hello (How are you?)	Ia Orana	Kia Orana	Aloha
Welcome	Haeva Mai		
Thank you	Maruruu Roa		
Goodbye	Nana		
Good	Maitai	Meitaki	Maikai
Forbidden/Bad	Tabu		Tapu
Drink	Inu	Inu	Inu
House	Fare	Are	Hale
Big	Nui	Rai	Nui
Little	Iti	Rikiriki	Uuku
Pretty	Neh Neh		
Chief	Arii	Ariki	Alii
Male	Tane	Tane	Kane
Female	Vahine	Vane	Wahine
Foreigner	Popaa		Haoele
Any large number	Mano	Mano	Mano
Water	Vai	Vai	Uai
Sea	Tai	Tai	Kai
Wind	Mata'i	Metangi	Makani
Sand	One	One	One
Land	Fenua	Enua	Honua
No	Aita		
Ship	Pahi	Pai	Ua'a

A statement can be changed in context by the inflection placed on the words. The dialects of Polynesia are similar, with slight differences in pronunciation.

FISH POISONING (CIGUATERA)

A danger present when travelling in the tropical coral atoll areas is the possibility of poisoning from eating fish that may contain the toxin that causes ciguatera (in French - cigaratua). No completely satisfactory explanation of the source and reasons for accretion of the toxins in particular fish has been determined, though it is almost certainly related to the base of the tropical food chain, i.e. some of the algae, fungi, or corals that are eaten by some fish. It may be the food material itself is toxic, as some algae have been found to be, or it may be that the food is chemically altered within the fish to become toxic. It is also difficult to understand why a particular species of fish is toxic in one atoll or area of an atoll, but the same fish in a nearby atoll may be quite unaffected and other species may be culprits.

But if the basic reasons of source are unknown there are still some major facts that are available:

1. This is a problem only in coral areas and never occurs where the water temperature is below 68°F (20°C).

2. Oceanic travelling fish, such as tuna, bonito, mahi-mahi, etc. are almost never poisonous with this toxin. But many species of reef fishes can be dangerous even when freshly caught and eaten.

3. The toxin accumulates in all organisms, including humans so that the larger the fish the more likely it is that it may have accumulated enough toxin to be dangerous. Thus larger predatory fish such as barracuda can be especially dangerous, and in fact, barracuda are not eaten in Polynesia, nor permitted to be sold commercially in the market place. Because smaller size tends to provide safety local fishermen will usually take only small grouper or other food fish (15" or less--just enough for a meal). But it is important to remember that size alone is not a protection if the fish are particularly toxic in a lagoon. Checking with local people will help identify which fish are safer, but this may lose in communication or understanding and is not a reliable safeguard.

Symptoms

A few minutes to hours after eating a poisonous fish a tingling numbness (pins and needles sensation) occurs around the mouth and nose, and is often also felt in the hands and feet. Contact with cold water intensifies the feeling until people experiencing it compare it to electric shocks or burning sensations. This may intensify with the progress of the poisoning and may last a long time.

Soon after, vomiting and acute diarrhea will be experienced, together with aching joints and muscle pains, especially in the legs. Itching that gets no relief from scratching may also occur. The person affected feels cold and weak, sometimes to an extreme degree. The pulse slows, and blood pressure drops, on occasion enough to make hospitalization necessary. Later effects that are reported include continuing numbness and the loss of skin on the hands and feet.

The length of the attack varies, probably depending on the amount ingested or accumulated. For, remembering that accumulation occurs, you may have already taken in small amounts from other fish without apparent ill effect until this particular dose triggers the result. This is why Polynesians, who eat a lot of fish, sometimes suffer severe reactions after a meal from which visitors emerge unaffected.

Except in some cases of low resistance or of massive toxin intake, fish poisoning is not usually fatal. With rest and proper treatment the patient will recover in a few hours (which may stretch to days) for normal reactions. Severe cases may take weeks or even months for a full recovery.

Treatment

GET TO A DOCTOR IMMEDIATELY. (A local doctor who is experienced in fish poisoning treatment is preferred.) In the meantime, induce vomiting if it has not already begun, in order to void the fish material remaining with toxins. Use any means available, including a finger down the throat, warm salt water, syrup of ipecac, etc.

Epsom salts or sodium bicarbonate, while not directly needed may help in neutralization, especially if some of the effect is due to poisoning of the scombroid type or due to fish spoilage, etc.

Strong allergic reactions may need the use of anti-histamines. You should have some in your medicine chest, and they can be given by mouth, or for fastest results by intramuscular injection.

Where the respiratory system is affected keep the victim breathing. Use artificial respiration as necessary. Adrenalin may be needed as a heart stimulant, but beware if the patient has a heart problem. For severe pain, morphine or strong pain relievers may be needed. But these last treatments of adrenalin and morphine should usually await a doctor's use.

Rest is essential, with an avoidance of any fish or highly seasoned food until recovery is total.

Prevention

There is no totally safe prevention unless one does not eat any fish whatever, but with caution and good judgment one can enjoy food fish.

1. Eat only oceanic travelling fishes if you want to limit fish intake.

2. If you eat reef fishes, eat only the small size - under 15" or 2 pounds.

3. Ask for local advice as to which fishes are best avoided in any locality. If an area has been reported particularly bad, avoid any fish from there, you can always eat at some other spot.

4. The liver and viscera are the most heavily contaminated, hence cleaning the fish immediately it is caught and cleaning it well can help reduce the amounts of poisons. However, no amount of cleaning or washing can reduce the toxicity of the poison remaining.

Other Fish Poisoning

Ciguatera is not the only type of fish poisoning possible. There is that due to fish spoilage, and remember that fish spoils rapidly and easily so do not eat any questionable smelling or rancid fish, cooked or not. There is also the very dangerous and different type of poisoning caused by eating the skin, flesh or any part of the puffer fish. This has as high a mortality rate as 60%. Though gourmets in Japan delight in flirting with death and consider this a delicacy, this is a fish to avoid. There are also poisons from the herring and mullet group of fishes in certain areas of the Pacific.

ILES MARQUISES

The Archipel des Marquises lies oriented NW - SE'ly between 8°S and 10°30'S at about 140°W. They are high, volcanically formed islands with steep, black cliffy coasts indented by many valleys. They are a navigator's dream of a landfall, with steep-to approaches, generally clearly visible from 20 miles or more at sea. Their spectacular outlines never fail to thrill when sighted after many days at sea.

The Marquises are the northern division of the island groups forming French Polynesia. They have their own distinctive setting and style. The total population is about 6,000, the remnants of proud and warlike Polynesian tribes that once numbered 60,000 in the eighteenth century. This was before they were decimated by western contact and diseases.

Weather

The islands lie within the trade wind belt, so the winds are predominantly easterly, though the southern trades are not as steady as those in northern latitudes. They occur during 80% of the year. Northerly and northeasterly winds occur from November to January. Tropical storms and hurricanes are very infrequent. Since the islands are high and steep, the wind can be modified and dramatically disturbed in their vicinity, and squalls can be experienced.

The climate is warm and tropical with daytime temperatures reasonably steady during the year--around 86°F (30°C). The humidity is high (70%) and rainfall is relatively light but regular throughout the year. Thunderstorms are frequent.

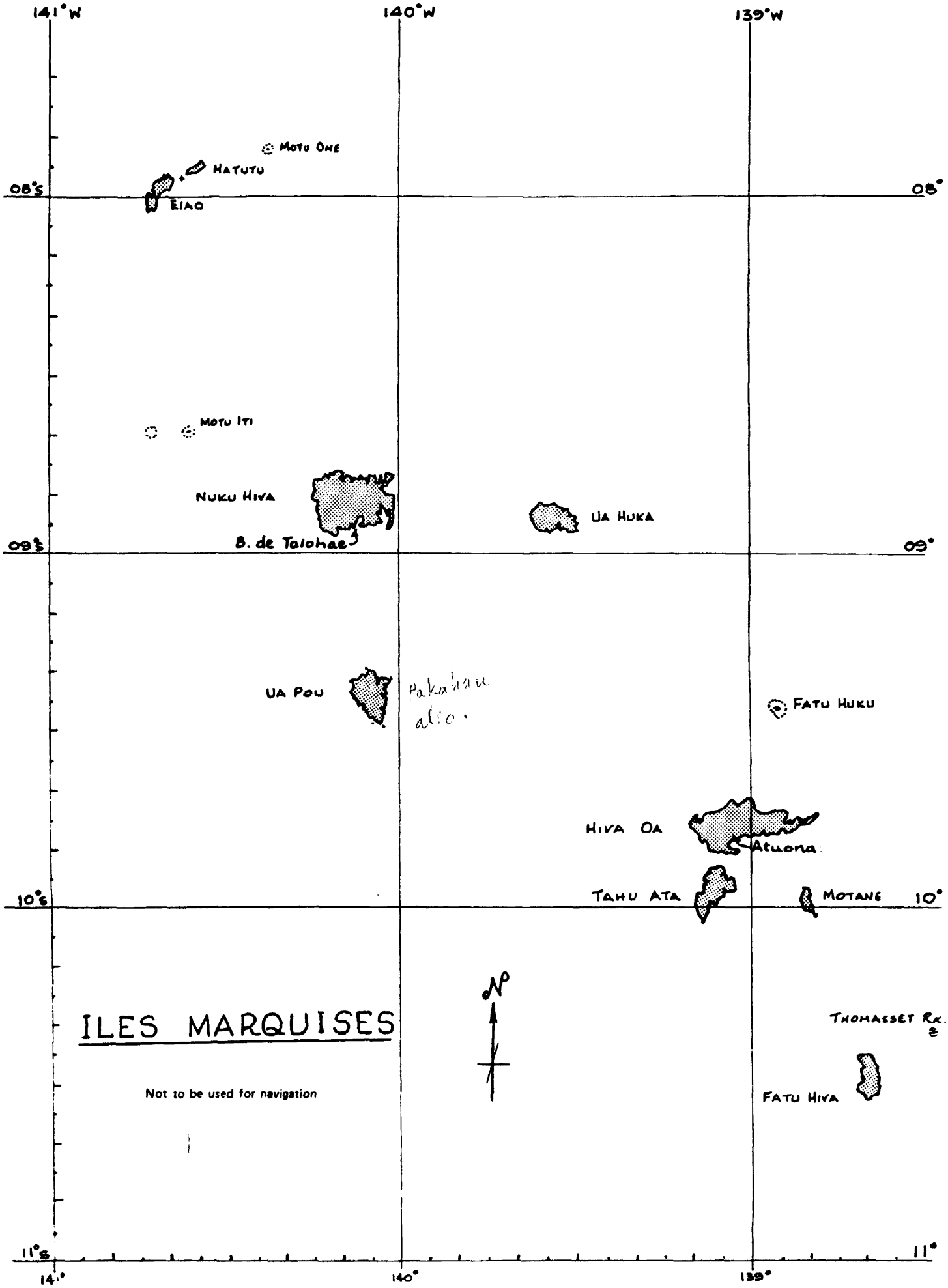
Currents

This is the region of the South Sub-Tropical current and it generally moves in a westerly direction. The main islands with their capes and points alter currents slightly in their immediate vicinity, and periods of strong trade winds also may affect the current. The lee sides of the islands have calms and slightly altered currents.

Clearance and Travel Notes

The main administrative center of the area is at Baie Taiohae on Nuka Hiva, but similar entry can also be made at Atuona on Hiva Oa. It is well to remember that Papeete in Tahiti is the only true Port of Entry for French Polynesia.

Because of weather considerations in the Northern Hemisphere most vessels make the trip to the Marquises in the period from March to May. Yachties, a term in common use for cruising yachtsmen, tend to leave the Marquises for Tahiti or the Tuamotus at or near the full moon period. This gives the benefit of bright moonlight for the critical period of passage near the Tuamotus, but according to trading ship captains, it is often a time of squally weather. The government closely monitors the movement of all yachts in the Territory, so it's best not to try to trick the gendarmes with where you've been or where you plan to stop.


141°W
140°W
139°W
08°S
08°
09°S
09°
10°S
10°
11°S
11°
14°
140°
139°
Motu One
Hatutu
Eiao
Motu Iti
Nuku Hiva
B. de Taiohae
Ua Huka
Ua Pou
Pakarau
alto.
Fatu Huku
Hiva Oa
Atuona
Tahu Ata
Motane
Thomasset Rk.
Fatu Hiva
N
ILES MARQUISES
Not to be used for navigation

NUKU HIVA

This is the principal island of the Marquises and it has the Port of Entry at Taiohae. Nuku Hiva is precipitously high, rising to Takao at 3,888', and to other heights along the northern coast, giving rise to many beautiful waterfalls. A plateau forms the center of the island. Several bays are found on the northern and southern coasts, many of which can be used as anchorages, depending on the direction of the winds and swell. Baie de Taiohae is the principal one and it is described on the next page, as is Baie de Controleur. Two small, pleasant bays suitable for anchoring are Baie de Anaho and Baie Taioa.

Baie de Anaho

This is a large bay on the north coast near the eastern end of the island. There is a long, narrow peninsula on one side and a steep mountain about 1,000' high on the other. The bay indents the coast by about 1 1/2 miles, and provides a sheltered anchorage from the prevailing trade winds and swell. But for periods of the year when the wind moves northerly the swell can enter the bay and be bothersome. The low pass on the east side near the head of the bay lets easterly squalls through in bad weather.

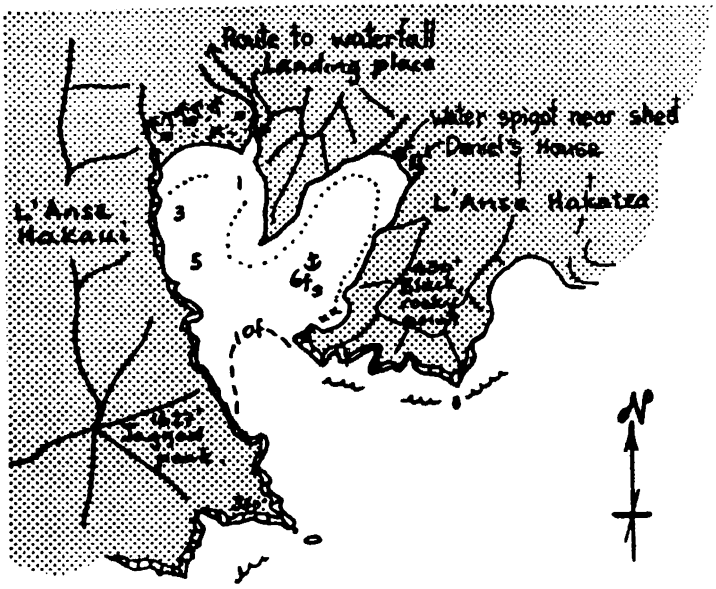
The entrance to the bay is clear and open. Pointe de la Mesange projects from the western side about a mile into the bay, narrowing the bay slightly. The eastern side is clear and steep-to, but the western side and the head of the bay have some coral reefs. Small vessels anchor in the shelter given by Pointe de la Mesange on the western side in about 10 fathoms, fine sand bottom, in a position keeping the entrance open to avoid the dangers of the coral at the side. A landing can be made as shown through an inlet in the reef near the huts on the western side. There are excellent hiking trails to Baie Atiheu, Baie Haataivea and to Taiohae. Two miles west of Baie de Anaho is Baie Atiheu where one may anchor in 5 fathoms with easy landing on a wharf to the east.

Baie Taioa

This is a small bay with good anchorage that is often preferred to Taiohae as it has less swell, and yet it is only 5 miles to the west. On some charts it is called Baie Hakatea, though this name is more correctly applied to the eastern lobe of the bay. It is also known as Daniel's Bay, after the friendly Marquesan who lives with his family on the shore of the bay. Pointe Motumano, the southern point of Nuku Hiva lies only 1 1/2 miles WSW of the bay.

The entrance may appear difficult to find from seaward since the entrance points overlap. The west side is a steep, 1,600' mountain, while that to the east is a lower, black cliff with a flat-topped point. There is generally a rough sea at the entrance and the surf breaks on the eastern point, but one can motor in to find a calm anchorage with white sand beaches at its head. The western cove, L'Anse Hakaui is shallow, and the better anchorage is in the eastern cove, L'Anse Hakatea, in about 6 fathoms midway in the bay. Swinging space can be restricted if there are several boats in the anchorage. Though the bay is calm, strong squalls can blow down the two valleys. No-nos are a pest that infest the beaches and sometimes affect the anchorage. Next to the cooking shed on the beach is a water spigot with excellent water.

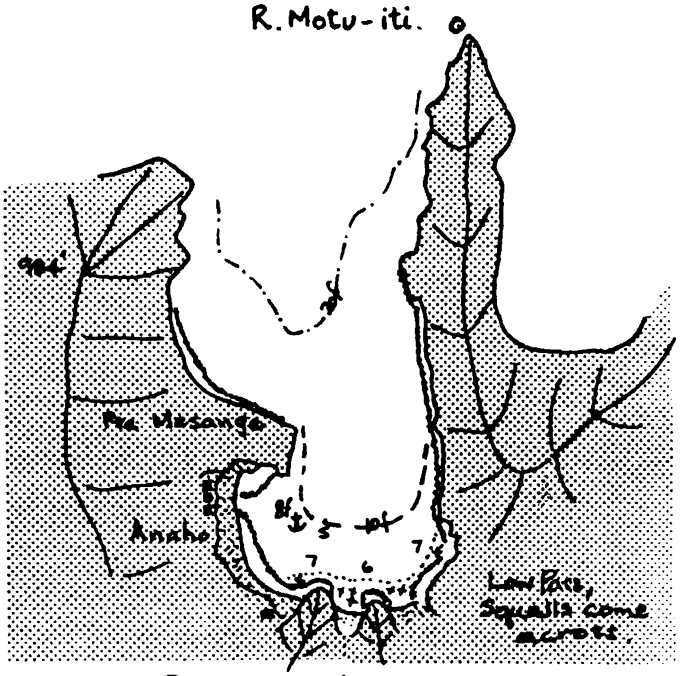
Boats can land near the river at the eastern head of L'Anse Hakaui. A walk through the coconut palms and up the slope leads through the valley to a spectacular waterfall cascading from the 2,000' plateau to the valley floor below.



BAIE TAIOA (HAKATEA)

0 1000' 1/2 1

Approx. Scale n.m.

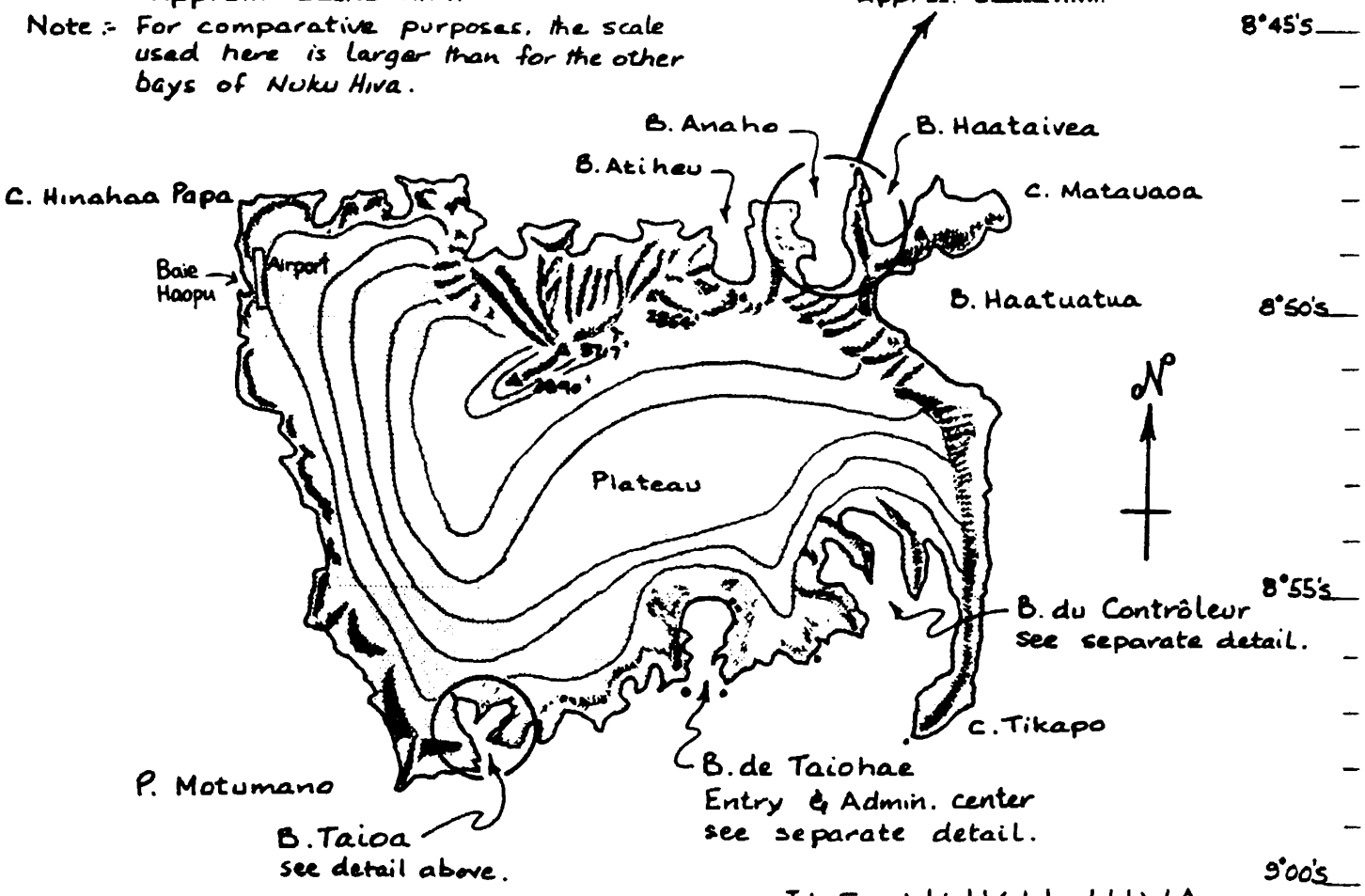


BAIE ANAHO

0 1000' 1/2 1

Approx. Scale n.m.

Note :- For comparative purposes, the scale used here is larger than for the other bays of Nuku Hiva.



ILE NUKU HIVA

0 5

Approx. Scale n.m.

For an offshore view see page 41

Not to be used for navigation

140°15'W 140°10'W 140°05'W 140°00'W

Baie de Taiohae

This is the safest and most important anchorage in the Marquises. It is a large bay about 3 1/2 miles ENE of Baie Taioa. A flashing light at the head of the bay shows a central white sector with red to port, green to starboard, that takes one straight into the head of the bay. A second light is set on the hill of Fort Collet and it defines the anchorage sector in green. Swell can affect the bay and make it uncomfortable so one should set a stern anchor to keep the yacht perpendicular to the shore and swell.

At the entrance to Taiohae Bay stand two bare islets. There are rocky cliffs around and behind the bay. On the western side a steep sided laval plug rises above the slopes. At the entrance to the bay a large white cross of crystalline rocks can be seen on the cliff to the east. Another identifying mark is Pointe Arquee, a curved and bare rock spur that projects from the eastern shore within the bay. All the remaining shores are covered with green growth except for a few black volcanic outcrops.

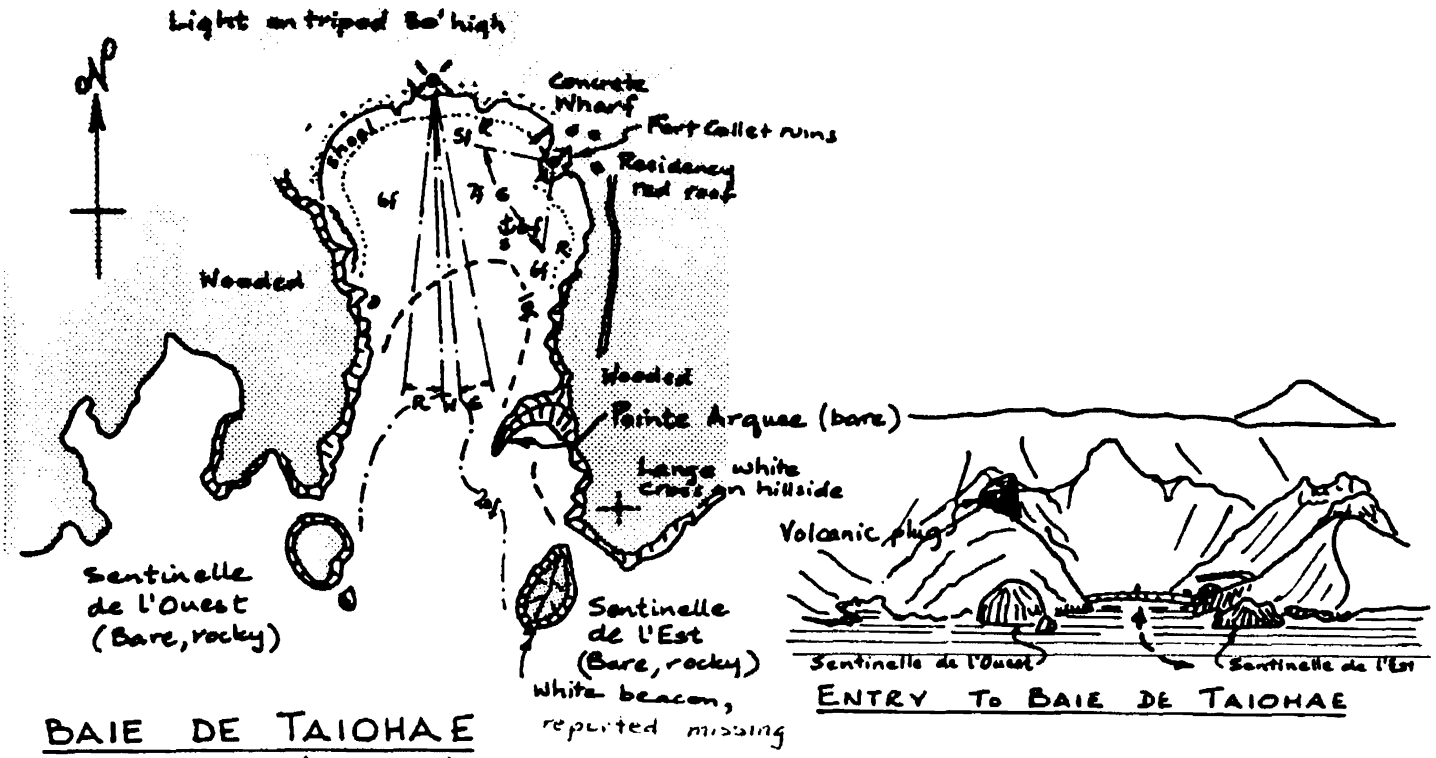
The village is at the eastern side of the head of the bay. The ruins of Fort Collet on a small green hill that slightly protrudes from the shore are not visible on approach. Below it and along the head of the bay several buildings with red roofs stand out. A concrete wharf juts out from the shore below the Fort. Landings can be made at the wharf or at the concrete boat ramp inshore of the wharf. The gendarme and other authorities are at Taiohae, as well as a post office with a telephone, radio station, hospital and several stores. There is an airstrip on the plateau above the village.

Clearance for entry and permission for visiting any of the other islands of the group can be obtained here. A small daily fee is charged for boats staying in the harbor. Water can be taken on but it is often contaminated and should be boiled or purified before drinking. Hakatea, 5 miles to the west is a much better place to fill one's tanks. Taiohae is the only place in the Marquises where contaminated water is a problem as too many goats and pigs live in the catchment area. To obtain fuel, make arrangements in advance by mail or telephone with Maurice McKittrick, Taiohae, Nuka Hiva.

Baie de Controleur

This is a large bay that is immediately to the west of the long narrow projecting point of Cap Tikapo. Within the bay, two rocky points with one shorter than the other, divide the head of the bay into three narrow coves. Anchorage is possible in all three coves towards their heads. Some swell can enter and disturb the anchorages, though the coves are sheltered from the prevailing winds, so that small vessels anchor well into the coves. It is advisable to set a stern anchor to keep the vessel perpendicular to the shore and swells. The depths range from 7 to 10 fathoms in good holding mud and sand bottom. The cove with the least sea is the westernmost, L'Anse Haka Paa. The wharves in Anse Hange Haa are destroyed so landing can be difficult. Anse Hooni has good anchorage with easy landing on the far beach.

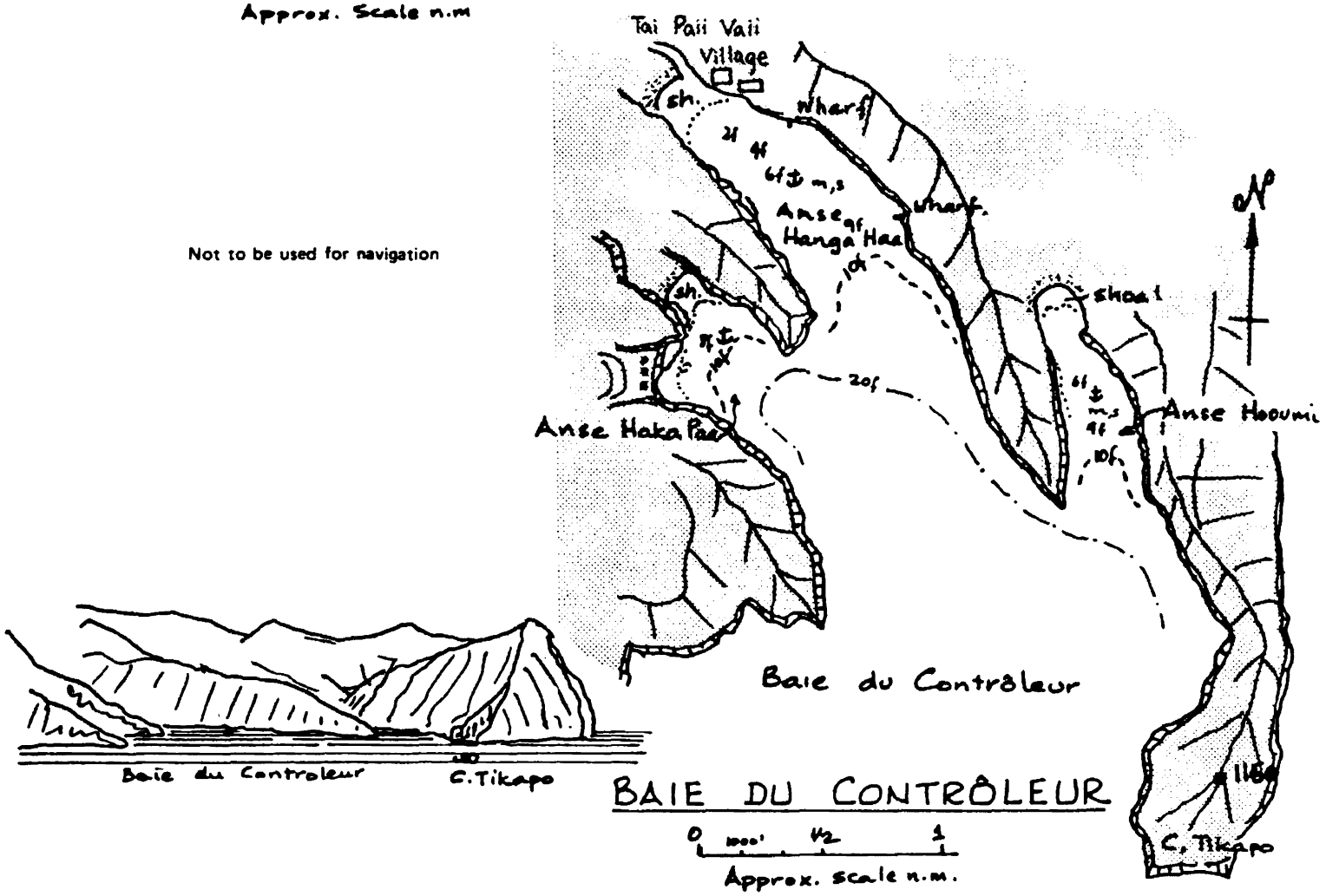
Among the coconut palms there is a small village at the head of each of the coves. Landing is usually possible on the beaches. There are also two small wharves in the middle cove where one may land in Tai Paii village. From the village one can take a fascinating hike up the valley to see large stone tikis as well as a huge ceremonial stone temple platform measuring 25 by 170 meters. Biting no-nos are a nuisance in this village.



BAIE DE TAIOHAE

Approx. Scale n.m

ENTRY TO BAIE DE TAIOHAE



Not to be used for navigation

BAIE DU CONTRÔLEUR

Approx. scale n.m.

Danger

o R. Teohote Kea (4')

Pass clear to the south.

UA HUKA

A smaller, but equally high (2,800') and steep mountain island, Ua Huka lies about 24 miles to the east of Nuku Hiva. Two anchorages that can be used are on the southern side. They are Baie de Vaipaee and Baie d'Hane.

Baie de Vaipaee

This narrow bay is difficult to notice until one is directly opposite the entrance and can see the beach at its head. It lies about a mile east of the southwestern point of the island, Point Tekeho. The steep, black walls of the entrance appear forbidding, and a rough sea always seems to exist at the entrance, but once inside the sea is calm. The head is shoal and anchorage in about 3 fathoms is found about two-thirds of the way in. As swinging room is limited it is better to lie to two anchors, bow and stern, to hold the vessel into any swell. In northerly or easterly winds the bay can be acceptable, but if the winds sets southeasterly the swell rides right into the bay.

Landing can be made at the concrete boat launching ramp and jetty, or on the beach at the head of the bay, where there is a small village. The first museum in the Marquises is located in the Mayor's office and is certainly worth a visit. There are two small stores, an attractive church and very friendly people in this village.

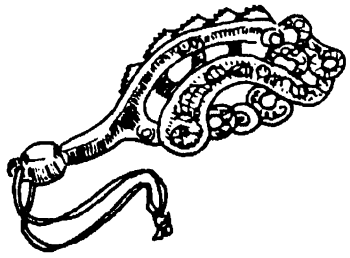
Baie-D'Hane

Two miles to the east of Baie de Vaipaee is Baie d'Hane, recognizable by the 508' purple-red rocks of Motu Hana lying to the east of the entrance. The bay is a little wider than Vaie de Vaipaee and very good anchorage can be taken in 8 to 10 fathoms about midway into the bay. Some swell enters the bay, and may make landing a little chancy through the surf on the beach. Near the stream at the head of the bay is a village which has stores and a bakery.

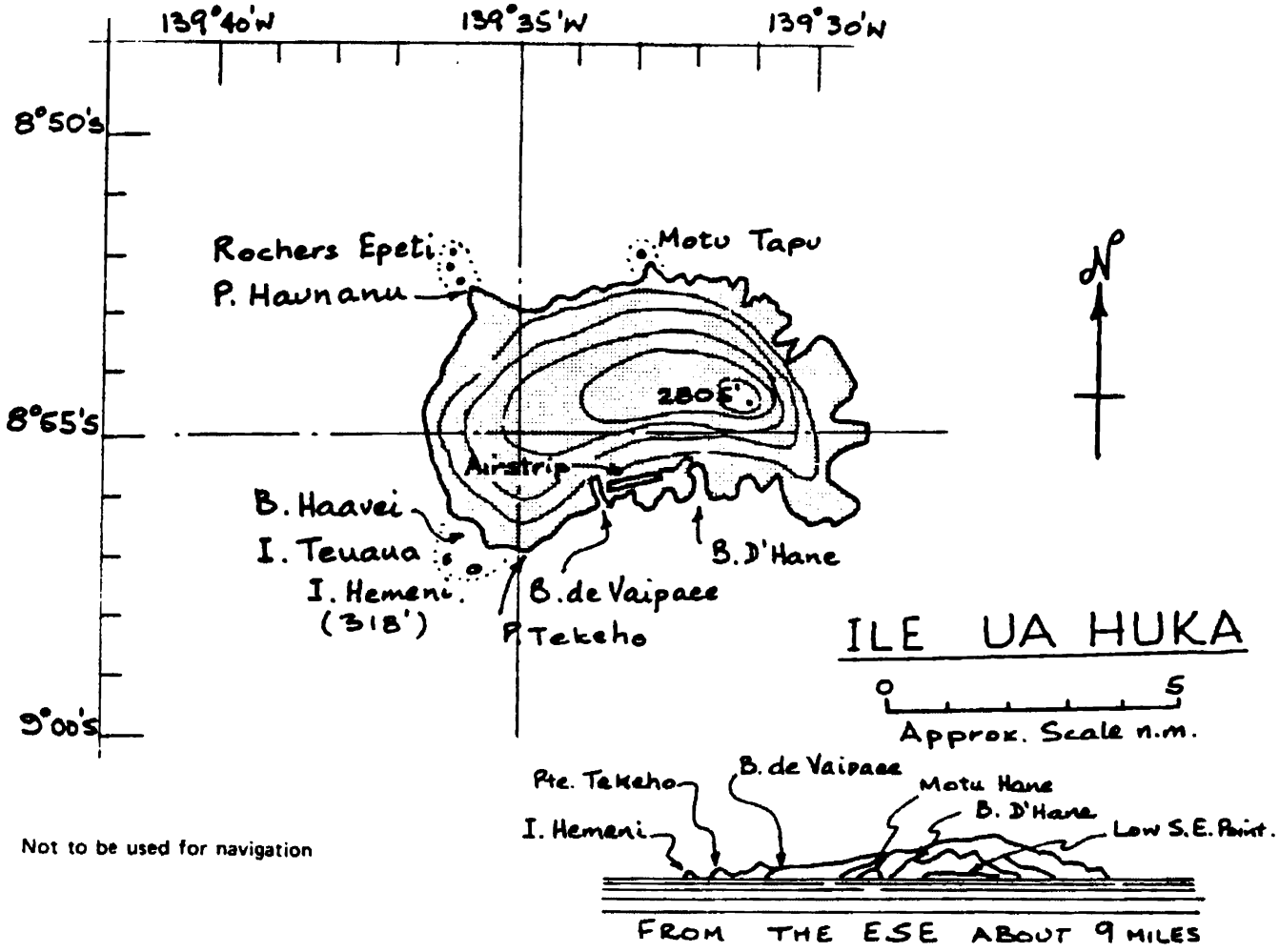
Baie Haavei

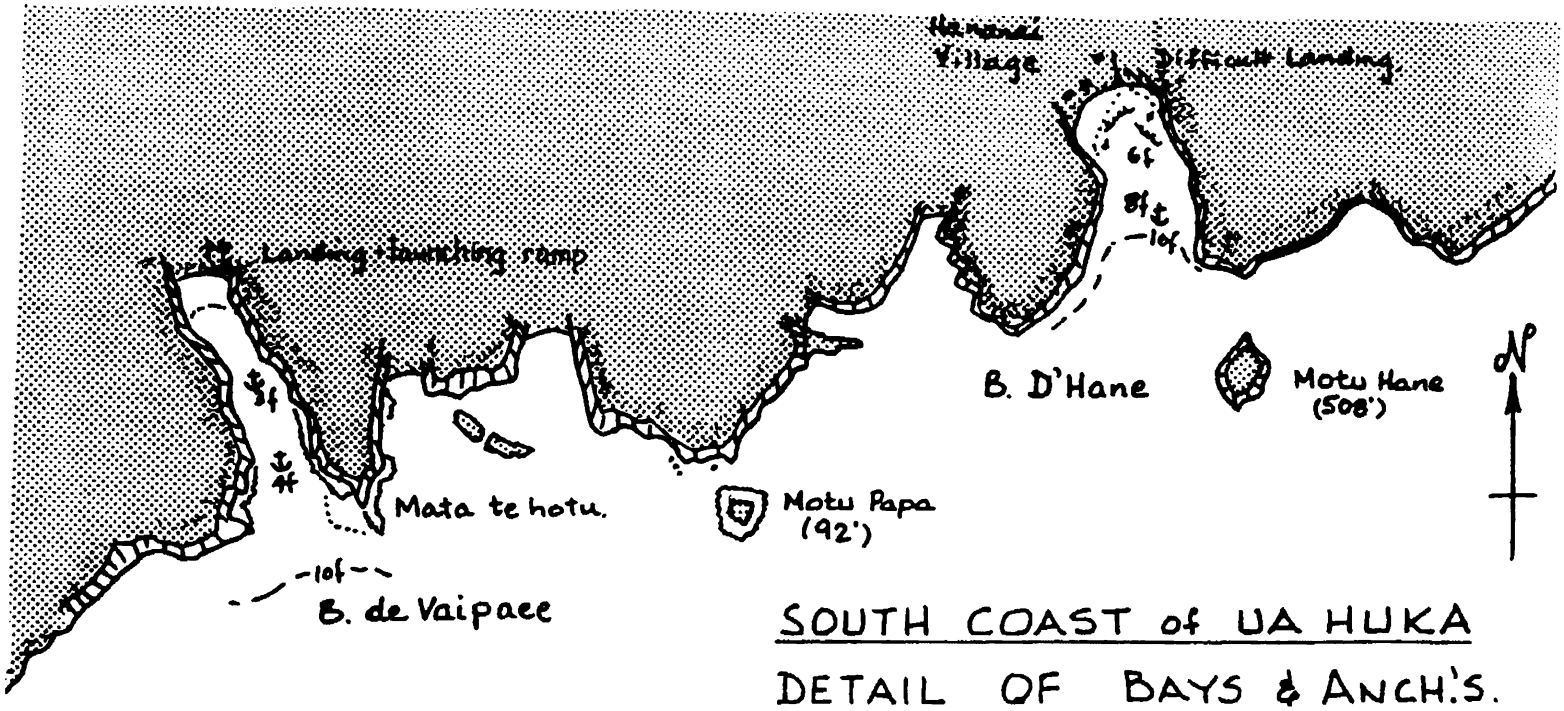
This is an open bay near the SW part of the island, just NW of Pointe Tekeho. Two islands, Ile Hemeni and Ile Teuaua help protect it from wind and swell. Anchorage is off a sandy beach, with Ile Hemeni lying a little east of south from the vessel.

This bay is owned by the influential Lichtle family. Leon Lichtle is the mayor of Ua Huka, founder of the museum and one of the Marquesan representatives in the Territorial Assembly in Tahiti. The valley is like a tropical garden park, and since this is all private land, it is necessary to obtain permission before exploring. Landing on the sandy beach may be difficult because of the surf.



SHARK TOOTH HAND SAW


139°40'W
139°35'W
139°30'W
8°50's
8°55's
9°00's
Rochers Epeti
P. Havnanu
Motu Tapu
280E
Airstrip
B. Haavei
I. Teuaua
I. Hemeni
(318')
B. de Vaipaee
Pte Tekeho
B. D'Hane
N
ILE UA HUKA
0
5
Approx. Scale n.m.
Not to be used for navigation
Pte. Tekeho
B. de Vaipaee
Motu Hane
B. D'Hane
Low S.E. Point.
I. Hemeni
FROM THE ESE ABOUT 9 MILES


Village
Difficult Landing
Landing + launching ramp
3ft
4ft
Mata te hotu.
-10f-
B. de Vaipaee
Motu Papa
(92')
B. D'Hane
Motu Hane
(508')
N
SOUTH COAST of UA HUKA
DETAIL OF BAYS & ANCH'S.
0
1000'
½
1
Approx. Scale. n.m.
Not to be used for navigation

UA POU

This triangularly shaped island lies about 25 miles to the south of Taiohae Bay on Nuku Hiva. It has a spectacularly serrated skyline when seen in its entirety from any distance, with the steepest spires and towers on each side of a high central plateau. It has a high point of about 4,000'. Many bays indent all three sides, but only the most useful ones for small craft are described.

Baie d'Hakahau

This bay lies midway on the NE coast and is thus exposed to NE winds. A breakwater-wharf combination extending out from the east side of the bay affords yachts considerable protection from the swell. This is the third most populated village in the Marquises and has a post office, Gendarmerie, stores, bakery and infirmary. Some of the best traditional dancing and wood carving in Polynesia originate here.

Baie d'Hakahetau

This bay lies about midway along the NW coast of the island, and has several identifying features. A whitish patch can be seen on the eastern cliffs, and below them is an islet, Motu Koio and farther out, Rocher Rouges. At the center of the head of the bay is conspicuous rock, Rocher Anapuai, with an island, Motu Kivi in front. Coral reefs line the eastern shore and extend out past Rocher Rouges. The eastern point, Pointe Tehena, has a coral patch before it.

Anchorage in about 6 fathoms, sand, can be taken well in to avoid the swell, about 1,000' off Motu Koio. However, swell is never completely absent and landing can be difficult. A coral or rock area projecting from Rocher Anapuai can be used for landing. A fairly important village, with a church, small store and school is behind the beach and palm trees.

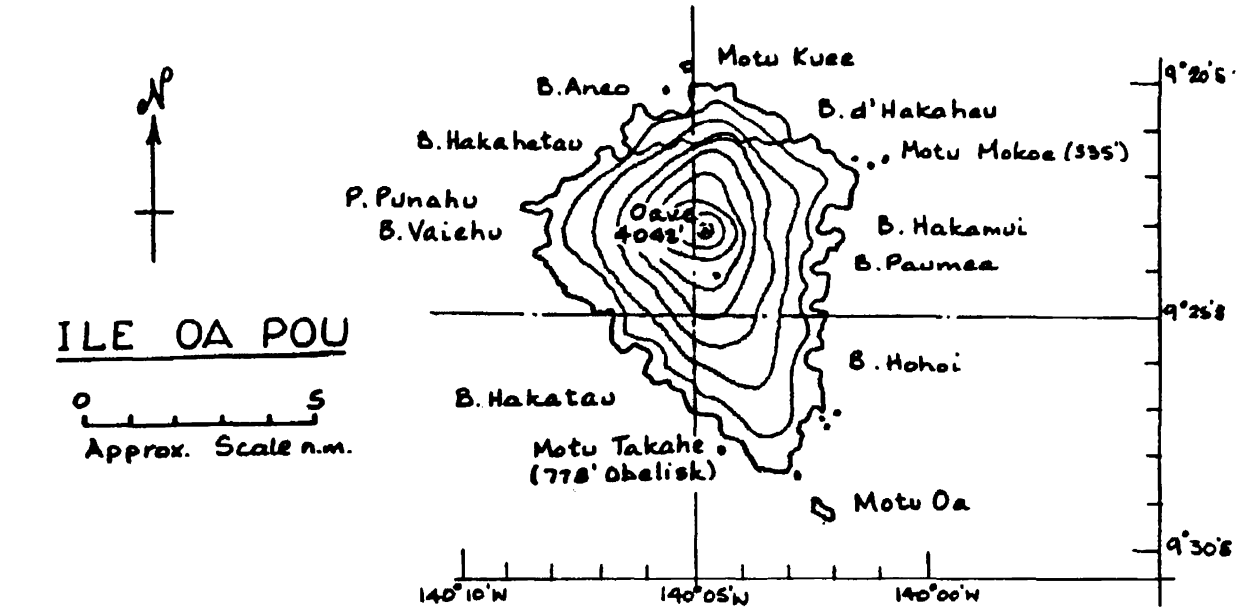
Baie Aneo

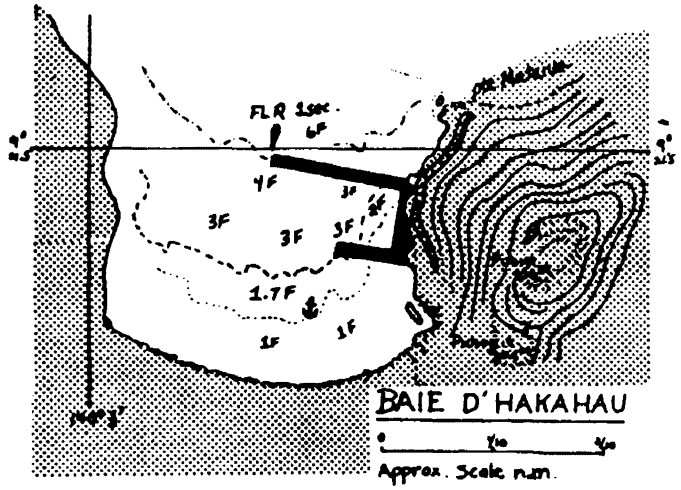
This bay lies about 1 1/2 miles NE of Baie d'Hakahetau and has a wide entrance split in two by a reddish rock, Rocher Tauna, which is surrounded by coral. Though one may enter on either side, the western entrance is easier and deeper. When using the eastern entrance stay close (300' or so) to the eastern shore to avoid the coral patch near the island, and watch the current setting at the entrance.

Anchorage can be taken in 6 fathoms southwest of Rocher Tauna, where swinging room is available. Landing can be made ashore, but the swell can make this anchorage somewhat uncomfortable.

Baie Vaiehu

This is a large, open bay at the westernmost part of the island, and immediately below the long peninsula of Point Punahu. Anchorage can be taken in the northern part of the bay well in to shore in about 8 fathoms, where protection from the wind is gained except when it blows from the west. Swell is, however, a factor and thus the other bays are generally preferred. Baie Vaiehu is uninhabited, but it is only a short hike over the ridge to the north to the village of Haakuti. Anse Hakaotu is an indentation in the southern side of Baie de Vaiehu, and is a more comfortable anchorage at times.





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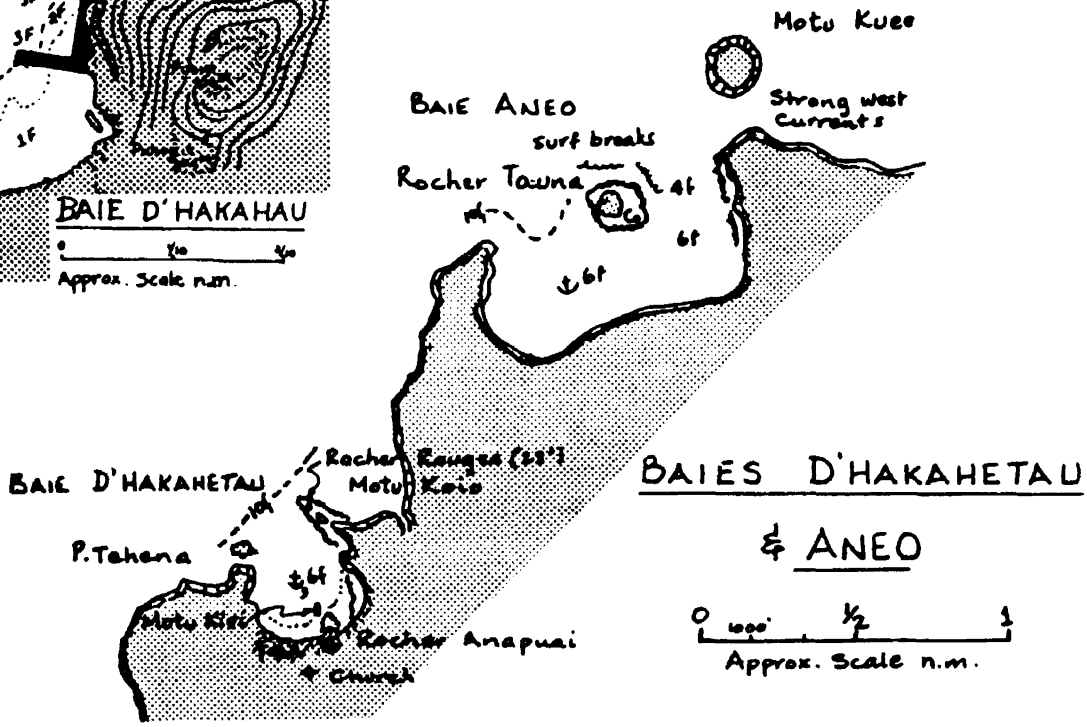


Not to be used for navigation

Baie Hakamaii

This bay lies 2 miles SSE of Baie Vaiehu and has traditionally given cruisers a warm welcome. It may be necessary to set a stern anchor to keep the yacht perpendicular to the swell. Since the wind may change direction at night this precaution affords a more comfortable anchorage. There are dramatic hiking trails to explore inland from the village.

HIVA OA

Hiva Oa is the largest of the Iles Marquises, and is the main island of the southern group of four islands of this archipelago. The island lies east-west, and the land falls to the indented coastline from a central ridge of high mountains reaching 3,500' at the eastern end. Pointe Teaehoa stretches to the south forming a large bay, Baie Taaoa (also called Baie Vipihai or Traitor's Bay). At its northern end is a smaller bay, Baie Atuona with the Port of Entry of that name. South of Hanakee, Baie Taaoa is open to the prevailing winds and seas. Several bays along the northern coast can be used as anchorages, and the best for a small vessel, Baie Hanamenu, is described here.

Baies Atuona and Taahuku

These two adjacent bays open off the northern part of the larger Baie Taaoa. They are separated by a small rocky point, Pointe Feki, on which there is a light. Between Pointe Feki and Ilot Hanakee to the south is the open bay of Atuona. The village on the shore of the bay has a church, bishopric, hospital, radio station, airport and store. Entry permits for the Marquises can be obtained through the gendarmes or other authorities here. The airstrip, with connection to Tahiti, is on the plateau north of the village.

Trading schooners and large cruising vessels anchor in 8 to 10 fathoms within the mouth of the bay, where some effect of the swell is felt. Small vessels find easier anchorage in Baie Taahuku which is immediately to the east of Pointe Feki. This a narrower bay, but its orientation makes it less affected by the swell, though backwash effects do occur. Anchorage may be taken between the concrete steps and a concrete wharf, in 5 fathoms, sand, good holding bottom. The head of the bay is shoal. Landing can be made at either the steps or the wharf.

Paul Gauguin and Jacques Brel are buried in the Autona cemetery.

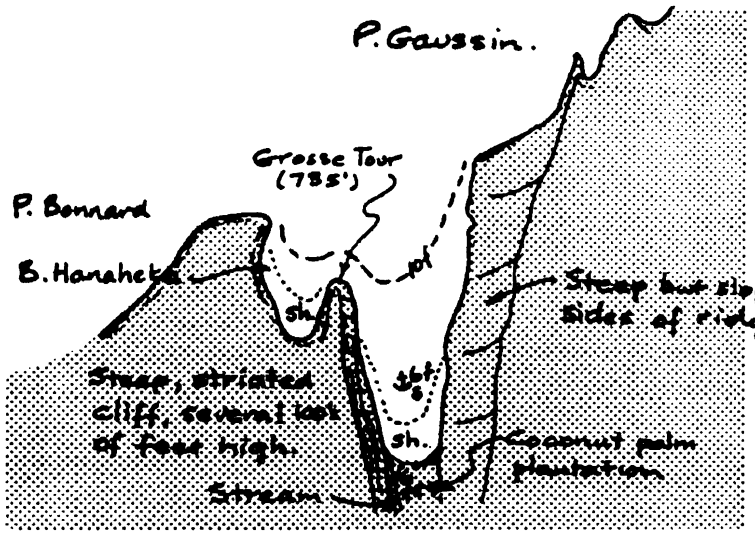
Baie Hanamenu

This bay lies almost at the western end of the northern coast, and provides a secure and restful anchorage. It is a double lobed bay, recognizable by the steep, central, massive dark rock, Grosse Tour (735'). The western bay is shallow and open, but the eastern bay is more deeply indented.

The head of the bay is shoal, but small vessels can enter well into the bay, anchoring towards the head in about 6 fathoms, sand bottom. On the western side are steep, almost overhanging cliffs, and on the east the slopes of the mountain ridge. At the head of the bay is a lovely beach, with a coconut palm plantation behind. A hut is near the stream at the western side of the beach. Squalls may sometimes be felt off the steep walls and there is often a strong onshore breeze in the afternoon, making landings through the surf difficult. The bay is occasionally visited by wild pig and cattle hunters.

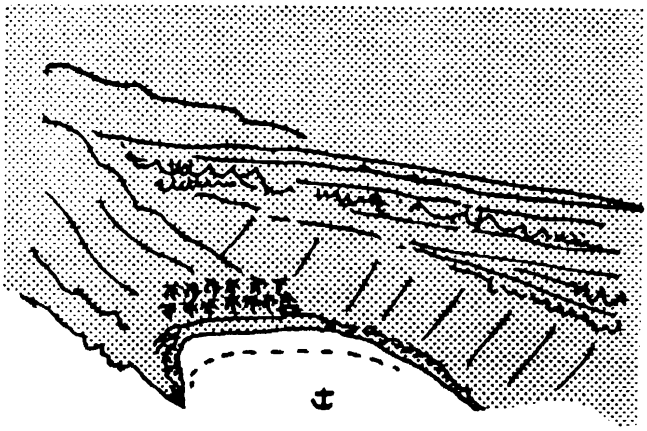
TAHUATA

The island of Tahuata lies south of Hiva Oa across the 2 1/2 mile width of Canal du Bordelais. The wind and sea, as so often in narrow passages between high islands, is usually increased in intensity. The center of the island is a high mountain chain, (1,500'), radiating out in steep ridges and valleys to the coasts. The best anchorages on the island are Hana Tefua (1/2 mile north of Hapatoni), Hana Moe Noe and Baie Vaitahu.



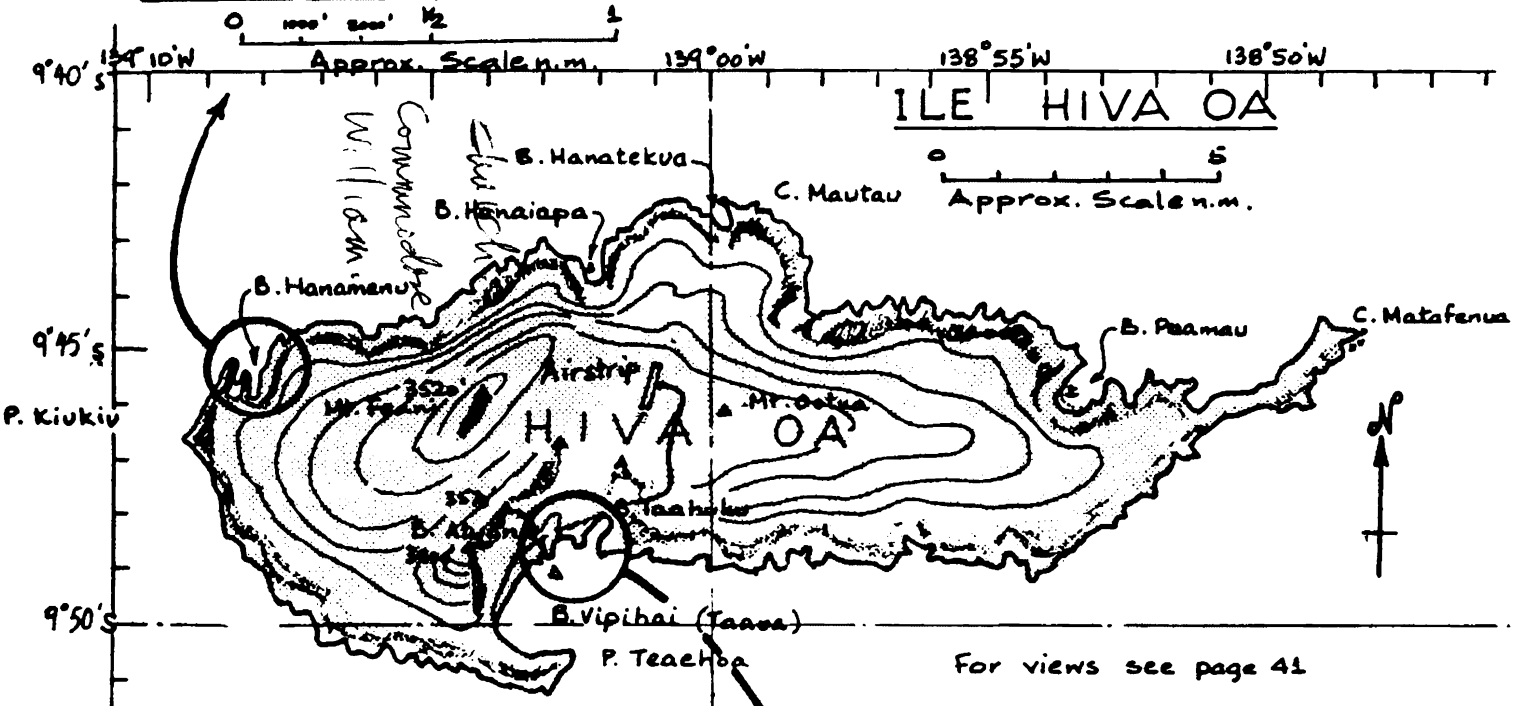
DETAIL OF BAIE HANAMENU

0 100' 200' ½ 1



IN BAIE HANAMENU

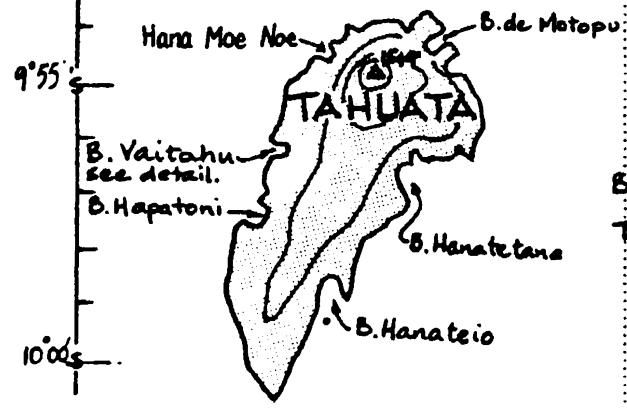
See page 43 for approaches.

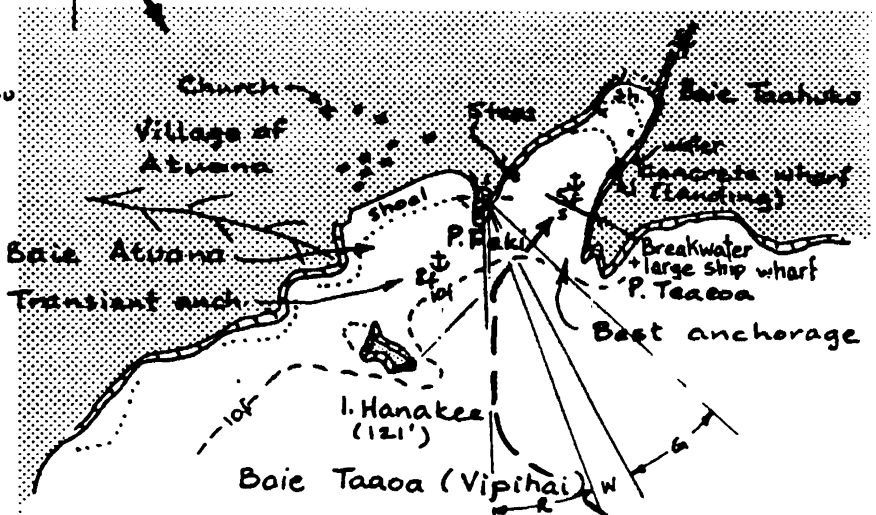


For views see page 41

CANAL DU BORDELAIS (HAAVA)

(Strong wind & sea, West'ly current)





DETAIL OF ATUONA & TAAHUKU B.

0 1000' 2000' ½

Approx. Scale n.m.

Not to be used for navigation

Baie Vaitahu

Though protected from the prevailing winds this anchorage is fairly open and has such a steeply sloping bottom that it is not to be depended upon. Squalls blowing over the mountains into the bay may cause dragging, so it is advisable to set two anchors off the bow. The head of the bay is split into two beaches by a rocky buttress. Behind the northerly beach are the ruins of a temple, the village of Vaitahu, and a church. Landing can be difficult on the beaches and may have to be attempted at the concrete wharf. If the wind becomes northerly the swell can make the anchorage untenable.

Hana Moe Noe, two miles NNW of Vaitahu offers good holding on a sandy bottom in 4 or 5 fathoms. There is a beautiful white sand beach and several wild orange trees here. The valley is not permanently inhabited.

Hapatoni Village, 1 1/2 miles south of Vaitahu is one of the friendliest and most attractive in the island group. The anchorage directly off the village is quite deep and is sometimes rolly. A better anchorage is Hana Tefua, 1/2 miles north in about 8 fathoms. This bay has some of the best snorkeling in the Marquises with good visibility and excellent coral formations.

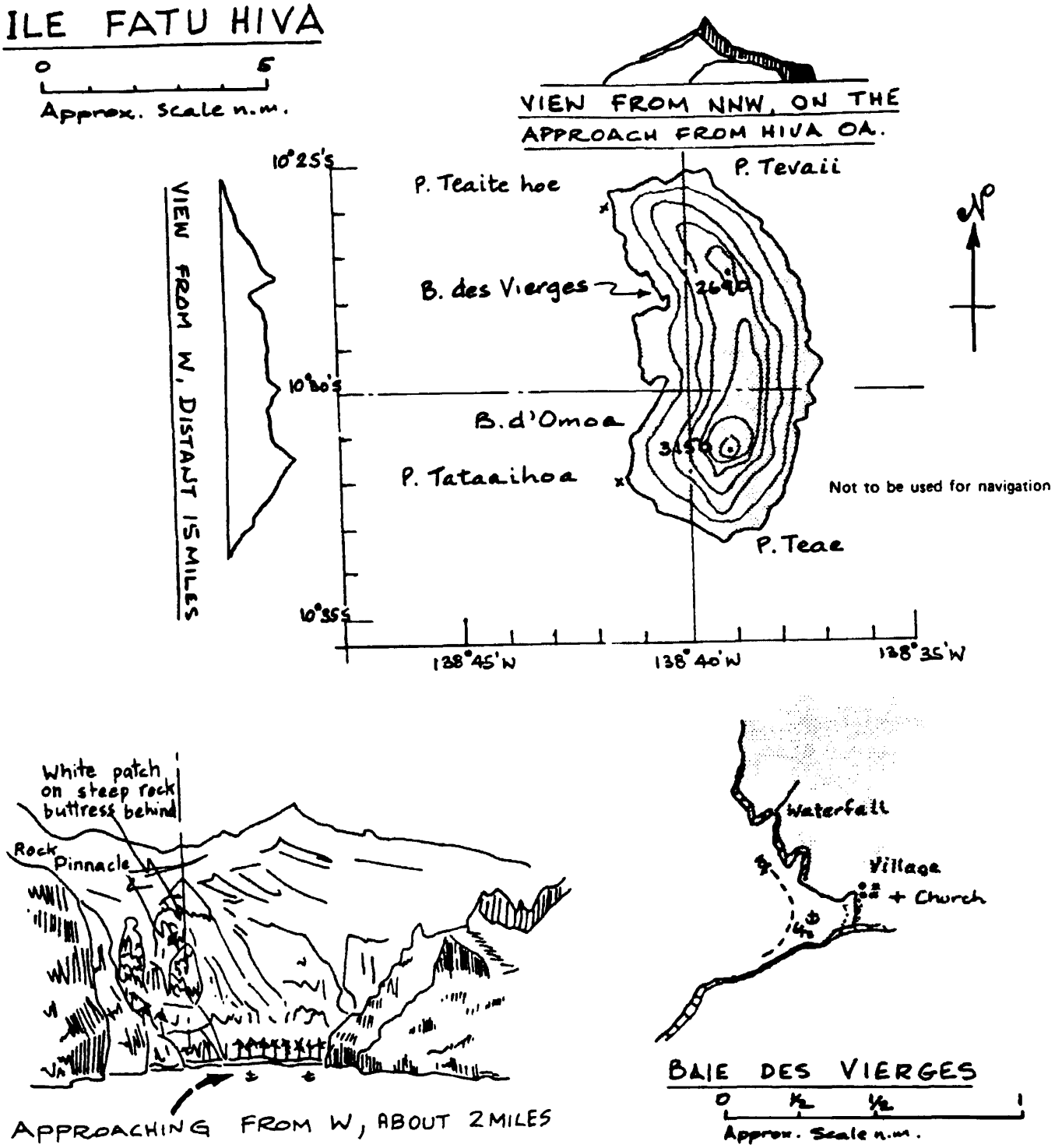
FATU-HIVA

The southernmost island of the archipelago, Fatu-Hiva lies about 35 miles south of Hiva Oa. The central range of mountains here runs north-south, reaching 3,150' at the south end. The eastern side is of steep and precipitous aspect, pounded by heavy surf and it is only on the western or lee side that there are any anchorages worth using. The most practicable for small vessels is Baie des Vierges (Hana Vave). [redacted] because the chief radios Atuona with the names of all yachts that stop here, and the Gendarme will levy a fine when you report in at Atuona.

Baie des Vierges (Hana Vave)

This bay lies about 2 1/2 miles SSE of Pointe Teaitehoe, the northern end of the island. It has a 1/2 mile wide opening narrowing to a small head of the bay. The bottom is steeply sloping, and the 10-fathom curve is well within the bay. Though swells are tolerable, the wind gusts down the steep slopes and can cause vessels to drag.

Enter the bay by lining up a steep pinnacle rock on the north side with a whitish peak halfway up the slope behind. Small vessels can then enter to near the head of the bay to anchor in 6 fathoms, mud and sand, good holding. A village with a church is at the north end of the beach and landing can be accomplished here. The village is famous for its many graceful outrigger canoes which the people use for fishing and to visit Baie d'Omoa. From the village there are excellent hiking trails to Omoa and to the interior of the island. A short walk takes one to an attractive swimming hole in the river. Because many cruisers visit this bay, the local inhabitants have become very shrewd traders, demanding a lot for their fruit and tapa.



Baie d'Omoa

This bay, 3 miles south of Baie des Vierges, has an anchorage, but it is not well suited for small vessels. It has an uncomfortable swell, poor holding, and landing is difficult because of the surf, but yachts do use it. Omoa and Hana Vave are the only villages still producing tapa cloth.

MOTANE

This small island lies about 12 miles east of Tahuata and south of Hiva Oa. It is also high, about 1,700', and has no real harbors or anchorages. Landing can be made in the lee of the northwestern side, but there is little incentive to visit here.

NORTHERN ISLETS

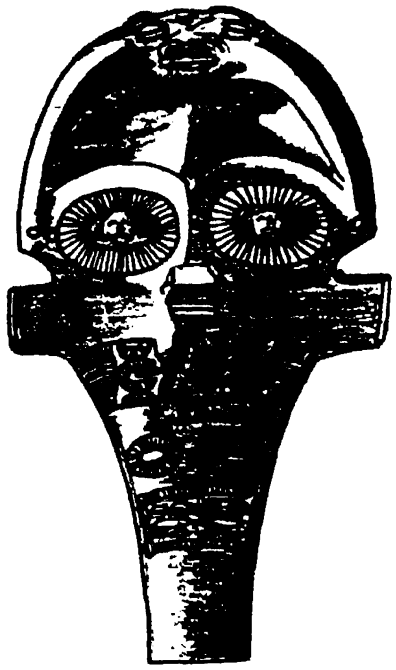
Two groups of smaller islands lie to the west and north of Nuka Hiva. One group includes Hatu Iti, a group of three rocky islets, the largest being a sheer, 722' rock, lies 23 miles to the WNW of Nuku Hiva. The deposit of guano on the smaller rocks gives them a whitish look from any distance.

The second group, consisting of the islands of Eiao, Hatutaa, and Motu One, lie about 52 miles NW of Nuka Hiva. Eiao is about 7 miles long and rises to about 1,900' at its NW end. The south coast is steep and inaccessible, but the north coast has several small bays. The largest and most useable is Baie Vaituha, about midway up the island. Vessels have anchored in 12 to 13 fathoms near the head of the bay. Landing is possible on the sand and stone beach, but the swell can make the landing troublesome and the stay uncomfortable. Wild cattle are reported to be ashore but shooting is not allowed.

Hatutaa is a smaller island about 3 miles ENE of Eiao, rising to 1,400' The island is uninhabited. The channel between the islands should not be used.

Motu One consists of two small islands 11 miles to the ENE of Hatutaa. A bank surrounds them and the sea breaks heavily.

Fishing is reported to be good around the various island groups and banks, however it is not advisable to fish for food on these banks or inshore since fish poisoning is prevalent here. Trolling offshore in this area does not have the same hazard.



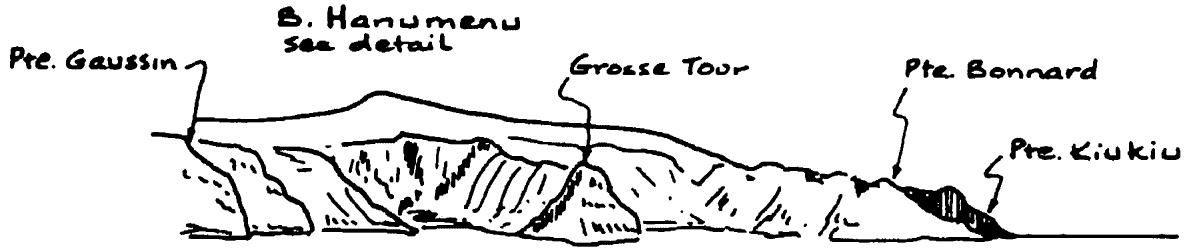
MARQUESAN WAR CLUB

OFFSHORE VIEWS OF ILES MARQUISES

PASSING TO THE EAST OF THE NORTHERN ISLETS

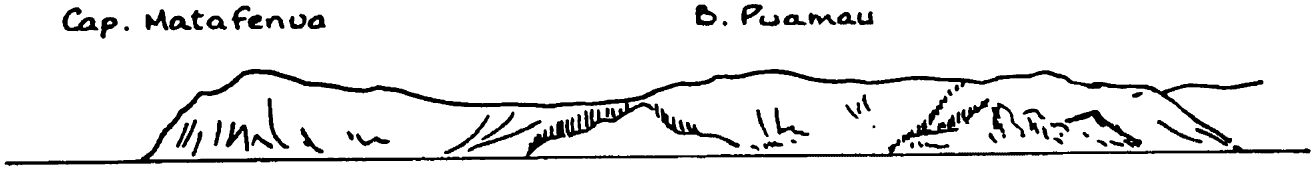
APPROACHING NUKU HIVA FROM THE N. SOME DISTANCE AWAY.

Refer to page 29



THE NW END OF HIVA OA AS ON AN APPROACH FROM NUKU HIVA

Refer to page 37



APPROACHING THE NE END OF HIVA OA FROM SEAWARD AND NE'LY

Refer to page 37

ARCHIPEL DES TUAMOTU

This group of 78 islands, all but two being coral atolls, lies spread across 15° of longitude. They extend almost 1,000 miles in a NW-SE direction. Together with the Marquises and the Society Islands they form French Polynesia, and are administered from Tahiti.

These islands have, with truth, been called the "Low or Dangerous" archipelago. This derives from their low-lying character, which only allows them to become visible from the deck of a yacht when as close as 8 miles. In most atolls the islets on the reef are clustered to a greater degree on the northern and western sides while the southern side is often bare coral reef, awash. This is very dangerous since even in daylight the reef cannot be seen until close-to and the sounds of the wind and sea can often mask the sound of the breakers.

It was not so long ago that most cruising plans aimed at only sighting and passing the Tuamotu safely. Today a few atolls are regularly visited and are included in many cruising itineraries. But do not underestimate the dangers of travelling in these waters. The increased numbers of yachts lost and stranded on reefs attests to the hazards.

The atolls most often visited are Manihi, Ahe, Takaroa, and Rangiroa, because they are closest to the usual route to Tahiti. Occasionally visits are made to Arutua, Apataki, Aratika, and Fakarava. Sketches are given for these and other atolls, but this should not be taken as any indication that they are easy to visit, nor that the Tuamotu may be cruised with greater safety than previously.

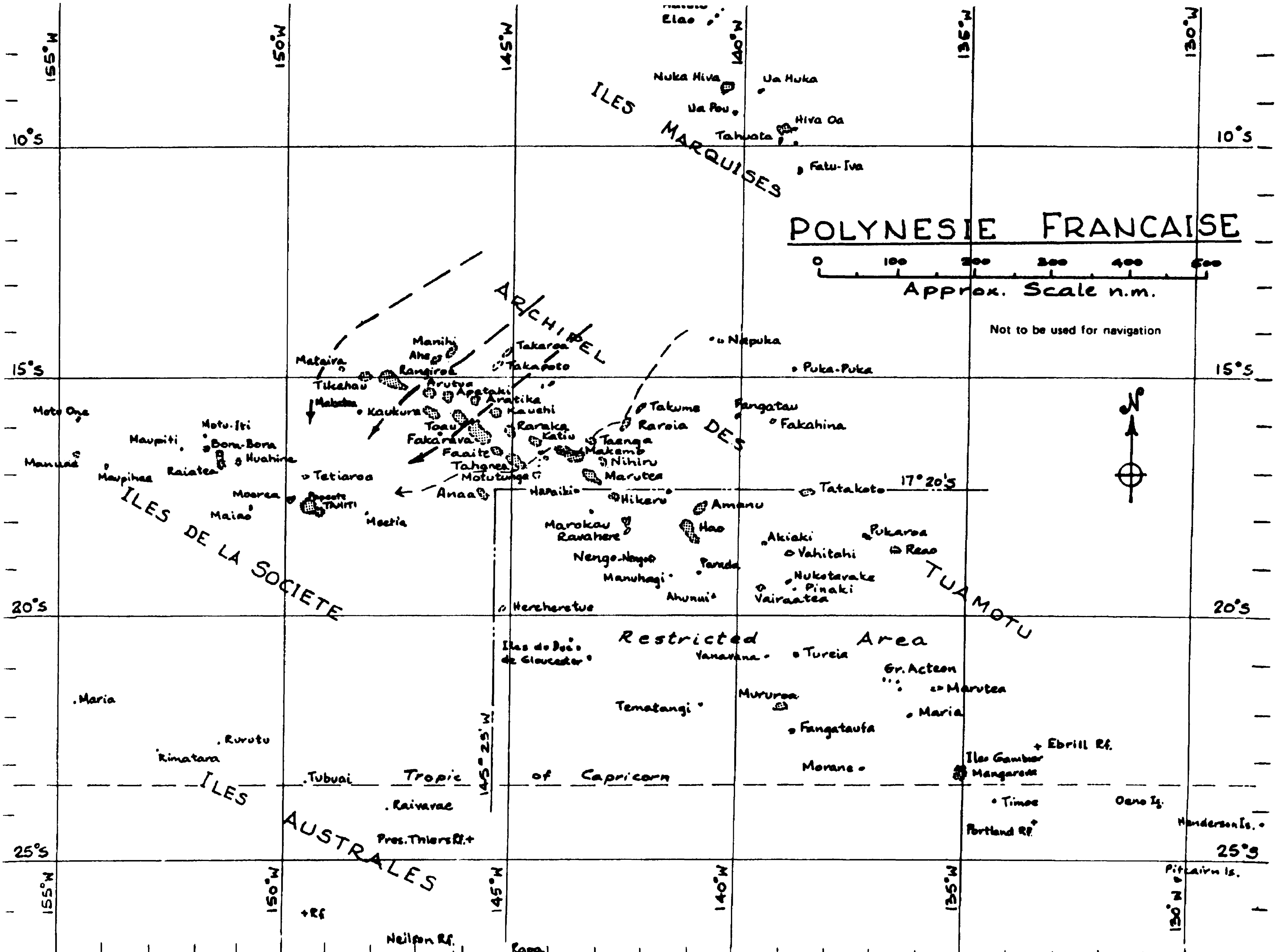
Restricted Areas

A restricted zone applies to all vessels and aircraft within the territorial and inner waters of French Polynesia south of Latitude 17°20'S, and east of Longitude 145°25'W. Permission to enter this area must be obtained from the Territorial Governor through his agents at Tahiti, Hao, Mururoa, or Iles Gambier. Vessels must specify if they intend a simple transit or if they wish to enter any atoll's inner waters.

In addition, when nuclear tests are being prepared, or are in progress, an area with a radius of at least 100 miles from Mururoa atoll is prohibited to all vessels. French Naval Forces patrol the area and it is not advisable to ignore these restrictions.

Routes Through the Archipelago

The main routes in use are indicated in the accompanying sketch. The Tuamotu may be avoided by steering well to westward of Mataiva (the westernmost atoll), before reaching down to Tahiti. The most used route makes a landfall on Takaroa and then passes through the 20-mile gap between Rangiroa and Arutua. This is a direct route which has advantages in indentification and relative safety. The alternate route through the Chenal de Fakarava is not as suitable though it takes one to less visited atolls. Another possibility is to stop first at Raroia or Makemo, both of which are easily identified and have good passes, and depart the Tuamotus for Tahiti from Tahanea.


POLYNESIE FRANCAISE
0 100 200 300 400 500
Approx. Scale n.m.
Not to be used for navigation
155°W
150°W
145°W
140°W
135°W
130°W
10°S
15°S
20°S
25°S
17°20'S
145°25'W
ILES MARQUISES
Elao
Nuka Hiva
Ua Huka
Ua Pou
Hiva Oa
Tahuata
Fatu-Iva
ARCHIPEL DES TUAMOTU
ILES DE LA SOCIETE
ILES AUSTRALES
Restricted Area
Tropic of Capricorn
Manihi
Ahe
Takaroa
Takapoto
Mataiva
Rangiroa
Tikehau
Arutua
Apataki
Aratika
Kaukura
Kauehi
Toau
Raraka
Fakarava
Katiu
Faaite
Tahanea
Motutunga
Anaa
Hararki
Taenga
Makemo
Nihiru
Marutea
Takume
Raroia
Napuka
Puka-Puka
Fangatau
Fakahina
Tatakoto
Hikeru
Amanu
Hao
Marokau
Ravahere
Nengo-Nengo
Manuhagi
Ahunui
Paraoa
Akiaki
Vahitahi
Pukarua
Reao
Nukutavake
Pinaki
Vairaatea
Hereheretue
Iles du Duc de Gloucester
Vanavana
Tureia
Gr. Acteon
Marutea
Mururoa
Tematangi
Maria
Fangataufa
Ebrill Rf.
Iles Gambier
Mangareva
Morane
Timoe
Oeno Is.
Henderson Is.
Portland Rf.
Pitcairn Is.
Moto One
Motu Iti
Maupiti
Bora-Bora
Huahine
Manuae
Maupihaa
Raiatea
Tetiaroa
Moorea
Papeete
TAHITI
Maiao
Mehetia
Maria
Rurutu
Rimatara
Tubuai
Raivavae
Pres. Thiers Rf.
Rf
Neilson Rf.
Rapa

ATOLL MANIHI

This atoll and its companion Ahe, together with the other pair of Takaroa and Takapoto are the northern outliers of the Tuamotu. They are close to the usual route followed by a majority of yachts and are thus the most likely to be visited. They are described in a little more detail for this reason. Manihi and Ahe lie close together about 40 miles WNW of Takapoto.

Passe Tairapa

This pass into the lagoon at Manihi is at the SW end of the atoll adjacent to the village of Manihi, which lies on the eastern side of the pass. The pass is well defined, but is relatively narrow (about 250' wide), reducing at the inner end to 130'. The west side of the channel is deepest, and beacons were established there, now missing due to cyclone activity. The village is visible from offshore to identify the pass. On the western side there is a long curving island on which the airstrip is built about 2½ miles NW from the village.

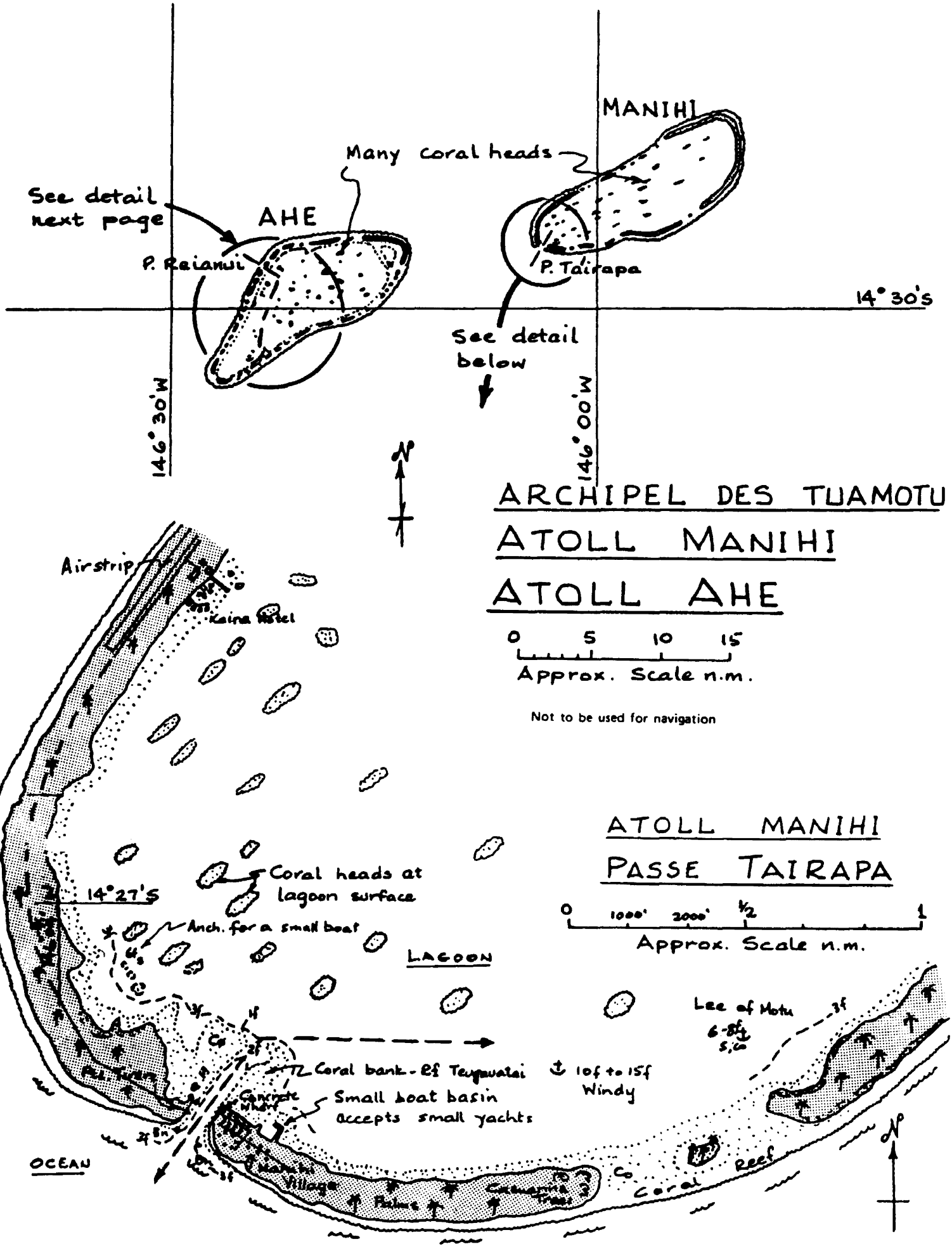
Two sandy patches are on either side of the entrance that might allow for temporary anchorage if awaiting conditions to enter. However, though a strong current runs out through the pass it is usually possible to enter and pass into the lagoon. There are no leading lights or ranges, but the passage is straight and about ½ mile long. On the ocean side the coral reef is close to the shoreline, but on the inner or lagoon side the reef (awash) extends inward for some distance.

In the pass itself there is a wharf on the village side. This is a straight concrete section, slightly damaged during the 1983 cyclones. Two large trees (not palms) are in the little square behind the wharf. On the other side of the pass are causarina bushes. There are many coral heads exposed or awash within the lagoon, between which a route must be traversed.

Once clear of the inner coral reef behind the entrance an anchorage can be taken in a bight about ½ mile beyond the village. There is a small boat basin at the village where one can moor if your draft is small, but this should be checked before entering. Another pretty and protected anchorage is further to the east in the lee of the long motu that is separated from the village motu by a small islet with four or five palm trees. A sandy bottom with coral patches gives good holding, and the motu acts as a windbreak against the trades which blow strongly and constantly across the atoll. Good shelling is found along the outer side of the motu.

Other anchorages can be found in the lagoon. There is a curved bight with a white sand beach about ½ mile westward of the pass, but a passage must be threaded through several coral heads and a suitable swinging room found between them when anchoring. There is also a spot off the Kaina Hotel, but this side is a lee shore as the wind blows on to it.

Manihi lagoon had a pearl culture station established for the black-lipped oysters. This was damaged by the 1983 cyclones and may not yet be replaced. Most of the lagoon can be explored but there are shallow spots and many coral heads to be avoided. The underwater visibility is great and the diving is superb. Some fish poisoning has been reported here.


MANIHI
Many coral heads
See detail next page
AHE
P. Raianui
P. Tairapa
14° 30's
See detail below
146° 30'W
146° 00'W
N
ARCHIPEL DES TUAMOTU
ATOLL MANIHI
ATOLL AHE
0 5 10 15
Approx. Scale n.m.
Not to be used for navigation
Airstrip
Kaina Hotel
14° 27'S
Coral heads at lagoon surface
Anch. for a small boat
LAGOON
ATOLL MANIHI
PASSE TAIRAPA
0 1000' 2000' ½ 1
Approx. Scale n.m.
Lee of Motu
6-8f S,Co
Coral bank - Rf Teupuatai
10f to 15f
Windy
Small boat basin
accepts small yachts
OCEAN
Village
Palms
Coconut trees
Co
Coral Reef
N

ATOLL AHE

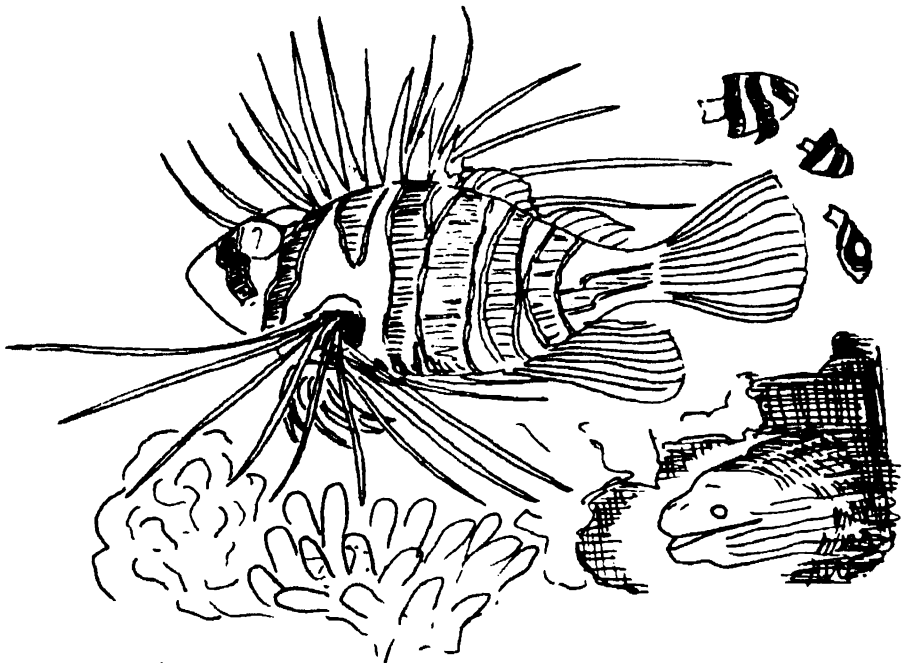
This companion atoll of Manihi lies about 8 miles westward. It is rimmed by many small motus with palm trees. There is only one entry through Passe Reianui, which is about 2 miles southwest of the northwestern point of the atoll. At the village leave the little pink house on pilings (a pearl farm) to port. When docking at the wharf use the outer end only, which has 3 fathoms, but which shoals rapidly shoreward.

Passe Reianui

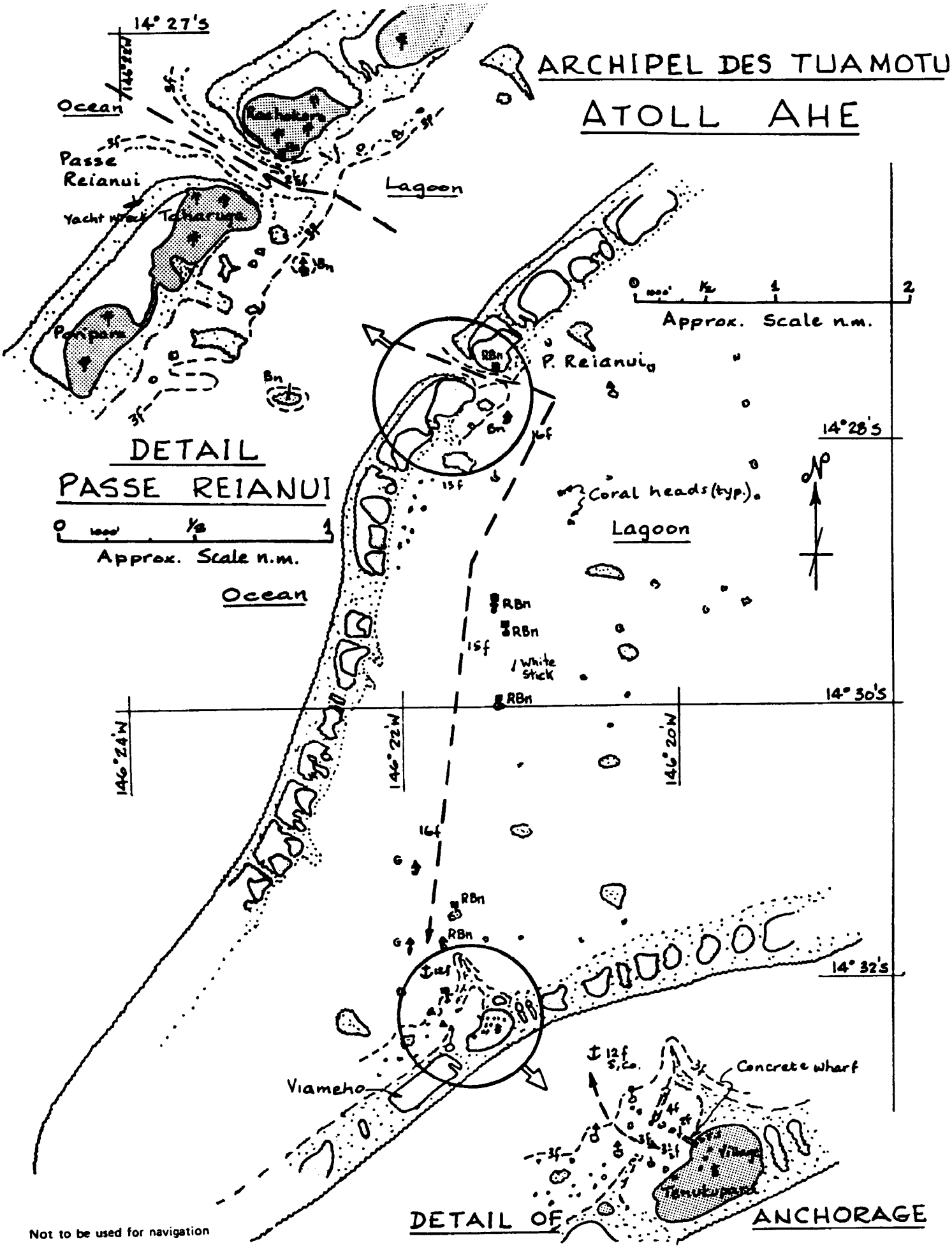
The pass is fairly short. It is about 450' wide at the entrance but is reduced to 150' at the inner end where the bar affects the depth, limiting it to vessels of less than 12' draft. There is little trouble for a vessel under power to enter the lagoon if there is a crew member aloft to con the vessel in, taking care at the narrow part over the bar. When inside the lagoon there are many coral heads exposed and awash between which a route can be threaded to an anchorage.

South of the pass there is a series of beacons set on coral heads that can be followed to the village. Anchorage can be taken either outside a coral bar in 12 fathoms, sand and coral bottom, or with care, a boat can pass between the heads to lay alongside the concrete wharf. Many yachts have visited Ahe and the villagers' hospitality is well known. But the great increase in traffic in recent years has placed a heavy load on the resources of the atoll and because of this the welcome has been toned down.

Anchorage can also be found off the motus near the entrance in about 15 fathoms. There is a good but isolated anchorage at the partially shoaling northeastern end of the atoll. The water is clear and the diving is magnificent throughout the lagoon which has been the site of pearl culture.



EVEN THE MORAY EEL AVOIDS THE POISONOUS LION FISH.


ARCHIPEL DES TUAMOTU
ATOLL AHE
14° 27'S
Ocean
Passe Reianui
Yacht wreck
Tahariuga
Lagoon
Approx. Scale n.m.
P. Reianui
14°28'S
DETAIL
PASSE REIANUI
Approx. Scale n.m.
Ocean
Coral heads (typ.)
Lagoon
RBn
White Stick
14° 30'S
146°24'W
146°22'W
146°20'W
14° 32'S
Viameho
Concrete wharf
DETAIL OF ANCHORAGE
Not to be used for navigation

ILES DU ROI GEORGES

This group consists of Takaroa, Takapoto, and the small coral island of Tedei.

TAKAROA

This atoll is the northernmost of the group and is an often sought landfall for the Tuamotu. It can be clearly identified from the north by the large skeletal wreck of the iron sailing ship "County of Roxburgh" standing on the beach about 4 miles NE of the pass. At least three other smaller wrecks lie around the island, two on the same beach as the Roxburgh and another on the other side of the atoll. Takaroa has a well rimmed and palm-treed circumference on all sides.

Passe Teauonae lies on the SW side about 4 miles from the south point of the atoll. On the north side of the pass is Teavaroa village, and the church with its red roof helps confirm the location. A temporary anchorage in about 10 fathoms, out of the current can be taken off the reef on the north side of the pass. The pass itself is narrow, about 250' wide, rimmed with coral on both sides, and a strong current can set out from the pass. Three pairs of beacons, red on the north, black on the south, delineate the actual passage. A stone wharf about 200' long projects out from the end of Teavaroa Isle into and along the pass. Taking a moorage at the wharf is advisable.

If entry into the lagoon proper is desired the vessel must negotiate the right-angled bend and bar at the lagoon end of the pass and pass several coral heads to reach anchorage within. This should only be done at slack water or on the early ebb. Several anchorages can be used if the coral heads are noted. However, the sharp bend and strong currents limit vessels entering to 60' in length, 9' draft maximum. Most vessels will be better off tied to the wharf, bow to the lagoon, and to turn from the wharf with the assistance from the current when leaving. Vessels have been pinned to the wharf for as much as three days by the current during heavy winds.

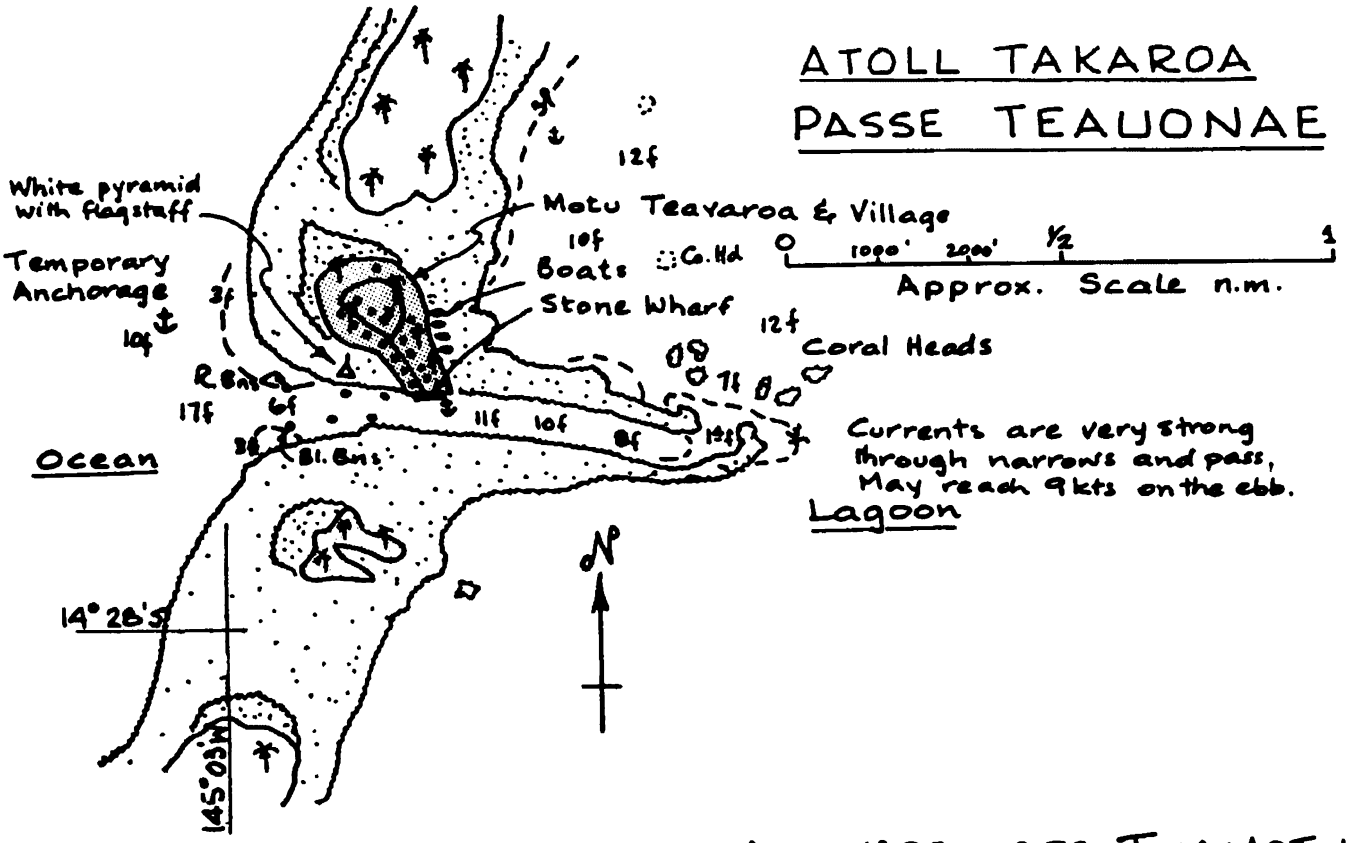
TAKAPOTO

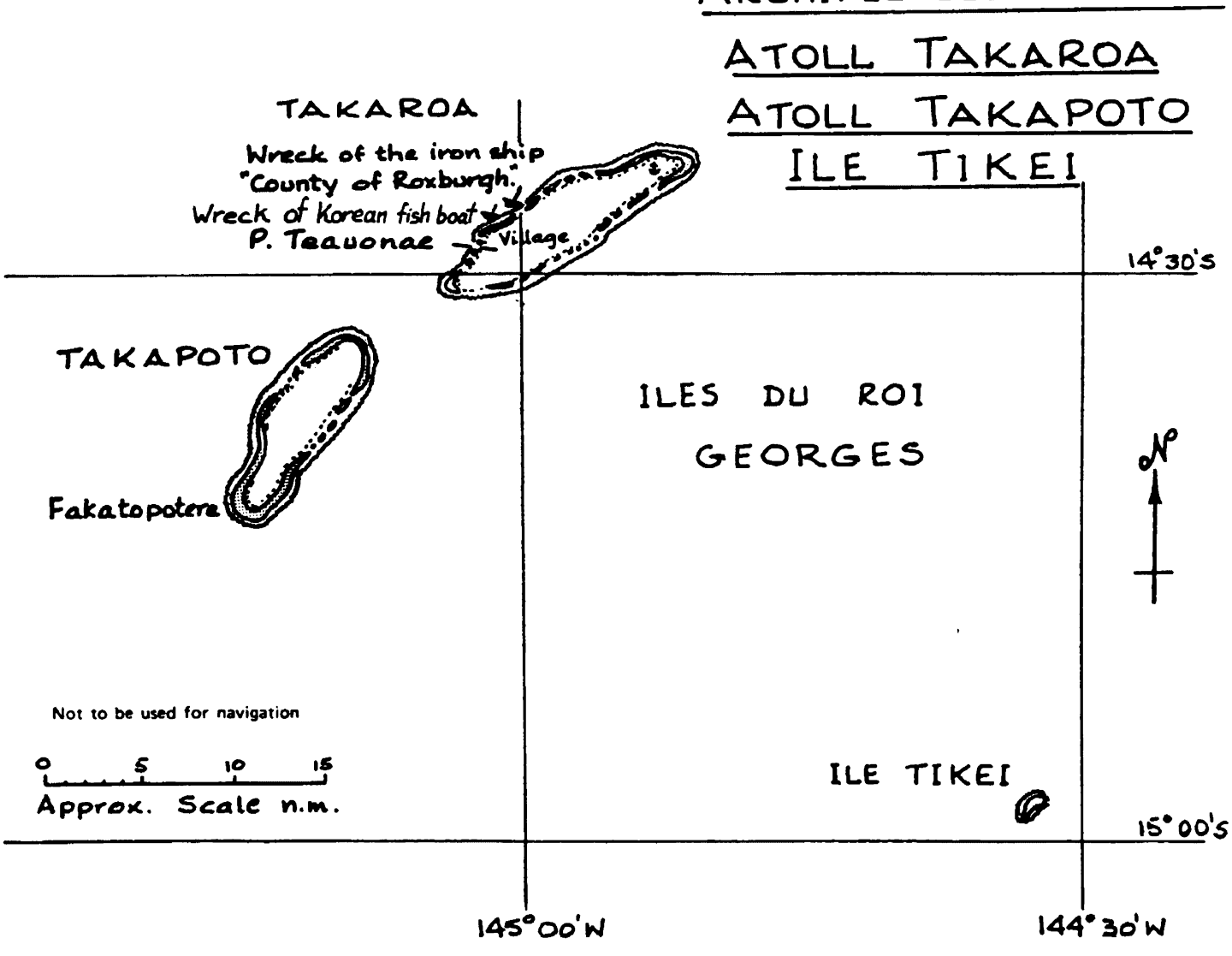
This atoll lies about 5 miles SW of the south end of Takaroa. It is about 10 miles long and well rimmed with islets and palm trees. It has no entry pass, through there are villages ashore. It was one of the richest pearl oyster atolls of the archipelago and is being revived in this role as the lack of a pass causes a higher level of calcium to accumulate in the lagoon.

Landing can be made in calm weather at the village of Fakatopatere about 1/2 mile NW of the south point of the atoll; or at Okukina which is 2 miles further northward. At Okukina a vessel can anchor off the reef and make fast to it. The south point of the reef is marked by a pyramid.

TIKEI

This is a small, treed, coral island about 2 miles long, without a lagoon. It lies about 140 miles ESE of Takapoto. There is a small village and landing place.


ATOLL TAKAROA
PASSE TEAUONAE
White pyramid with flagstaff
Temporary Anchorage
Motu Teavaroa & Village
Boats
Stone Wharf
Coral Heads
Ocean
Lagoon
Currents are very strong through narrows and pass, May reach 9kts on the ebb.
Approx. Scale n.m.
14° 26'S
145° 05'W


ARCHIPEL DES TUAMOTU
ATOLL TAKAROA
ATOLL TAKAPOTO
ILE TIKEI
TAKAROA
Wreck of the iron ship "County of Roxburgh."
Wreck of Korean fish boat
P. Teauonae
Village
14° 30'S
TAKAPOTO
Fakatopotere
ILES DU ROI GEORGES
Not to be used for navigation
Approx. Scale n.m.
ILE TIKEI
15° 00'S
145° 00'W
144° 30'W

MATAIVA

This is the most westerly atoll of the Tuamotu Archipelago. It is a small atoll and is separated from the next atoll (Tikehau) by a 22-mile wide, deep channel. The atoll is about 5 miles long from east to west, and 3 miles wide from north to south. It has a dense covering of coconut palms. The only pass is a small boat passage at the northwestern end which has a small obelisk on the south side. A small airstrip is southwest of this pass.

TIKEHAU

An oval atoll, populated and accessible, this atoll is often used as the passage check point to by-pass the Tuamotu chain. It has many islands and motus around its perimeter, with palms that help its visibility.

Passe de Tuheiva is at the western end of the atoll. A draft of 12' could be taken in, but the tidal stream is very strong and can make entry difficult. The southwest side is slightly deeper, and coral heads will be encountered but with good light they should be visible.

If desiring to make an entrance one can wait at a small anchorage outside the atoll on a bank with depths of 8 to 10 fathoms about 150 yards north of the pass entrance, provided the weather is suitable. (A mooring post for the use of the government vessel is located here.) When the tide permits the pass can be traversed easily and a choice of anchorages is then available. A confined anchorage (limited by patches of coral) in 3 to 4 fathoms can be taken off the small village on the north side of the entrance.

The main village, Tuherahera, is on the largest island on the southern side of the lagoon, about 8 miles from the pass. The passage to the village is practicable, but a good lookout and proper light are needed to avoid the coral heads scattered along the way. A good anchorage can be taken off the village.

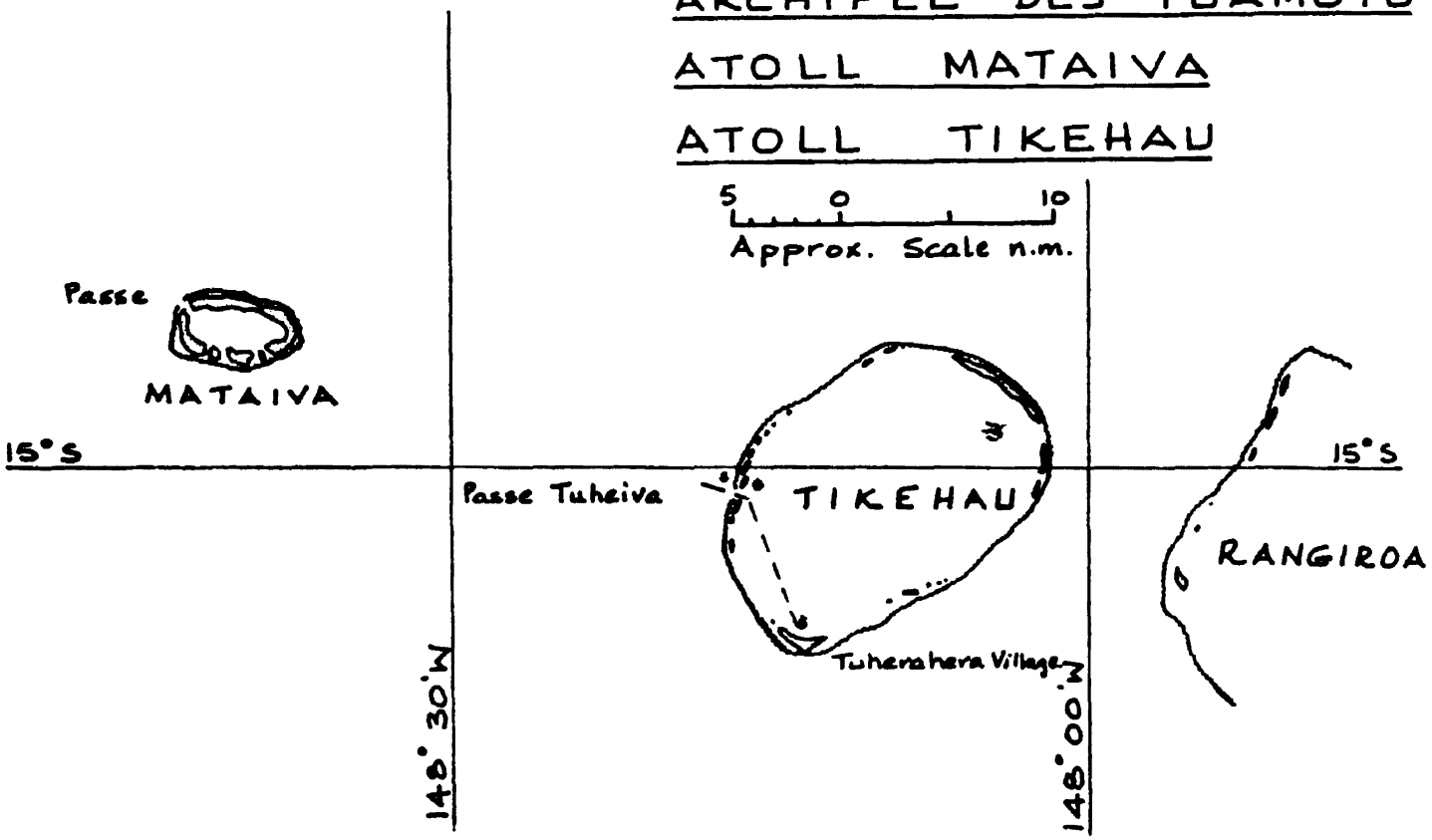
ILE MAKATEA

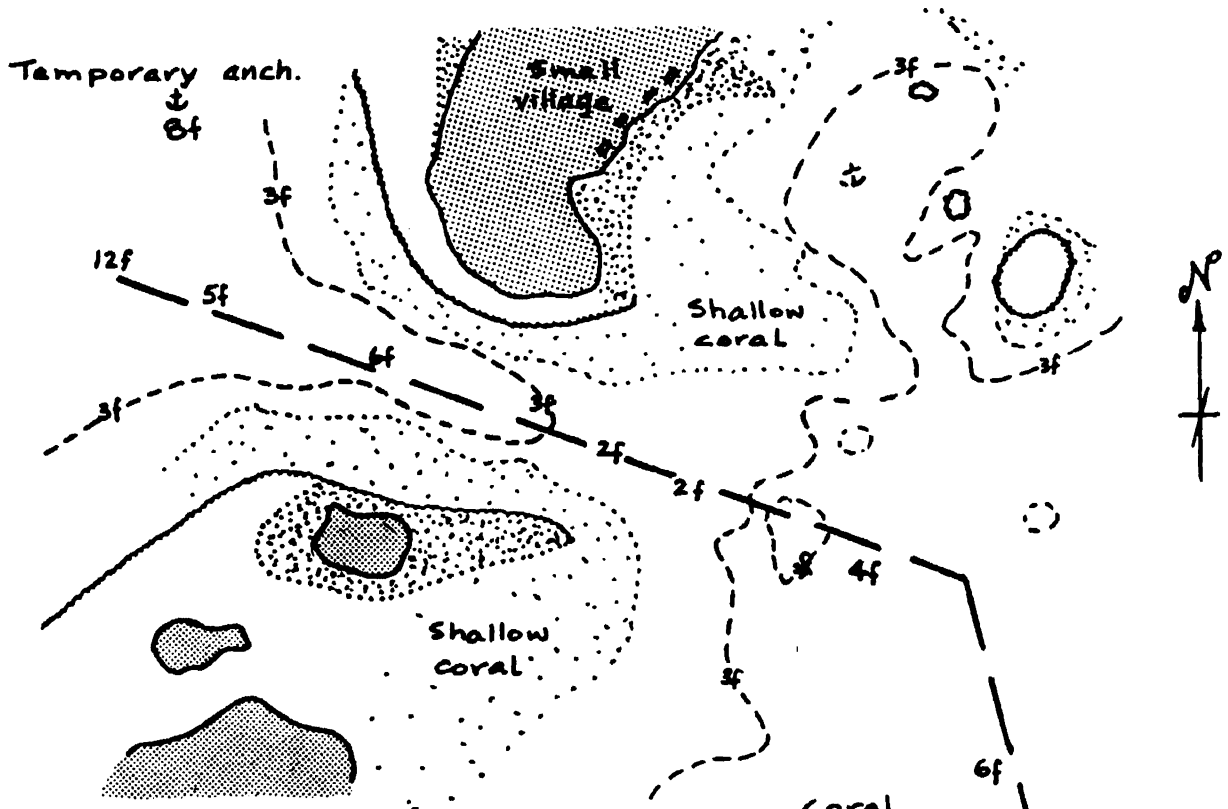
This is a small, high (300') coral island about 44 miles southward of Tikehau. The coast is primarily of coral cliffs apparently raised above sea level. This type of coral cliff structure is called a "makatea." The island was once mined for phosphate, but mining has ceased and no port facilities are maintained. As there is no protected anchorage, landing can be difficult. There are mooring buoys at the west end of the island. This island can well be passed by.

ARCHIPEL DES TUAMOTU

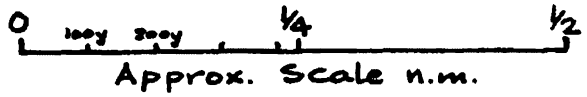
ATOLL MATAIVA

ATOLL TIKEHAU





PASSE DE TUHEIVA



Not to be used for navigation

RANGIROA

Rangiroa atoll is huge. It is the largest atoll in the Tuamotu and has a circumference of about 100 miles. The entire island of Tahiti would fit easily inside the atoll. Located about 8 miles east of Tikehau, it is 40 miles long and 17 miles wide at its widest point which is near the western end. The ring is formed by some 240 motus or islets separated by about 130 channels called "hoas," mostly very shallow. The larger islands with vegetation and palms on them are mainly on the northern side. This atoll is an important landfall for vessels making a transit of the Tuamotu. The only two deep water passes -- Passe Avatoru and Passe Tiputa -- are at the the north, and a village of the same name is near each respective pass. The total population is about 1,100.

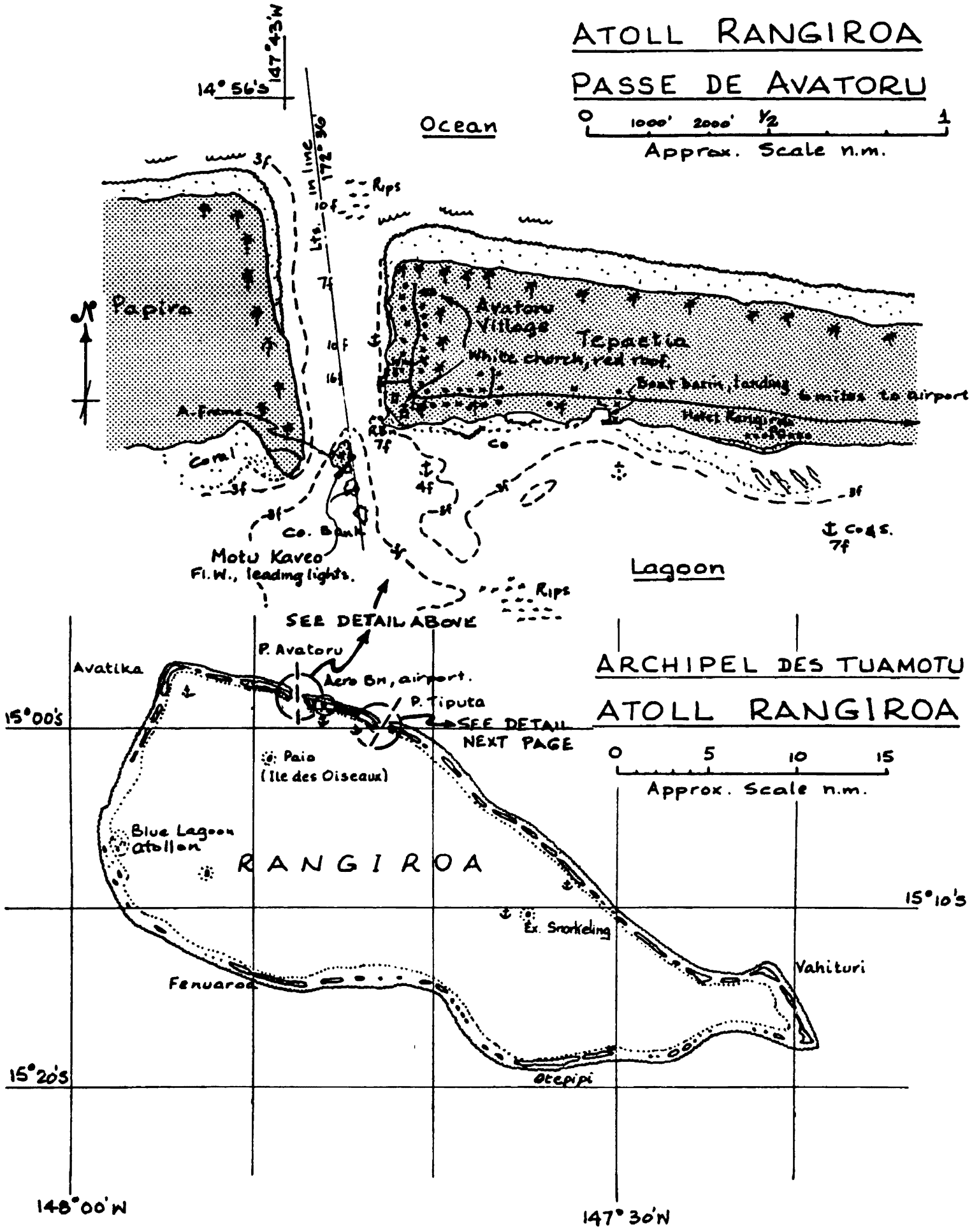
Passe Avatoru is the main pass into the lagoon, and it lies about 8 miles east of the NW point of the atoll. It has a large village on the eastern side, the white church with its red roof standing out. The concrete wharf of the village is at the downstream (lagoon) end of the pass. The trading schooners tie up here, so there is deep water alongside, but one cannot tie up to the wharf for long. Yachts can anchor fore and aft just ahead of the wharf at the side of the pass, and this anchorage is said to be preferrable when strong trades are blowing across the lagoon. However, the anchorages in the lagoon are very safe and attractive as well.

A small motu, Motu Kaveo, lies in the center of the channel at the inner end of the pass, dividing it into two. The best route is on the east side, passing a red post beacon labelled "Avatoru." The motu is well wooded with palms and casuarina trees. A small A-frame hut is at the west side. The west side is not a good route as there is a bar that reduces depths to 10' and causes swells and rips.

Once past the red beacon on its spit, follow the deeper blue water around the point to an anchorage within the lagoon. The one favored by most skippers is off Hotel Rangiroa about 1 mile to the east of the pass. A small boat basin, too shallow for yachts, will be passed as you proceed. Stay clear of any pale blue water with brown coral ribs that show along the shore.

The lagoon of Rangiroa is particularly safe to travel across, as it is deep in most areas and the coral heads are generally visible. Thus trading vessels and most yachts travel across from Avatoru to the anchorage at Tiputa and often leave by that pass. In good conditions one may also sail across the lagoon to visit motus on the other side. The Isle of Birds (Ile des Oiseaux) is in the middle of the lagoon and is a nesting ground for fairy and sooty terns, frigate birds, etc. At the SW corner there is a small atoll within the larger one. This is called the "Blue Lagoon" and it is a pretty and isolated spot except when visited by guests from the hotels.

Important! At both passes when the strong outgoing current meets an easterly wind and ocean current it causes steep, short seas, and swells to occur at the pass entrance. Such seas seem to favor the western side, but they are dangerous to a small vessel attempting an entry. A slick may sometimes extend further out beyond the breaking seas to give a false sense of security. These seas roll down the passes into the lagoon. The tidal currents are so strong that eddies and rips can be found on the inside when the flood is in force.



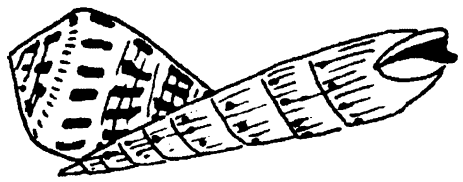
Not to be used for navigation

Enter at or near slack water or during quiet sea conditions with a favorable current (provided rips and seas are small. If it is necessary to wait, there is an emergency anchorage, useable only in easterly winds, on a sand patch outside the reef about 1 mile south of the SW end of Rangiroa in the lee of a small motu.

Passe Tiputa is also wide and clear. At the inner end it is divided into two channels by a sandy coral cay on which is a light structure. Behind this is a taller post with a green flashing light which provides a leading line through the pass. At the outer entrance to Passe Tiputa at the corner of the reef there is a tall, white concrete tower which helps in identification. When entering or leaving the pass stay on the line and pass the lights and cay on the east side, for coral patches extend out from the islet on the NW side.

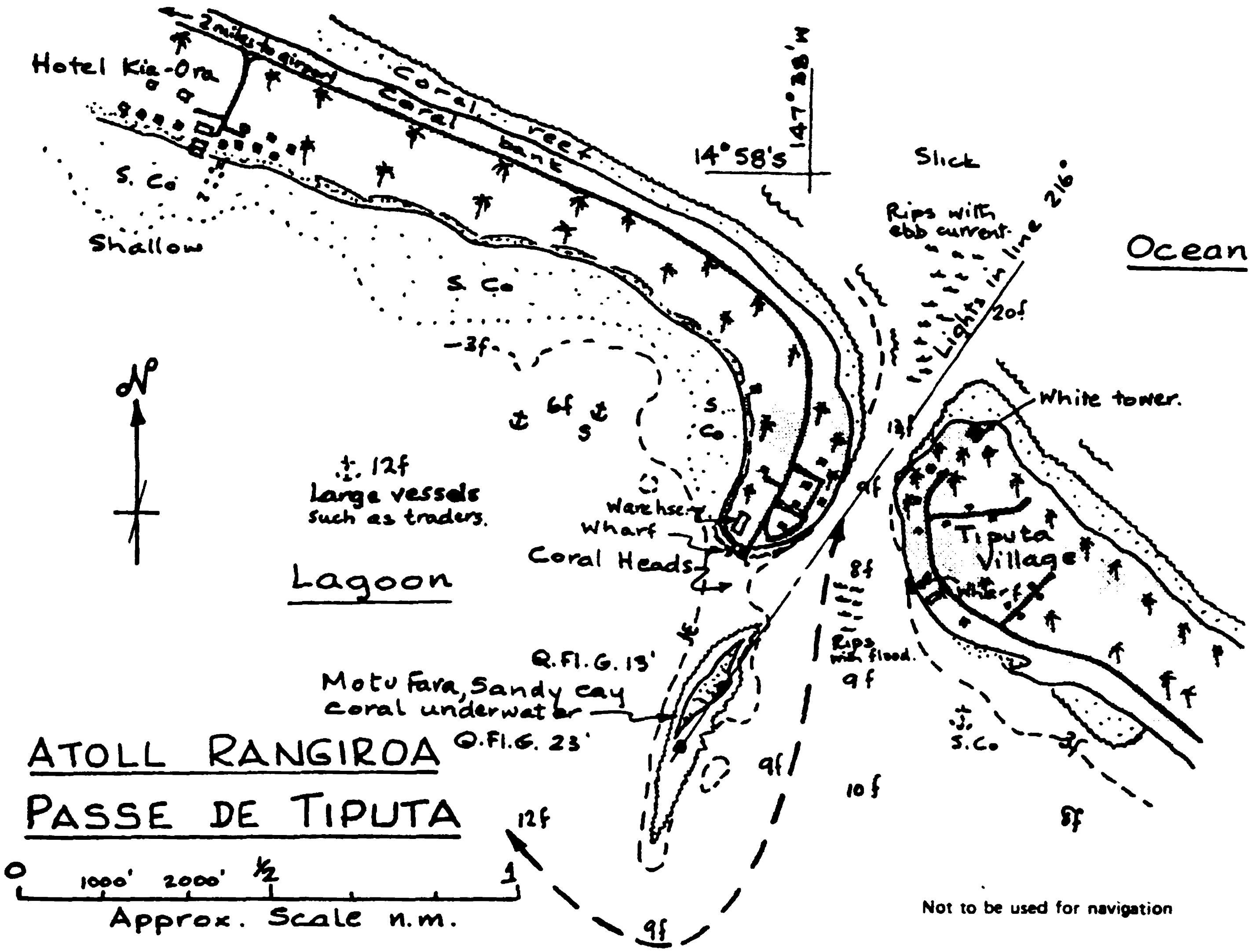
Anchorage at Tiputa can be taken in a good location to the west of the pass, in the bight of land and off the old village. The deep blue of safe water is clearly seen. At the tip of the land is a concrete wharf where one can moor only while waiting for slack water. Behind it is a concrete block warehouse with a green roof. Anchor level with this warehouse in the bay, keeping clear of the lightest blue water and brownish coral patches. A luxury hotel, the Kia Ora, is along the shore nearby, and is a great place to go for a superb, but expensive dinner. It is about 6 miles along the road to the village of Avatoru, and a mile across the pass to that of Tiputa. The local bread is excellent.

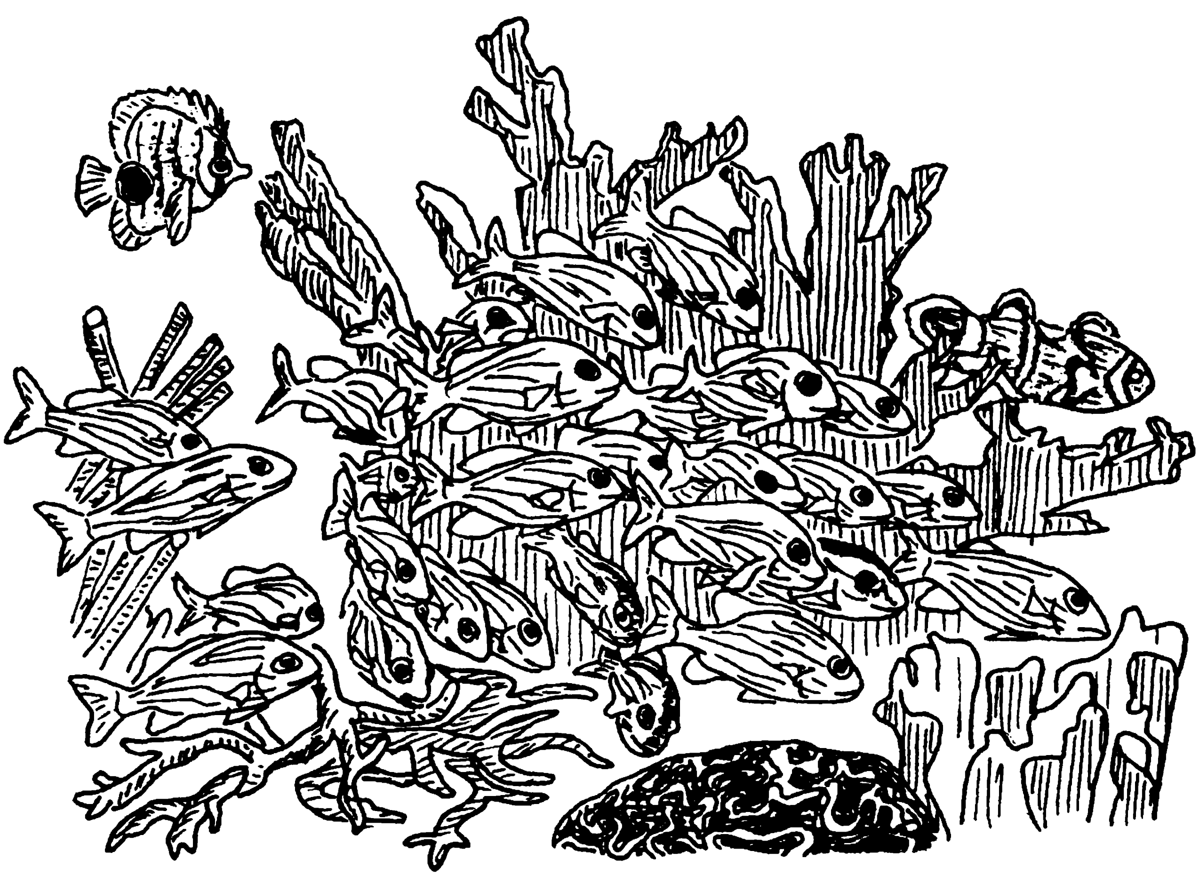
An interesting snorkeling experience is to drift snorkel down either pass. This can also be done at passes on other atolls, provided the pass is relatively straight. Drift snorkeling should only be done on an incoming tide and near slack water. It is the safest procedure, the water is smoother, and the pick-ups can be managed easier. Using an inflatable or any dinghy that can be boarded by a swimmer without tipping, take the snorkeler about 1/3 of the way up the pass. The snorkelers enter the water and drift down with the current. Be sure to agree on which side of the small central motus they should stay for a pick-up! At Passe Tiputa the eastern side is prettier, as it has coral and many fish along the side of Motu Fara. The west side has coral but also has deeper zones where sharks can be seen. Deep water makes for darker viewing. Similarly, Passe Avatoru is also prettier along the eastern channel. The snorkelers must keep together and need to watch the current which can carry them very quickly towards the coral reefs that surround the motus. A collision with coral is best avoided!



HEBREW CONE (Conus ebraeus Linne)

STRIGATE AUGER (Terebra strigilata Sowerby)


2 miles to airport
Hotel Kia-Ora
Coral reef
Coral bank
147°38'W
14°58'S
Slick
Rips with ebb current
Lights in line 216°
Ocean
S. Co
Shallow
S. Co
20f
-3f
6f
S
White tower.
13f
9f
12f
Large vessels such as traders.
Warehse
Wharf
Coral Heads
Tiputa Village
Wharf
Lagoon
8f
Rips with flood.
Q.Fl.G. 13'
9f
Motu Fara, Sandy cay
coral underwater
ATOLL RANGIROA
PASSE DE TIPUTA
Q.Fl.G. 23'
9f
10f
S.Co
8f
12f
0
1000'
2000'
1/2
1
Approx. Scale n.m.
9f
Not to be used for navigation



GROUPE DES ILES PALLISER

Three atolls, Arutua, Kaukura, and Apataki make up this group. They lie to the east and southeast of Rangiroa and southwest from the northernmost islands of Manihi, Ahe, Takaroa, and Takapoto.

ARUTUA

A 20-mile gap lies between Rangiroa and Arutua. This wide channel is one of the preferred routes for a passage through the Tuamotu, especially if one has made a landfall on Takaroa and is then heading for Tahiti.

When approached from the NE, as you would when coming from the Marquises, the palm-treed islets along the north and east sides help to make the atoll visible. But if the approach is from the south, these sides of the atoll are extremely dangerous for they are mostly bare with the reef awash. This can hide the reef until one is critically near--very dangerous if at night.

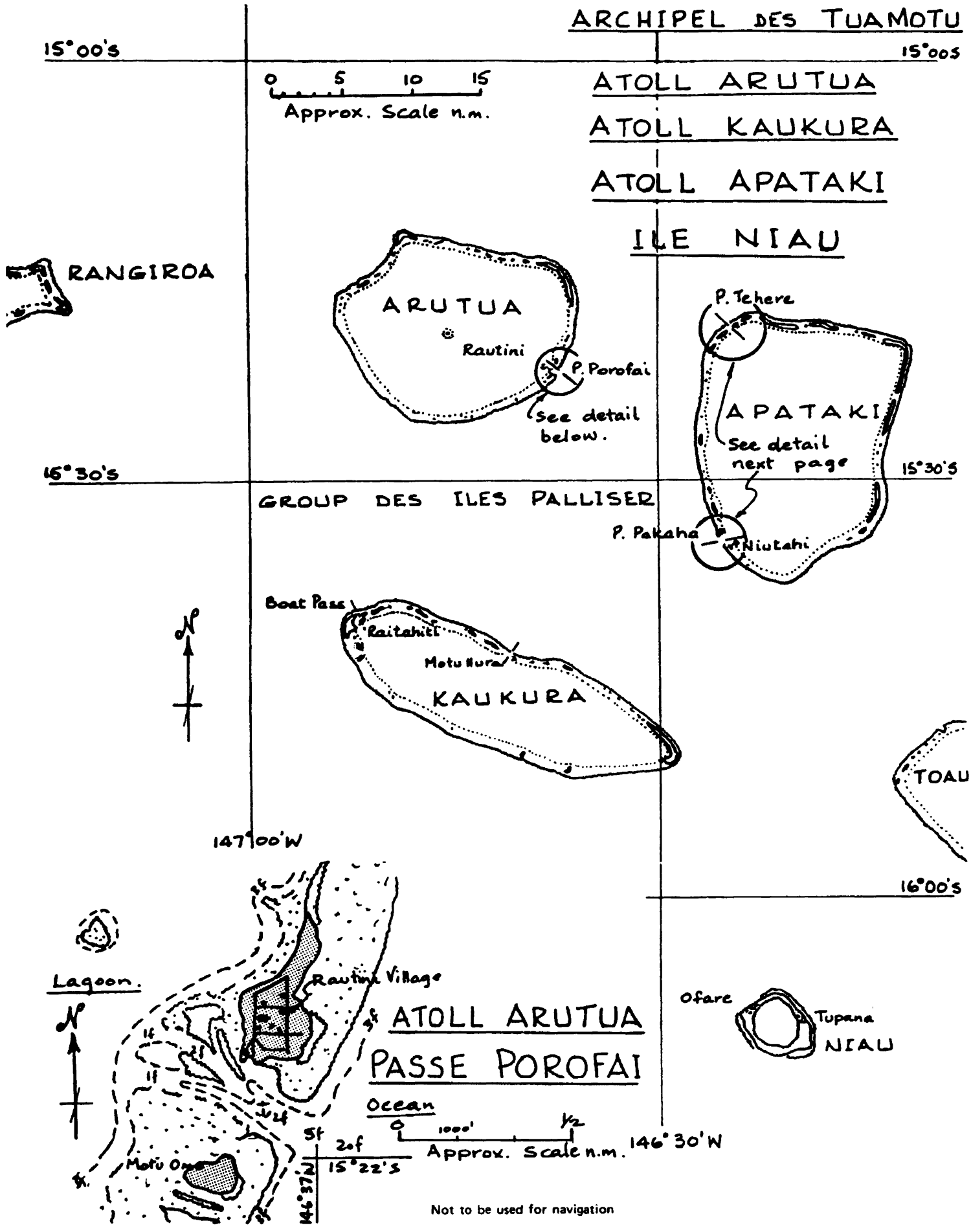
In contrast to most atolls which have their passes at the northern or western sides the pass into the lagoon is near the south end of the eastern side. This pass, Passe Porofai, is difficult and is used only by small vessels. The inner end of the pass is partially blocked by coral heads, thus forming three channels. Anchorage is usually taken within the pass as shown on the sketch, off the village of Rautini. The village lies on the northern side of the pass and can be seen and recognized from offshore by its flagstaff. Entry into the lagoon is possible, but should be done only at slack water when the shallow bar must be crossed and the route threaded between the coral heads. Either the center or south channel can be used.

KAUKURA

A long, oval atoll of about 25 miles in length, this atoll is south of Arutua. Like that atoll it has many islets on the northern and eastern sides and very few on the southern sides, making it dangerous to approach from this angle. However, during a hurricane of many years ago some large coral blocks (some as much as 30' high) were thrown up on the reef and they help in giving it some visibility.

The pass into the lagoon is at the middle of the northern side near Motu Ura, recognizable by large clumps of palm trees. The tidal streams in the pass are very strong, and set eastward on the flood, westward on the ebb. The lagoon itself is shallow and filled with coral heads and shoals.

The main village of Raitahiti is situated on the largest islet at the NW end of the atoll. It is the only permanently inhabited atoll in this area. A shallow boat passage leads north of the village near Motu Paveo--it should not be attempted.


ARCHIPEL DES TUAMOTU
15°00's
15°00S
0 5 10 15
Approx. Scale n.m.
ATOLL ARUTUA
ATOLL KAUKURA
ATOLL APATAKI
ILE NIAU
RANGIROA
ARUTUA
Rautini
P. Porofai
See detail below.
P. Tehere
APATAKI
See detail next page
15°30's
15°30'S
GROUP DES ILES PALLISER
P. Pakaha
Niutahi
Boat Pass
Raitahiti
Motu Nuna
KAUKURA
TOAU
147°00'W
16°00's
Lagoon.
Rautini Village
ATOLL ARUTUA
PASSE POROFAI
Ofare
Tupana
NIAU
Ocean
0 1000' 1/2
Approx. Scale n.m.
146°30'W
5f
2of
15°22's
Motu Ono
146°37'2
Not to be used for navigation

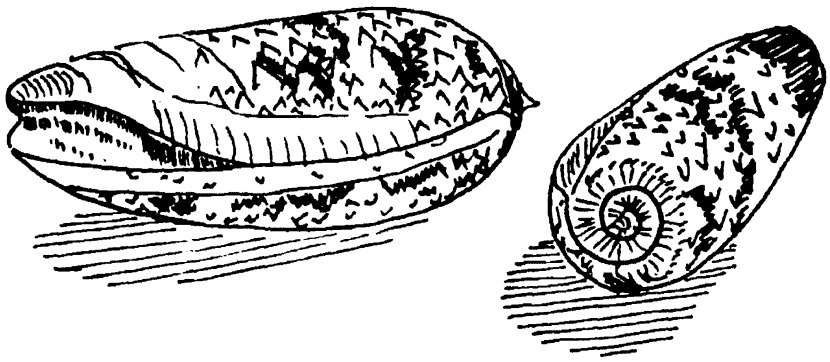
APATAKI

This square-shaped atoll lying 10 miles to the east of Arutua is fairly well rimmed with motus except for the southern side. Two passes allow access to the lagoon, both being on the western side. This is an important atoll as an administrator for the area resides here. There is an airstrip that makes connections with Tahiti. Fish poisoning is known to occur here.

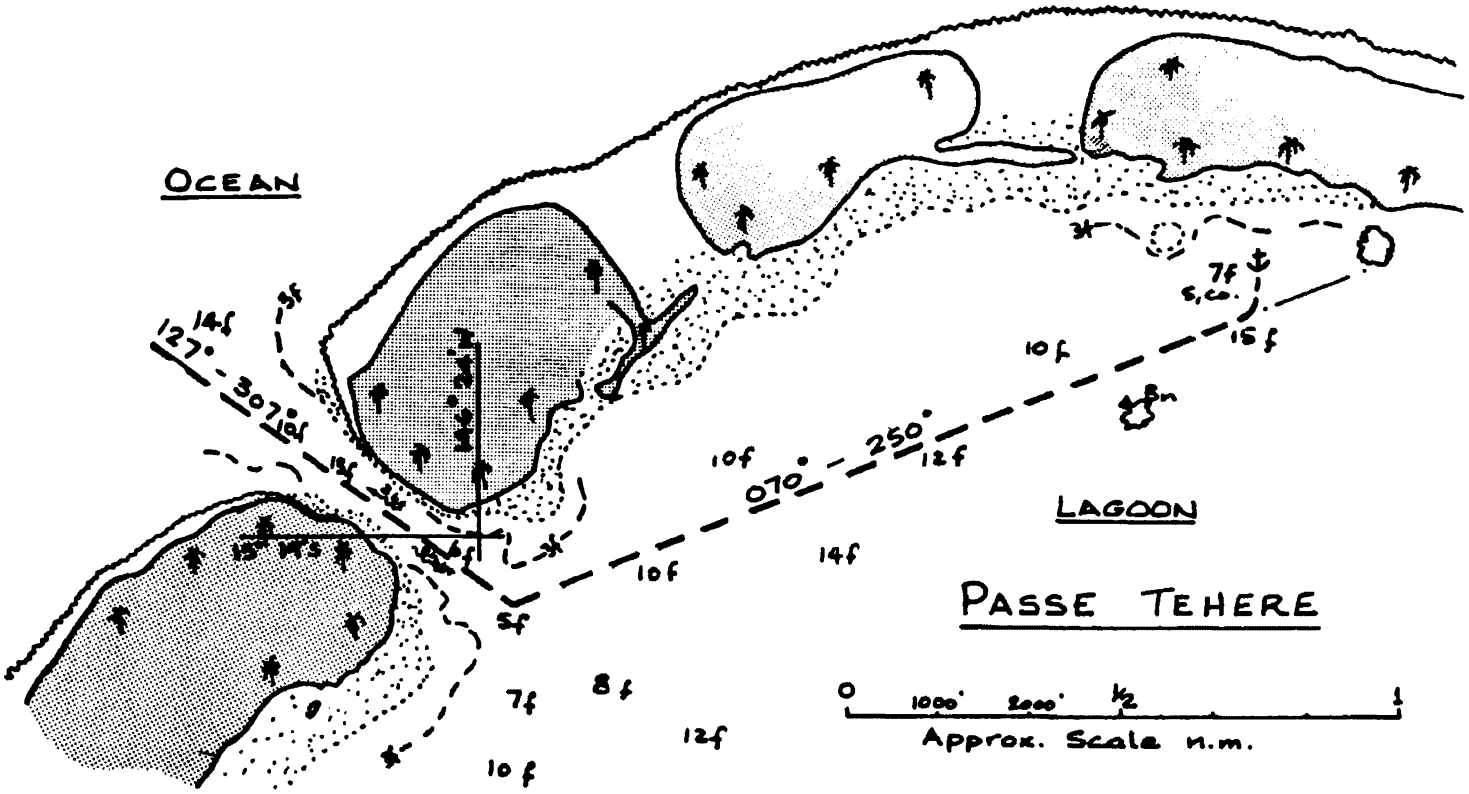
Passe Pakaka is the southern pass, about 5 miles north of the southern end of the atoll. The village of Niutahi is on an islet on the south side of the pass, and the airstrip angles across the islets behind the village. There is a wharf at the village. The pass is wide, deep, and clear as far as the village. Lights on the wharf provide a range line into the pass. If the lights are not seen in daylight the line can be taken on the flagstaff. Just before the wharf, on its western side, is a niche in the reef where there is a small anchorage out of the current in well sheltered though shallowing water. It is possible to moor to the wharf.

If continuing on into the lagoon steer down the center of the pass and take the middle channel. A reef and a bank divide the pass here. There are a few beacons but they cannot be depended on to identify all coral heads. There are two current streams in the pass itself. The north side sets with the tide at about 4 knots, while the south side is a counter-current. Both change direction with the tide. The current increases in intensity to 5 or 6 knots in the narrow channels at the inner end of the pass. The inner part of the pass should be travelled only at slack water in sunlight for good visibility to avoid coral heads.

Passe Tehere is at the NW tip of the atoll. It is a straight and relatively short passage, fairly deep and clear. Shoal areas on either side reduce the width of the passage to about 400'. There are shoals that narrow the outer entrance, and on entry it is best to line up the pass from at least 1/2 mile offshore when coming in from seaward. Currents of up to 3 or 4 knots run out of the pass. Once inside the lagoon, anchorage can be found at Roto Ava following the route on the sketch and anchoring off the motu shown.



TENT OLIVE (Oliva porphyria Linné)



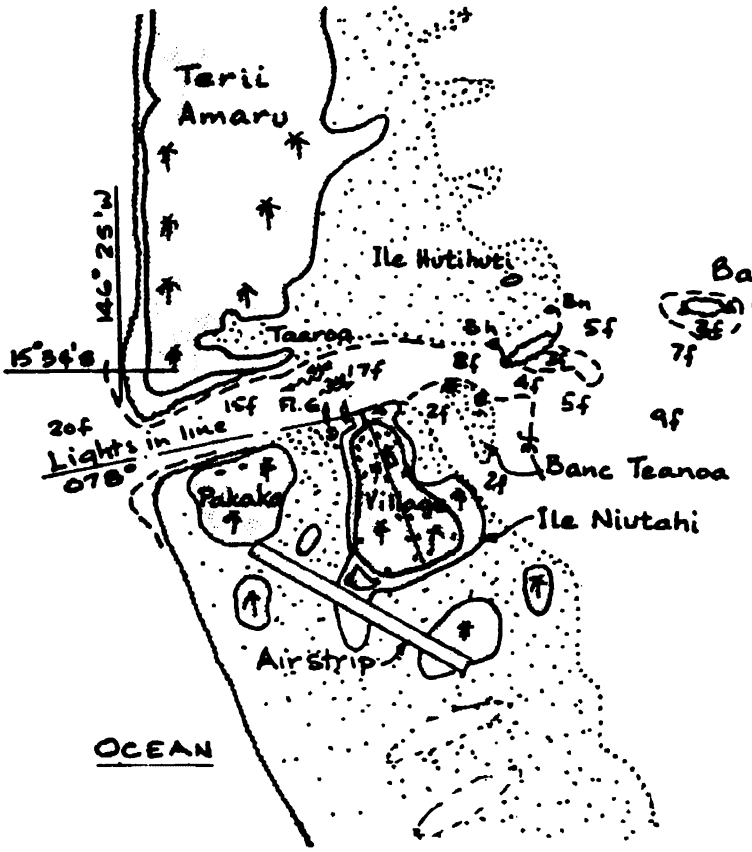
PASSE TEHERE

0 1000' 2000' ½ 1

Approx. Scale n.m.

ATOLL APATAKI

Not to be used for navigation



PASSE PAKAKA

0 1000' 2000' ½ 1

Approx. Scale n.m.

Anchorage basin for small yachts to the west of Nharf in pass.

On the NW side of the Chenal de Fakarava are two pretty atolls, Aratika and Toau, which are described in this and the following sketch. But though the atolls are attractive, the passes into the lagoons of both atolls are not the easiest for a beginner in the Tuamotu to start with. Experiences on other, easier passes such as those at Manihi and Ahe give confidence and an understanding that prepares a skipper for the less well known passes. This reason together with a less satisfactory identification are the reason the Chenal de Fakarava is not as suitable as the route past Rangiroa.

ARATIKA

A roughly triangular atoll, Aratika lies about 22 miles NE of Toau. The north side is virtually one long island, low but well covered with palm trees. Smaller islets lie along the sides, but the entire SW side is bare and dangerous. Two passes, one on each side of the northern island, lead into the lagoon. There are many coral heads, visible and awash, scattered throughout the lagoon. Some are shown on the sketch. There are a few inhabitants, and a small native type hotel is run by them. An airstrip is located near the southern end of the atoll to provide the means of travel for guests from Tahiti. Fish poisoning is known to occur here.

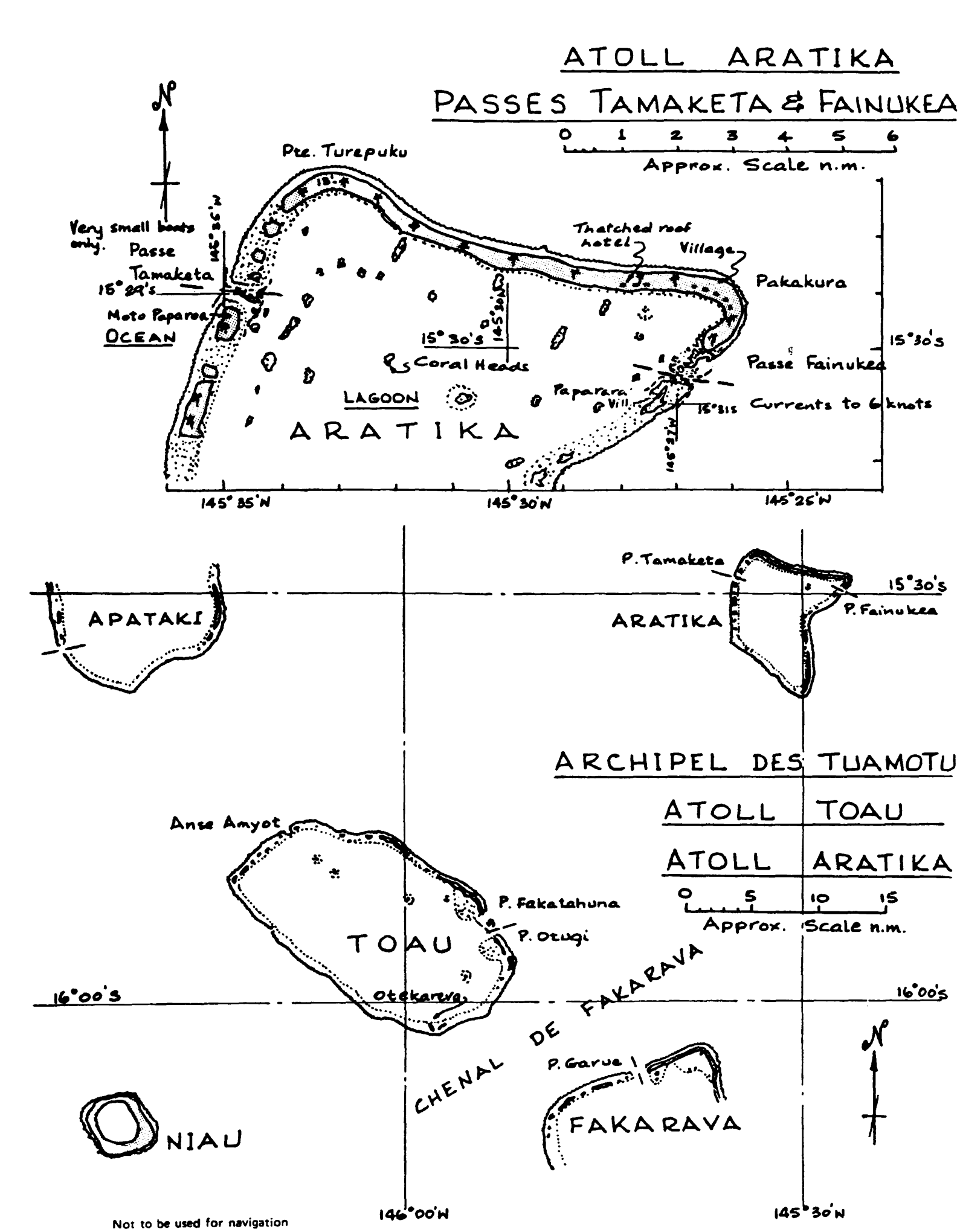
Passe Tamaketa is about 3 miles SSW of the north extremity of the atoll which is Point Turepuku. The pass lies between two small islets on the reef, though the northern side is more reef than land. The opening is narrow, broadening out at the inner end. But an inner reef splits the pass into two passages. The northern passage is the best, but a bar of coral reduces depths to a bare 7', which makes the pass useable by small vessels only--the other passage is even shallower. Several large coral heads lie in the lagoon just within the entrance and must be avoided. Very strong currents may be encountered in the pass.

Passe Fainukea is on the other side of the atoll, about a mile SW of the NE corner of the atoll. The small village of Pakakura is at this end of the long northern island. However, the pass is bordered by reefs on both sides, and with no treed islands bordering the pass it is harder to spot. On the north side a partially exposed portion of the coral reef extends SW from the island, and continues underwater but it is visible in the sunlight. The south side is all underwater. This pass is deeper, with a least depth of about 16', but as it curves slightly and is bordered by underwater edges it should be traversed only in good conning conditions. From the descriptions of these passes one can see why it is recommended that a newcomer first attempt the better known passes at the western end of the Tuamotu.

Anchorage is taken south of the village and hotel buildings which are visible on the inside shore of the north island. A spot clear of coral heads (for swinging room) can be found here.

ATOLL ARATIKA

PASSES TAMAKETA & FAINUKEA



Not to be used for navigation

TOAU

Marv's Friend likes

Toau is a roughly rectangular atoll that lies between Apatiki (15 miles to the NW) and Fakarava (8 miles to the SE). The atoll has many islands along the northwest and northeast sides but the southern sides are bare and low. There are two passes close together on the northeast side and a small niche in the reef which can be used as an anchorage on the northwest side. The villages on Toau are used by the people of Fakarava when they harvest copra. The permanent population consists of seven people. Fish poisoning is reported here.

Passe Otugi is about 3 1/2 miles NNW of the eastern tip of the atoll. It is reasonably wide and clear of danger, and has depths of at least 4 fathoms. The currents run out very strongly, so much so that strong eddies can be felt up to 2 miles outside of the pass. Enter the midsection of the pass, and after clearing the entrance turn southward to anchor about 1/2 mile from the inner end of the pass. A large area with coral heads extends into the lagoon from the pass and the anchorage is clear of this patch. Alternatively, the route to the NW can be taken through a beacon marked passage to anchor off the village of Maragai.

Passe Fakatahuna is a short mile further NW of Passe Otugi, and is separated from it by an island and section of the reef. It is narrower than the other and thus effects of the current are felt to a greater degree. It should only be used at, or close to slack water. Anchorage may be taken on either side of the pass, again being sure to stay clear of the coral patches in the lagoon.

Anse Amyot is a slot in the reef which appears to be a pass, but which is really a cul-de-sac blocked by a coral bank across the inner side. It lies about 3 miles from the northern extremity of Toau along the northwestern side. The entrance is narrowed by projections of the reefs and banks to an actual width of about 200', but at least 15' draft can be taken into the anchorage. A shallow bank within the cove and extensions of the SW side reduce the useable part of the cove to anchorage in the northern part. Swinging room may be adequate for a small vessel, but most tie a line ashore to the reef or to palms to keep from swinging. A yacht can lie here comfortably, even though the current is very strong, as the spot is well sheltered from the wind and swell. The family that lives here enjoys visits from yachts. Their extensive fish traps just inside the anchorage are interesting.

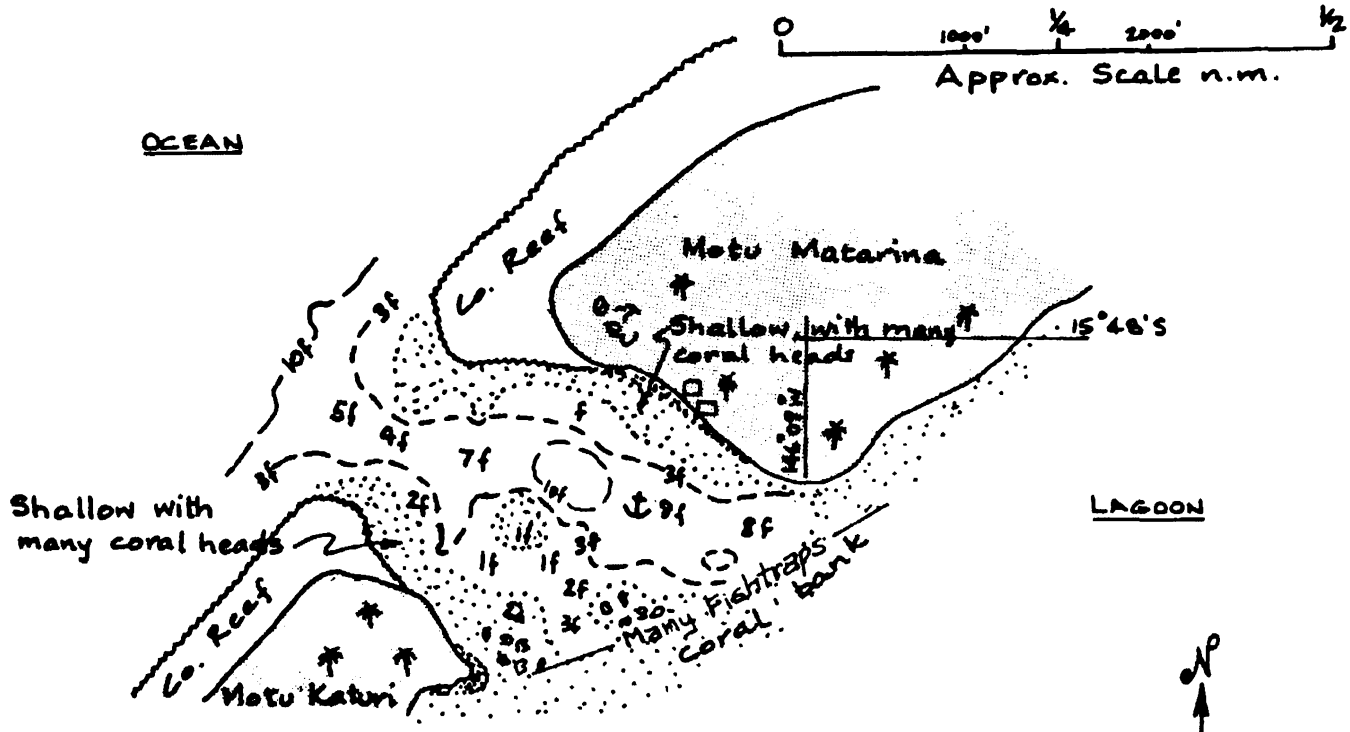
TEXTILE CONE. (Conus textile Linné)

A large and venomous cone.

Not to be used for navigation

ATOLL TOAU

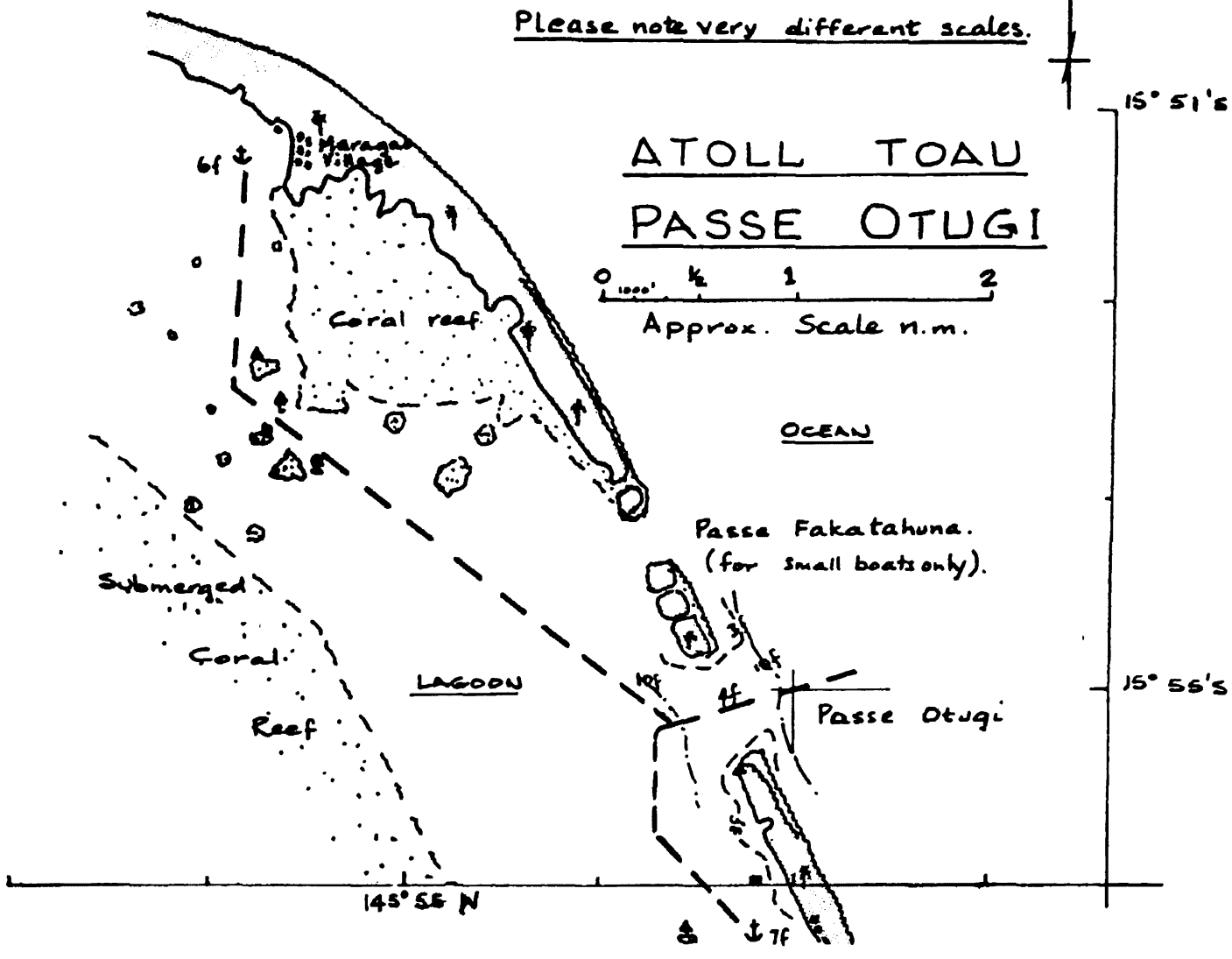
ANSE AMYOT



Please note very different scales.

ATOLL TOAU

PASSE OTUGI



FAKARAVA

This is the second largest Tuamotu atoll, and is a 32-mile long rectangular shape lying roughly NW - SE, being about 15 miles wide. There are 3 passes into the lagoon, the most important being Passe Garue on the northern side. The channel between Toau and Fakarava is about 8 miles wide and is called the Chenel de Fakarava. It is a passage through the archipelago that is sometimes used en route to Tahiti. Currents are irregular and strong in the channel, usually setting westward.

Three sides of the atoll, northern, northeastern, and southeastern, have many islands and palm trees, particularly the NE side. However, the southeastern side is low-lying and though there are some small islets along it they tend to be well in from the edge of the reef, and do not give much warning of the reef. Fish poisoning is known to occur at this atoll.

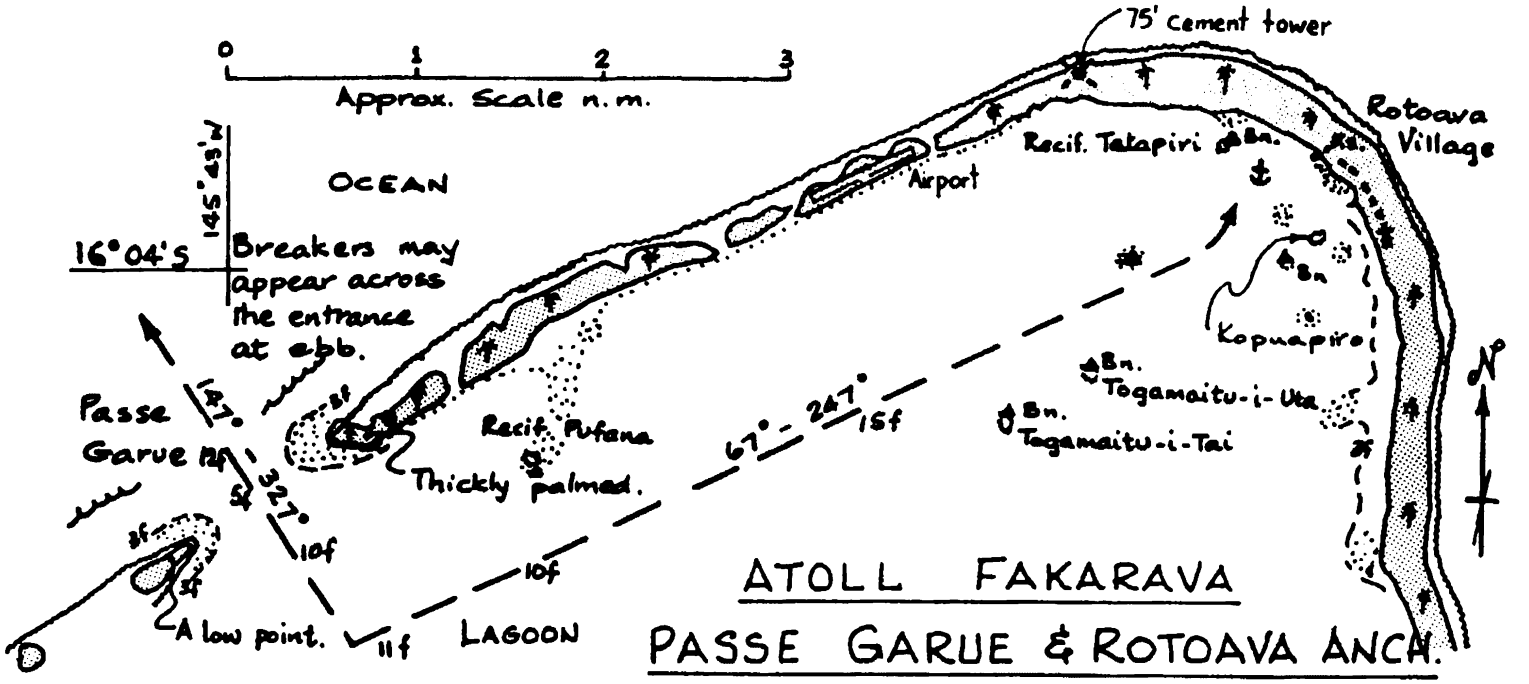
Passe Garue is a wider pass than those normally encountered; the pass can often appear impossible because the outgoing stream, when strong, causes breakers to appear right across the entrance. It is advisable for small vessels, especially auxiliary powered sailboats, to wait for slack water or enter with a favorable flow. However, the width of the pass allows vessels with sufficient power and speed to enter at any time.

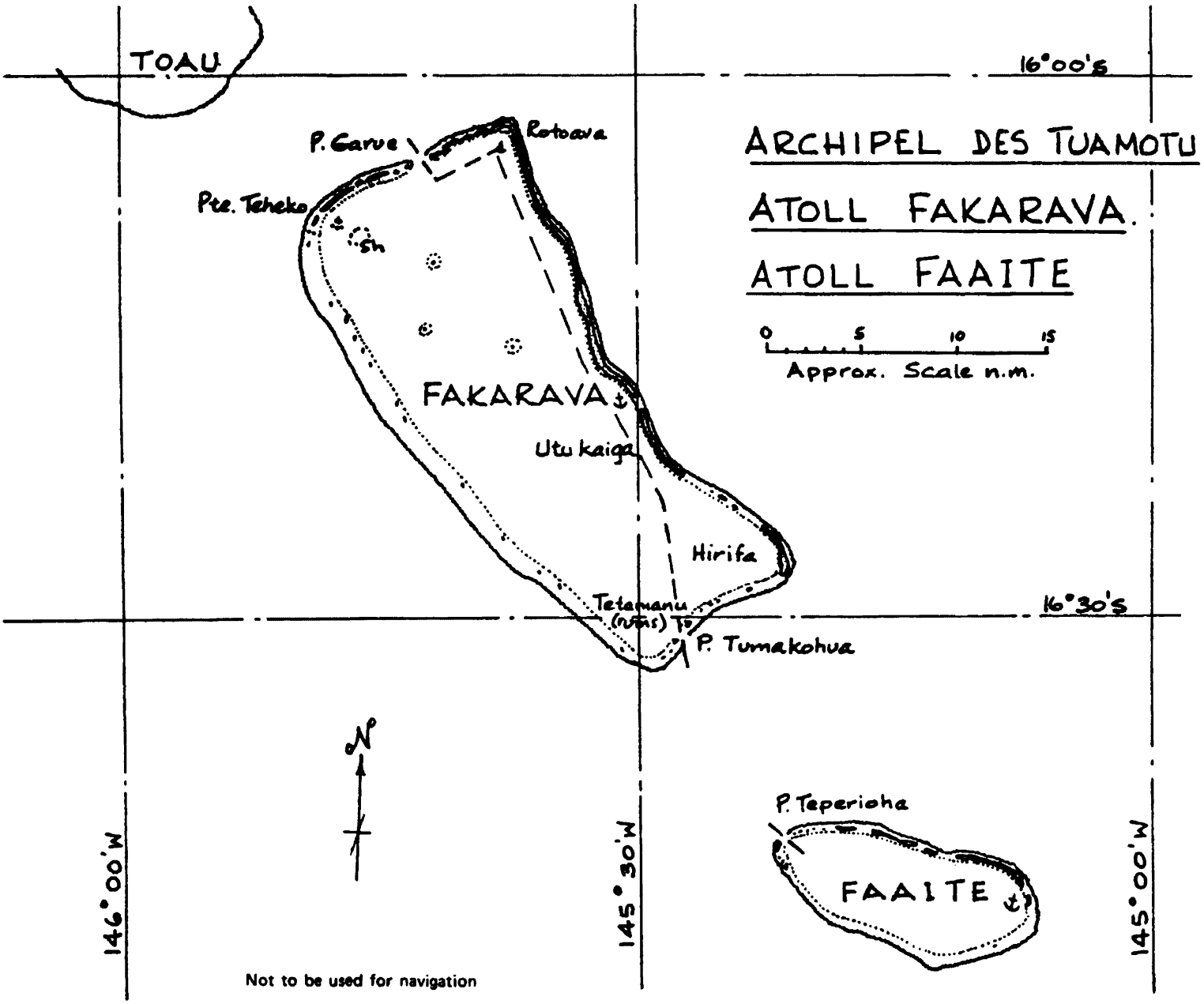
Once through there are two anchorages available. The village of Rotoava, and its anchorage is to the ENE of the entrance. Take a course to pass clear of Pufana Reef, which lies about 3/4 of a mile east of the inner end of the pass. A beacon is erected on it.

About 2 1/2 miles further along are two other drying coral reefs, Togamaitu-i-tai and Togamaitu-i-uta, each with a beacon. Leave them to starboard when entering. Steer for the flagstaff at Rotoava village, on the curve of the island edge of the reef. Vessels generally anchor off the pier and flagstaff in about 6 to 10 fathoms, sand and coral. Closer in, though still deep, the bottom has more coral and may not provide as good an anchorage. This anchorage is well sheltered except from southerly winds which may raise a sea across this large lagoon.

Rotoava is a large village, having two churches and was at one time the center of administration of the Tuamotu. The present population is about 150. There are no stores, although there are weekly flights to Papeete.

The second anchorage choice is in the other direction from the entrance at Passe Garua. It lies in the lagoon side of Point Teheko, the NW extremity of the lagoon off a small island with a hut and palm trees. To reach this anchorage, good light and conning are needed to avoid shoals and to find the clear area which is located within a small group of uncovering reefs. This anchorage is lovelier, though more exposed to winds and surge.


0 1 2 3
Approx. Scale n.m.
75' cement tower
Rotoava Village
Recif. Takapiri
Bn.
Airport
OCEAN
145°43'W
16°04'S
Breakers may appear across the entrance at ebb.
Passe Garue
Recif. Pufana
Thickly palmed.
67° - 247°
15f
Bn. Togamaitu-i-Uta
Bn. Togamaitu-i-Tai
Kopuapiro
N
A low point.
11f
LAGOON
ATOLL FAKARAVA
PASSE GARUE & ROTOAVA ANCH.


TOAU
16°00'S
P. Garue
Rotoava
Pte. Teheko
5h
FAKARAVA
Utu kaiga
Hirifa
Tetamanu (rufas)
P. Tumakohua
16°30'S
ARCHIPEL DES TUAMOTU
ATOLL FAKARAVA.
ATOLL FAAITE
0 5 10 15
Approx. Scale n.m.
N
P. Teperioha
FAAITE
146°00'W
145°30'W
145°00'W
Not to be used for navigation

Passe Tumakohua is about 2 miles NW of the southern end of the atoll. It can be identified by the group of four islands, each well covered with palms. The pass is between the third and fourth islands. Though deep enough, this pass is more complicated to enter than Passe Garue. Slack water duration is 30 to 45 minutes.

A large coral patch, clearly visible, divides the inner end of the pass in two. The eastern channel is narrow, but feasible for small vessels. The western channel is broader, but appears blocked by the dark coral that makes it appear shallow, though it is deep enough for large vessels to use. The village of Tetamanu, now mostly in ruins, is at the southern end of the lagoon. Two families live here.

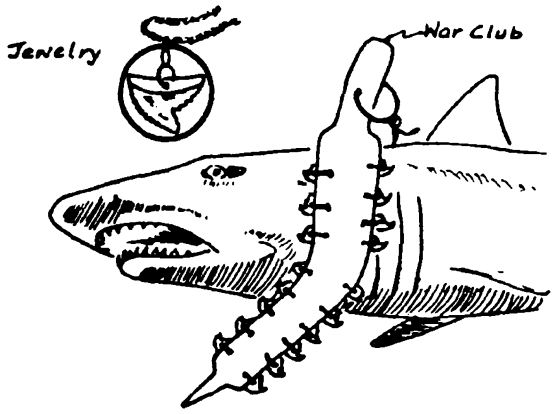
Crossing the lagoon between the two villages or passes is dangerous in periods of bad visibility. All normal and careful procedures when travelling in coral reefed waters should be used if this trip is made.

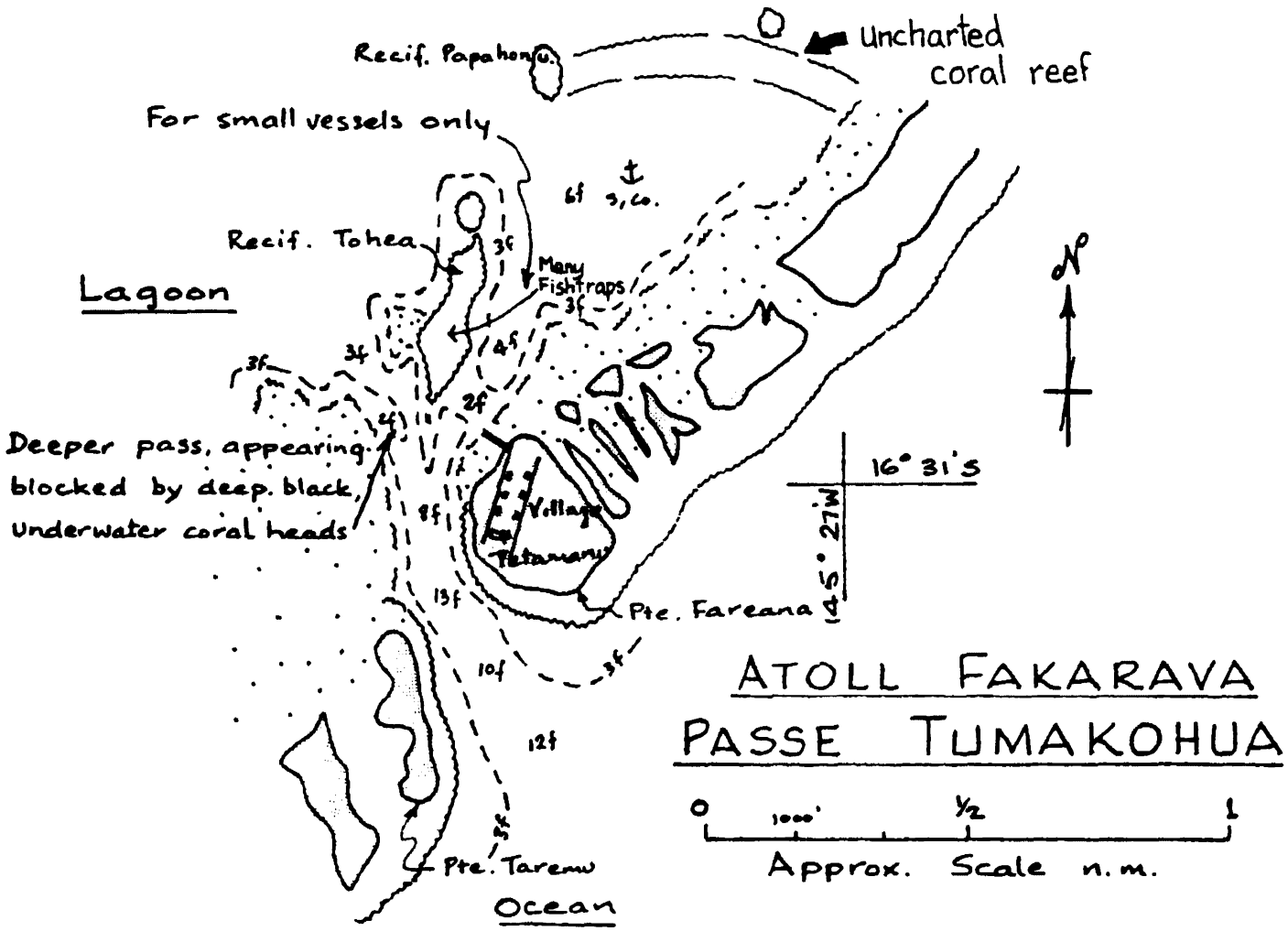
FAAITE

Lying about 10 miles SE of Fakarava, this atoll is only thinly covered with palms on its northern side, and is bare and low on its southern side, making it a dangerous atoll to approoach, especially at night. There is one pass at the western end of the atoll, Passe Teperioha.

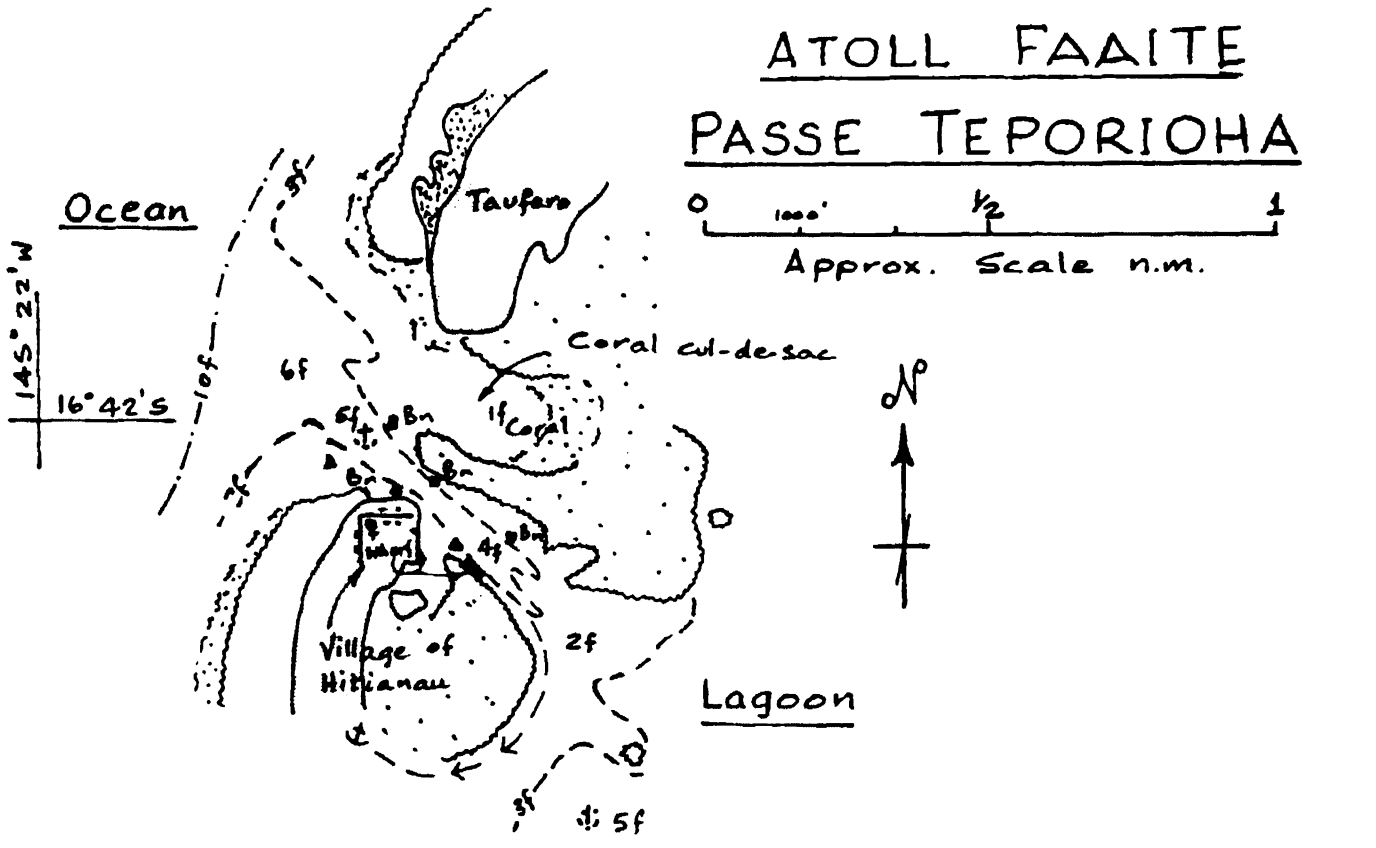
Passe Teperioha is about a half mile north of the extreme western end of the atoll. A series of small islets lie on each side of the entrance, with the village of Hitiamaa on the south side. The largest building in the village -- the town meeting hall -- is conspicuous when off the entrance.

The deep section of the pass is about 400' across, having a depth of about 15', but a coral bank on the northern part tends to block off the pass in that direction. However, the channel to the south of the bank leads past the village wharf into the lagoon. This channel is quite narrow (about 45' to 50') and only about 12' deep, so the tidal streams can attain velocities of 6 knots or more. The wharf at the village fronts on the pass; it is about 60' long with depths to 9' alongside. Vessels can tie to the wharf, but the very strong current and height of the wharf make this difficult. It is almost impossible to anchor in the pass. The best anchorage is in the NE corner of the lagoon, and a passable anchorage can be found about 1/4 mile south of the village in about 5 fathoms, sand and coral. This anchorage is not protected from prevailing winds, although it is close to the village.





Not to be used for navigation



KAUEHI

The atoll is 18 miles SE of Aratika, and 24 miles NE of Fakarava. Though the NE side, and parts of the SW side have islands, and the atoll is very green with palm trees, the entire atoll is very low. The SE side is bare and dangerous. A prominent tower is seen on the northern extremity of the atoll. The entrance into the lagoon is through Passe Arikitamiro which is on the SW side.

Passe Arikitamiro is within a break in the reef which is about 1,500' wide, but the channel itself is narrower, being about 1,000' across. The center channel is deep and clear. Enter a little south of the centerline, steering 045° true to get the best route.

The current is strong, such that eddies and overfalls and breaking waves may be evident across the entry at maximum outflow. Sometimes similar features are seen at the inner side of the pass with a strong inflow. Entry or exit is best at or near slack or with the flow.

Once inside the lagoon, steer on a bearing of 024° true, with the inner side of the pass on the reciprocal bearing. Use all standard precautions of travel in coral lagoons. The village of Tearovero lies across the lagoon on the NE side. An anchorage is available about half a mile southwest of the wharf off the village. Swinging room may be restricted here, and a Bahamanian mooring with two anchors out, may help.

RARAKA

About 11 miles SE of Kauehi lies this almost circular atoll. It has several small islands along its west, north, and east sides, leaving the southern side low, bare, and dangerous. The lagoon can be entered at Passe Manureva.

Passe Manureva is for small vessels, and a very strong current can be encountered. This, together with an islet and coral patch at the inner side of the entrance makes entry tricky and needing care. When entering, pass between the coral bank and the reef to anchor within the lagoon.

Another anchorage is also available off the village of Manuaha on the island to the north of the entrance.

TAIARO

This small, circular atoll, only 3 miles in diameter lies slightly outside of the main group, and is about 24 miles NE of Raraka. It is completely encircled by an island, which is well covered with palm trees. There is no entry into the lagoon, but landing can be accomplished off of a group of huts on the western side, and small vessels can secure to the reef. Another landing is near the village on the SE corner, but this landing may be affected by the prevailing swell.

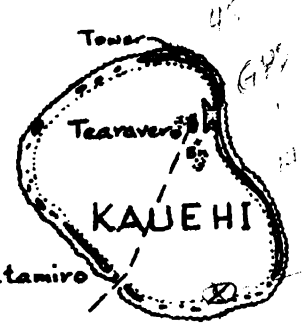
The island was leased by W.A. Robinson of "Svaap" and "Varua" fame and was his home during his efforts to investigate elephantisis which was prevalent in the South Pacific.

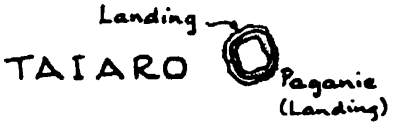
ARCHIPEL DES TUAMOTU

15°30'S

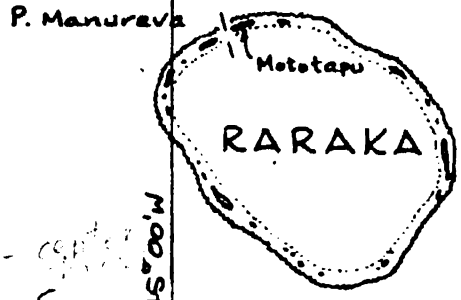
ATOLL KAUEHI
ATOLL RARAKA
ATOLL TAIARO

0 5 10 15 20
Approx. Scale n.m.





16°00'S



145°30'W
145°00'W
144°00'W

GPS Fix -
15°57.10 S
145°10.79 W

Course to Tearavero village & wharf. 020°

Very strong currents overfalls on ingoing stream

(Wrong) trees here

overfalls on outgoing stream

eddies up to ½ mile offshore

080° to Passe

15°57'S

145°12'W

Ocean

ATOLL KAUEHI

Lagoon **PASSE ARIKITAMIRO**

0 1000' ½ 1
Approx. Scale n.m.

N

Var. 11°50' E (1980)
Ann. Incr. +2'

Not to be used for navigation

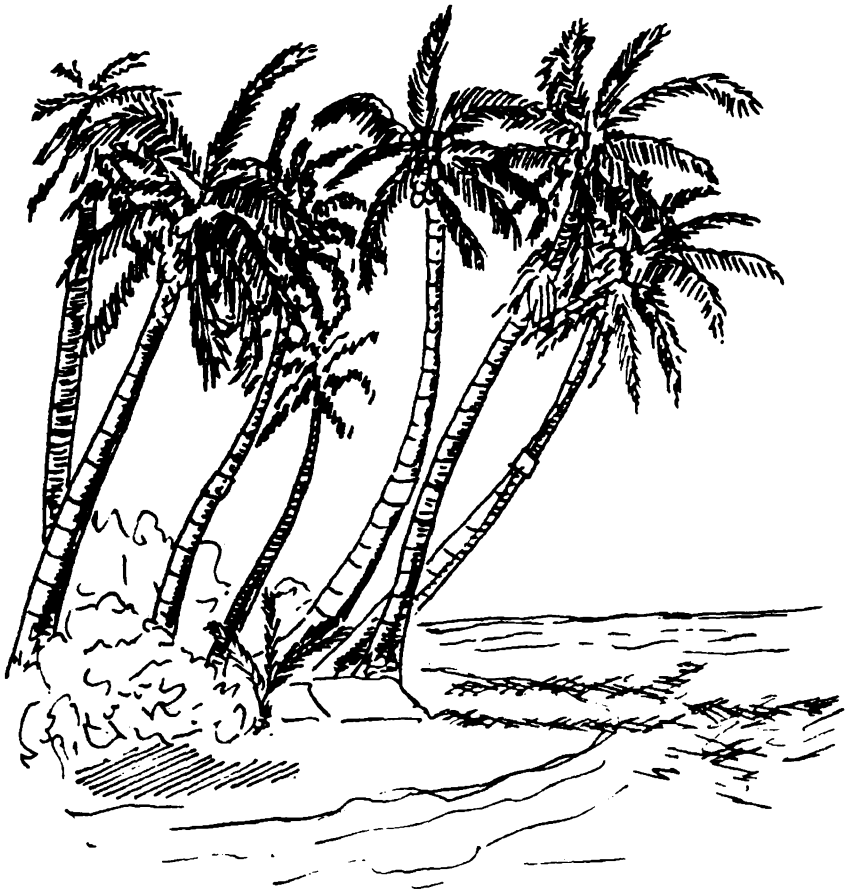
ANAA

This atoll is the southerly outlier of the northern group of Tuamotu atolls. It lies about 35 miles SSW of Faaite. It is also on the edge of the restricted area designated by the French authorities for the southern group of the Tuamotu.

There is no pass into the lagoon, and the 19-mile long atoll is fairly well rimmed by islands along the encircling reef. There is a fairly substantial population distributed over the five villages.

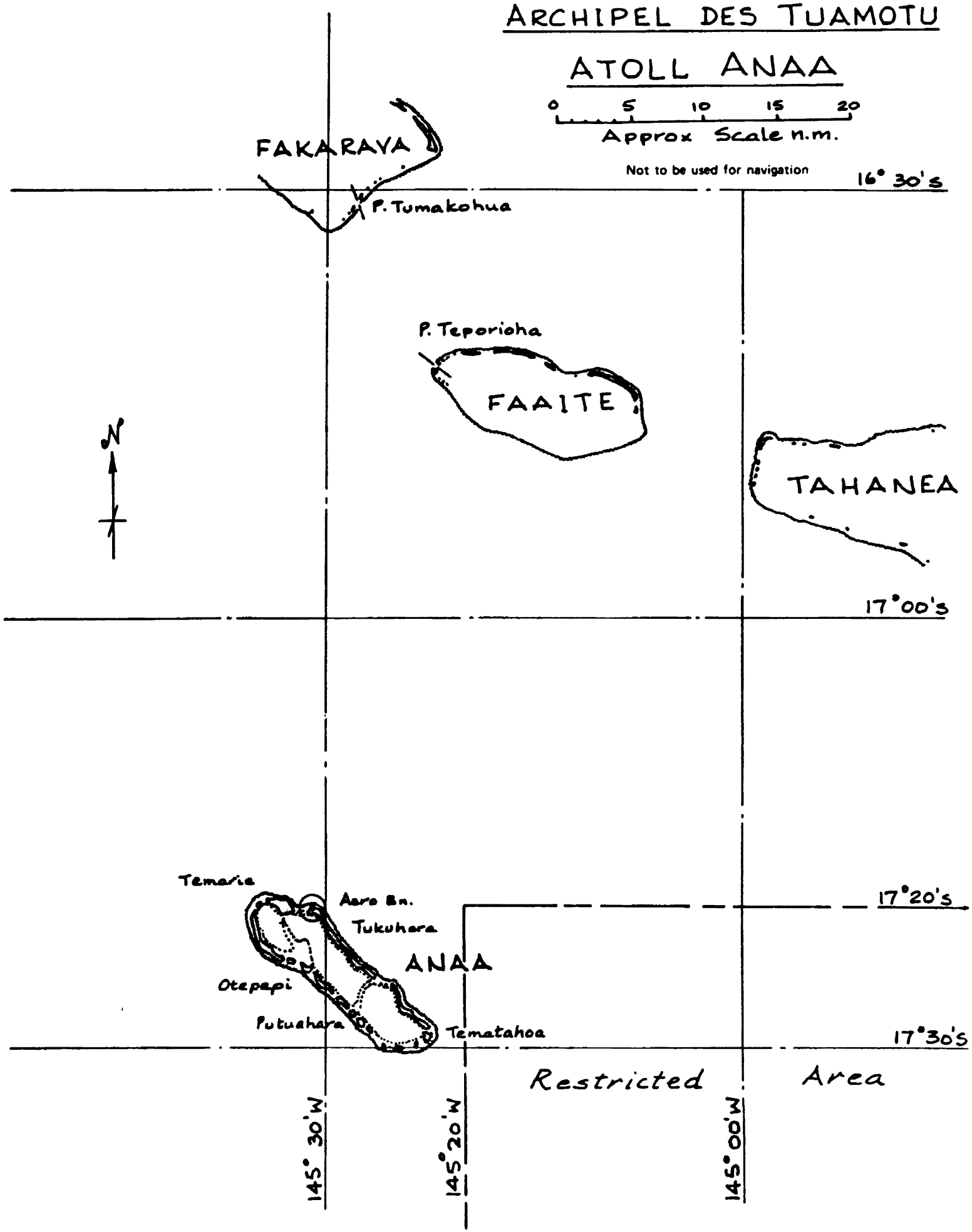
Landing can be made on the island on the NE side, abreast of the village of Tukuhora. The village cannot be seen from offshore, but two sheds and a road lead back to it. A current sets in towards the reef so it is advisable to leave an anchor watch aboard. There is a radio station and an airstrip on the island, and it is a regular call for the schooners out of Papeete.

The island is famous for several things. Hurricanes have laid waste to the islands several times and this may have been the source for Nordoff and Hall's book, "Hurricane." The men of the island have a respected reputation as sailors and have been very good crew when they could be persuaded to sail with one. Lastly, the island has a curious mirage effect, whereby the atoll can be seen in a greenish reflection which is visible a long way off.



COCONUT PALMS

Food, drink, medicine, cloth & shelter.


ARCHIPEL DES TUAMOTU
ATOLL ANAA
0 5 10 15 20
Approx Scale n.m.
Not to be used for navigation
FAKARAVA
P. Tumakohua
16° 30's
P. Teporioha
FAAITE
TAHANEA
N
17°00's
Temaria
Aero Bn.
Tukuhara
ANAA
Otepapi
Putuahara
Tematahoa
17°20's
17°30's
Restricted Area
145° 30'W
145°20'W
145°00'W

The atolls sketched on the opposite page--Katiu, Tahanea, and Motutunga--are less well known than the others previously described. They are not visited as they lie far from the normal routes through the archipelago. Other better known atolls, Makemo and Hao, lie to the east near an old sailing ship route through the Tuamotu.

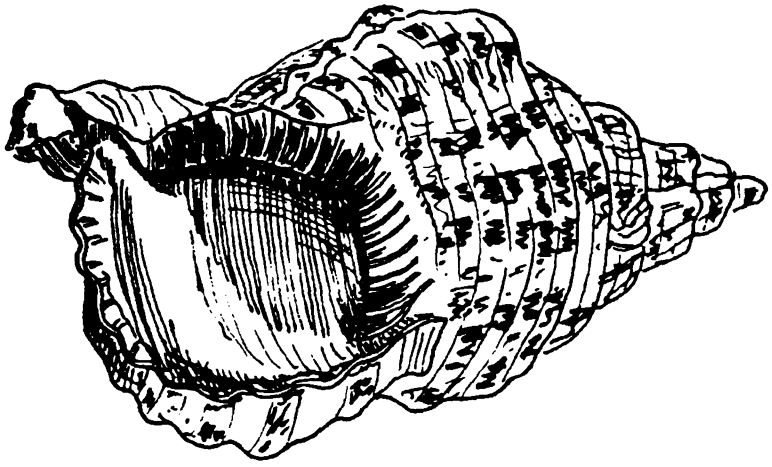
KATIU

Katiu lies 23 miles ESE of Raraka. As with many atolls the northern sides are well rimmed with islets and palm trees, while the southern sides are less defined and thus dangerous to approach. There are two passes, Passe Pakata and Passe Okarere; the latter being useful only for small boats.

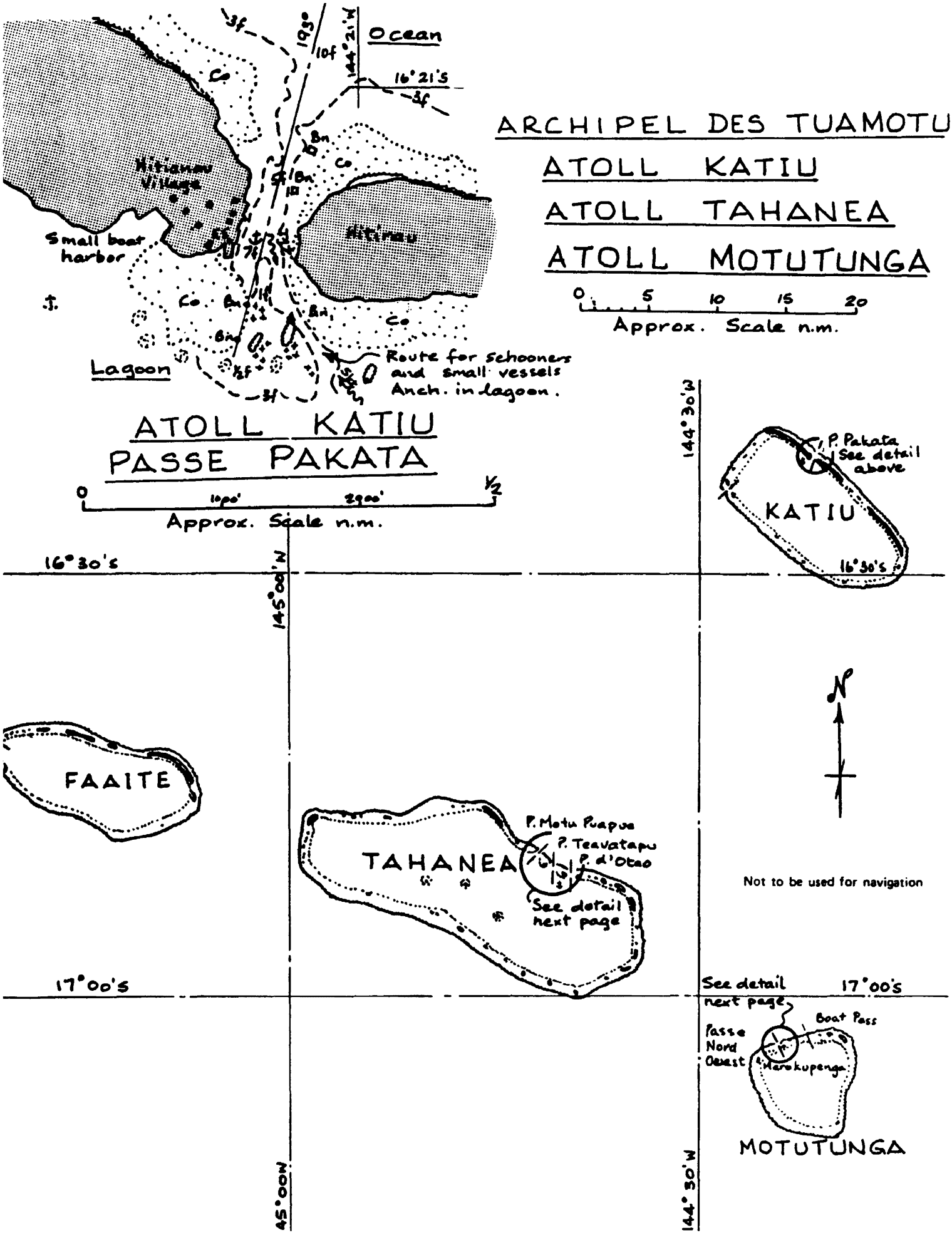
Passe Pakata is on the northeastern side of the atoll, about 4 miles from the northern extremity. It is identifiable by the clear gap between the palm trees and, as the distance closes, by the flagstaff at the village of Hitianu on the northwestern side of the entrance. The currents through the pass can attain a velocity of 6 knots.

Two beacons are established south of the flagstaff and in the lagoon. They are painted black with a white stripe. When in line, bearing 193½° true, the vessel traverses through the pass in the best water. Two red spar beacons mark the edge of the reef on the eastern side of the entrance to the pass.

Coral reefs and underwater heads block off a good deal of the inner pass. The true passage is through the eastern passage. This is a narrow route between the coral bank of the main reef on its inner side and an isolated small reef marked by a white spar beacon. The opening is about 100' wide, but do not be misled by the apparently wider and open center part of the pass for here there are many visible and underwater heads. Vessels going into the lagoon must carefully traverse this narrow pass and clear the inner banks of coral heads staying clear of the 3-fathom line before being able to turn west towards an anchorage which is southwest of the village of Hitianu. Because of the difficulty of entering the lagoon, most vessels anchor within the pass itself, off of the wharf in 7 fathoms, closer to the western side.



PACIFIC TRITON (Charonia tritonis Linné)


ARCHIPEL DES TUAMOTU
ATOLL KATIU
ATOLL TAHANEA
ATOLL MOTUTUNGA
0 5 10 15 20
Approx. Scale n.m.
Ocean
144°21'W
16°21'S
193°
10f
3f
Hitianau Village
Small boat harbor
Hitianau
Co
Bn
Lagoon
Route for schooners and small vessels Anch. in lagoon.
ATOLL KATIU
PASSE PAKATA
0 1000' 2900' ½
Approx. Scale n.m.
144°30'W
P. Pakata
See detail above
KATIU
16°30'S
145°00'W
FAAITE
TAHANEA
P. Motu Puapua
P. Teavatapu
P. d'Otao
See detail next page
N
Not to be used for navigation
17°00'S
See detail next page
Boat Pass
Passe Nord Ouest
Harekupenga
MOTUTUNGA
45°00W
144°30'W

TAHANEA

Seven miles southeast of Faaite is the atoll of Tahanea. It is roughly rectangular, 25 miles long, and has islands scattered fairly well around its perimeter. Those on the north side are larger and are well covered with palms. Three passes lead into the lagoon, all on the NE side and all close together. There are many coral reefs, visible and awash, in the lagoon, but in good visibility a vessel can find deep water routes between them.

Passe d'Otao is about 5 miles from the eastern end of the atoll. It is the narrowest of the passes and can only be used by small vessels. The village of d'Otao is on the eastern side of the pass, but two large coral heads block off this side except for a narrow passage useful only to local boats. The straighter, western passage which has a least depth of 3 fathoms, can be used by yachts. However, this pass is generally preferred for leaving the lagoon rather than for entry. Although there are several houses, a new church, and a cistern in the village of d'Otao, the island is uninhabited for seven months of the year.

Passe Teavatapu is the central and main pass of the three. It lies about 2 miles westward of Passe d'Otao. It is the deepest, wth a least depth of 6 fathoms and is very wide and clear, being almost 1,500' across. The width and depth of the pass can lead to swell and surges coming well into the opening, and this has tended to give the pass a poor name. But there is no difficulty in using the pass if care is taken and the best time for entering with a reduced sea is chosen. Steering down the center line gives a yacht plenty of room for maneuvering.

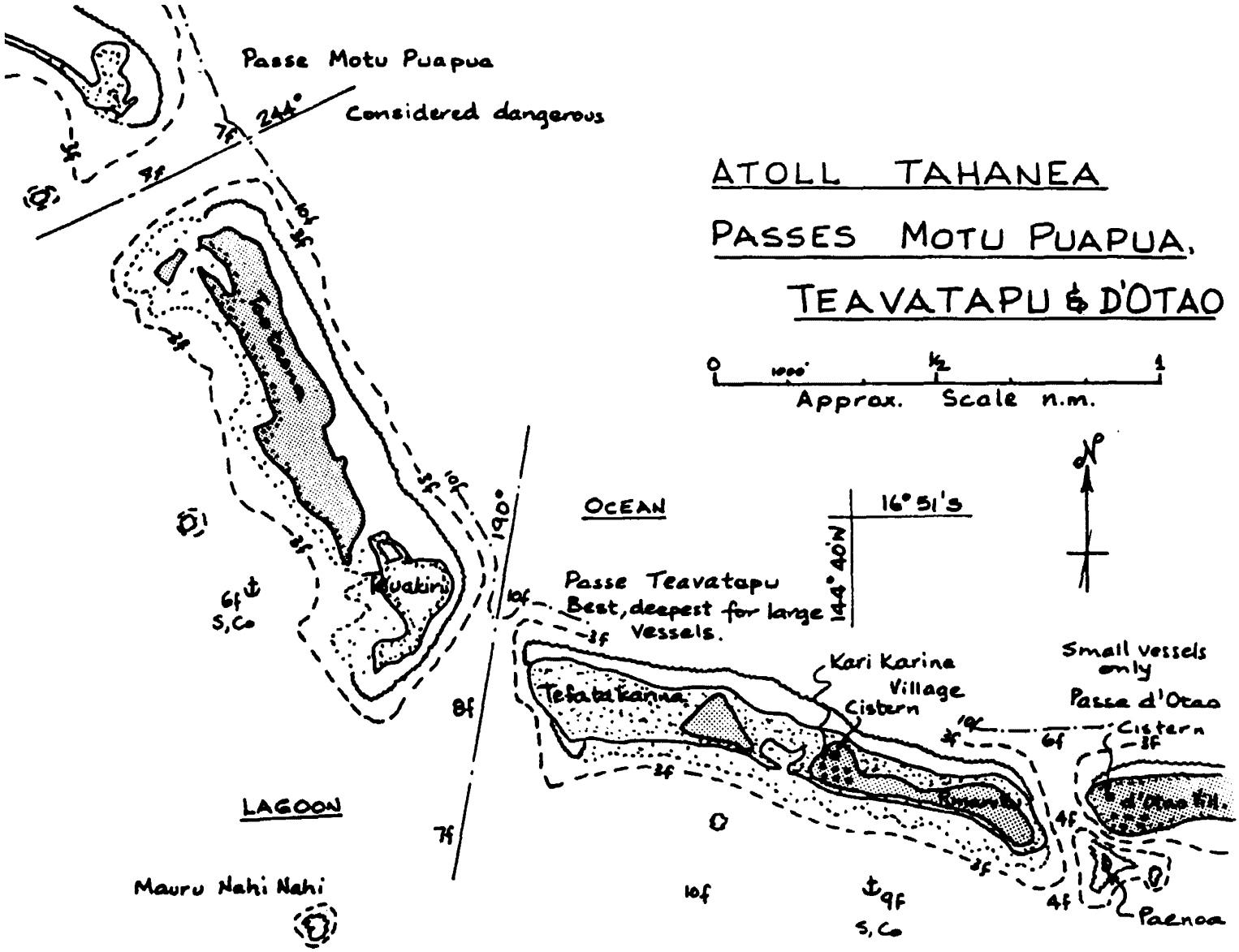
Anchorage can be taken to the east or west of this pass. The western anchorage is in the bight formed by Teuakiri islet and a coral reef. Good anchorage can also be found off the village of Kari Karina on the eastern side. To enter the anchorage the vessel turns between the island and Mauri Nahi Nahi reef (which lies south of the centerline of the pass).

Passe Motu Puapua is one mile north of Teavatapu. It is fairly deep, and about 650' wide, but a coral bar at its inner end tends to make the pass dangerous. Although the bar has 4 fathoms over it, most skippers prefer the more open entrance through Passe Teavatapu.

MOTUTUNGA

This almost circular atoll lies 10 miles ESE of Tahanea and 34 miles south of Katiu. It is very low, having several treed islets on its northern side. There is a passage which appears to be a pass one mile east of the NW end. Although it is called Passe Nord-Ouest it is actually a cul-de-sac. There is a village with a wharf in this opening on the island to the east. Vessels can tie to the wharf within the pass, gaining good protection with surprisingly little effect from the current. An underwater reef blocks off the inner end of the pass and thus there is no passage into the lagoon.

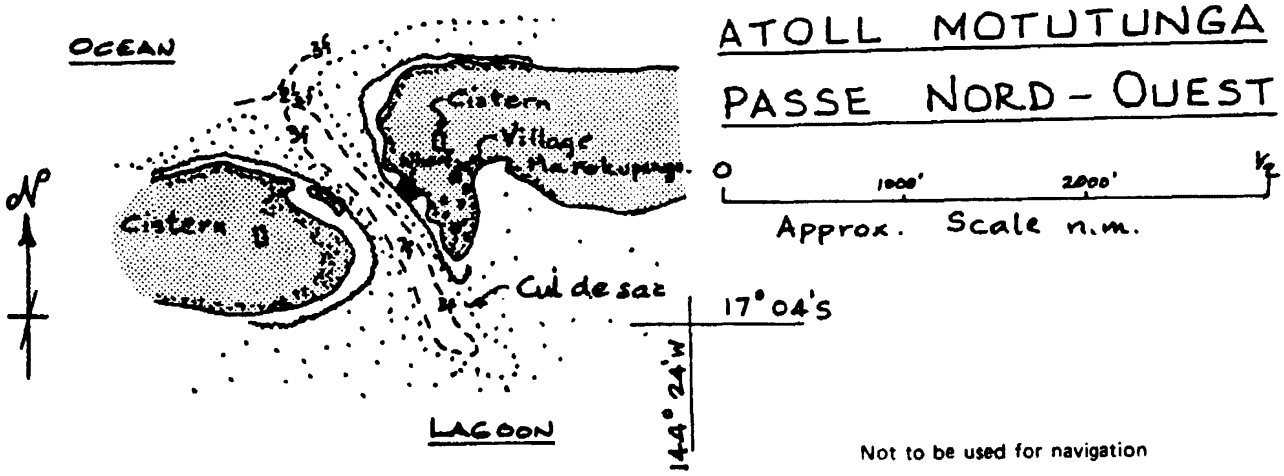
There is a small boat passage into the lagoon about 2 miles ENE of Passe Nord-Ouest, but it is not useable by yachts. It is used by local boats when the village is inhabited during the copra collecting period.



ATOLL TAHANEA

PASSES MOTU PUAPUA, TEAVATAPU & D'OTAO

Note different scales



ATOLL MOTUTUNGA

PASSE NORD-OUEST

Not to be used for navigation

GROUPE RAEVSKI

This group is made up of three small atolls: Hiti, Tepoto, and Tuanake. They lie to the southwest of Katiu, about 9 miles of channel separating Tuanake from Katiu. They are generally uninhabited, and though boat passages exist on two of the islands they are not practicable. Tuanake is the largest of the group, while Tepoto is the smallest, but all are less than 4 miles in diameter.

TAENGA

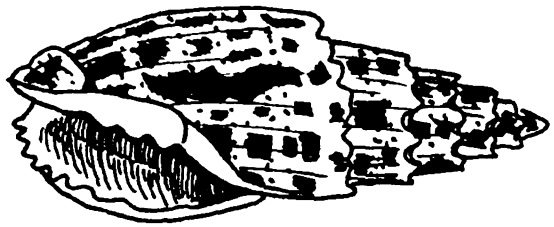
This atoll is not illustrated, but it lies about 19 miles northeast of Makemo. As with many other atolls it is rather bare on the southern side where the reef is submerged. It is a smaller atoll than Makemo, being less than half of its size.

Passe Tiritepakau is the only pass into the lagoon and it lies about 3 miles WNW of the southwest end of the atoll. Though it has some deep sections it is divided into two parts by a coral bank, Tarioi, which is shallow and dries with the tide. A bar here reduces the draft that can be taken into the lagoon. The village of Fenuapaea is located on the south side of the bank. There is a small wharf to which vessels can tie. There is enough swell coming over the submerged south side of the atoll to create an almost continuous outflowing stream, at times up to 10 knots. The wharf is out of the strongest current, and by setting a bow anchor toward the lagoon, in addition to tieing to the wharf, it is possible to moor here. The population is about 45. An average of about three yachts per year stop at Taenga.

MAKEMO

This elongated atoll is about 40 miles long and 10 miles wide at its widest point. It lies 16 miles west of Katiu. There are two passes: Passe Arikitamiro and Passe Tapuhira. The northern side of the atoll has several very long islands which are well treed with palms, but the southern side is bare and low. Since the atoll is so long this adds to the danger of any approach from the south. It also accumulates enough water from swells over the southern reef to cause very strong outgoing currents in both passes. There are many shoals and coral heads, both visible and awash, but in good sunlight these can be avoided while moving within the lagoon.

The local population is about 280 and the village boasts a dispensary, a huge cathedral, and three small stores. No fresh fruits, vegetables or fuel are available here although there are weekly flights to Papeete.

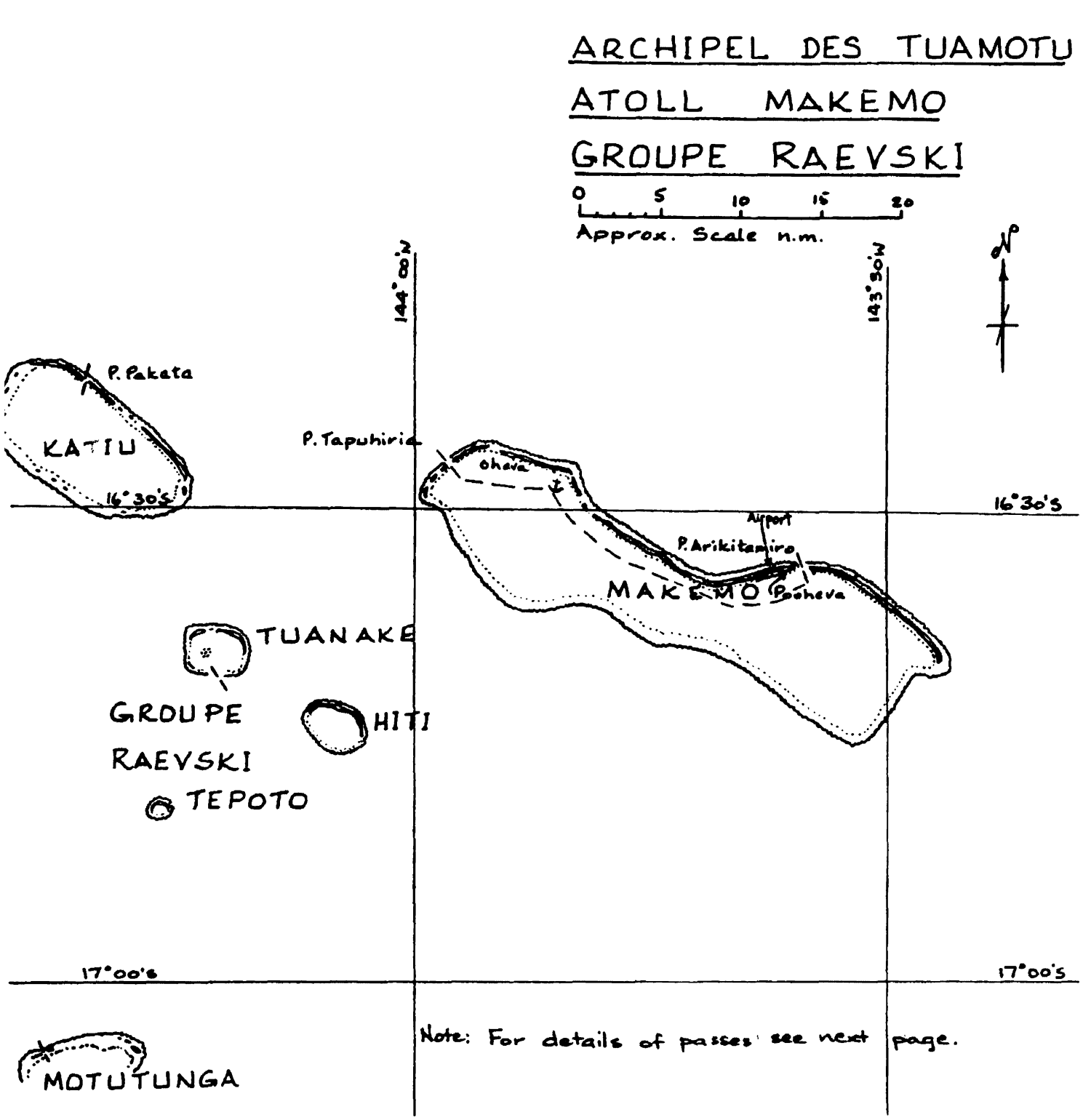


PONTIFICAL MITER (Mitra stictica Link)

ARCHIPEL DES TUAMOTU

ATOLL MAKEMO

GROUPE RAEVSKI



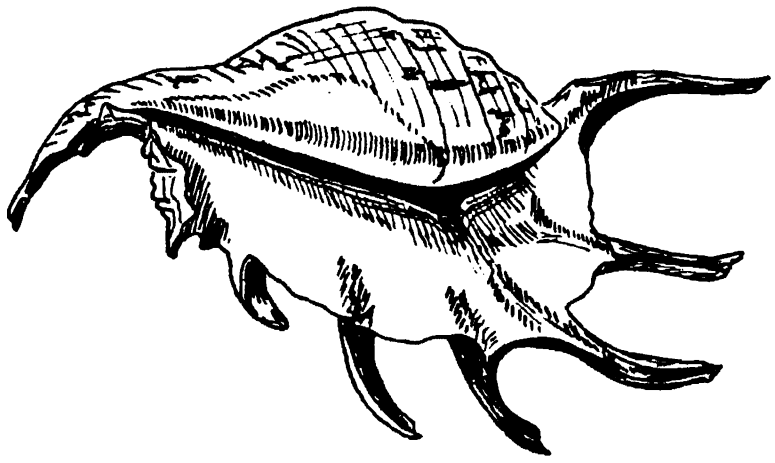
Note: For details of passes see next page.

Not to be used for navigation

Passe Arikitamiro is the deepest and clearest pass of the two. It is identified by the wide break in the palms on the northern reef about 10 miles west of the eastern end of the atoll. The pass is about 600' wide and has a least depth of 7 fathoms. At the inner end a coral reef, Rikiriki, and a coral shoal, Ekoeko, divide the channel into three. Large vessels use the center channel, passing well south of Rikiriki reef before turning to anchor behind the island to the west. Several beacons mark the passage, and also mark some isolated coral heads. However, smaller vessels can use any of the passages, though the side channels need special care. The outgoing tidal stream can reach 8 or 9 knots. The village of Pouhera lies on the western side of the pass.

Passe Tapuhiria is also deep and well marked. A visible shoal lies to the east of the entrance outside the reef and vessels awaiting a propitious time can anchor on this shoal.

Within the pass two detached reefs divide the pass into three channels. As with Passe Arikitamiro, the outgoing stream can be very strong, reaching 8 or 9 knots. It is possible to sail between the two passes inside the lagoon in good light, conning carefully. There are a few coral patches to avoid.



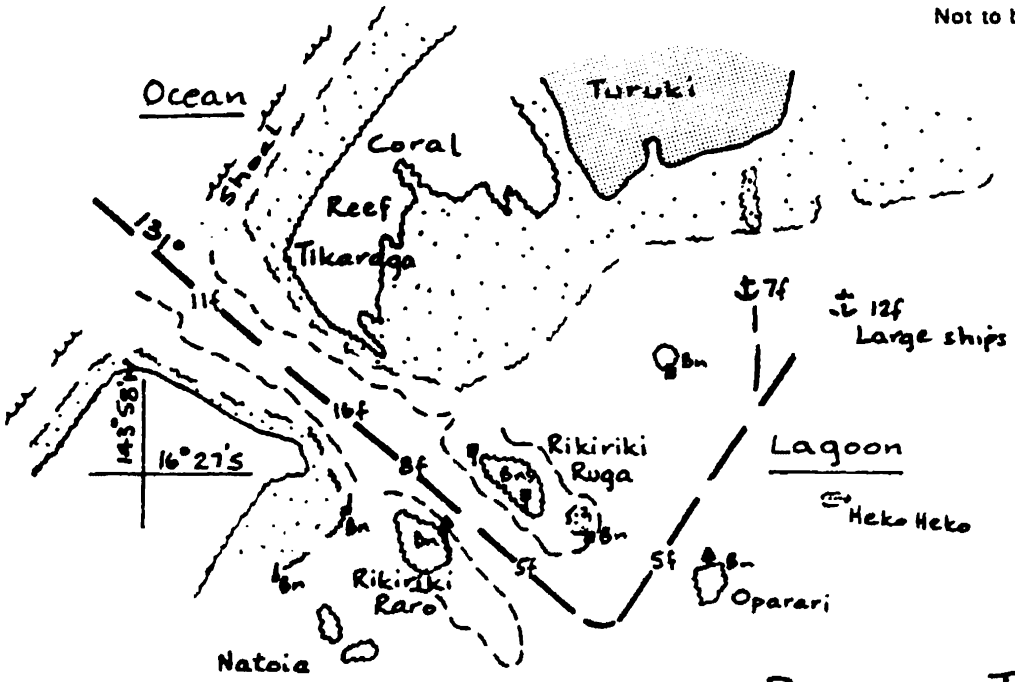
SPIDER CONCH (Lambis lambis Linne')

ATOLL MAKEMO

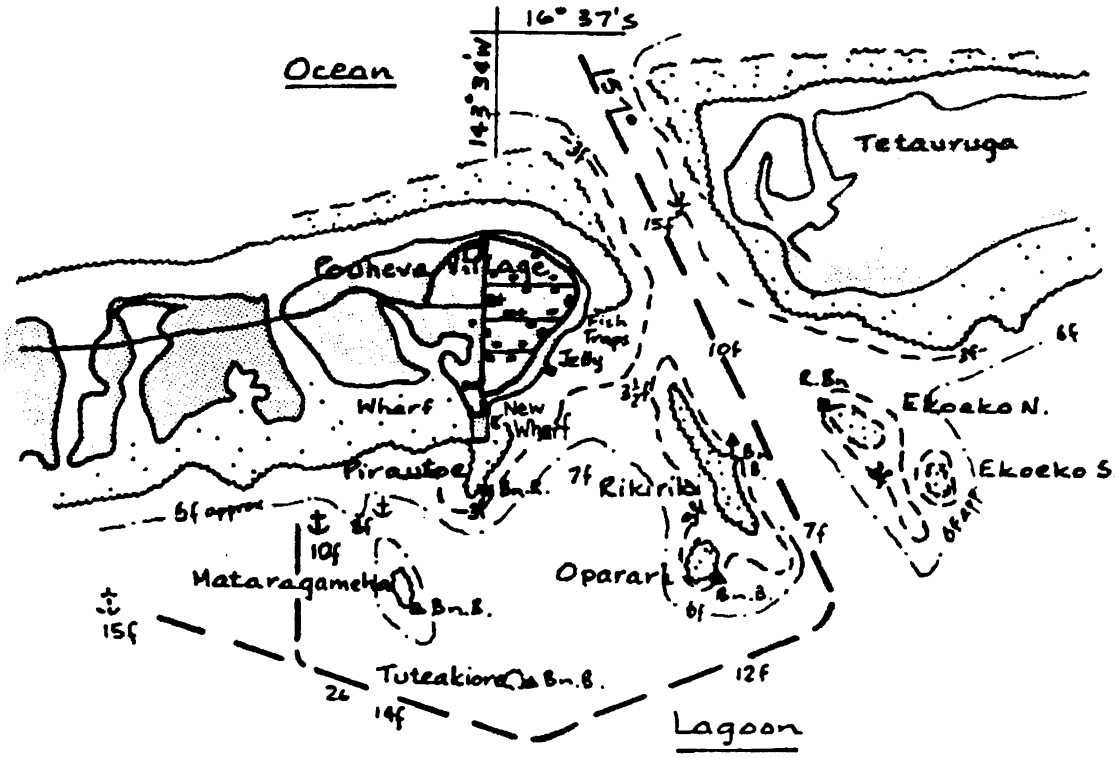
0 1000' 1/2 1

Approx. Scale n.m.

Not to be used for navigation



PASSE TAPUHIRIA



PASSE ARIKITAMIRO

RAROIA

Marv's Friend liked

Raroia lies about 49 miles NE of Makemo atoll. With its partner atoll of Takume it lies as a northeasterly spur to the line of the Tuamotu chain, in a very similar manner to the Manihi-Ahe and Takaroa-Takapoto groups. There are only a very few atolls that lie further northeast. These are Napuka, Pukapuka, Fangatau, and Fakahina (which are not described in this guide).

The current, running westward, sets on to the eastern side of Raroia. Unfortunately this side of the atoll is not as well provided with islets and palms as the western and northern sides so it can be dangerous to approach. Thor Heyerdahl's craft, "Kon-Tiki," grounded on the eastern side of Raroia, ending his adventurous voyage. The approximate location of their landing, south of an old wooden wreck, is shown on the sketch.

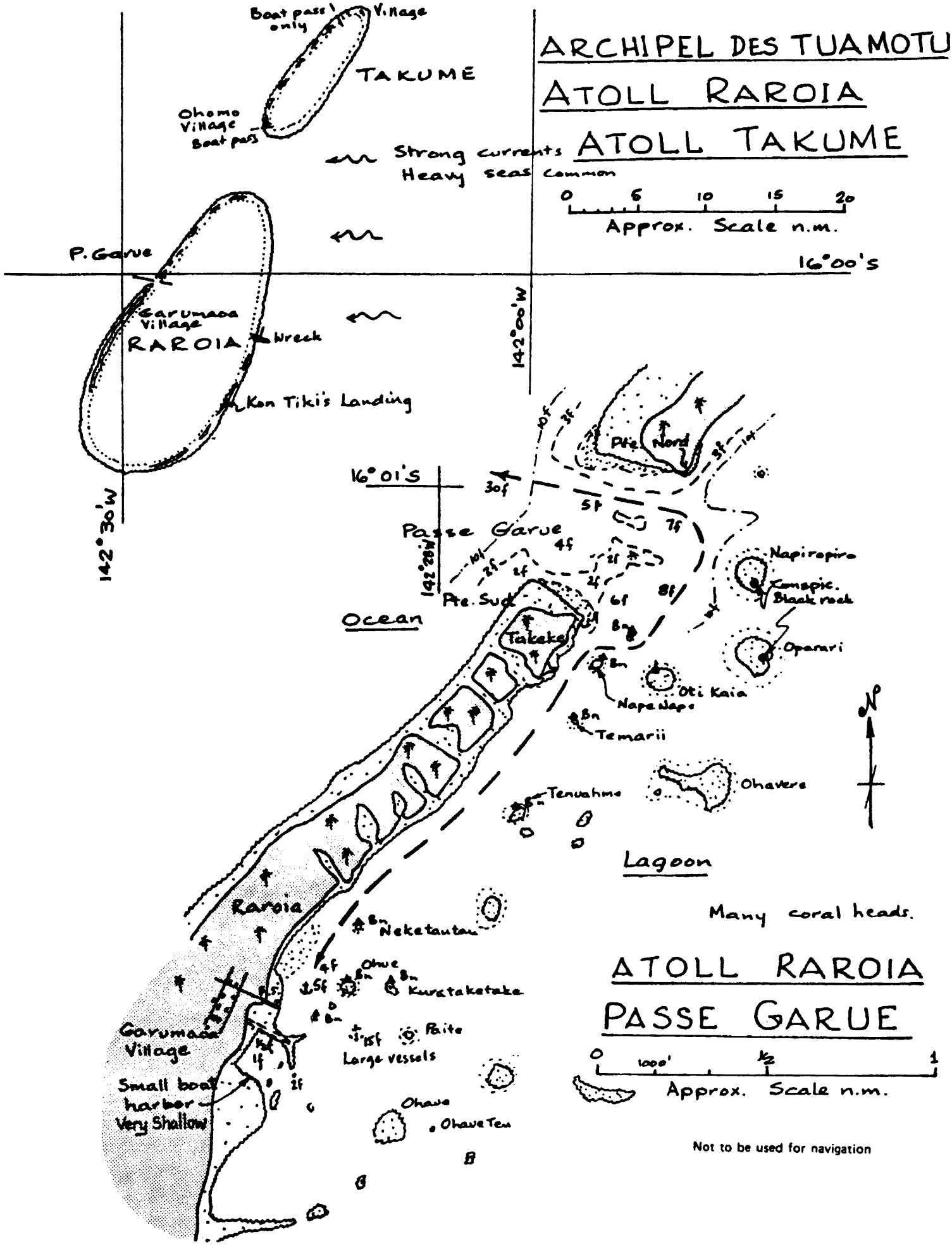
The only pass into the lagoon is Passe Garue, which lies about midway down the western side. The main village of Garumoa is on the long island southwest of the pass, but because of the mass of coconut palms it is not easily visible from offshore.

Passe Garue is wide and clearly indicated by the open water between two heavily treed parts of the atoll. The pass is deep, except as described below, and fair sized vessels can enter and leave by it. The tidal streams and currents can be as high as 8 knots and slack water is usually of short duration.

The route through the pass favors the northern side, for shoalling sand banks extend from the south side for 1,000'. A lesser bank extends southwest from the north side. The northern channel is about 400' wide and has least depths of 4 to 5 fathoms. Once through the pass there are many coral heads visible and awash, several with beacons to mark the passage to the village. The route is shown on the sketch and yachts should have no difficulty in clearing the shoals and negotiating the beacon-marked coral heads. Even if the beacons are missing the route is easy to follow. The anchorage is off the jetty at Garumoa village in 4 to 5 fathoms, sand and coral bottom. A small boat harbor lies beyond the old coral jetty, but the depths may not accommodate yachts of average draft. The population is about 65. No supplies are available here.

TAKUME

This atoll lies 5 miles northeast of Raroia. It is smaller than Raroia and there is no pass into the lagoon for yachts and larger vessels. A boat pass that is used by the islanders is near the north end of the atoll. A village is at the southwest end of the atoll, a flagstaff, and an obelisk can be seen from offshore. Landing can be done here, but the current and trade winds cause heavy seas and swells that run through the gap between the atolls and it is thus unsafe for a vessel to remain near this coral reef.


ARCHIPEL DES TUAMOTU
ATOLL RAROIA
ATOLL TAKUME
Boat pass only
Village
TAKUME
Ohomo Village
Boat pass
Strong currents
Heavy seas common
0 5 10 15 20
Approx. Scale n.m.
P. Garue
16°00's
Garumaoa Village
RAROIA
Wreck
Kon Tiki's Landing
142°30'W
142°00'W
16°01'S
Pte Nord
Passe Garue
142°28'W
Pte. Sud
Ocean
Takeke
Napiropiro
Conspic. Black rock
Opanari
Oti Kaia
Nape Nape
Temarii
Ohavere
Tenuahmo
Lagoon
Raroia
Many coral heads.
Neketautau
Ohwe
Kuvataketake
Garumaoa Village
Paite
Large vessels
Small boat harbor
Very Shallow
Ohave
Ohave Tew
ATOLL RAROIA
PASSE GARUE
0 1000' ½ 1
Approx. Scale n.m.
Not to be used for navigation

ILES GAMBIER

This group has several fair sized islands and small islets within a barrier reef, and it lies at the SE end of the Tuamotu. The largest island is Mangareva, and this name is often given to the group. The other large islands are Taravai, Aukena, and Akamaru. The islands are of volcanic origin but the reef and motus are of coral structure. The surrounding reef is, very roughly, a square set on its diagonal in a north-south direction. At the northern end the reef is partially visible and partly awash, but it is submerged at the southern sides. Three passes, one each at the NW, SW, and SE sides lead over the sunken portions of the reef into the lagoon. On any approach, especially from the north, the pointed peaks of Mont Duff, 1,447', and Mont Mokoto, 1,394', are very good landmarks. At closer distances the other islands become visible and the motus on the reef help to show its location.

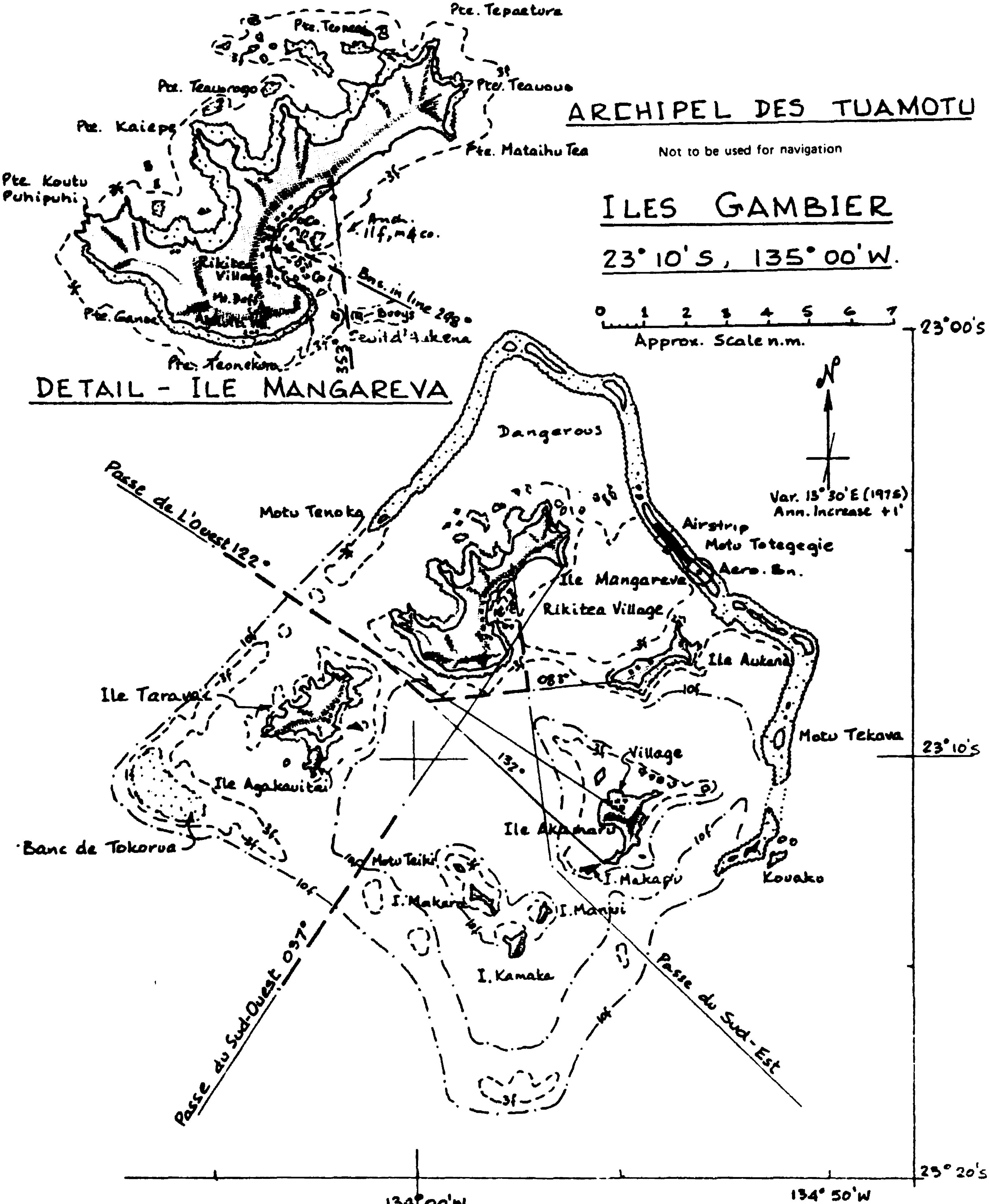
Passe de l'Ouest is the northwest entrance. It is clearly indicated by the gap between Iles Mangareva and Taravai, and at the reef by Motu Tenoko and the surf breaking over the Banc de Tokorua. The actual entrance is about two and three-quarters miles southwest of Motu Tenoko. The sketch shows the proper line leading in through the pass and the successive ranges as a vessel turns past Pointe Teonekura into the Rade de Rikitea on the eastern side of Mangareva. The inner bar between the two islands has shallow spots limiting entry to vessels with a maximum draft of 13'. Another shallow spot is the Seuil d'Aukena where the route crosses a submerged reef between two buoys. When the village of Rikitea is clearly visible, and the beacons near the wharf are bearing 298° the yacht can steer in through the coral heads into the anchorage. The anchorage is protected and has good holding in 11 fathoms, grey mud bottom.

The village of Rikitea is the largest on these islands and the local administrator and the gendarme reside here. Entry formalities should be followed as this is a Port of Entry and is within the restricted zone in the Tuamotu. Some fresh produce and water can be obtained and in emergency, some fuel. As with the islands having air connections to Tahiti the fresh bread comes in with the air service.

The story of the Jesuit priest, Honore Laval, who came to the Gambier Islands in 1834 is a frightening and typical one. Having converted and dominated the last king, Maputeoa, Laval then ruled the island as a despot, setting stringent rules and making the people erect coral stone churches, convents, and other buildings. In the process he ruined a whole culture, and caused the death of over 5,000 people, ruining the will of the people to survive. Today only a few pure blood Mangarevans are left. He is supposed to have said of his effect on the people that they had merely gone to heaven sooner. The cathedral and ruins of the archways and other buildings stand as monuments to his egomania, yet the inscription on his French donated statue reads, "His memory is blessed in these islands"!

Passe du Sud-Ouest is shown on the sketch, and is relatively straight forward leading to Mangareva. It joins the northwest route near the island. Though open it is an easy route for yachts to use.

Passe du Sud-Est is as easy and is especially suited to sailing vessels with the prevailing wind. The little islet of Makapu acts as a milestone along the route, and when past it a yacht can lay a course directly for the range leading across the Seuil d'Aukena to Rikitea. Travel across the lagoon should be undertaken with care as parts of it have not been surveyed and there are coral heads in many places and near all the routes.


ARCHIPEL DES TUAMOTU
Not to be used for navigation
ILES GAMBIER
23° 10'S, 135° 00'W.
0 1 2 3 4 5 6 7
Approx. Scale n.m.
DETAIL - ILE MANGAREVA
Pte. Tepaetura
Pte. Teauoua
Pte. Mataihu Tea
Pte. Kaiepe
Pte Koutu Puhipuhi
Rikitea Village
Dangerous
Motu Tenoka
Passe de L'Ouest 122°
Airstrip
Motu Totegegie
Aero. Bn.
Ile Mangareva
Rikitea Village
Ile Aukena
083°
Motu Tekava
Village
Ile Taravai
Ile Agakauitai
132°
Banc de Tokorua
Ile Akamaru
Motu Teiki
I. Makapu
Kouako
I. Makaroa
I. Manui
I. Kamaka
Passe du Sud-Ouest 037°
Passe du Sud-Est
Var. 13°30'E (1975)
Ann. Increase +1'
23°00'S
23°10'S
23°20'S
134°00'W
134°50'W

PITCAIRN ISLAND

Pitcairn Island lies about 860 miles west of Ile Rapa and about 330 miles SW of Iles Gambier. It is one of a group of small and widely scattered islands that includes Ducie, Henderson, and Oeno, all far off the SE end of the Tuamotu. They are a British dependancy governed from New Zealand. Except for Pitcairn, all the others are uninhabited, and all are difficult to land on. The inhabitants of Pitcairn are mostly descendants of the mutineers of the "Bounty" and of the Polynesians who accompanied them into exile. The remains of the "Bounty" lie in Bounty Bay where she was driven ashore and set afire by Fletcher Christian in order to cut all ties with the rest of the world.

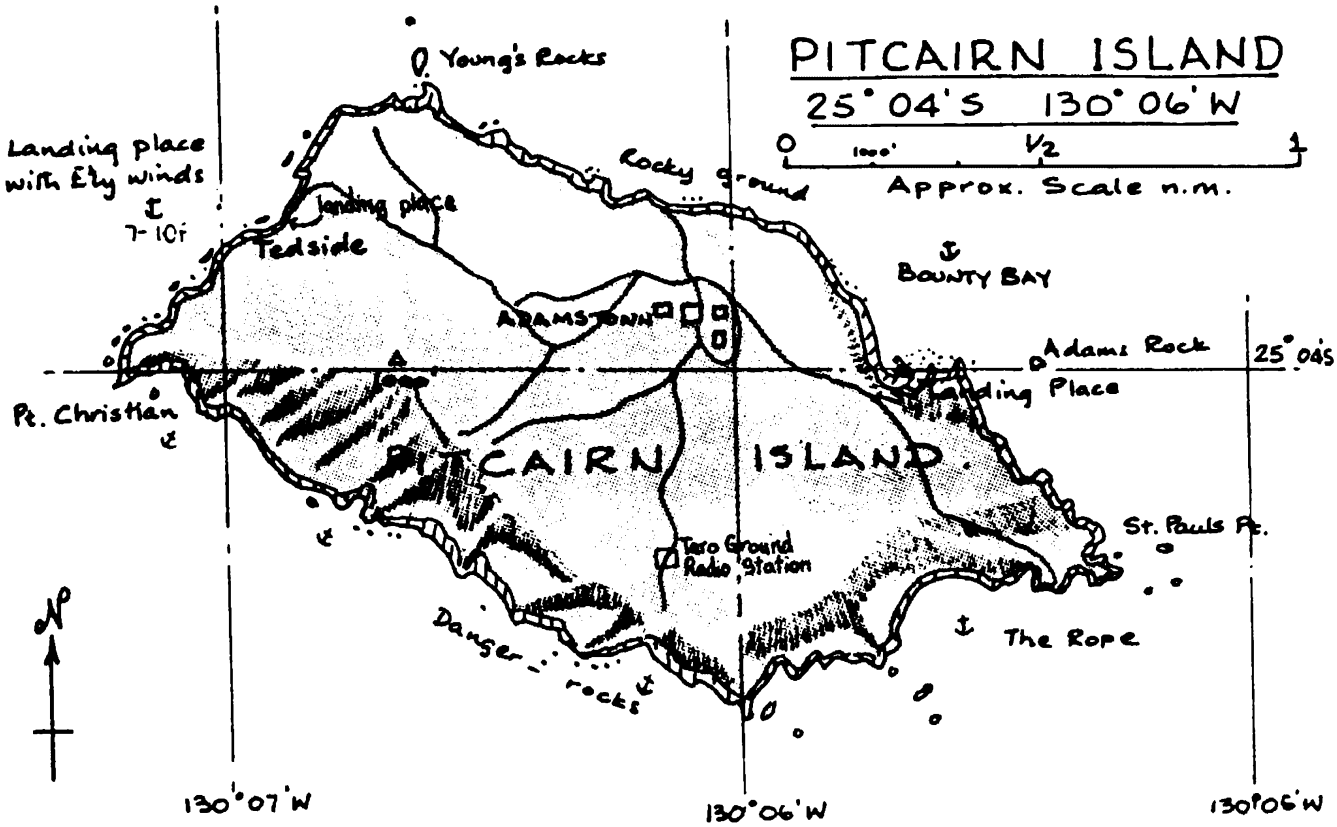
The island is high and of volcanic origin, rising to about 1,000' and almost the entire coast is composed of steep cliffs. The soil is very fertile and so all of the island is covered with vegetation. The main settlement of Adamstown (named for the last mutineer to die, John Adams), lies about midway along the NE side of the island.

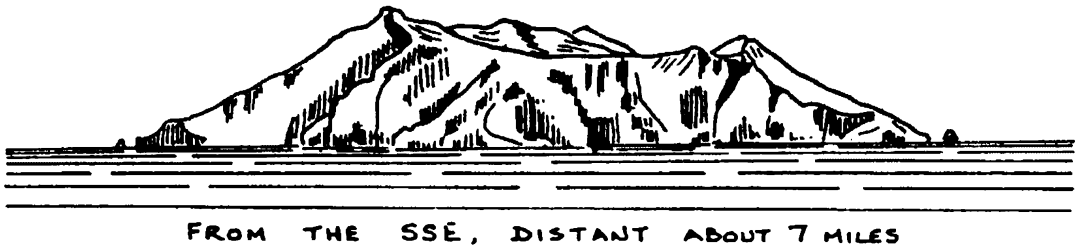
Bounty Bay is the anchorage and main landing place. It is an open bay on the NE coast, about 1/2 mile NW of Saint Pauls Point (the easternmost point). From offshore the roof of the boathouse near the water, and one or two bright tin roofs of the houses above help to identify the place. Larger vessels anchor about 1/2 mile offshore with St. Pauls Point visible past Adams Rock. Yachts and small vessels can anchor a little closer, in about 8 to 10 fathoms, sand bottom with rocky patches. The holding is not ideal and an anchor watch aboard is advisable. At times there are no safe anchorages at Pitcairn and vessels may have to heave to for several days while waiting for better weather.

There are two other anchorages. On the NW coast, Tedside can be used if the wind shifts in Bounty Bay. The anchorage is deep (7 to 10 fathoms, sand and coral) and landing ashore is possible. A trail from here leads to Adamstown. Neither Tedside or Bounty Bay can be used if the wind shifts to the northern quadrants. The last anchorage is in Down Rope bight on the SE coast, but this is almost never used by yachts as landing ashore is impossible.

Landing ashore is very difficult and should not be attempted by visitors in rough conditions. It is best to contact the islanders, who maintain a radio watch on Ch 16 and have them take you ashore in their own surf boat for your first time ashore. They are exceptionally adept at landing. It is a spectacular feat, for at the last minute as the boat rushes in, it must be swung hard to port around a stone wall and run up the concrete ramp built out from the boathouse. The first trip in their longboat is free, but the charge for succeeding trips is $10 NZ per trip. An inflatable tender with outboard works well for landing on your own in moderate conditions. A steep pathway leads up to the plateau above where the houses are located.

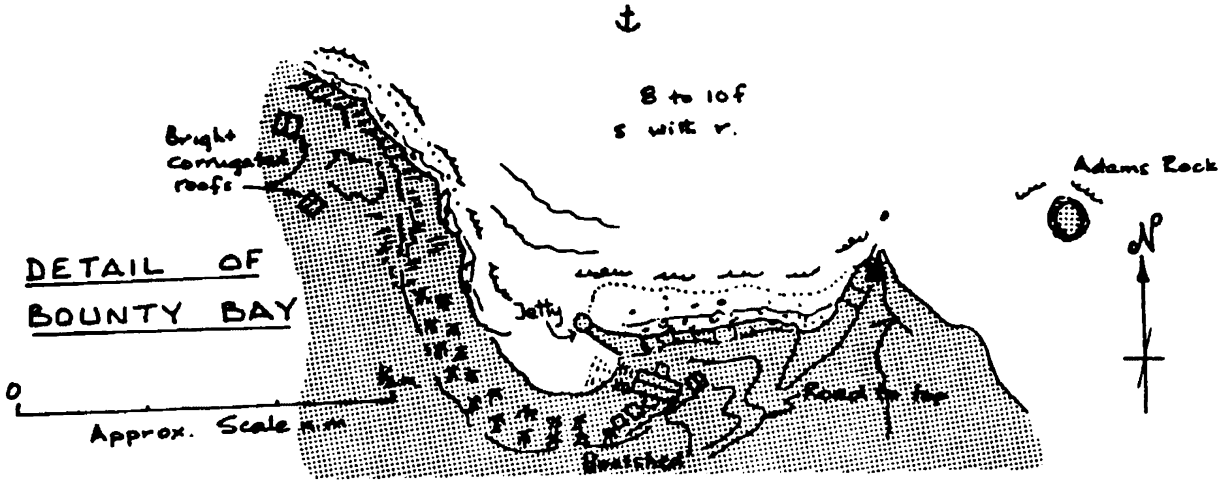
The islanders are exceedingly hospitable and will often share their surplus fruits and vegetables with visitors. A small co-op store has a limited selection of canned, frozen, and dried foods. Diesel and gasoline are very difficult and expensive for the islanders to purchase from passing ships, so it is not available for sale to yachts. Drinking water is available from a tap at the boat shed in Bounty Bay. No visas are required for brief visits, but those wishing to stay ashore for an extended period must obtain permission from the Island Council. There are no entry or exit fees.





FROM THE SSE, DISTANT ABOUT 7 MILES

Not to be used for navigation



Letters mailed from Pitcairn Island may take up to five months to reach their destination. The beautiful Pitcairn stamps with hand-cancelled postmarks are rare and become valuable with time. Wood carvings, finely crafted baskets and printed T-shirts make good souvenirs.

ISLA DE PASCUA (EASTER ISLAND)

Easter Island is a Chilean possession, although the governor is now a Rapanui, or locally-born Polynesian. Spanish is the official language, although 70% of the population is of Polynesian descent and speak Pascuan (a Polynesian dialect) when speaking among themselves.

The island is famous for its huge stone statues. It is the easternmost outpost of the Polynesian people, and is truly isolated, being 1,400 miles west of Pitcairn Island, 2,260 miles from Tahiti, and over 1,900 miles from Valparaiso, Chile. It is a volcanically formed island having several extinct volcanoes as the high points. Cerro Terevaka at 1,070' is the highest and close south of it is the crater of Volcan Rano Aroi. The island itself is roughly triangular in shape, with a length of 14 miles. It can be seen from 50 miles away, from which distance it looks like two islands.

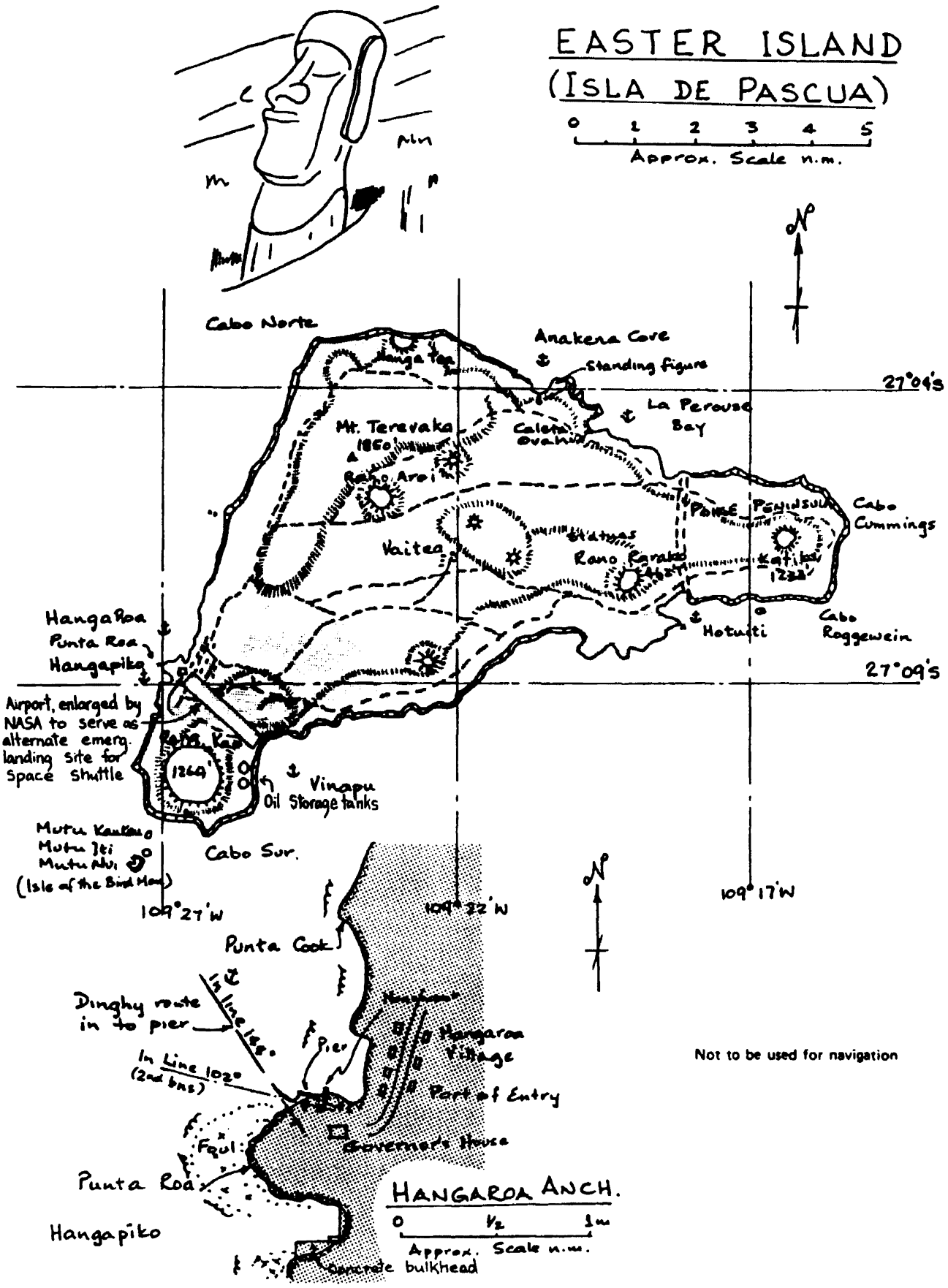
The shores are predominantly rocky and steep-to with no sheltered anchorages. Most of the bays are open, although there are a few coves with sandy beaches. The main village and Port of Entry is Rada Hanga Roa. In the summer months of October to April when the SE trades blow, the anchorage may be good. During northerly gales a vessel can be shifted to Rada Vinapu on the south coast. Anakena Cove is best in any strong west wind.

The Port Captain is an officer of the Chilean Navy and is very helpful to the few yachts that stop here. He and the officers from Health, Agriculture, and Immigration Departments board arriving yachts that anchor off Hanga Roa. A call on Ch 16 to "Maritime Gobernacion" will contact the Port Captain and the launch will come out. Several boats have been damaged by the over enthusiastic islanders who sometimes give the officials a ride to the yachts in their large, rough, and unwieldy fishing skiffs, so have fenders and fender boards ready! The officials will take care of tourist cards and clearances on board. At present, entry and exit fees and visas are not required for brief visits.

Hanga Roa roadstead is encumbered with rocky patches and foul ground. A vessel should approach it on the ranges established as shown on the sketches. The village is visible from offshore, especially the landing place where the wooden skiffs are stored on the beach. It is best to anchor outside the 6-fathom line to be clear of the rocky ground, although it is possible with extreme care to move in closer to the pier.

For yachts drawing less than 4'6" it may be possible to enter and tie up inside Hanga Piko harbor, with the permission and piloting of the Port Captain who suggests tieing the yacht in the middle of the harbor with many lines ashore in four directions. This commercial harbor is used by motorized barges that unload the supply ships which come from Chile every six months. Hanga Piko is sheltered in all but westerly winds when it becomes an extremely dangerous trap. Good weather forecasts are available at the airport meteorological office, which is within walking distance. At the first forecast of a westerly wind yachts inside Hanga Piko should either put to sea or shift to another anchorage.

Water is available at the Hanga Roa landing or inside Hanga Piko harbor although there may be a charge since it is scarce. Diesel and kerosene are available at a service station near the airport. The island has weekly air connections to Santiago, Chile and Papeete.



During the winter months there is a reasonable anchorage at Anakena Cove on the north coast which is identified by the white sand beach at its head. It is protected from all but northerly winds and landing through the surf is usually possible on the beach at its head.

ILES DE LA SOCIETE

These are the islands that come to mind at the mention of the South Seas. They are part of every cruising sailor's dreams. Although the islands are still beautiful, much has changed in the islands of Polynesia.

The islands extend over 400 miles in a WNW direction. They are divided into two sections for administrative purposes, but together form the controlling core of French Polynesia. The Iles du Vent (Windward Isles) are the southeastern group and include Meetia, Tahiti, Moorea, Tetiaroa, and Tupai Manu. The Iles Sous le Vent (Leeward Isles) are the northwestern group and include Huahine, Raiatea, Tahaa, Bora-Bora, Maupiti, Tupai, Maupihaa, Manuae, and Motu One.

With the exception of Tetiaroa and the smaller western islands, all of the islands are high, volcanically formed, and are surrounded by coral reefs. They are the the worn remnants of once tall volcanoes that now show jagged towers and various other shapes. They are the largest of the south seas islands and they enjoy an ideal climate. This made them the favored base for all the major explorers of the Pacific, beginning with the Polynesians.

Though probably seen by Quiros in 1606, it was not until the late 1700's that Tahiti became important on the evolving charts of the Pacific. Wallis in the frigate "Dolphin" anchored in 1767 at Matavai Bay during the first recorded visit. In 1768 Bougainville visited the islands briefly and stayed at Hitiaa. But it was Captain Cook's many weeks in Tahiti, observing the transit of the planet Venus in 1769 that brought the island to the full notice of the Western world. Though Cook was an ideal observer, and one unusually concerned with the effects of his visits, it was the many less scrupulous people who came after him--including the missionaries--who radically changed this culture. In 1880 these islands were taken under French protection, and by 1888 they were made part of the French nation. Discussions are going on as to independence, and in 1977 the territory was granted Interne Autonomie, or self-government. France still controls defense and to an ever decreasing degree, immigration.

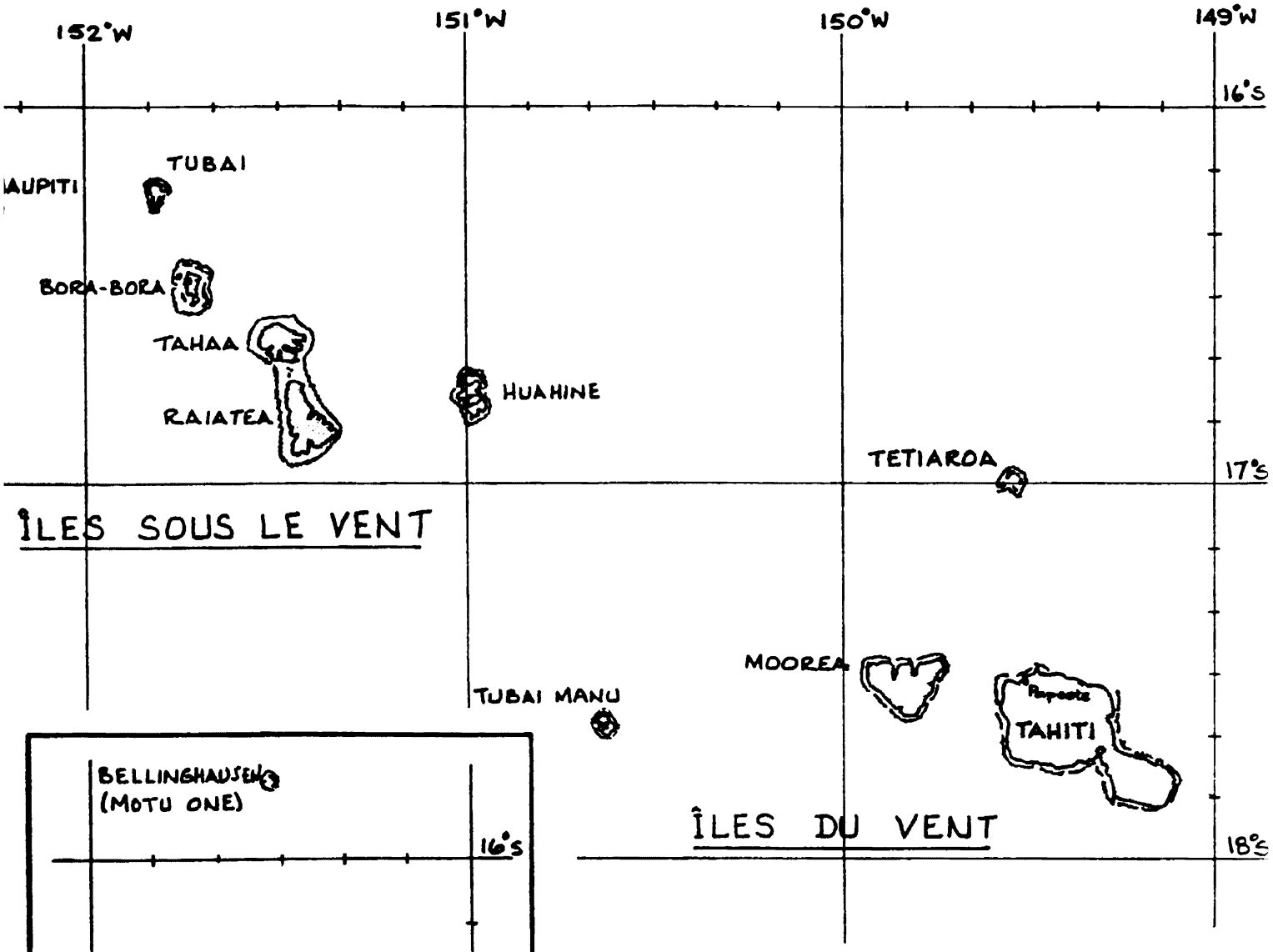
The islands lie within the southeast trade wind belt, with winds between southeast to east predominating. The trades are strongest in the winter i.e. July to September. Gales are infrequent, though in recent years there have been an unusual series of cyclones culminating in six between December, 1982 and April, 1983. Except in showers, the visibility is very good. In the vicinity of the high islands the winds are altered and affected in various ways. Land and sea breezes have greater force, and in the lee of the land there may be calms and variable winds.

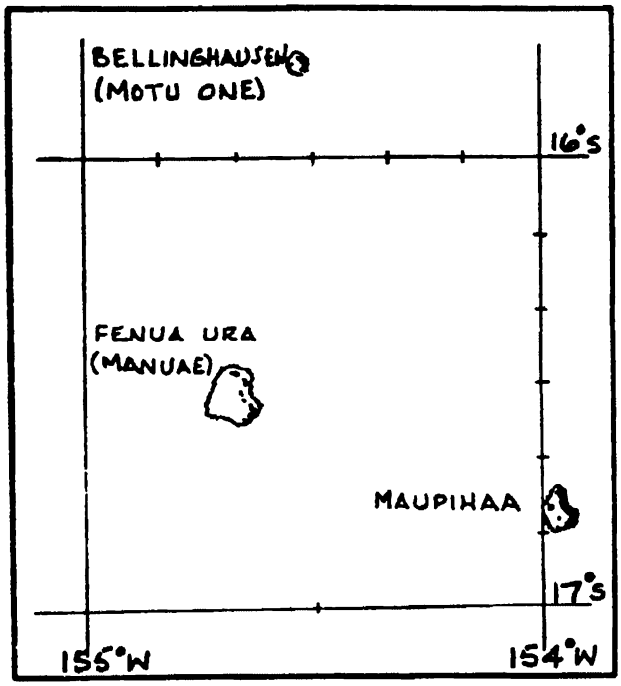
The currents follow the direction of the wind, except near the coasts. With the dominating easterly wind driving it, the current runs west at about 10 to 15 miles per day.

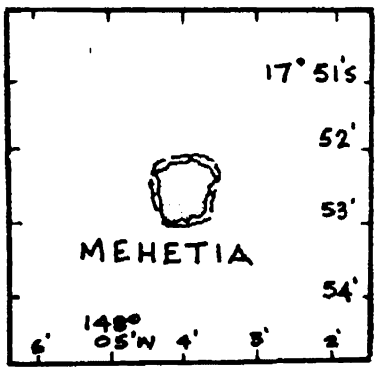
IMPORTANT NOTE: The Uniform System of Buoyage, with some special additions, is used in French Polynesia. This system of RED LEFT RETURNING is discussed on page 14 and illustrated in Appendix I.

ÎLES DE LA SOCIÉTÉ

Not to be used for navigation







ILE TAHITI

Tahiti is the largest island and easternmost of the group, with the exception of little Meetia, which lies some 60 miles further east. The hourglass shape of the island is due to the double volcano structure that once formed the island. The larger, almost circular section is the northwestern part and is called Tahiti Nui. The oval-shaped smaller section is called Tahiti Iti or the Tairapu Peninsula. The neck joining them is the Isthmus of Taravao. Both parts of the island are broken into high, spectacularly sharp peaks, that on Tahiti Nui rising to Orohena at 7,340', and that on Tairapu to Pic Roniu at 4,340'.

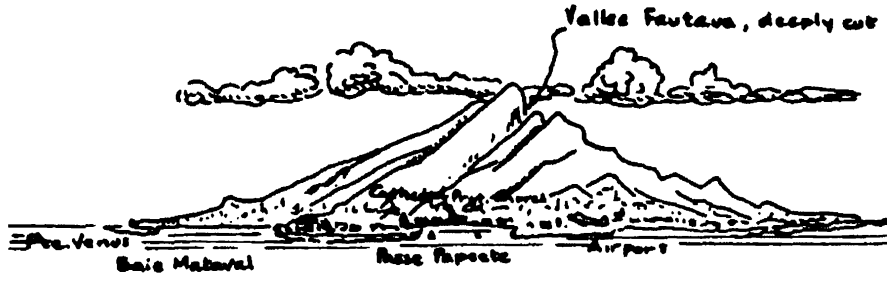
A strip of coastal plain surrounds the peaks, and it is larger on the western side. The majority of people live on this side. The mountain peaks are often obscured by clouds or mist. The valleys between them are striking because of their depth and size, and together with the peaks are used as guides to the passes through the coral reef barrier. Though visible from many miles at sea the island should be approached with care, especially at night. Since most skippers using this guide will be making their landfall enroute from the Tuamotu or the Marquises (i.e. coming from the north or northeast sector), the key feature is Pointe Venus, which should be identified before closing the coast.

The entire island is surrounded by a coral reef barrier varying from half a mile to two miles off the coast. In at least two areas the reef is submerged as a shoal. There are many passes allowing entry or exit through the reef. Several good anchorages are behind the reef, that of Papeete on the northwestern side while the next important--Port Phaeton--is to the south. Passage behind the reef and between the passes is possible at many places, and in a detailed section information on these passes and anchorages is given.

The main port and administrative center for French Polynesia is at Papeete. Details of the entry to and harbor of the port are given on the following page. Papeete is the largest city of French Polynesia, and there continues to be a steady population drift to it from the many islands of the area. It is a gathering place for yachts travelling in the South Pacific, but there is much more to Tahiti than Papeete.

A cruise around the island is not often undertaken by most skippers, who seem content to lie in Papeete. Yet such a cruise will show the island in a very different perspective to the adventurous cruiser, one that is perhaps truer to the Tahiti of old than one will see at Papeete. It is a little wetter and windier in the south and east. The anchorages are deep, but uncrowded, and the views of the Tairapu Peninsula are worth the trip.

Following the coast around the island will be described. There are several passes that are suitable for use, and though sketches are drawn of their approaches a running log of the openings and passes should be kept as a backup if clouds obscure the peaks. Most of the passes and passages behind the reef are well marked by beacons, those near Papeete even being lit. Nevertheless it is best to travel on good viewing days and to use visual methods of navigation when behind the barrier reef.



ÎLE TAHITI

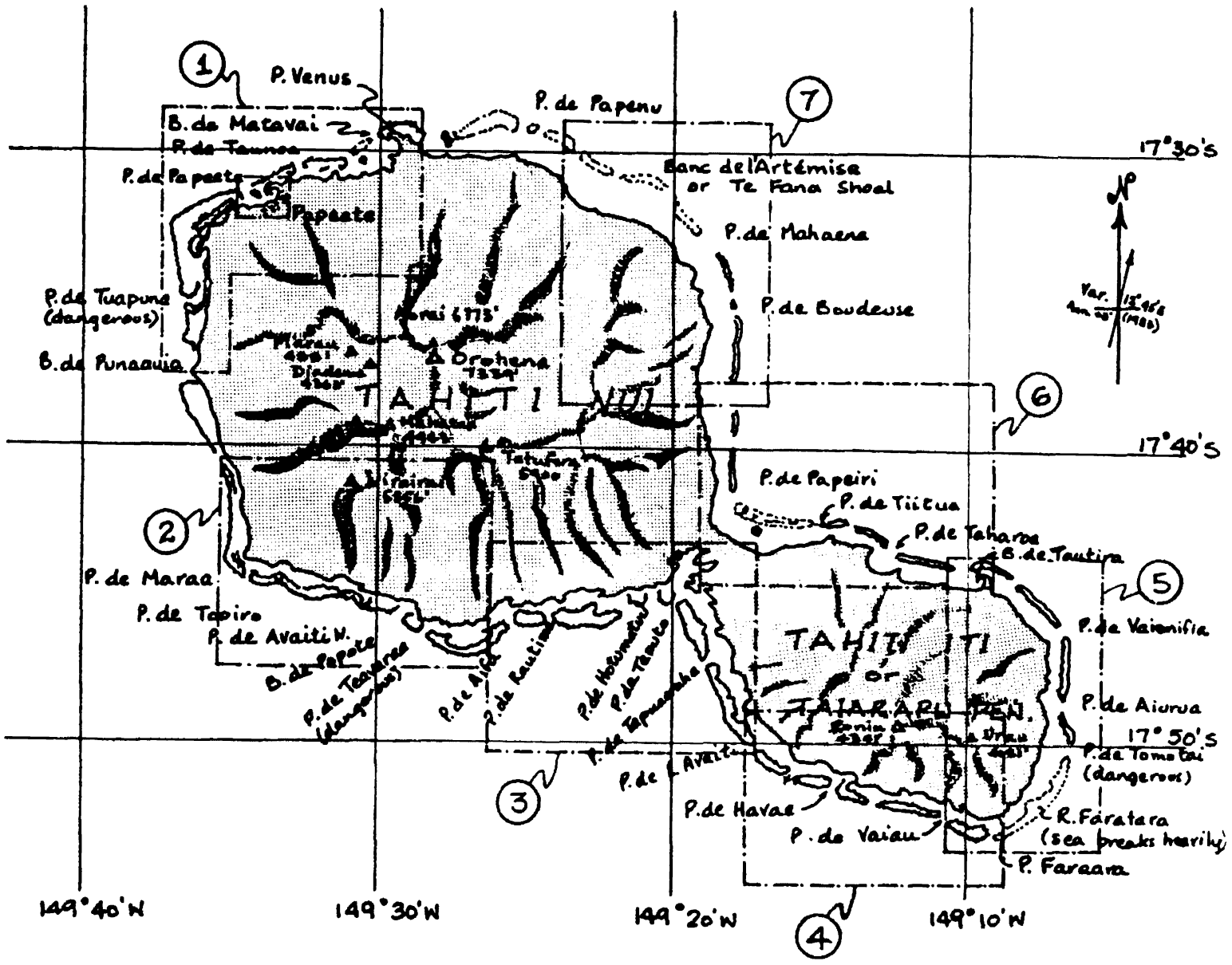
17° 30'S, 149°30'W

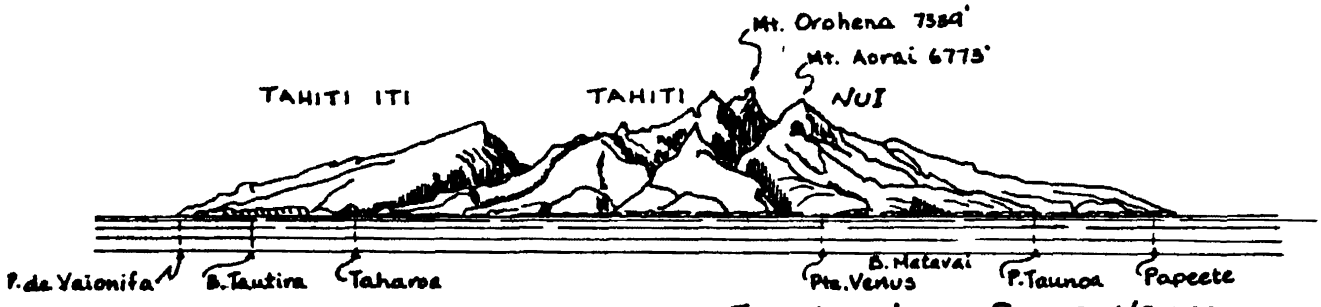
0 5 10

Approx. Scale n.m.

ILE TAHITI FROM NE, ABT. 1 MILE, APPROACHING, PAPEETE.

Not to be used for navigation





APPROACHING TAHITI APPROX. 7 MILES N. OF POINTE VENUS

PAPEETE

This is the best sheltered harbor, lying on the northwestern coast, about 5 miles west of Pointe Venus. Passe de Papeete is the opening in the barrier reef into the harbor. Though the pass appears quite wide, the actual dredged opening (which is capable of the passage of large cruise ships) is about 200' wide between the buoys. There is no difficulty for any small, handy vessel entering in good weather, even though strong currents of up to 5 knots may run out of the pass. Large vessels have more trouble in the pass because of cross-currents and the easterly wind. Under certain circumstances swells occur that may cause breakers to appear across the pass, and at such times it is best to await a calming of the seas. Outside the pass the current generally sets westward at about one knot.

At one time, pilots were compulsory for all vessels, but most yachts now enter without one. From a distance the deep cleft of Vallee Fautauna helps in identifying the approach to the entrance and the sketch shows the view of the harbor when closer in. Once the pass is seen and the buoys are visible an entry can be made on leading lights or marks, on white pylons with red bands on a bearing of 149^{o}. The city of Papeete extends along the shore for a considerable distance. The Protestant Church, on the waterfront toward the west is prominent when entering the pass. Once through the pass, the yachts along the Quai are seen, and there are leading lights and a range leading to them.

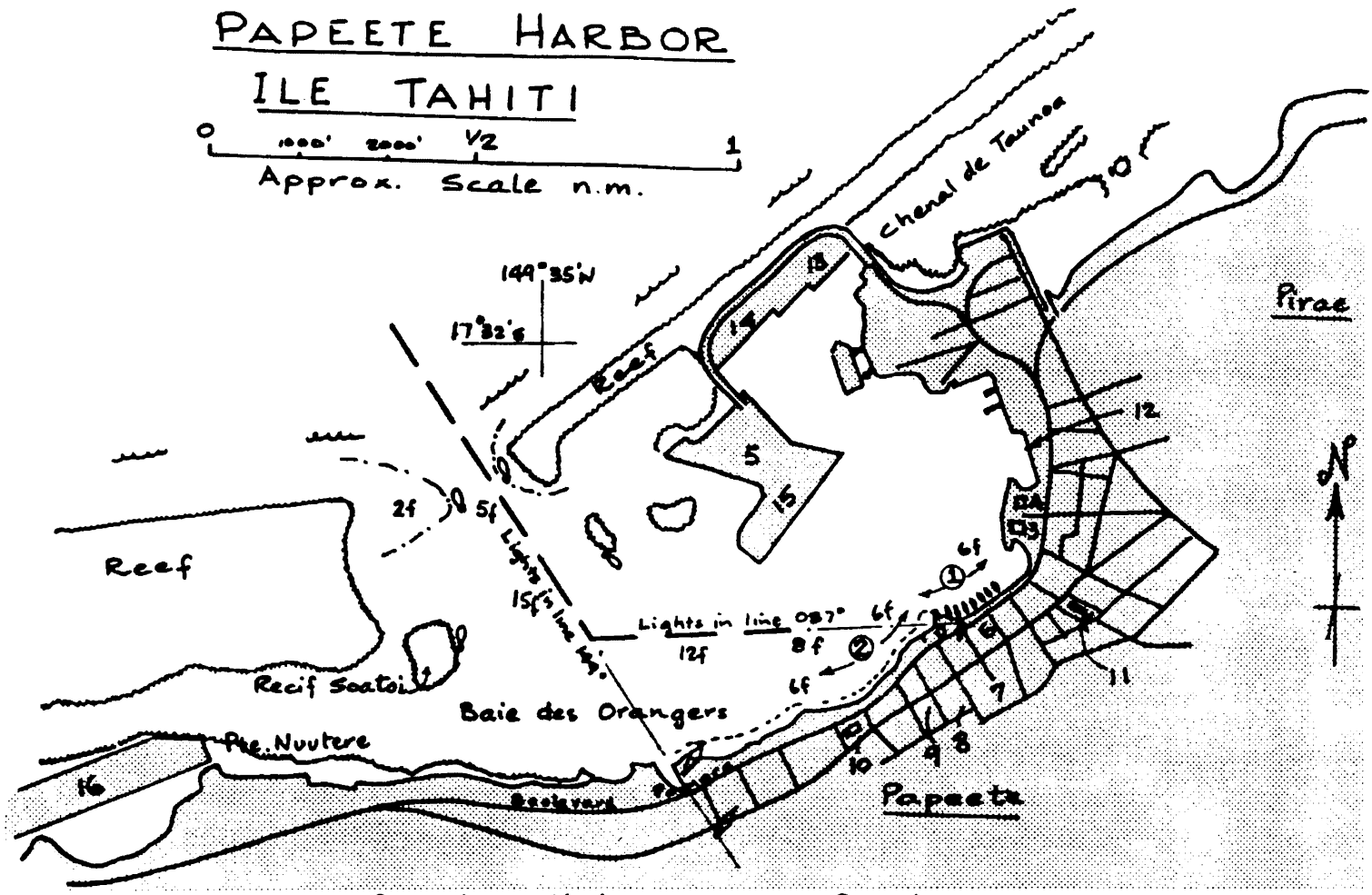
The harbor is divided for the different purposes of the vessels that use it. For yachts the important section is the Quai Bir-Hakeim and its extension. Here one ties bow or stern-to with an anchor out in the stream. At the Quai, which is faced with concrete, there are bollards to tie to and sometimes a plank to form a gangway for going ashore. Elsewhere along the extension of the quay the vessels are a little further out and use their dinghies as shoreboats.

The Harbormaster (Port Directeur) controls all yachts within the port, and in fact all around Tahiti. Anchor out in front of the Protestant Church and report to him and to the Customs (Douane). He will assign a berth to you, collect crew lists, fees, and give you instructions as to procedures to be followed. Entry fees (1986) were 1900 francs (about $16 US). Once the vessel is cleared you can find the assigned berth. Yachts are only allowed to anchor out until they have cleared in and have been assigned a berth. Neighboring boats are usually helpful in getting one settled and in passing on advice as to the best shopping places. Take on any essential fuel, water, and provisions early in your stay in case the vessel has to move to a less suitable location. Observe the rules of the port and keep the waterfront area clean. This will keep the welcome fresh for visiting yachts.

All the services of a large city can be found here. Many stores and facilities are available, including open air markets, banks, and welding, refrigeration, engine repair and rigging shops etc. The waterfront area is the most expensive. Papeete is no longer a dreamy, tropical town in the style of the old movies. It is a busy, bustling place, sometimes cool towards visitors until they make friends. The next part of this guide describes the northwestern coastal section within close reach of Papeete, where there are anchorages some distance from the crowded downtown zone.

PAPEETE HARBOR

ILE TAHITI



- 3 towers Red Lights

1	Quai Bir Hakeim - Yachts stern-to	9	Hospital
2	Overflow Yacht mooring stern-to	10	Temple Paofoi - Protestant
3	Tourist Offices	11	Cathedral
4	Port Captain, Customs, Immigration	12	Quai de Moorea - ferries.
5	Motu-Ura, main Customs area.	13	Transit Wharf
6	Post Office	14	Inter-island schooner wharf.
7	High Commissioner & Assembly	15	Ocean going ship wharf
8	Surete - Police Station.	16	Airport - airfield.

YACHTS AT THE QUAI

ILE TAHITI - NORTHWEST COAST (Pointe Venus to Pointe Nuuroa)

In describing the coast around Tahiti the guide will arbitrarily proceed anti-clockwise, beginning at Pointe Venus. As the sketch on the following page shows, a small part of the coast is not detailed, for some areas are too exposed or have no suitable anchorages.

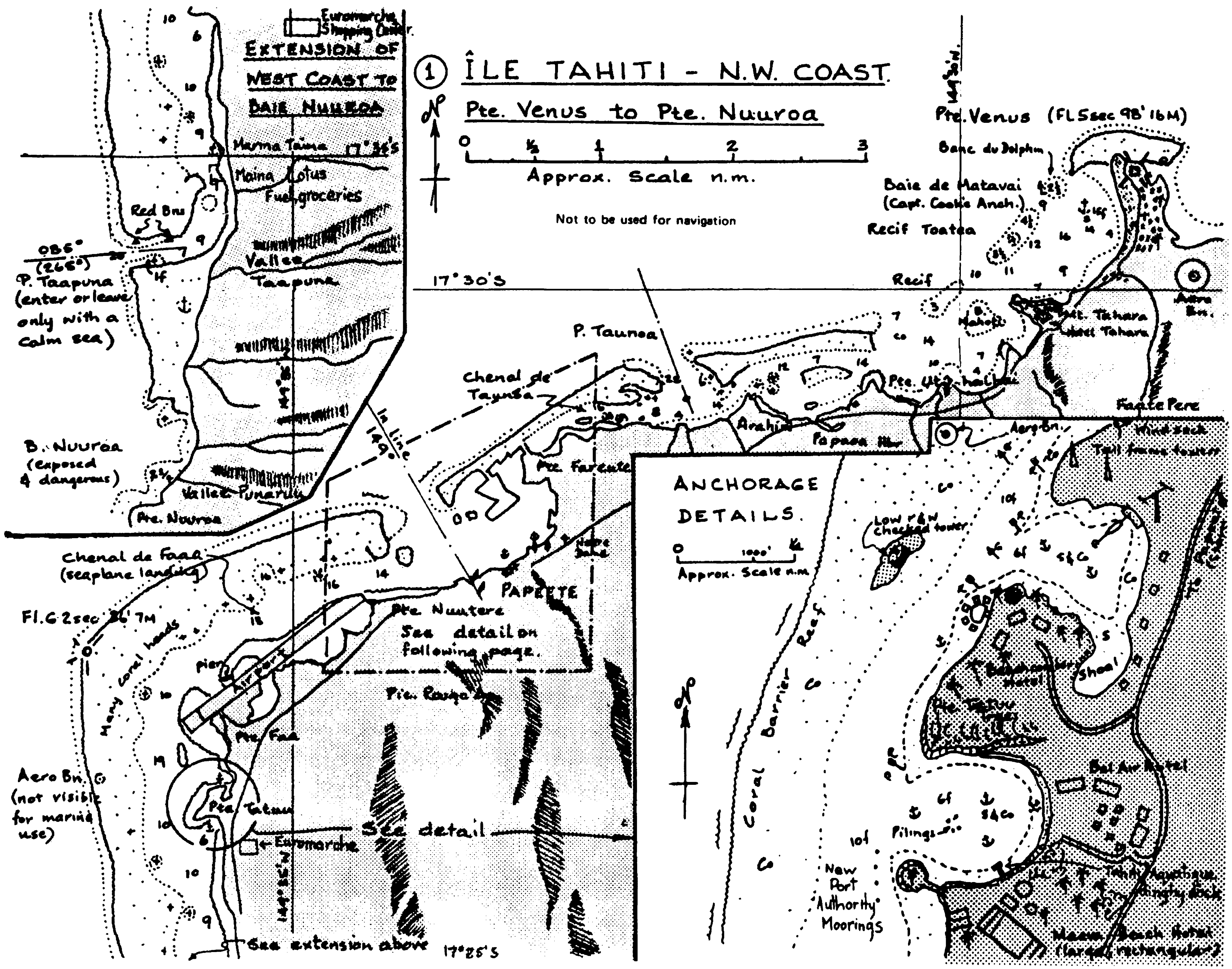
Pointe Venus is the northern extremity of Tahiti. It is a long, low point having many houses nestled in the palms and trees that extend out about a mile from the foot of the mountains. The lighthouse is a square white tower, 92' high, at the tip of the point. A radio pylon about half a mile south is another good landmark. The coral reef, awash, extends about 2,000' on each side and out from the point. A black sand beach lies along the Baie de Matavai side. In 1769 Captain Cook built a small fort on the point to observe the transit of Venus, thus giving the point its name.

Baie de Matavai lies to the west of Point Venus. This deep anchorage was used by Wallis, Cook, and later Bligh and is suited to the sailing vessels of an earlier era. The fringing reef is submerged here, but an opening with 9 fathoms near the point is the entrance. Banc du Dolphin, on which is a beacon, restricts the opening. The anchorage is mainly of historical interest.

Passe Taunoa is about 3 miles east of Pointe Venus, and leads into Taunoa and Papaoa. It is a 900' gap in the reef that is reduced by shoals on each side. There is an anchorage in the basin but it is exposed to swell coming in the pass. A slightly less exposed anchorage is near the eastern reef, in black sand. Chenal Taunoa leads westward to Papeete and marked by beacons. It is quite narrow and is not used except by local vessels.

Papeete Harbor is described separately. From the western side of the harbor the Chanel de Faaa leads behind the reef and past the airport at Pointe Faaa, after which it turns southward towards Passe Taapuna. The currents run northeasterly out of Chenal de Faaa and westerly from Taunoa, all into and then exiting from Passe de Papeete. Chenal de Faaa is marked by lighted pipe beacons, and has a least width of 200' so that it can easily be negotiated with crew aloft (at least for the first few times). Two anchoring areas that are alternatives to Papeete are along this passage. They are less crowded and more relaxed, and "Le Truck" takes one downtown quickly. The Port Authority has moorings for rent just west of the Maeva Beach Hotel. Tahiti Aquatique at the hotel has a dinghy dock, showers, and laundry service available for yachts on a weekly fee basis. Euromarche, the largest and best supermarket is 1/4 mile south of Maeva Beach Hotel. Marina Lotus is just south of Euromarche and is the easiest place in French Polynesia to take on fuel and water. It may be possible to leave your boat inside the marina if you need to fly home, although the marina isn't considered to be "hurricane proof" by local sailors.

Passe Taapuna is about 1 1/2 miles south of the afore mentioned anchorages. Although it is marked "dangerous" in the Pilot, it is quite suitable for auxiliary powered yachts. The pass is 300' wide between the reefs awash (it is actually narrower because of shoals on each side). The shoal on the south side is only 6' deep so boats should stay closer to the north side during transit. The outgoing current can be strong, and if the swell is high the pass may be covered by breakers and transit should not be attempted. Such a high swell is usually made known by the large breakers and spume on the reef as you proceed behind the fringing reef.



1 ÎLE TAHITI - N.W. COAST
Pte. Venus to Pte. Nuuroa
0 ½ 1 2 3
Approx. Scale n.m.
Not to be used for navigation
EXTENSION OF WEST COAST TO BAIE NUUROA
Euromarche Shopping Center
Marina Taina 17°34'S
Maina Lotus Fuel, groceries
Red Bn
086° (266°)
P. Taapuna (enter or leave only with a calm sea)
Vallee Taapuna
B. Nuuroa (exposed & dangerous)
Vallee Punaruu
Pte. Nuuroa
Chenal de Faaa (seaplane landing)
Fl.G 2sec 36' 7M
Many coral heads
pier
Airport
Pte. Faa
Aero Bn. (not visible for marine use)
Pte. Tataa
Euromarche
See extension above
17°35'S
In line 149°
Chenal de Taunoa
P. Taunoa
Pte. Fareute
PAPEETE
Pte. Nuutere
See detail on following page.
Pte. Rauiga
See detail
17°30'S
Pte. Venus (Fl 5sec 98' 16M)
Banc du Dolphin
Baie de Matavai (Capt. Cook's Anch.)
Recif Toatea
Recif
Mahoti
Mt. Tahara
Hotel Tahara
Aero Bn.
Pte. Utu-hai
Arahiri
Papaoa
Faaa Pere
ANCHORAGE DETAILS
0 1000' ¼
Approx. Scale n.m.
Low R&W checked tower
Aero Bn.
Wind sock
Tall frame tower
Coral Barrier Reef
Shoal
Pte. Tataa
Bel Air Hotel
Pilings
New Port Authority Moorings
Tahiti Aquatique dinghy dock
Maeva Beach Hotel (large rectangular)

ILE TAHITI - SOUTHWEST COAST - (Pointe Maraa to Pointe Mahaitea)

Between Pointe Nuuroa and Paea the coral reef closes in on the coast, thus making Baie Nuuroa so exposed that it should be passed by. The immense gorge of Vallee de Punaruu extends back into the mountains and is a good landmard from seaward. This part of Tahiti is one of wealthy homes and estates. Much of the coastline is blocked off to public access by these homes.

The barrier reef begins again at Pointe Nuuroa, and by Pointe Maraa it widens to about 3/4 of a mile. At Pointe Maraa, a low point, the coast turns eastward. There is no break in the reef in this section.

Passe Maraa is the entry into a small bay at the point. About 1 mile east is another pass, Passe Topiro, which should not be attempted. Passe Maraa is the westernmost, a steep hill on land lying between the two passes. Shallow spits extend out from both sides to reduce the actual entrance but the pass is clear and can be easily entered along the centerline. Beacons mark the channel. The current sets westerly across the pass and should be taken into account. Under certain conditions in the winter season when the swell is SW'ly, breaking seas appear across the entrance. At these times the pass should not be attempted. Within the pass anchorage can be taken off the small stream near the point or in front of the steep cliff.

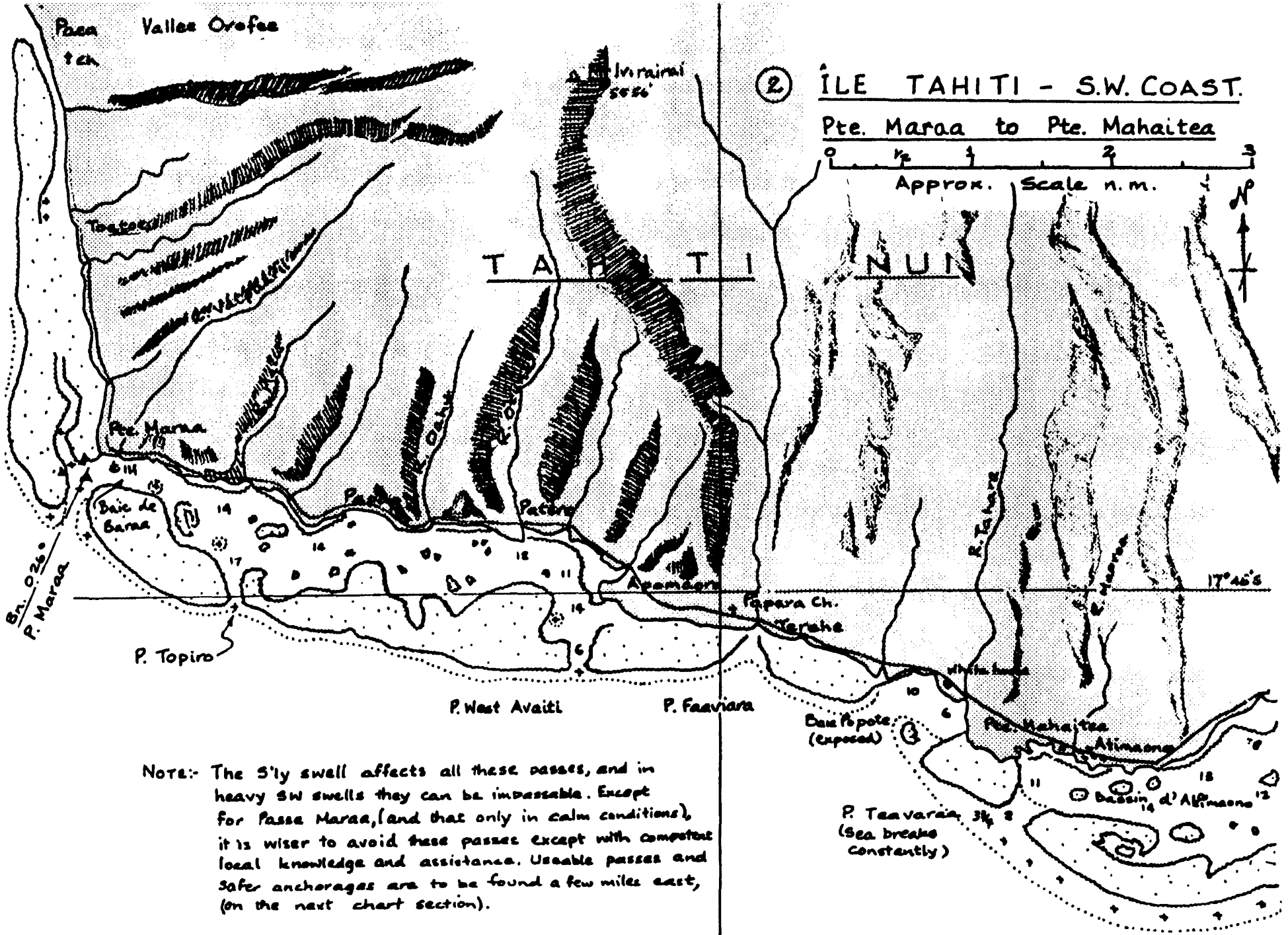
Several basins are formed behind the barrier reef over the next 3 miles. In good seeing conditions it is possible to thread a route into these basins from the basin at the point, but it is necessary to leave again by Passe Maraa. Both Passe Topiro and Passe West Avaiti (which appear to open through the reef) are shallow and have coral heads which make them dangerous. If there is any heavy swell they can be traps.

The remainder of the coastal reef in this section does not have any useful anchorages or passes, though they will be described so that a running check on position can be kept. As the peaks which are often used to define a line through the passes are sometimes obscured such a running check acts as a good backup. On the south coast the air seems more humid and the trees come right down to the shoreline. The barrier reef is broken up in some places, but in general it extends out about 2,000' from the shore.

Passe Faarearea is an open boat passage opposite Terehe village, and is used only by small local craft. The next large opening is Baie Popote, about 2 miles east of Passe West Avaiti, but the bay is open to the swell, particularly the SW swell of winter and so it is not a useful stop.

Passe Teavarae is a gap in the reef about 900' wide, directly south of Pointe Mahaitea. This point is the highest and most clearly defined of the relatively low points along this coast. A white building to the north assists in defining this point. But though Passe Teavaraa has a depth of 2 fathoms the swell and surge often cause breakers and lumpy seas across it. Thus it is dangerous to cross.

Note that in this and in following sections the apparently wide passes are reduced in actual width to a narrower useable (deep) section. The breakers that occur across these shallows usually mark the edge of the deep and true portion of a pass. In a few cases the spits are deep enough so that breakers do not occur, and so no warning can be seen. Passes should be entered carefully, especially those slanted towards the coastline, but in the majority of cases a centerline route takes one clear of dangers. Of course, specific dangers will be described.



(2) ÎLE TAHITI - S.W. COAST.

Pte. Maraa to Pte. Mahaitea

NOTE:- The S'ly swell affects all these passes, and in heavy SW swells they can be impassable. Except for Passe Maraa, (and that only in calm conditions), it is wiser to avoid these passes except with competent local knowledge and assistance. Useable passes and safer anchorages are to be found a few miles east, (on the next chart section).

Not to be used for navigation

ILE TAHITI - SOUTH COAST (Passe Aifa to Pointe Patoa)

After Passe Teavaraa the reef bulges out to extend almost 1½ miles offshore. A good natural basin lies behind it, but one must weather the bulge to reach Passe Aifa which is about 2 miles to the east before the reef can be entered.

Passe Aifa leads directly into Baie D'Aifa from thence westward into Baie d'Atimaono which is behind the bulge of the reef. The pass has similarities to Passe de Papeete, and it has an apparent width of 1,000' reduced by shoals on both sides to a bare 300' wide at the center. A small wooded islet, Ile Mapeti, the first to appear along the coast, lies on the reef on the eastern side of the pass. A small sandy cay is on the reef on the western side. Between them and in the passage are three small reefs, awash, leaving sufficient room for a passage. Passe Aifa can be used easily in good weather, and anchorage taken in the lagoon in about 10 fathoms. Enter the pass on a bearing of 317° aiming at the small sandy cay, and cutting close to the eastern side of the reef. When the south side of Ile Mapeti bears about 040° turn northward to pass the three small reefs to port, and a shallow 3-fathom patch ahead to starboard. Then your choice of anchorage determines which way to proceed.

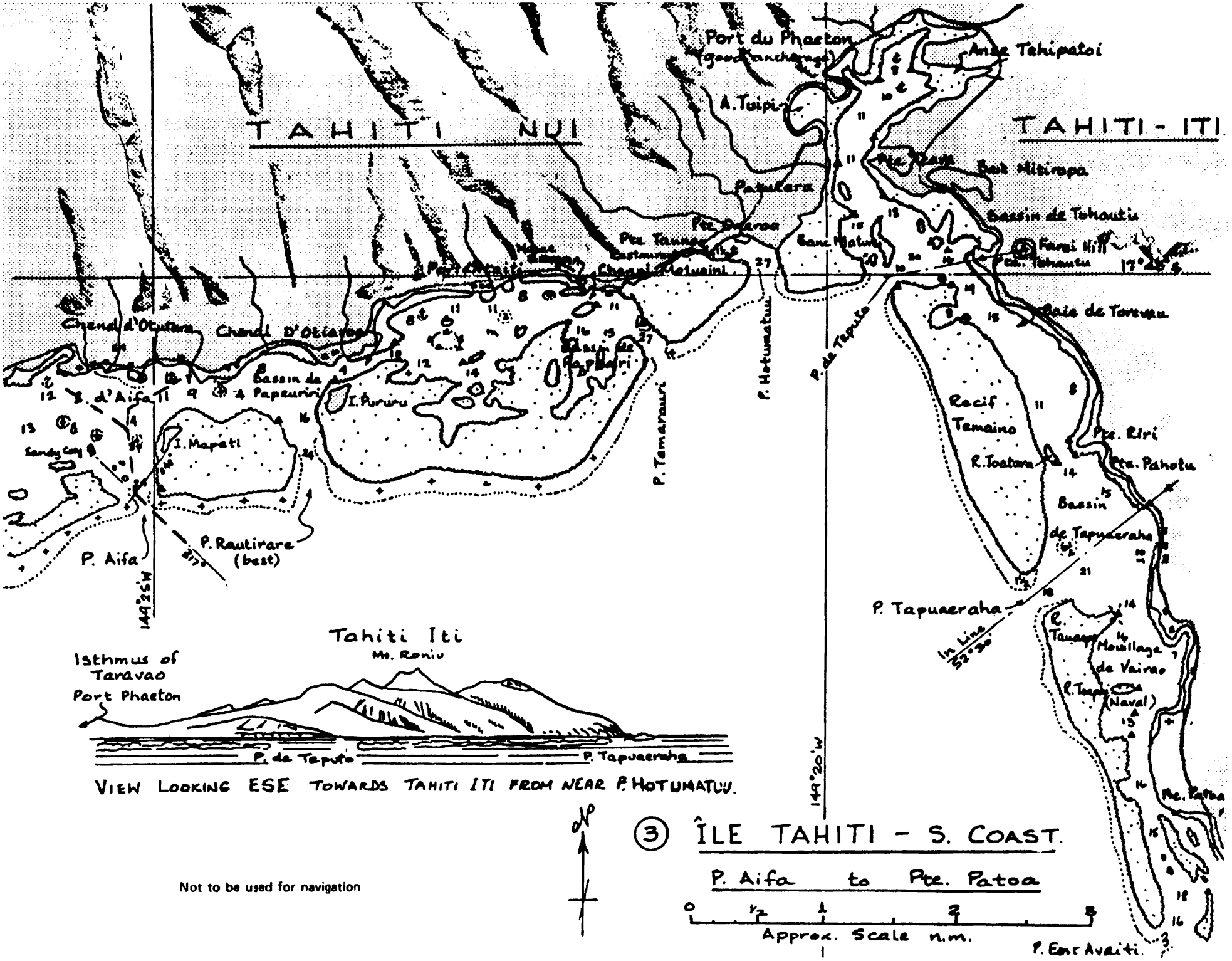
Passe Rautirare is the best of the passes of Tahiti in that it lacks dangers and has sufficient depth. It is about 900' wide and leads into the Bassin de Papeuriri. Ilot Pururu (which is larger than I. Mapeti) stands on the eastern reef well back from the breakers. The best place for an anchorage is near I. Pururu in good holding, black sand bottom. However, the pass is so clear and open that in strong winds it does not provide as good a shelter as other less ideal passes give.

Chenal d'Otiaroa leads from the Bassin de Papeuriri to the wider space of Port d'Ataiti. The channel is only about 150' wide but beacons mark the route and the passage can be easily accomplished with care. Anchorage is southeast of the village in about 8 to 10 fathoms. Port d'Ataiti is also connected on the east by Chenal Motuoini to Bassin de Papeari, again by a narrow 150' wide channel which is marked by beacons. This latter basin can also be entered or left through a pass in the fringing reef, Passe de Temarauri, which lies 3 miles east of Pointe Rautirare. The pass has some shoals and reefs along its eastern side but can be traversed in good visibility.

Passe de Hotumatuu is the next pass, about a mile east of Pointe de Temarauri. It leads into the cul-de-sac of Port de Paul. Anchorage is available for small vessels off the restaurant on Pointe Taunoa (tucked in the niche behind the reef to the west). A small landing wharf is near by, but patches of coral which have to be avoided in reaching the anchorage also prevent a vessel from mooring to it.

Passe de Teputo is one of the entrances that lead into Port Phaeton. Within the opening a large reef--Banc Matuu--divides the pass into two--Passe de Matuu on the west and Passe de Teputo which continues along the eastern side. Passe de Matuu is encumbered with reefs and shoals, while Passe de Teputo is direct and clear. Beacons mark the channel. Very good anchorage is obtained at the head of the inlet that forms Port Phaeton which is almost 2 miles into the isthmus.

Passe Tapuaeraha is about 3 miles south of Passe de Teputo and leads into Bassin de Tapuaeraha, and thence northward to Port Phaeton. The Pilot recommends it for larger vessels, but for yachts it is not especially superior. However, it does lead southward into Mouillage de Vairo, where there is a naval base from which travel further south can continue behind the reef to Passe East Avaiti.


TAHITI NUI
TAHITI - ITI
Port du Phaeton
Anse Tahipatoi
A. Tuipiri
Papuara
Pte. Tauaa
Pte. Patoa
Baie Mitirapa
Bassin de Tohautia
Farai Hill
Pte. Tohautia
Baie de Toreau
Chenal d'Otutara
Chenal D'Otiarapu
Bassin de Papeuriri
I. Ururu
I. Mapeti
sandy cay
P. Aifa
P. Rautirare (best)
149°32'W
P. Tamarauri
P. Hotumatuu
P. de Taputo
Recif Temaino
R. Toatara
Pte. Riri
Pte. Pahotu
Bassin de Tapuaeraha
P. Tapuaeraha
In Line 52°-90°
Mouillage de Vairao
R. Taapuna
(Naval)
Pte. Patoa
149°20'W
P. Est Avaiti
Tahiti Iti
Mt. Roniu
Isthmus of Taravao
Port Phaeton
P. de Taputo
P. Tapuaeraha
VIEW LOOKING ESE TOWARDS TAHITI ITI FROM NEAR P. HOTUMATUU.
dlp
Not to be used for navigation
③ ÎLE TAHITI - S. COAST.
P. Aifa to Pte. Patoa
0 ½ 1 2 3
Approx. Scale n.m.

ILE TAHITI - SOUTH COAST (Pointe Patoa to Pointe Fareara)

This section of the coast forms the southwestern and southern sides of the Taiarapu Peninsula or Tahiti Iti. The land is scored into peaks and valleys making for a fantastic skyline, and rising to a high plateau at the center of the island. The barrier reef continues around the shore with several useable passes leading to anchorages. Since the peaks are often in cloud, a running count of the openings in the reef can provide an additional identification check.

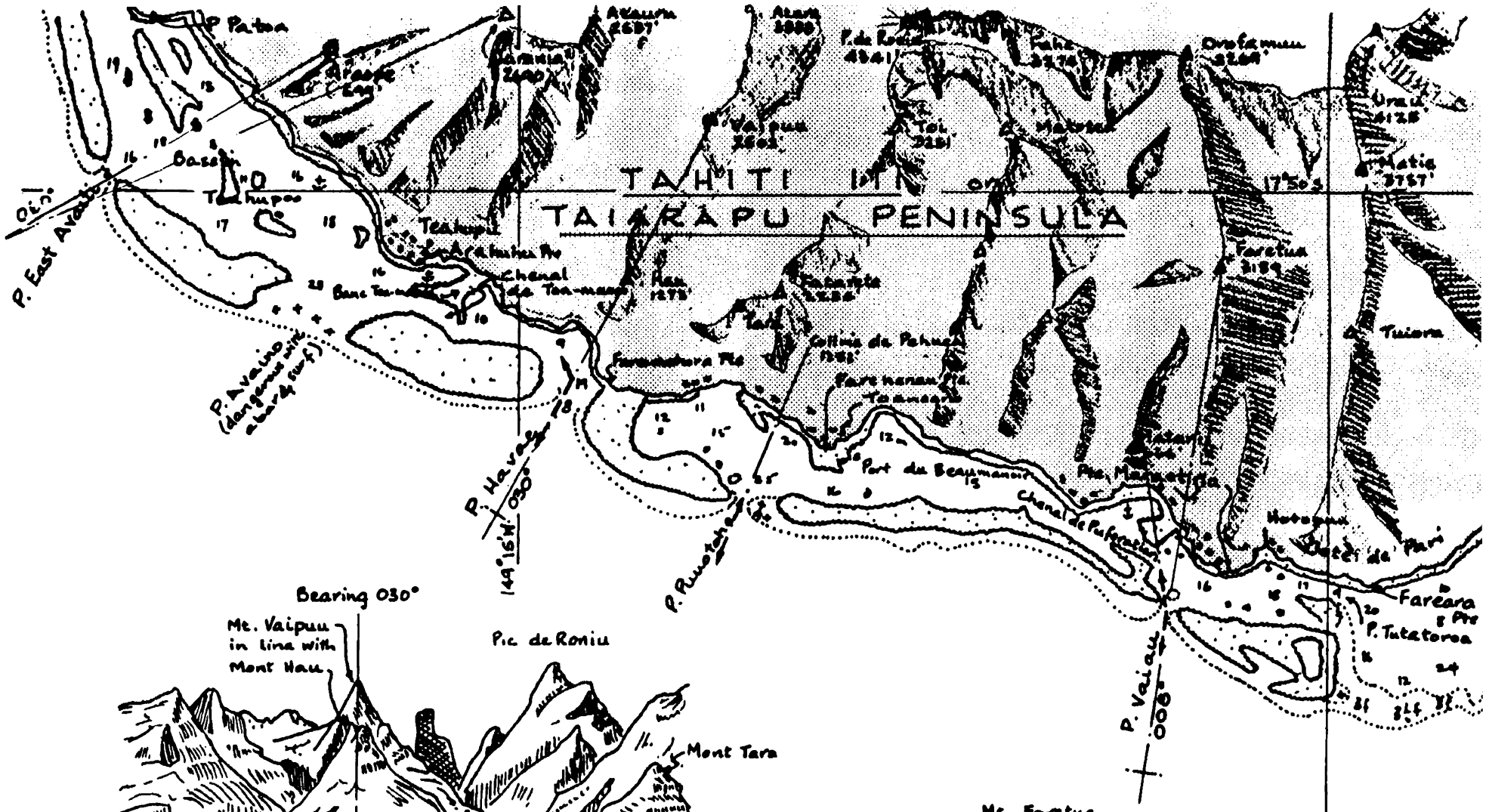
Passe East Avaiti is about a mile south of Pointe Patoa, and it can be used to enter or leave the Mouillage de Vairo and Bassin Teahupoo. The pass is only 500' wide, and comparatively shallow with least depths of 12' to 16'. In fine weather it is useful for yachts and other small vessels, but in other conditions the seas can rise across the bar. From seaward the pass should be approached by steering 065° towards the massive bulk of Mont Tarania (2,630') until close-to when the pass can be clearly seen. When within a mile of the pass the alignment can be corrected to a bearing of 060° on the flat-topped mount of Araope (899') which is very near to the coastline. Anchorage can be found in 10 fathoms within the small basin formed by the projection of a reef, Banc Toa Maere which extends out about 2,000' southwest of Pointe Arahuku. Alternatively, slightly more open anchorage is available in Bassin Teahupoo, about ½ mile northwest of Pointe Arahuku, close to the coast and in sand and coral bottom. Passe Avaino also appears to be an opening into this basin about 1½ miles southeast of P. East Avaiti, but it has a bad bar with several coral heads. Blind rollers can raise a heavy sea across this opening.

Passe Havae is about 1½ miles beyond P. Avaino, and it is the best of this group. It is straight, deep, and clear except for the narrowing of the apparent width of 1,200' to 600' by submerged reefs on each side of the opening. A bearing of 030° aligned on Mont Vaipuu (2,500'), with the cleft summit of Mont Te Hau (1,273'), before it and near the beach, leads through the pass. Many yachts use the pass to leave the lagoon having come down behind the reef from Port Phaeton.

At Pointe Fara Mahora, on the south side of the pass the coral reef reaches right to the shore, curving from there to the southeast about 2,000' out. Here it forms one side of Passe de Puuotohe. On the eastern side of the pass the reef extends underwater to reduce the true pass to a mere 150' wide. Coral heads in the pass and heavy swells on the outside can be dangerous, and since a better pass is close by, this one can be passed.

Passe Vaiau is a good entrance, about 600' wide. It is divided at the inner end into two channels by a reef awash. Either side may be used but the west side is usually preferred. A leading line into the pass from seaward can be taken at 003° on the summit of Mont Faretua (3,190'), a bulky mountain from which three arms extend towards the coast in the form of an "E". Port de Vaiau is the basin within the reef. Anchorage is found in the cove formed by the coral reef below Pointe Maraetiria.

Passe Tutataroa leads eastward from Port de Vaiau. It is narrow and winds past some underwater reefs. It is not a recommended route since it leads past Pointe Fareara to the sometimes heavy seas that are caused by the submerged offshore Faratara Reef. The coast at the southeastern tip of the island begins to turn northeasterly around Pointe Fareara, and this portion is called the Cote de Pari. It is different from the coast so far experienced because the offshore reef is submerged and the prevailing southeasterly swell breaks on the coastal cliffs as well as over the reef. When the swell is heavy the breakers are spectacular. Passage along this part of the coast must give the reef a wide berth.



④ ÎLE TAHITI - S. COAST.

Pte. Patoa to Pte. Fareara

Not to be used for navigation

ILE TAHITI - SOUTHEAST COAST (Pointe Fareara to Pointe Tautira)

From Pointe Fareara to Pointe Puha, about 3 miles up the coast, the Faratara Reef extends underwater about 1 mile out from the coastline. The reef is submerged to depths varying from to 2 to 11 fathoms, and this leaves the coast unprotected. Small vessels must stand clear when sailing up the coast. On the land there are no roads along this section until Pointe Tautira. The villages, anchorages, and island views are thus closer to the Tahiti of old, though the villagers are completely modernized as they whiz along in outboard powered outriggers when they commute to their homes.

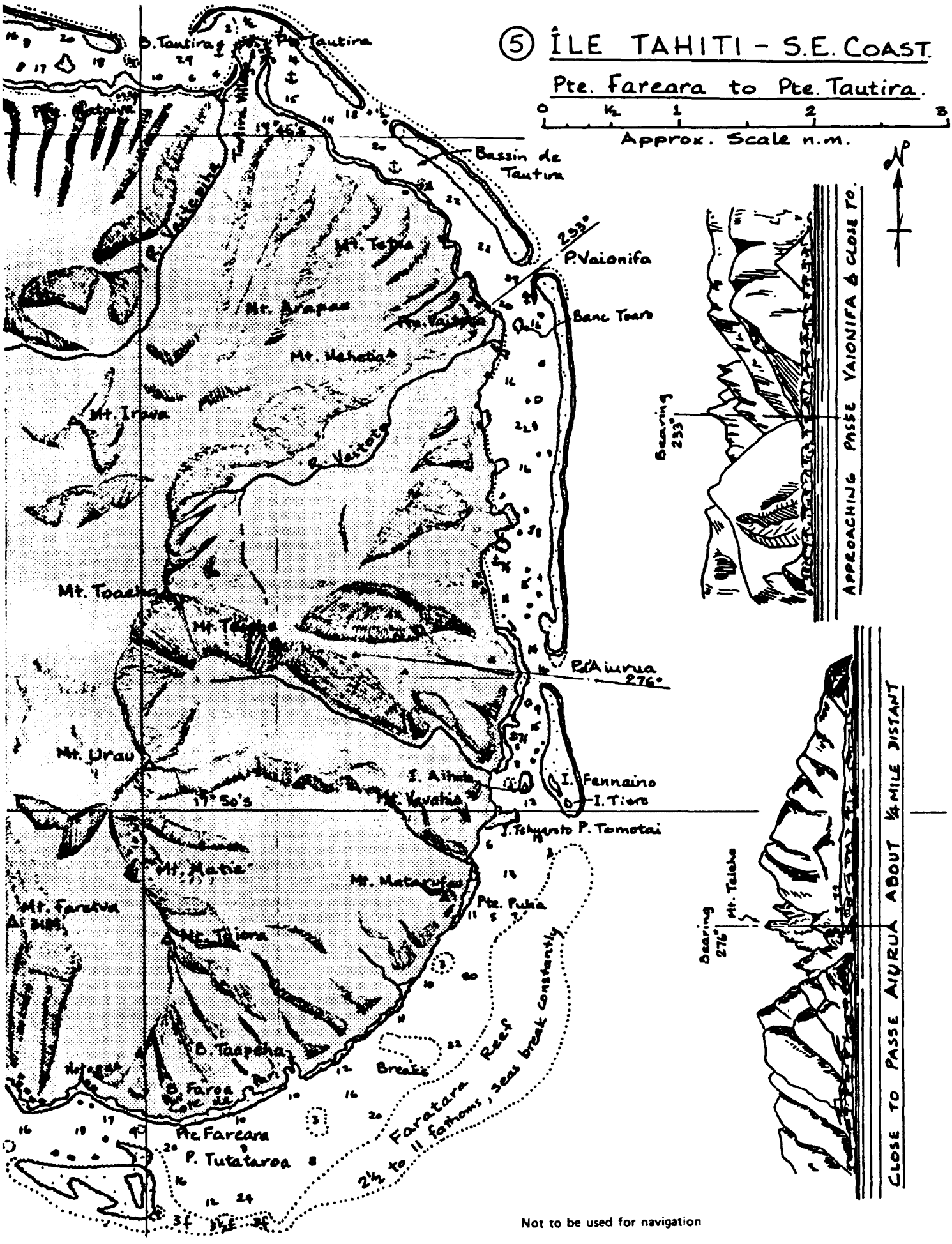
Passe Tomotai is the first entrance, just beyond Pointe Puha. It is between the north end of the Faratara Reef and the recommencing visible barrier reef that continues up the coast. Several small islets and reefs occur near the entrance and on the barrier reef to help identify it. Ilots Tiere and Fennaino are both covered with palms and are clearly visible from seaward. To avoid any danger with the underwater hazards of Faratara Reef it is better for yachts not to use this pass, and to continue to the next one.

Passe Teaianui (also called Passe d'Aiurua) is 1 mile north of Pointe Tomotai. It is deep, 600' wide and gives easy access to the lagoon behind the reef. A shallow, 2-fathom patch extending southward from the end of the northern reef requires that the line through the pass be made a little south of the centerline. From seaward a bearing of 276° on the sharp pinnacle of Mont Teiche brings one on to this line. Within the lagoon there is an anchorage on each side of the pass in coves formed by coral projections extending out from the land. The southern anchorage is more exposed, but prettier, and the islets, reefs, and motus on the outer reef give some protection. More coral heads are exposed and awash behind the barrier reef, thus requiring careful conning while travelling to Pointe Vaitoto if the vessel intends to leave from the northernmost pass of Passe Vaionifa.

Passe Vaionifa is also a very good and easy pass, though narrowed from its 600' width by shallow spits on each side of the opening. It lies about 3 1/2 miles north of Pointe Teaianui and just north of Pointe Vaitoto. A shallow patch, marked by a beacon, lies almost on the axis well within the pass, and it is easily avoided. Approaching from seaward the pass should be approached from the northwest, on a bearing of 233° taken on the highest peak of the group framed in the deep cut of the Vallee de Vaitoto.

Anchorage can be found in Bassin de Tautira, either midway up the basin or at the head near Pointe Tautira. There is a rocky patch, Le Crabe, awash about 500' from the shore which is marked by a beacon. Identification of Le Crabe, which is about 1 mile northwest of Pointe Vaionifa, is needed for safe passage. The head of the basin offers good holding in about 14 fathoms. There is an opening in the reef about 1 mile from the head of the basin, but it is not a proper pass as it is obstructed by coral heads. There is also no passage between Pointe Tautira and the reef; to travel to the north a vessel must exit from Passe Vaionifa and proceed around the entire reef (and point) to enter Baie Tautira from the north.

Pointe Tautira is a low projection from the mountains that extends northward from the curve of the coastline. The barrier reef bends around the point to end off the west side of the point. A wide gap of more than half a mile before the reef recommences, leaves the bay open to the north. The town of Tautira, an important local center, lies spread around the tip of the point.



Not to be used for navigation

ILE TAHITI - EAST COAST (Pointe Tautira to Pointe Paritautia)

This portion of the coast includes the north coast of Tahiti Iti for a distance of about 8 miles before the coast changes direction northward as it becomes the east coast of Tahiti Nui. There are only a few big valleys along this northern coast which is hilly right up to the shore. The largest is Vallee Haavini, and it is a spectacular cleft through which the peaks at the center of the island are seen. Waterfalls are numerous along this coast.

Baie de Tautira is within the curve of land along the point and behind the half-mile wide opening in the reef. It can be easily entered, and anchorage found off the beach near the village, in 6 to 8 fathoms. The beach is of fine, black sand, and is one of the few large beaches on Tahiti. The anchorage is open to winds from the north through the WNW, and if the winds shift to this quadrant the bay can become a lee shore.

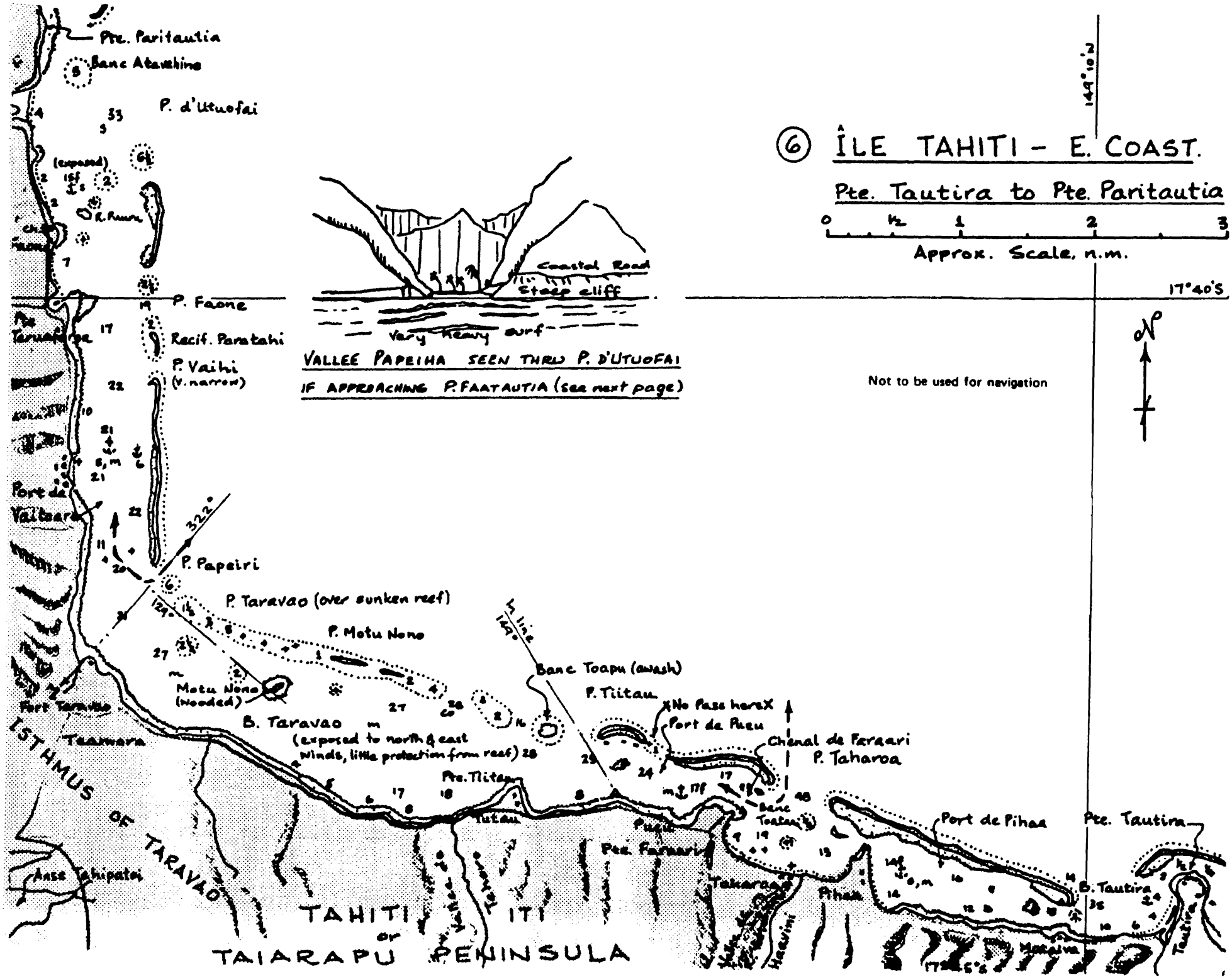
Port de Pihaa is the basin enclosed by the barrier reef that begins westward of the opening. At the west end a spit of land, Pointe Pihaa, almost closes the distance to the reef. The basin can be entered from either end, and was marked by beacons. This part of Tahiti's coast suffered heavy damage from the cyclones of 1983 and some of the beacons may be missing. Several small reefs are exposed in the basin, but they can be avoided. Anchorage in 14 fathoms can be found close eastward of Pointe Pihaa, sand and mud bottom.

Passe Taharoa is the next wide gap in the reef, about ½ mile across. A shoal with only 3' over it, Banc Toatoa, lies on the inside to divide the pass into two. The eastern side is 600' wide, and some scattered reefs must be negotiated in turning to Port de Pihaa. The western side is clearer and turns almost directly past Pointe Faraari into the next basin, Port de Pueu. Vessels using these openings hold a little closer to the offshore reef to be certain of avoiding the sunken bank. There is deep anchorage in Port de Pueu. A submerged portion of the outer reef could be mistaken for a pass but it is blocked by coral heads and must not be used.

Passe de Tiitau is ½ mile west of the aforementioned false opening. It lies between the end of the barrier reef and a portion of the reef awash named Banc Toapu which is almost 1,000' across. Ranges on shore give a line through the pass but they are difficult to make out from seaward, especially if this is the first visit. There are no problems in leaving via this pass.

Baie Taravao lies between Pointe Tiitau and the turn of the coast northward. Almost all along this section the barrier reef is below the surface, and becomes a series of shoals,except for a few motus above the water. Usually the surf breaks over the sunken reef to show its position. The holding is good in much of the bay, but it is exposed to the winds from north to east and the swell crosses the reef unhindered. Therefore, this is not a recommended anchorage.

Passe Papeiri is between the western end of the sunken reef and the once more visible but now northerly trending reef. A 6-fathom shoal lies in the entrance, and a good landmark for the pass is the town of Taravao which is in the low lying land between the two sections of Tahiti. Port de Vaitoare is north of the pass and has good anchorage in mud and sand. An anchorage closer to the offshore reef has less depth than the more popular one off the village. This anchorage can also be entered from the north via Passe de Faone. North of Passe Faone the barrier reef continues for a short way before a wide opening, Passe d'Utuofai, again exposes the coast.



⑥ ÎLE TAHITI – E. COAST.

Pte. Tautira to Pte. Paritautia

VALLEE PAPEIHA SEEN THRU P. D'UTUOFAI IF APPROACHING P. FAATAUTIA (see next page)

ILE TAHITI - NORTHEAST COAST (Pointe Paritautia to Pointe Rauraia and Pointe Venus)

Pointe Paritautia is an almost unnoticeable point on the land opposite the recommencing barrier reef at the north end of Passe d'Utuofai. The steep cliffs and cleft of the Vallee de Papeiha south of the point are far more evident. This coast is open to the sea through the 1¼ mile gap of Passe d'Utuofai. Very heavy rollers and surf come over the offshore shoals to crash on the rocky shores.

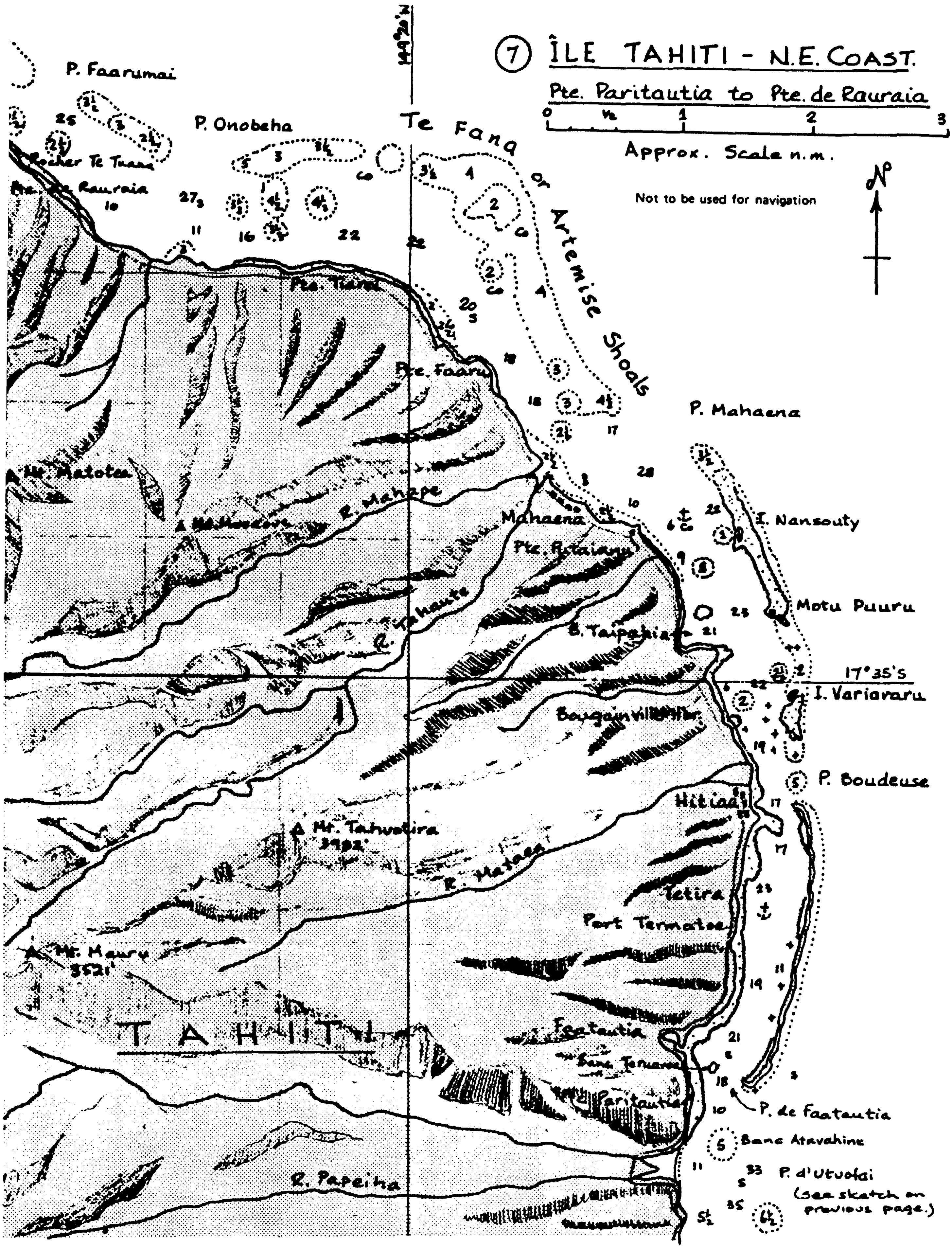
The barrier reef extends from Pointe Paritautia about 2 miles northward to the village of Hitiaa, where an extension of the coastal reef grows out to almost join it. Behind the protection of the reef is a sheltered basin, Port Termatoe, where good anchorage can be found. Enter the basin through the southern entrance, Passe de Faatautia, staying within 300' of the offshore reef when turning up into the anchorage. Avoid going close to the small detached reef on the western side. Dinghies can land on a beach of black sand on the southern side of Pointe d'Hitiaa. The town of Hitiaa lies along the coastal road nearby. There is a small boat channel around the coral reef projection at Hitiaa--its depth and suitability for yachts is not known.

Passe de Boudeuse opens opposite the town, and it is wide although it has some dangerous covered rocks and coral heads on the northern side. Vessels using the pass should therefore keep close to the edge of the southern reef. Mouillage de Bougainville lies between the island shore and the offshore reef which is partly submerged. The was Bougainville's anchorage during his visit. However it is not a well protected basin as the wind and swell can continue across the reef without reduction.

The barrier reef is submerged throughout the entire distance of 11 miles between Pointe Mahaena and Pointe Venus. It becomes a chain of dangerous shoals, known as the Banc de l'Artemise or locally as Te Fana, lying from 3/4 to 2 miles offshore. These shoals do not provide any real protection from the wind and seas, and as the coast is exposed to the prevailing winds for this entire length small vessels and yachts should stand well offshore. The seas can be very heavy on these shoals in bad weather.

The coast trends northwesterly for the 4 miles between Hitiaa and Pointe Faaru. The coast then begins to curve westward. Several deep valleys reach to the shore with steep mountain ridges between. Near Pointe de Papenoo, about 9½ miles from Hitiaa, the great cleft of the Vallee de Papenoo extends well into the center of Tahiti. Between this valley and Pointe Venus, only 4 miles away, there are some sandy beaches along the low coast, broken by the rocky bluff at Tapahi which is about 1½ miles from Papenoo. The lepers' hospital stands on this bluff and can be seen from seaward. The coast between Papenoo and Pointe Venus should be given a wide berth for the shoals extend to the east of Pointe Venus and are 2 miles offshore at Papenoo. A vessel coming from the south must stand well to the north (in fact until all of the island of Moorea is well open to view past Tahiti) before setting a course towards Pointe Venus and Papeete. At Pointe Venus itself the reef previously described at the beginning of the circuit projects about 2,000' out from the point and on either side.

The cruise around Tahiti that has been described can be done handily by modern yachts, and the dangers can be handled by careful attention to coastal navigation and to the needs of travel in coral waters. The circuit can be made in either direction, but as the western side of Tahiti (in the channel between Tahiti and Moorea) has light and variable winds it is found easier to begin there. In this way, the fair, prevailing easterlies and following seas will take one past the dangerous shoals of the eastern side of Tahiti.



7
ÎLE TAHITI - N.E. COAST
Pte. Paritautia to Pte. de Rauraia
0 ½ 1 2 3
Approx. Scale n.m.
Not to be used for navigation
N
P. Faarumai
P. Onobeha
Te Fana or Artemise Shoals
Rocher Te Tuau
Pte. Tiarei
Pte. Faaru
P. Mahaena
Mt. Matotea
R. Mahape
Mahaena
I. Nansouty
Pte. Ataianu
Motu Puuru
R. Vahaute
B. Taipahia
17°35'S
I. Variararu
Bougainville
P. Boudeuse
Hitiaa
Mt. Tahuatira 3982'
R. Matea
Tetira
Port Termatee
Mt. Maury 3521'
TAHITI
Faatautia
Banc Tomana
Pte. Paritautia
P. de Faatautia
Banc Atavahine
P. d'Utuofai
(see sketch on previous page.)
R. Papeiha

ILE MOOREA (Excluding Baie de Cook and Baie d'Oponohu)

The usual approach to Moorea takes the swell at an angle and closes the coast near Pointe Faaupo, the easternmost part of the island. As the fringing reef is steep-to and close to the coast along this section, a yacht can sail fairly close to the edge of the reef in favorable conditions. Proceeding in an anti-clockwise direction around the island, the coast trends northwesterly for about 2 miles until at Pointe Aroa it turns a little south of westerly. Pointe Aroa is thus the northernmost part of Moorea.

Passe Avaiti is a small pass a short distance west of Pointe Aroa. It is only used by local fishing vessels. About 1½ miles along there is a slightly wider and useable pass, Passe Irihonu, which opens westward into a small lagoon. In front of the Bali Hai Hotel (having over-the-water bungalows) there is an anchorage. There is a small channel leading westward behind the reef to Baie de Cook, but as the easier entrance of Passe Te Avaroa is very close this narrow channel should not be used.

A separate sketch and description is given for the two main bays of Moorea--Baie de Cook and Baie d'Oponohu. Beyond them the coast continues westward for about 2 miles to the last of the northern passes, Passe Taotoi. This is an entrance that can be used in good weather, but it leads only into a long, narrow passage behind the two islets at the western end of Moorea. The channel shallows as it opens into a bay where the Club Med establishment is located. Both the bay and its approaches are very shallow and are beset with coral heads.

The western coast of Moorea runs southeasterly towards Haapiti and the southern tip of the island. Several hotels lie behind the sandy beaches, and though a beacon-marked channel runs in front of them this is a channel used mainly by fishing craft. About 5 miles down the coast is Passe Toata, and a mile further is Passe Avamotu. Both are narrow and lead into small lagoon cul-de-sacs. Even in normal conditions strong rollers can be seen at the entrance bars of these passes and they should not be attempted.

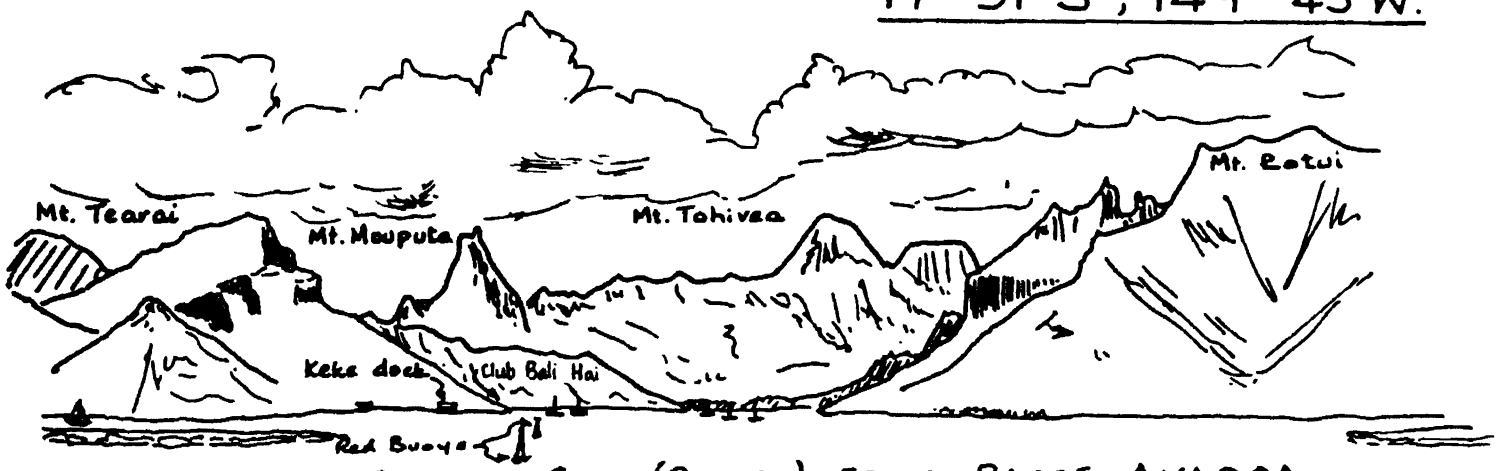
Passe Matauvau is another mile beyond Avamotu, and it leads into an extensive lagoon area behind the reef. The pretty village of Haapiti is located here. This pass can be rough and dangerous when there is a southwesterly swell. In calm periods it can be negotiated. Passe Avarapa, about 2½ miles further south, is the next entrance. A small lagoon area and a rough pass eliminates it from consideration for passage. The southernmost part of Moorea is a mile east of Pointe Avarapa, after which the coast begins to trend northeasterly back to Pointe Faaupo.

Passe de Teruaupu and Passe Tupapaurau both lead into the same long lagoon area that extends between the villages of Maatea and Afareaitu. Anchorage can be taken in this lagoon, particularly near Afareaitu (which is the largest village on Moorea). A post office and other government offices are here. Passe Tupapaurau should be used in preference to Passe de Teruaupu, for though they have similar sea conditions at the entrance (rollers across the opening), this is less pronounced at the former pass. This sea condition plus the rougher outside seas, as evidenced by the white caps and larger swell, is due to the funnelling and accelerating wind effect on the channel due to the mountains of Tahiti and Moorea.

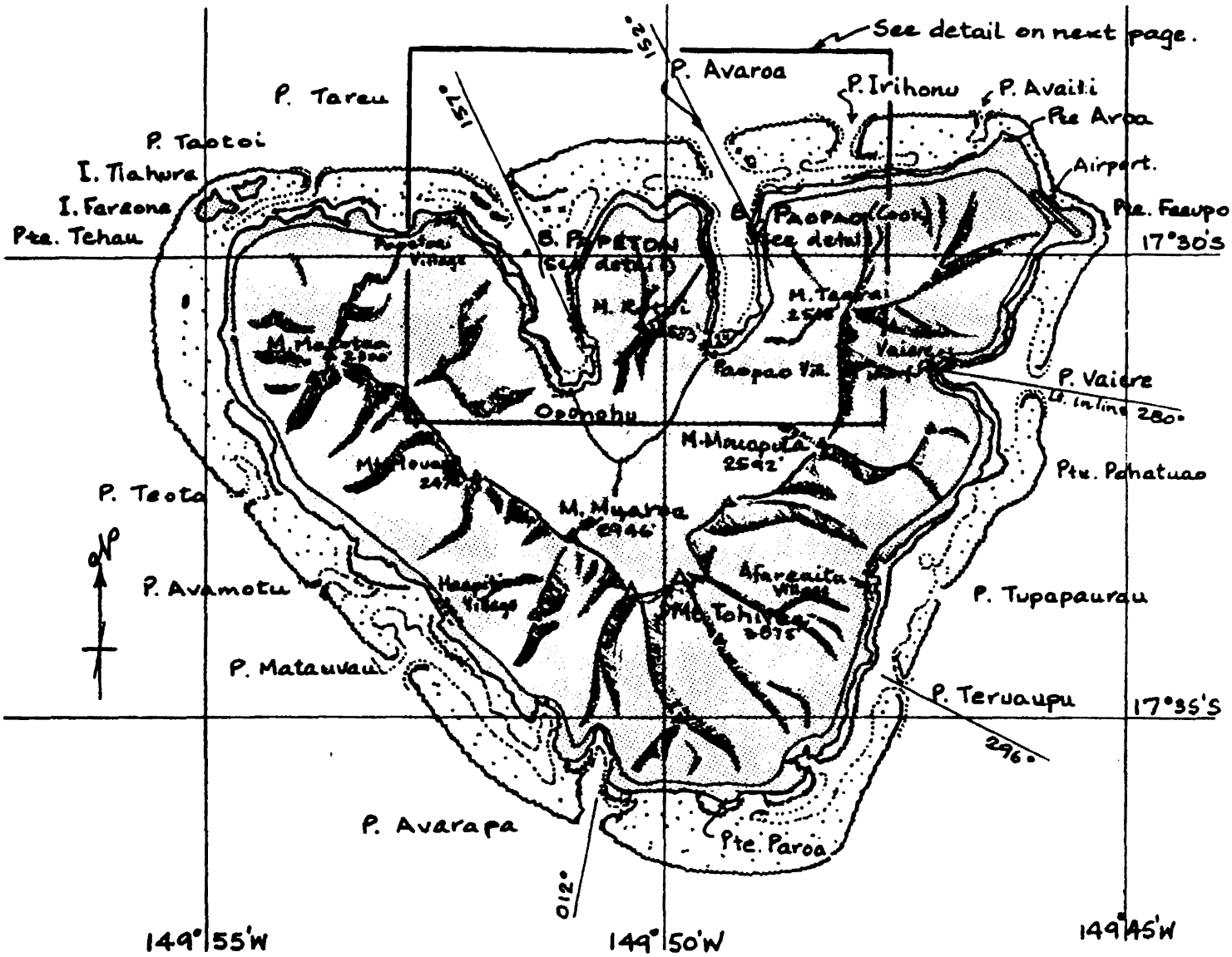
About 3 miles northeast of Passe Tupapaurau and thus 2 miles southwest of Pointe Faaupo is the last and most used of the eastern passes, Passe Vaiere. The cargo schooner uses this entrance to reach the little wharf and port at the head of the bay. While the entrance can be rough, this pass and anchorage can be used by yachts.

ILE MOOREA

17° 31' S, 149° 45' W.



VIEW INTO BAIE DE COOK (PAOPAO) FROM PASSE AVAROA



Not to be used for navigation

ILE MOOREA - BAIE DE COOK AND BAIE D'OPONOHU

These two major bays of Moorea probably have come to represent the sailor's idea of Polynesia, even more than Tahiti, because they have been photographed so often. The spectacular views of the peaks behind these bays is one of the reasons that Moorea rates as one of the most scenic islands in the world. In case one is confused, Baie de Cook is also called Baie Paopao on older charts, and Baie d'Oponohu is called Baie Papetoai.

Passe Avaroa leads into Baie de Cook and it is wide and well marked. No difficulty should normally be experienced in entering through this pass as the wind and sea have little effect in the partial lee of the island's mountains. Once through the reef the colors of the water indicate the deeper portions well, and anchorages can be seen on each side of the entrance behind the reef. These anchorages are exposed to northerly winds but when they occur a vessel can retire further into the bay.

On the east side of the entrance to the bay is the reception building and dock of the inter-island ferry "Keke III." The principal anchorages in the bay are further in, off Club Bali Hai Hotel which is midway along the eastern side, or at the head of the bay before the village and clear of the shallows. Mont Mouaputa is at the end of the bay; this spire has a hole through it near the top which can be seen from the north and northwest and resembles a patch of snow. Another hole-pierced mountain is on the eastern side of this bay.

Passe Tareu is about 2 miles to the west of Passe Avaroa, and it is the entrance into Baie d'Oponohhu. It is also well marked, wide, and clear, but because the pass is slanted to the line of the broader reef, it requires a little more caution to negotiate. A wreck, which looks very much like a pile of rocks, lies on the western side of the pass. Proceed well into the bay clear of the reef and its extensions before turning to any anchorage. There are pretty anchorages on each side of the pass behind the reef, that on the east side being off a sandy beach below the bulk of Mont Rotui (the mountain between the bays). On the western side, a channel leads to the village of Papetoai. Here the anchorage is in front of the octagonal Protestant Church. Slightly beyond is a small boat basin which is used by local boats. The basin's depth may not be adequate for large yachts. Water is available in the basin, and grocery stores and a post office are nearby.

The main anchorages are further up the bay. Some boats prefer the little cove at Orufara on the western side. It is the first cove one passes. Here an anchor can be laid in the bay and a line taken ashore to tie the stern to the palms. The road past the Roman Catholic Church runs to the head of the bay. Some prefer the eastern cove, Robinson's Cove, which lies just past the white board structures that give a leading line through the pass. This famous anchorage is slightly more open, but a point to the south helps form the cove. An old house in a lovely garden stands on this point. The main island road passes the rear of the cove. Many boats anchor at the head of the bay, closer to the village since the number of boats that can use the smaller coves is limited. The view behind the bay includes the massive bulk of Mount Tohieva and the spire of Mount Mouaroa, famous not only from sailing stories but also as the backdrop in the film version of "South Pacific." There is an excellent view from "Belvedere," a lookout above Oponohu experimental farms, that affords views of both Oponohu and Cook Bays. Two miles up the Oponuhu valley is a collection of ancient marae (Tahitian temples) and other archeological sights, some of which have been restored.

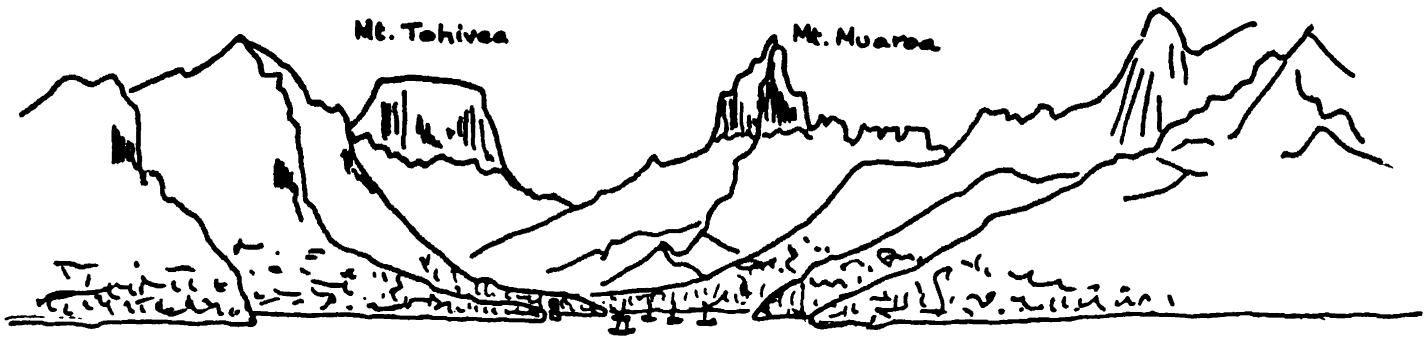
Not to be used for navigation

ILE MOOREA

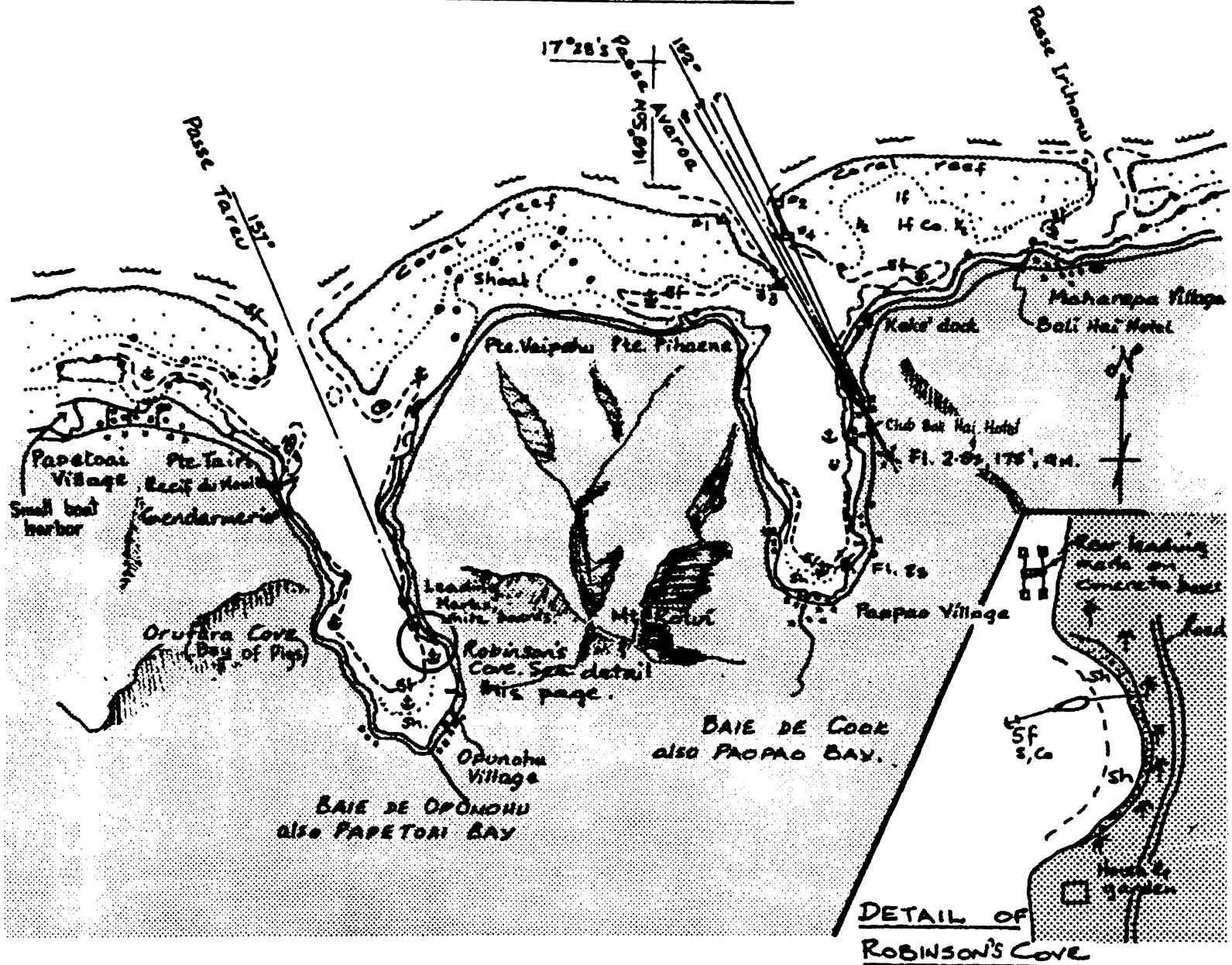
BAIES DE COOK & D'OPONOHU

17°28'S, 149° 50'W.

Approx. Scale n.m.



VIEW INTO BAIE DE OPONOHU



THE SMALLER ISLANDS OF THE ILES DU VENT

These are the islands of Meetia, Tetiaroa, and Tupai Manu (or Maiao). They are not visited nor recommended for visits by yachts because they have no entry into lagoons or secure anchorages and because landing on them can be difficult. They are included in this guide for information only as they are part of the group of islands.

ILE MEETIA

This high little island is 60 miles east of Tahiti, and is thus the furthest east of the Society Island Group. It is also 180 miles south of Mataiva, the westernmost island of the Tuamotu. The island is formed by a small peak, Fareura (1,427'), which descends in steep cliffs to the sea on all sides except the south. The island is usually uninhabited and is difficult to land on. It is a good sighting landmark to use when approaching Tahiti from the east.

ILE TUPAI MANU (MAIAO)

This is the western island of the Iles du Vent, and lies 40 miles west of Moorea. It is well off the usual track of vessels cruising the Societies, and so is isolated and rarely visited. The fringing coral reef closely surrounds two interlocked islands that enclose shallow lagoons. There is no entry into the lagoons. The center of the islands have two hills, the higher at about 440'. These hills are visible from seaward before the island itself is clear. A small cut in the reef for landing boats is at the southern end, off which there is an exposed, deep, and indifferent anchorage. Landing is hazardous on this inhabited island.

ATOLL TETIAROA

This is the only atoll of the Iles du Vent, and it is a very interesting island. It lies only about 30 miles north of Tahiti, and should be kept in mind by navigators when laying their courses to a destination point north of Pointe Venus on Tahiti. It is a very beautiful atoll having brilliant white beaches on the enclosed lagoon's shores. There is no entrance into the lagoon for other than very small boats.

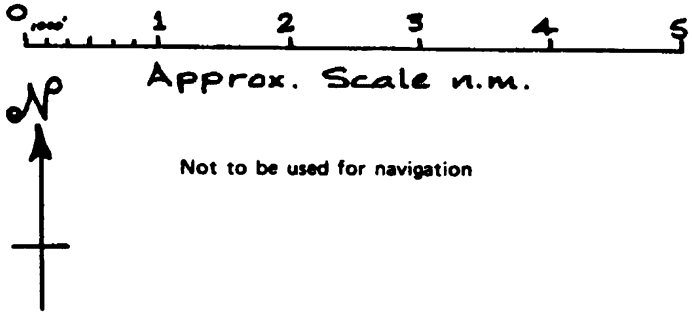
The island is privately owned, at present by Marlon Brando, who purchased it when he played Fletcher Christian in the 1966 version of "Mutiny on the Bounty." In 1973 the island was opened to tourists who are flown in to the airstrip on Motu Onetahi, but the hotel development has always been kept low key. It is closed indefinitely at present because of damage caused by the cyclones of 1983.

Historically, the island was the property of, and resort for the Tahitian Chiefs and of the Pomare royal family. The motu of Rimatuu where they resided was planted with the royal 'tuu' trees, very long ago. Here the female members of the important families were sent to 'fatten' and get the fashionable lighter skin before their marriages. In 1904 the royal family gave the atoll to their Canadian dentist who brought the atoll into the marketplace.

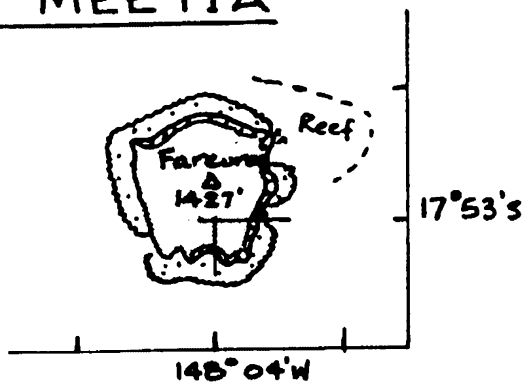
There is a wharf-like structure out on the reef at the southwest corner where trading vessels unload, but all access to the island has to be by small boat across the reef. No good anchorage is known. As this is private property any yacht wanting to visit should first obtain permission from the Hotel Tetiaroa office. Any travel agent can put you in touch with them.

ILES DU VENT

THE SMALLER ILES.

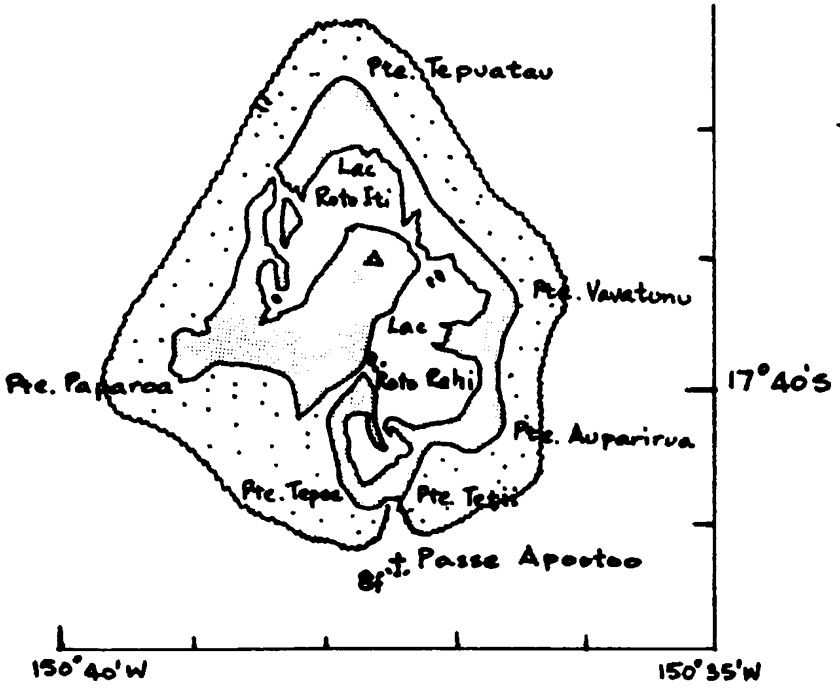


ILE MEETIA



ILE TUPAI MANU (MAIAO)

17°40'S, 150°38'W.



ILE TETIAROA

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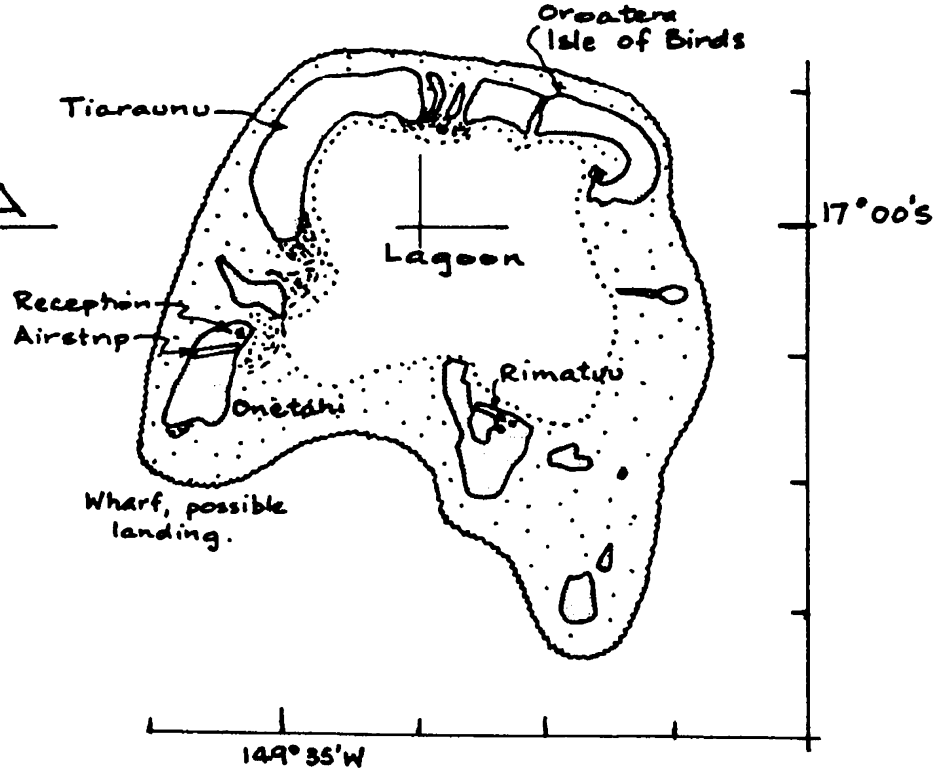


ILE HUAHINE

Huahine is 90 miles NW of Tahiti. It is the first of the leeward island group which are all fairly close together. They form an ideal cruising area, combining both the rural quality of Huahine and Raiatea with the spectacular beauty of Bora-Bora. The sail across from Tahiti should be arranged to allow the approach to Huahine to be made in daylight. The safest method is to leave Moorea just before dusk, keeping the boat speed down to about 5 knots, expecting the current to give you a boost as you approach the island, and planning the landfall after sunrise.

Like Tahiti, the land mass of Huahine is made up of two mountainous islands, Huahine Nui and Huahine Iti, connected by a narrow isthmus that is underwater much of the time. A bridge connects the islands. A common barrier reef encloses both islands. It is close to the northern coast but extends out as much as a mile from the shore elsewhere. There are five passes through the reef, the three most useful to yachts are described below.

Passe Avamoa, the main pass through the reef, is on the NW side of the island. It is used by all vessels coming to Huahine and it gives direct entry to the village of Fare. There is little difficulty in making an entry even though the apparent width of 1,200' is reduced considerably to only 400' by gradual shoalling from each side. Buoys mark the deep water of the pass while ranges with lights give a line through the entrance. Port de Fare lies along the SE slanting shore as one enters the pass. A pier at the village waterfront is used by trading vessels, but yachts can anchor SE of this wharf. Some yachts prefer to anchor off the Bali Hai Hotel, which is NW of and on the seaward side of the pier. This is not an all weather anchorage, and every year the combination of gusty winds and reversing tidal currents causes boats to drag into coral heads and ashore. It is necessary to check in with the Gendarme, whose office is visible from the main wharf.

Passe Avapeihi is 1 mile south of Passe Avamoa. It can also be identified by the deep cleft of Baie Haavai in the island behind the pass. Though slightly narrower than Passe Avamoa it is almost as easy to use, and buoys mark both the pass and a passage between the two passes behind the reef. There is good anchorage in Baie Haavai though it is deep and narrow.

Another good anchorage is in the basin of Port du Bourayne. There is a clear passage behind the barrier reef south of the passes, and the basin should be entered by the southern channel past Motu Vaiorea. The northern channel is partially blocked. Though deep, there are several anchorage spots in the basin.

Passe Farerea is the only pass on the eastern side of the island. It lies about midway along the reef but though deep and straight the curve of the reef from Motu Topati towards the coast reduces the pass to a width of 300'. Beacons mark the pass and on a passage one should favor the northern side. A bearing of 263° taken on the south edge of a steep cliff on the north side of Baie de Maroe leads through the pass. Strong trade winds can make this pass very difficult so it should be used in good weather only. Anchorage can be taken at the head of the bay, and there is a pier at the village of Maroe for landing. Squalls can blow off the steep mountains around the bay. French Chart 6434 should be used if you plan on anchoring anywhere other than at Fare or Haavai.

Passe Tiare is about 1 1/2 miles to the north of Passe Farerea. It is deep, narrow and should only be entered in calm weather. Local vessels with knowledge of its intricacies use it, and there is a small boat harbor dredged to a least depth of 6' clearly visible in the northeast corner of the bay. There are also good anchorages in the lee of Motu Vavaratea. It would be wise to check out this pass and bay either by dinghy or by road before entering.

ILE RAIATEA AND ILE TAHAA

Raiatea and Tahaa lie within the same hourglass-shaped coral reef, about 20 miles westward of Ile Huahine. Both islands are mountainous with spurs radiating from the central ranges to the coast forming a very indented shoreline. The valleys formed by these spurs are fertile, so the islands have a lush, green appearance. The northern end of Raiatea is slightly flatter than other areas and is the most populated.

Though now quietly rural, these islands are said to have been the first settled, and for a long period were the cultural and religious center of the Societies. Many temple altars (maraes) found in Raiatea attest to this.

The barrier reef completely surrounds both islands. It is awash in some places and sunken in others. Eight passes lead through the reef around Raiatea, and two into Tahaa. There is deep and navigable water between the reef and the islands so that it is possible to travel entirely around Tahaa, and about 2/3 of the way around Raiatea. There are shoals and coral heads scattered in the inner waters but the routes between them pose no difficulty if travelled in sunlight with a person aloft. As the trade winds impinge on the eastern side of the islands the seas they help to form at the entrances cause the western passes to be favored, except for Passe Teavapiti in the east.

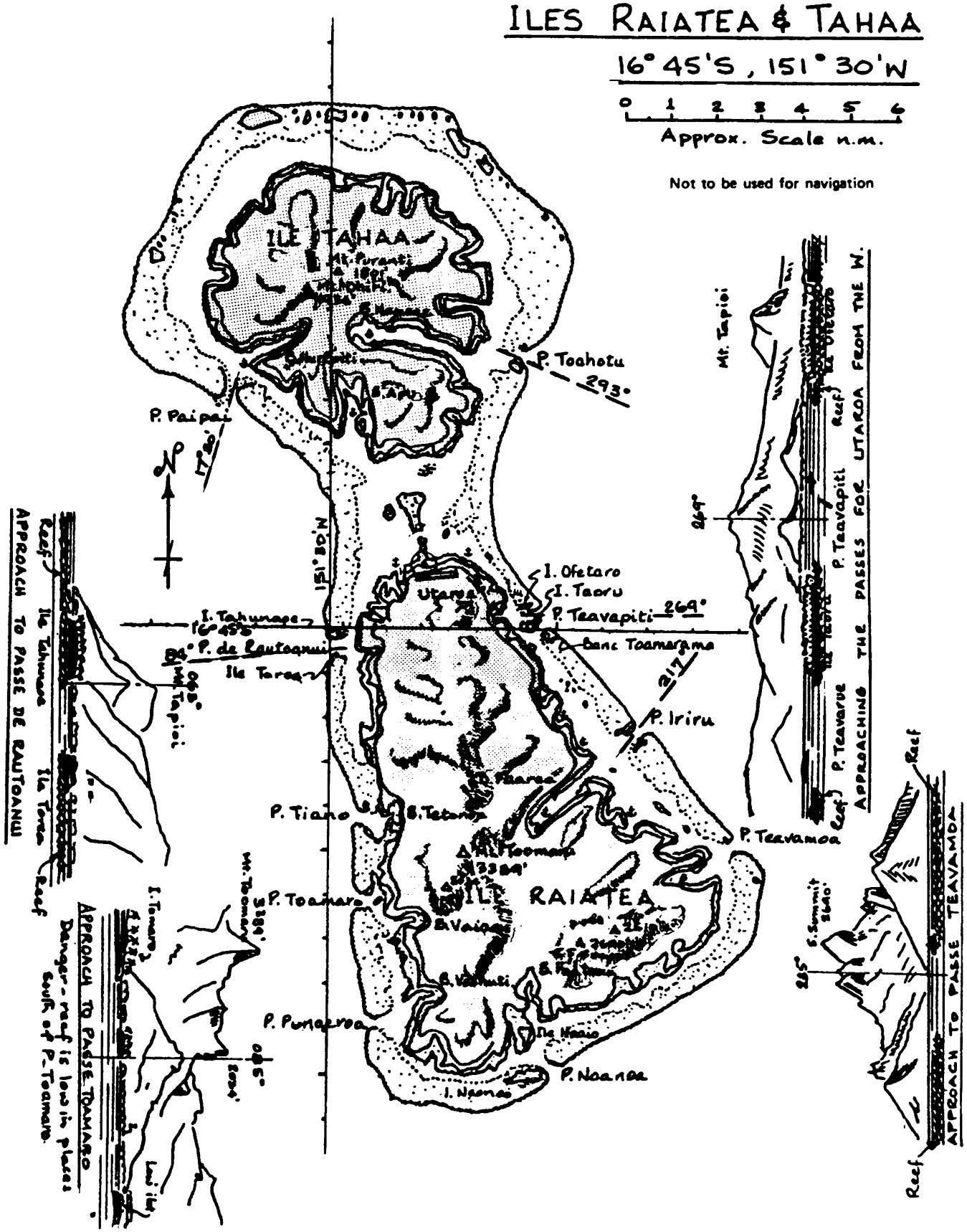
The southern passes will be briefly described on this page, leaving the most important passes and routes to the detailed sketch on the fullowing page. If you are planning on exploring Raiatea and Takaa, the use of French Charts 6282, 6283, and 6284 will make your visit safer and more relaxed.

Passe Teavarua is the southern channel of Passe Teavapiti, and it is used if the vessel intends to turn southward behind the reef. The channel is marked by beacons but it also has many coral heads to be avoided. Most of the open bays along the coast--Vairahi, Averaiti, and Averarahi--have safe anchorages. They are open to the trades winds but are protected from the sea by the reef.

Passe Iriru (Maire) is about 3 miles southeast of Passe Teavapiti and is clearly identifiable by the two islets on the coral reef bordering each side of the pass. It is about 500' wide. An entry on a bearing of 217° taken on the sharp peak of Mont Maufenua (which lies to the south of Baie Faaroa) leads through the reef near the southern side where the sea is quieter. Good anchorage is available near the head of Baie Faaroa in 8 to 12 fathoms, mud. Taking your dinghy up the Aoppomau River at the head of the bay is an experience not to be missed! The passage behind the reef between Passe Iriru and the next pass to the southeast can be traversed but it has many shoals and coral heads to avoid.

Passe Teavamoa is deep, narrow, fairly short, and can be easily entered. It leads to a very nice anchorage in Baie Hotopuu, about midway up the bay in 15 fathoms, mud. The fringing reef along the coast projects a little at the end points of the bay, especially from the south, and care is needed on entry. From the anchorage in Baie Hotopuu it is only a short walk to the NW to Marae Taputaputea, the most important religious and historical site in Polynesia. It was from this site that Tahitians sailed to and populated Hawaii and New Zealand.

Passe Naonao is 250' to 300' wide and a bar at the narrows causes the sea to break if a heavy southerly swell is running. It is not recommended for use in unsettled weather. There are attractive but deep anchorages in the lee of Iles Naonao and Haaio. A small store is in the village of Tautara.



Passe Punaeroa, Passe Toamaro, and Passe Tiano are all along the lower western side of the island. The first two could be used in good weather but they lead into separate lagoon pockets that do not connect with the rest of the lagoon around Raiatea. There are many shoals and reefs. In settled weather and with the sun overhead it is possible and interesting to sail inside of the reef from Ile Naonao, around the southern end of Raiatea and out either Passe Punaeroa or Taomaro. Few yachts explore the southern half of Raiatea.

Passe Teavapiti is the direct (eastern side) route and entry for yachts and ships coming from Huahine or Tahiti. There are two channels in the opening in the reef, separated by the central island, Ile Taoru. The northern channel is Passe Teavapiti, the southern is Passe Teavarua. On each side of the opening the reef is partially submerged, but its extent is clearly shown by the surf and the islets. There is usually little problem for vessels under power to negotiate the pass during good weather. The pass should be approached by heading towards the square-topped bulk of Mont Tapioi (998'), at the north end of Raiatea. As the pass is closed, leading lights and marks ashore can be aligned on a bearing of 269°, or if not immediately made out, the depression between a pair of skyline peaks south of Mont Tapioi can be used. The minimum width of the pass is about 600'. Favor the north side of the pass where the reef is steep-to as any current in the pass usually has a southerly component.

Beacons mark both sides of the channel leading from Passe Teavapiti to Utaroa. The town straggles along the coast northwards from opposite the pass to the airstrip. The main section is near Pointe du Roi Tomatoa, where two churches, and the hospital are found. A long concrete wharf used by trading schooners, extends along the shoreline SE of the point. It is possible to tie to the wharf while taking on fuel, water, and provisions but no overnight berthing is allowed. A public produce market many small shops, and the famous "Cafe au Motu" are within 2 blocks of the wharf. Good anchorage can be taken in the channel NE or SE of the wharf. These anchorages are deep--15 to 18 fathoms--but have good sand and mud bottom. A boat landing pier is at the northern end of the main wharf and is a good place to tie your dinghy.

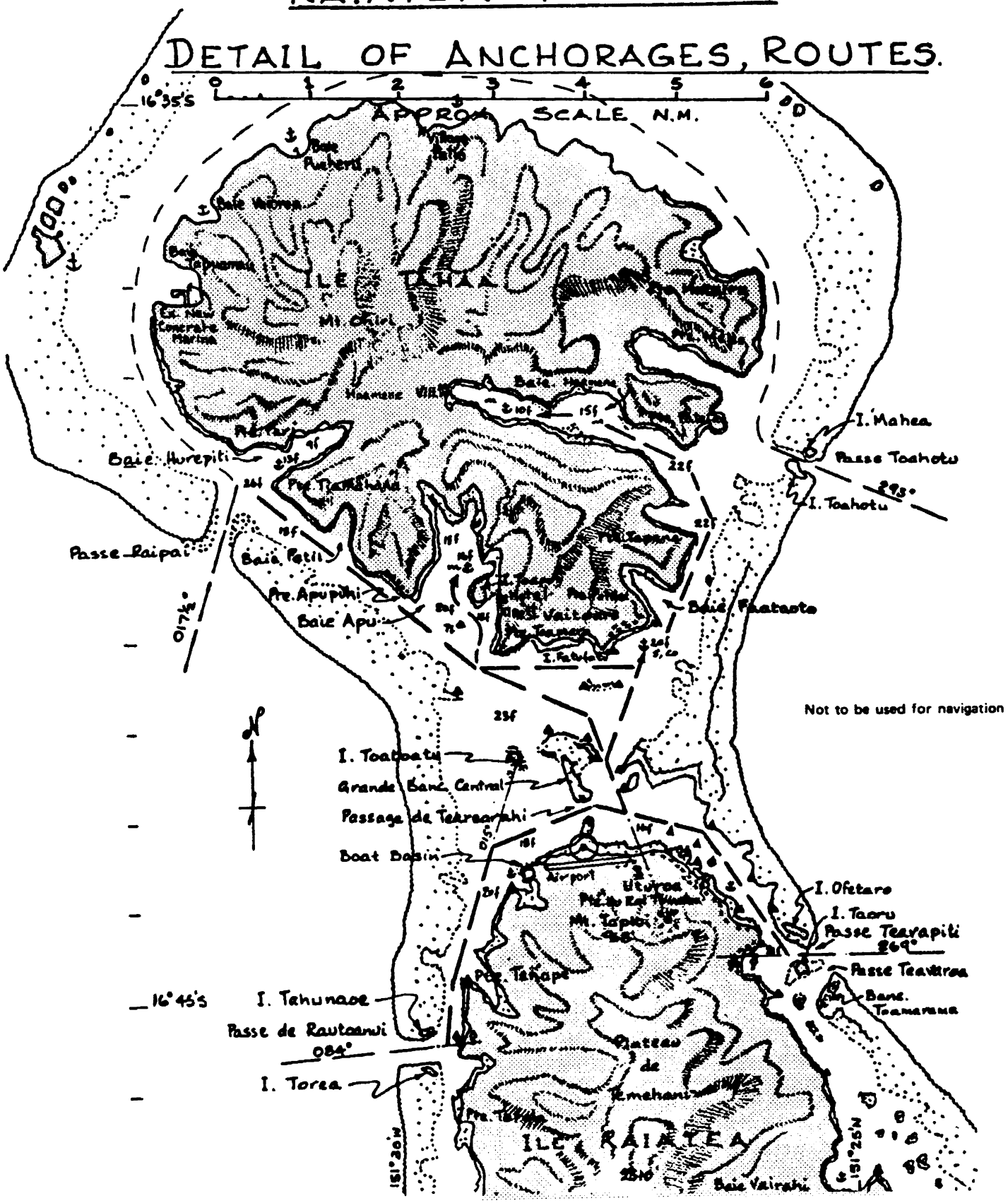
Passe Rautoanui is the main western pass. Often vessels enter by this pass and leave via Passe Teavapiti, or vice versa. The pass is over 1,000' wide and leading lights and marks take one through easily. This pass can be used even when strong trade winds are affecting the eastern passes. The passage is marked by beacons along the channel northwards to connect to Utaroa or Tahaa. The channel is about 1,000' wide. Near the western end of the airport a marina has been built where cruising boats may find temporary berths, or they can anchor outside the basin. This is one of the best "hurricane holes" in the territory. The Moorings operates a fleet of charter boats from this marina, and their manager, Henri Valin, has been helpful to cruising yachts since 1983. The first Travelift in the territory has been installed at a new boatyard just west of Marina Apooiti.

Pointe Motutapu is the northernmost part of Raiatea. The coastal reef extends northward from Pointe Motutapu for about 2,000'. The gap between this reef and the south end of the large reef (Grande Banc Centrale) is about 1,000' wide. Marked on both sides by beacons, Passage de Tearearahi is deep and provides the shortest route across the lagoon. Access can also be gained to the anchorages and passes at Tahaa by the channels east or west of Grande Banc Centrale. The main village of Tahaa is Vaitoare, which is located on the SE coast near Baie Faataoto. Anchorage may be taken off the village or further NNE in Baie Haamene, near its head in 8 to 10 fathoms. Passe Toahotu in the eastern barrier reef can be used in good weather to enter or leave the lagoon.

Good anchorage is also provided by Baie Apu which is on the southwest side of Tahaa behind Ile Toapui. Another beautiful, and well protected anchorage is near the entrance of Baie Hurepiti, looking out over the reef to the next island landfall, Bora-Bora. Though rarely visited by cruising yachts, a new marina in Baie Tapumau is one of the safest hurricane harbors in the territory. Water, fuel, food, and fresh bread are available here.

RAIATEA & TAHAA

DETAIL OF ANCHORAGES, ROUTES.



Passe Paipai gives access through the reef to Tahaa at Baie Hurepiti. Spits extend from both sides of the opening, that on the western side being dangerous because it causes the sea to break when the swell is heavy. Used with care, this pass is safe to enter or leave in good weather, and it has the advantage of being the closest pass to Bora-Bora.

ILE BORA-BORA

James Michener is credited with describing Bora-Bora as the world's most beautiful island. Its beauty owes much to the varied hues of blue in the extensive lagoon surrounding the island's central, thrusting volcanic peaks. Though always referred to as one island, Bora-Bora is actually two islands within a lagoon, the island of Bora-Bora being larger than Ile Toopua.

Passe Teavanui is the only entrance into the lagoon. It lies on the western side and is wide, clearly marked, and easily traversed. Lighted buoys mark the channel, and the edges of the reef can be seen on either side. A leading line of 104° taken on a marker shore leads through the pass between the buoys. The front marker is an easily seen white column 33' high, while the rear marker is about 90' high on the hillside and is not easily seen amidst the trees.

There are several choices of anchorages within the lagoon. As the wind tends to funnel between the islands and blow southeasterly (increasing slightly each evening), the best anchorages are on the lee side of the island. There are two main areas where yachts collect. One is off the Bora-Bora Yacht Club, which is situated almost directly in from the pass. The concrete wharves built by US forces during the war (where the Temehani and the Taporo land their cargoes) is just around the point of land north of this spot. Directly across Baie de Faanui from the wharf is an excellent hurricane harbor, where local fishing and ferry boats tie up during heavy weather.

The second popular spot is in the next bay, which has Hotel Oa Oa at its northern end and the wharf at the town of Vaitape at the southern end. Sometimes preferred because it is closer to the town, good anchorage can be taken in 15 fathoms, sand. Hotel Oa Oa has moorings in front of its little jetty that they may lend if permission is asked. These moorings are not suitable in southerly wind conditions. In 1988 three yachts dragged while on moorings, ending up on the coral shelf in front of the Hotel.

Many other anchoring spots are around the lagoon. The luxurious Bora-Bora Hotel lies on the southern point of Baie de Povai. Vessels sometimes anchor off this hotel, though it is exposed and the Hotel discourages yachties from using their dinghy dock. Further south around Pointe Matira the barrier reef is attached to a point of land and forms a secluded little bay. Entry into this spot is through a narrow corridor in the coral heads that must be negotiated only in the best visibility; thus an overnight stay is required.

Shallow draft vessels can find a way around the south end of Ile Toopua and Toopua-Iti to find anchorage in the western side of those islands. There are also idyllic anchorages in 5 to 7 fathoms that lie just within the barrier reef on either side of the pass. Between Motu Tapu and two semi-exposed coral areas to the east is a gap showing good blue water leading to a fair expanse of sandy bottom which is encircled by coral. A similar spot lies between the southern end of Ile Teveiroa and Motu Ahuna on the north side of the pass. It is shallower and less constricted by coral. Both of these anchorages are good for exploration and snorkelling in the beautiful underwater coral areas. These anchorages should only be used on a temporary, daylight basis.

The northeast bight can be reached, but a tortuous route must be traversed in a very narrow passage between the coral heads and the northern tip of the island. This route should be taken only in good light for visual masthead navigation. A secluded anchorage is found on this side of the island. The large area, further to the south along the eastern (windward) side of Bora-Bora is not easily accessible.

Not to be used for navigation

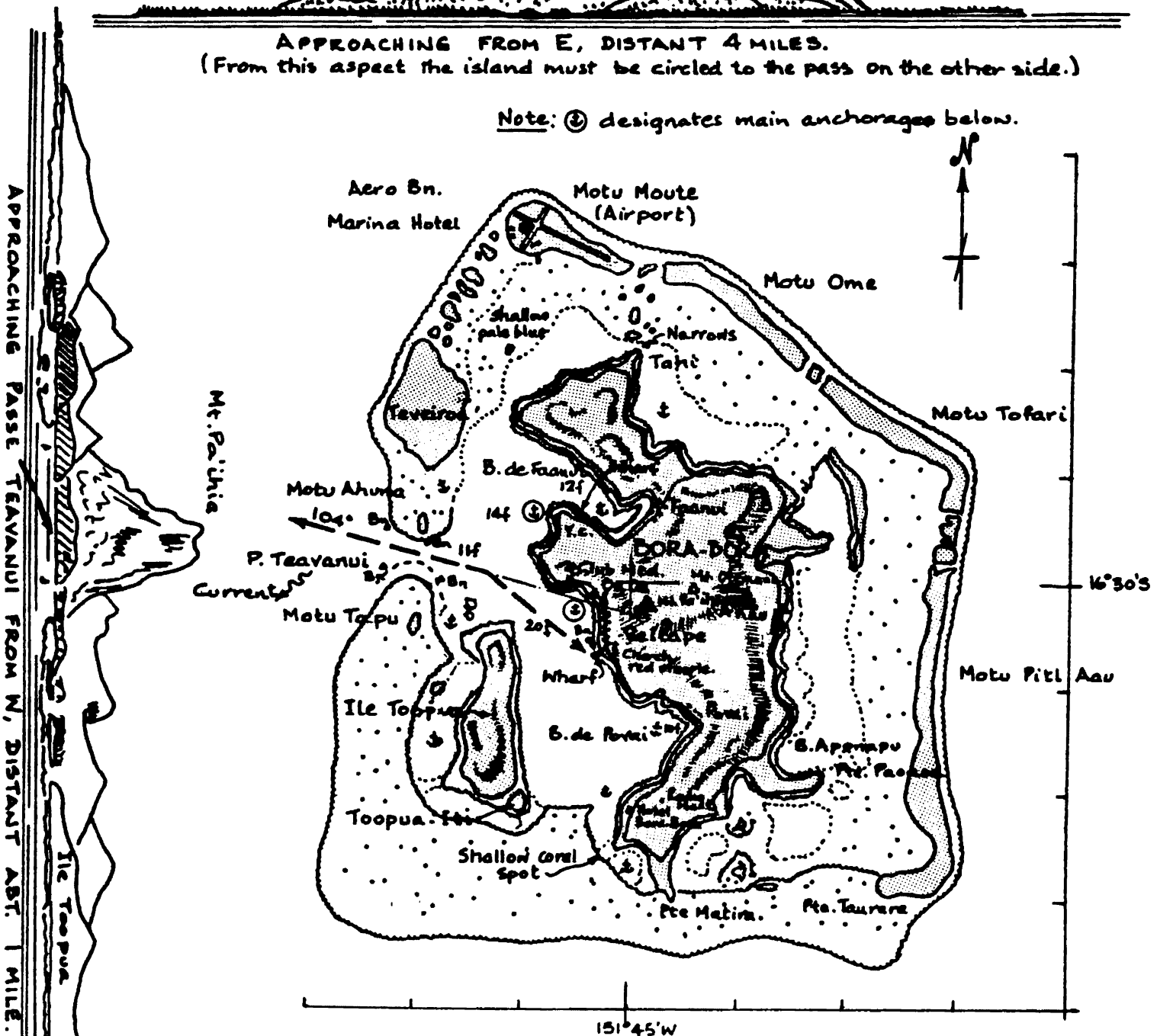
ILE BORA-BORA

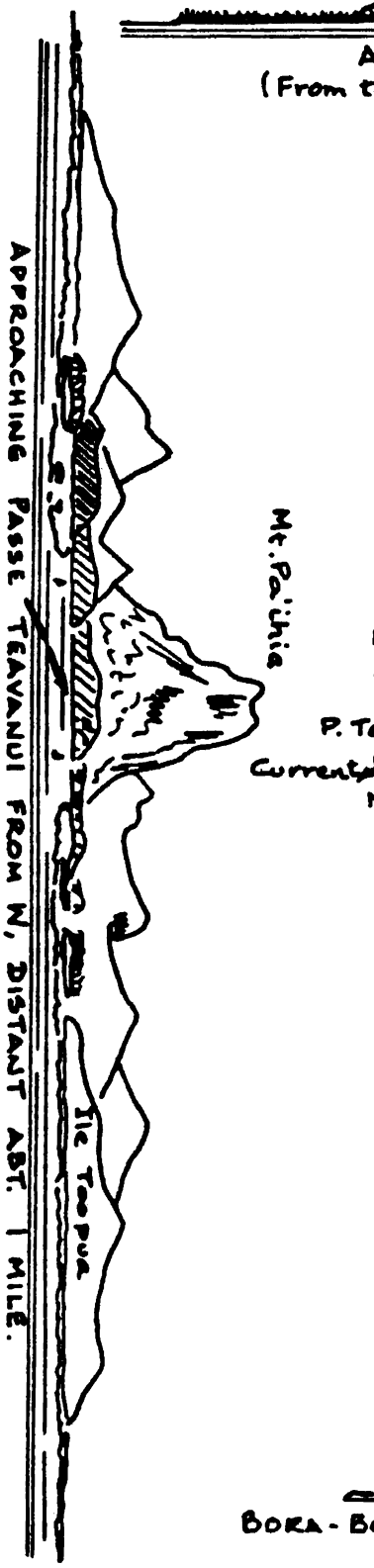
16° 30'S, 151° 45'W

0 1 2 3 4
APPROX. SCALE N.M.

APPROACHING FROM E, DISTANT 4 MILES.
(From this aspect the island must be circled to the pass on the other side.)

Note: ⚓ designates main anchorages below.





BORA-BORA AS SEEN FROM SE, ABOUT 8 MILES, LEAVING RAIATEA.

ILE MAUPITI

This is the westernmost, high island of the Society Group. (The remaining islands of the group are low atolls.) It lies 27 miles to the northwest of Bora-Bora. The island is the remnant of a volcanic peak that now has steep, vertical cliffs in a semicircle on the southwestern side. The highest point is about at the center of the island at 1,250'.

A barrier reef completely encircles the island in a roughly triangular shape. The northern side of this triangle is enclosed by one short and two long motus. At the southerly point of the triangle is Passe Onoiau, between two small islets on and within the reef: Motu Pitiahe and Motu Tipaa.

Passe Onoiau is a winding and relatively narrow pass that has gained a poor reputation because in any bad sea or rough weather condition it is hazardous to enter, and boats doing so have often come to grief. A strong outgoing current adds to the difficulties in negotiating the channel. However, once all this is said it is notable that this pass is no more difficult to enter than any other atoll pass if care is taken and entry is made at the best time. With a southerly swell large amounts of water come over the reef, which is low and poorly defined on the southwest side. All of this water ends up flowing out of the pass and can result in very strong ebb currents and heavy breakers across the pass which have trapped yachts inside the lagoon for up to two weeks. Check for breakers on the exposed southern reef of Bora-Bora before sailing to Maupiti. High slack water always occurs at noon in the Societies, so leave Bora-Bora as early in the morning as possible.

The pass is about 250' wide at the actual entrance, but it is considerably reduced by an underwater projection of the reef's eastern edge. There are 2 fathoms over this projection where it drops off, but the sea usually breaks over it. It is wisest to make the entry to the pass from a little way out to sea and thus to line up the passage through the clear portion of the opening to the two islets. Do not attempt to cut any corners here. The pass narrows at the turn to the left when one is abreast of the islands. Here the pass is about 175' wide between the shoals. Thereafter one must pick a way in the blue water through coral heads that are visible in the lagoon.

The main village of Vaiea lies along the eastern shore of the island, and a concrete wharf with a wide levelled coral games square alongside is at the center of the village. Anchorage can be taken in a relatively clear area southwest of the wharf or one can get permission to tie stern-to the wharf. There are about 2 fathoms alongside, but take care as the depth shoals rapidly on the northern side of the wharf. The anchorage area, and most of the lagoon is restricted by coral heads, so it is important to set your anchor securely.

To the east of the village and the wharf is a wide, whitish expanse of very shoal water beyond which is the curve of Motu Touanai. The airstrip that connects Maupiti to the rest of the Societies is located here. Some produce, mainly melons and fruit, can be bought here. As is the case in much of French Polynesia, bread is flown in from Tahiti whenever the plane comes in.

The beauty of the atoll and its rocky island, with the blues of the water and pale colors of the shoals contrasting with the greens of the palms is delightful. The people are rural, very friendly and make visitors feel most welcome. When it is time to leave it is essential to remember the need for caution and good visual navigation when winding your way out of the pass.

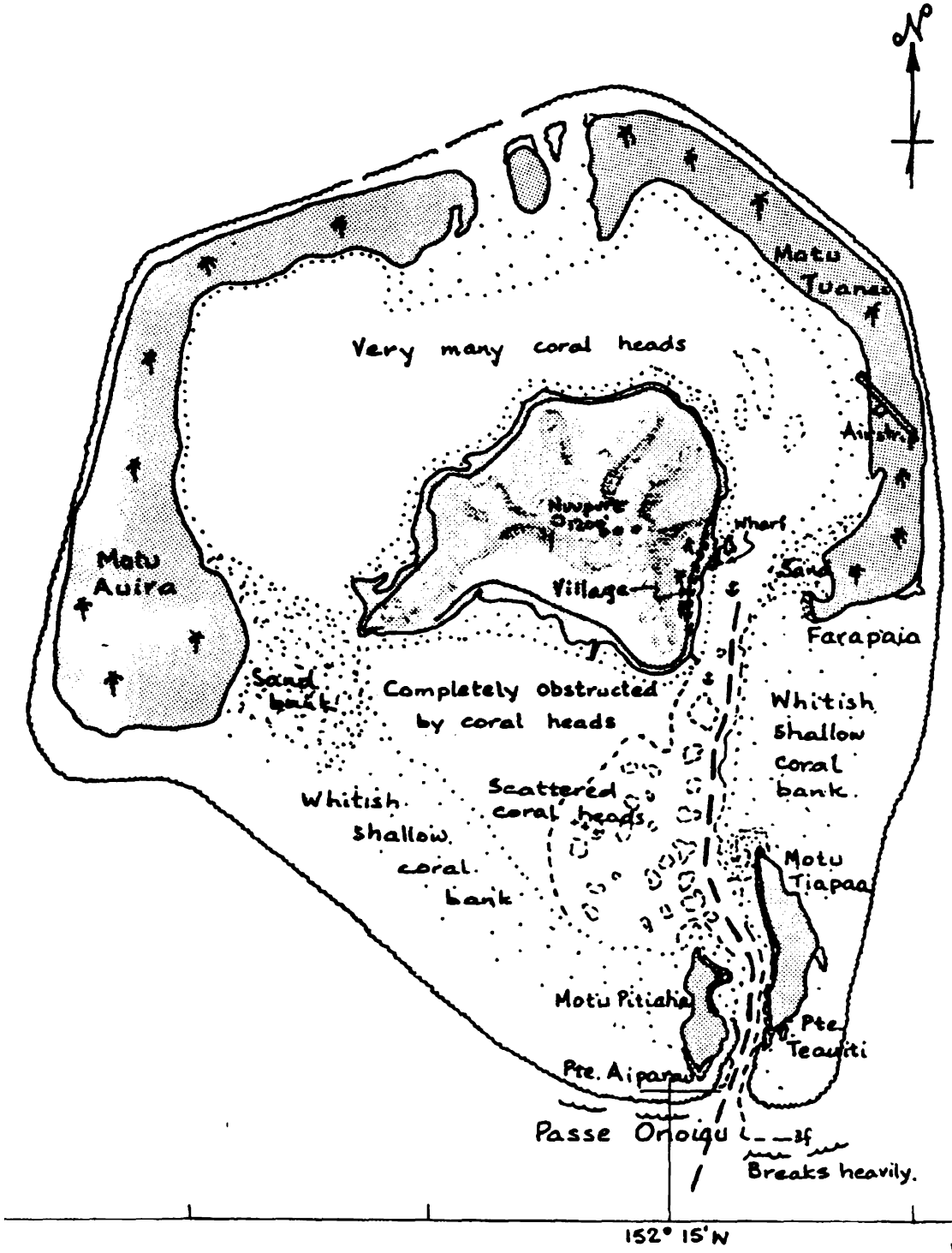
ILE MAUPITI

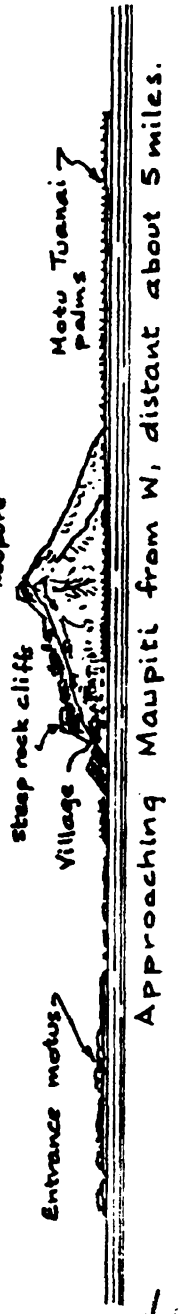
16° 29°S, 152° 15'W.

Not to be used for navigation

0 ½ 1 2

Approx. Scale n.m.





Approaching Maupiti from W, distant about 5 miles.

1992 2 sets Pass has of range markers.

Approaching from S, distant about 3 miles.

ILE MAUPIHAA (MOPELIA)

This island lies 100 miles (a full day's run) WSW of Ile Maupiti. As it is an atoll that cannot be seen until close by, the approach should be timed to occur in daylight. The current set should be allowed for during passage, and it is advisable to check on the actual set by using Maupiti as a mark as long as it is visible.

The atoll is roughly circular in shape, about 5 miles across. On the eastern side is a long, well treed motu that you will approach when coming from Maupiti. An extensive, deep lagoon has the only pass which is about one mile southwest of the northwestern extremity of the atoll.

Passe Taihaaru Vahine is one of the trickiest passes in French Polynesia for it is narrow, unmarked, and difficult to spot. The constantly ebbing current is over 6 knots at times, necessitating a strong, reliable engine, and a good set of nerves. If there is a strong southerly swell or southeast trade wind blowing, water entering the lagoon on the south side will funnel out of the pass creating too strong a current for most yachts to negotiate safely. Also, in a northwesterly wind the waves breaking across the pass and rips caused by opposing currents make the pass impassable.

It is important to time one's entry around noon when high tide occurs and the coral is plainly visible. To enter, when approaching from the northwest, you will pass a rusty wreck on the north side of the pass. Look for a break in the coral shelf and agitated water between the wreck on the north, and wooded motus to the south. Once you have the pass in view, post a bow look-out. About 2/3 of the way through the pass is a thin, black pipe which separates the north side of the deeper southern channel (minimum 2 fathoms) from the shallower north channel. On entering, this pipe is to be left to port.

The village and anchorage lie across the lagoon on the northern end of the long motu. The course must be set by visual means, avoiding the large coral heads; the clarity of the water helps considerably in making the passage. Anchorage can be taken off the village. Go ashore as soon as possible and pay your respects to the village Chief; there is no Gendarme. Because the island grows very little, gifts of fresh fruits and vegetables are welcome. The population varies as there may be as few as 3 or as many as 25 people on the island working ~~copra~~. pearls - oysters now.

Another good anchorage can be found at the southeastern corner of the lagoon just south of a shed and water cistern which are on the edge of a beautiful white sand beach. In southeast or southerly winds this is the best place to anchor in 2 1/2 fathoms, sand. There are many water cisterns both in the village and at an abandoned meteorological station which is a short walk from the village on the windward side of the motu. Ask permission before taking water, and don't plan on filling your tanks here. The small motus are the habitat of thousands of sea birds, and the lagoon abounds in many colorful varieties of tropical fish as well as sharks.

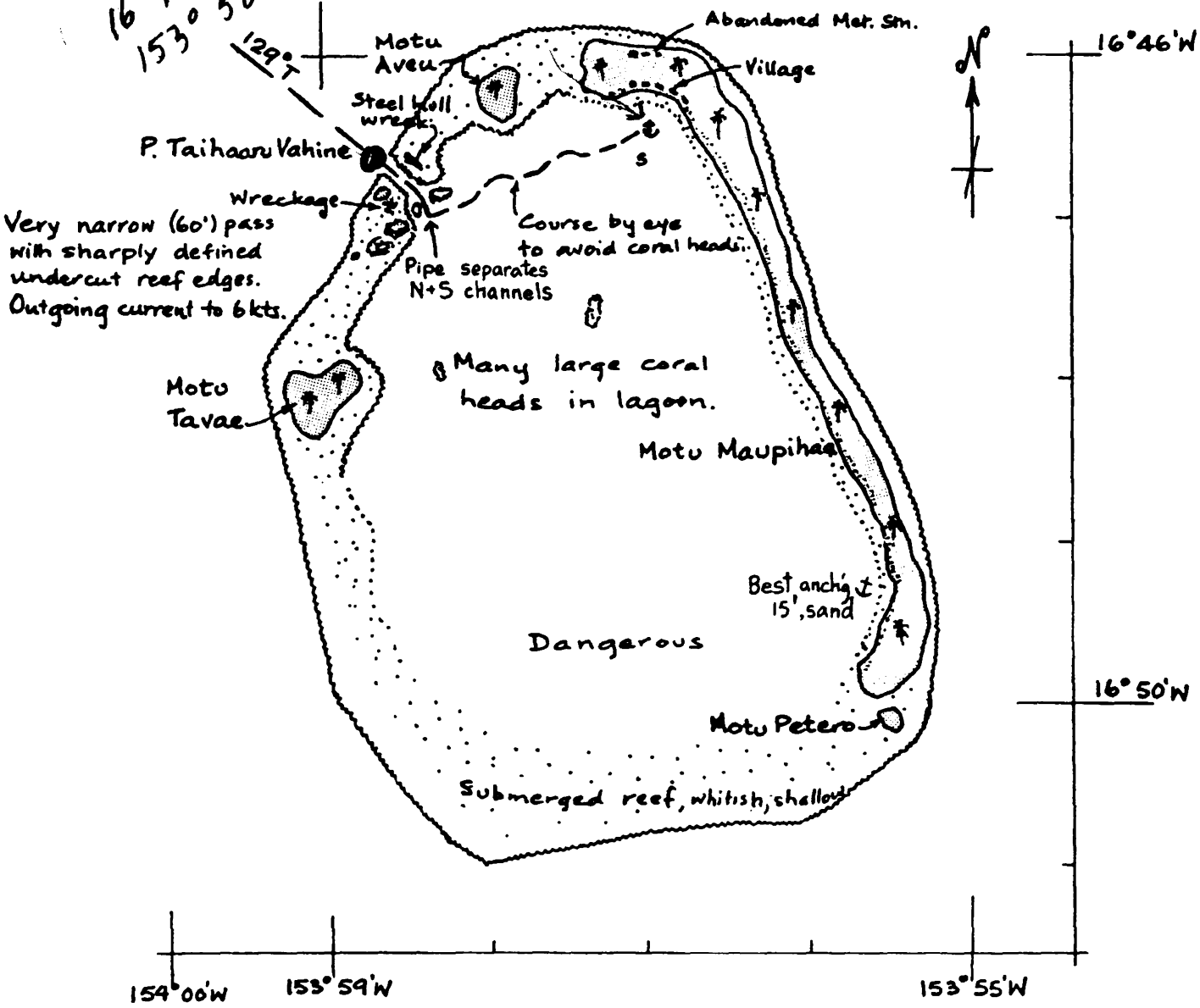
16°46.79S
153°57.06W

ILE MAUPIHAA
(MOPELIA)
16°46'S, 153°59'W.

Not to be used for navigation

16°49.9S
153°58.6W
129°T

0 ½ 1 2 3
Approx. Scale n.m.



THE WESTERN ATOLLS OF THE ILES SOUS LE VENT

These three atolls are described for information only as they are isolated and are not visited because of the difficulty in landing. The atolls include Motu One, Ile Tupai, and Ile Manuae. Data on them is extracted from the Pilots, charts and other sources.

ILE TUPAI (MOTU ITI)

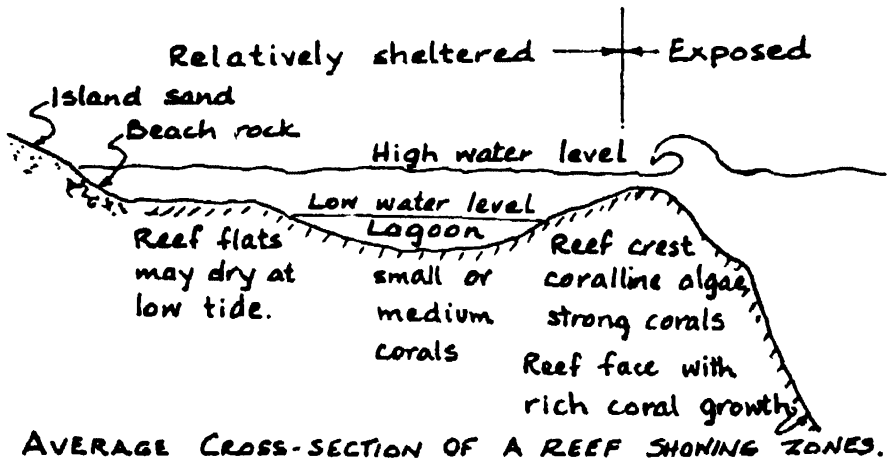
This is a pretty atoll, covered by palm trees, and is only 8 miles NNW of Bora-Bora. However, since the traffic from Bora-Bora goes south or west the island is neglected. Though the island is approachable without danger, the fringing reef encloses the two islets of the atoll without any entry into the lagoon (other than for small boats). There is a landing place with a small boat passage near the northwestern corner, but no good anchorage is known. A few people live on the atoll.

ILE MANUAE (SCILLY ISLAND)

This is the most westerly of the Iles Sous le Vent group and it lies about 40 miles WNW of Ile Maupihaa. This is a very dangerous atoll and one which should be avoided, for it is a large coral reef almost 7 miles square. It is low or mostly submerged and difficult to approach. Almost the entire western side is awash and only visible because of the surf. There are several motus along the eastern side. They are harvested for copra by a firm from Tahiti. There is a small boat passage at the northern end but no information is available as to its exact location or of any available anchorage.

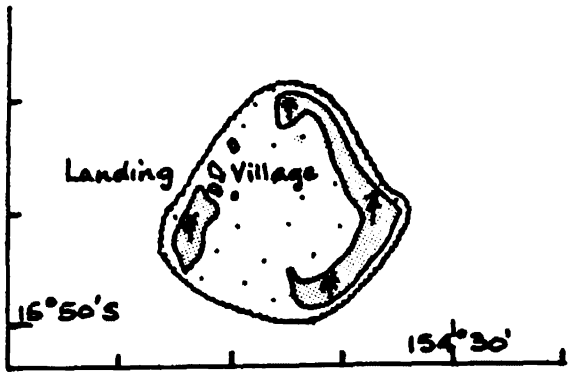
MOTU ONE (BELLINGHAUSEN ISLAND)

This is a small coral reef with four little islands atop it. It is about 40 miles north of Ile Manuae. There is no pass or good anchorage. A landing can be made on the western side if the sea is calm, and a deep anchorage in coral bottom taken off it. A small village here is occasionally inhabited.



AVERAGE CROSS-SECTION OF A REEF SHOWING ZONES.

MOTU ONE (BELLINGHAUSEN)



ILES SOUS LE VENT

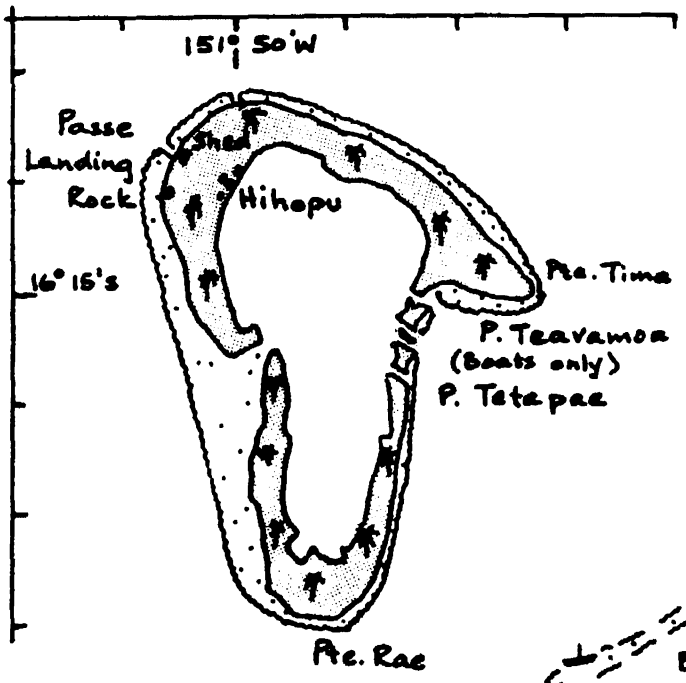
THE WESTERN ATOLLS

0 1 2 3 4 5

Approx. Scale n.m.

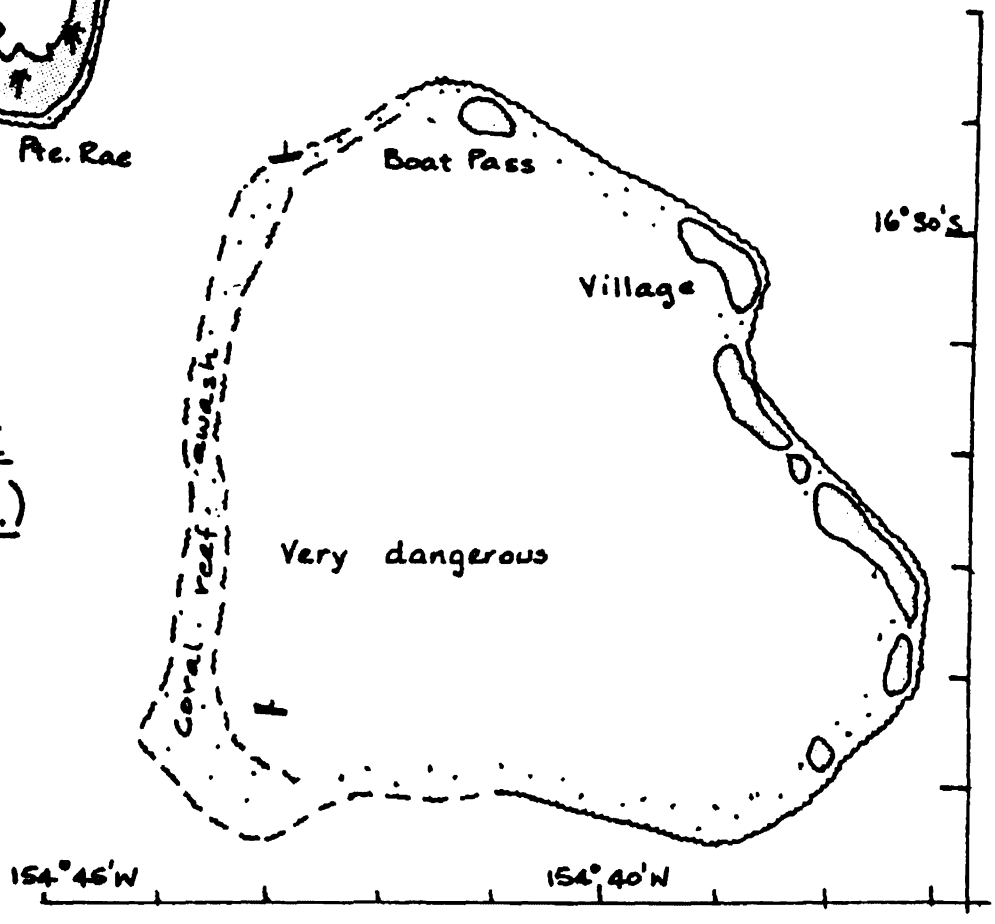
Not to be used for navigation

N



ILE TUPAI (MOTU ITI)

ILE MANUAE (SCILLY IS.)



ILES AUSTRALES

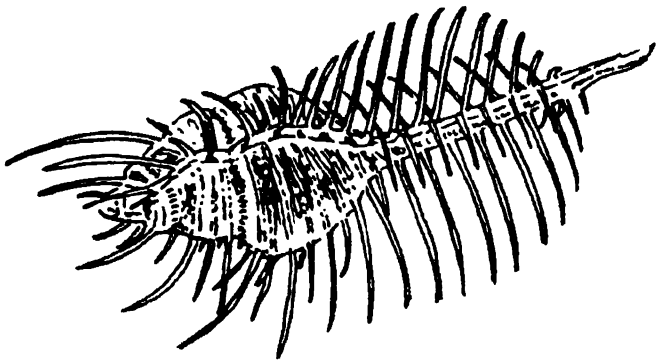
This group of islands lies spread over 800 miles in a WNW-ESE line across the Tropic of Capricorn, between 145°W and 155°W longitude. It includes the islands of Maria, Rimatara, Rurutu, Tubuai, and Raivavae, to which is attached Ille Rapa, lying further to the southeast.

They are high, volcanic islands, surrounded by fringing coral reefs which lie close to the islands, and which, except for Tubuai and Raivavae have no shelter behind the reefs. The most isolated of the French Polynesian Islands, they are being brought out of this separation by air service from Tahiti. Once there was a strong and warlike population on these islands, but they were decimated in the past by disease, and today by a population drift to Tahiti and other Polynesian Islands.

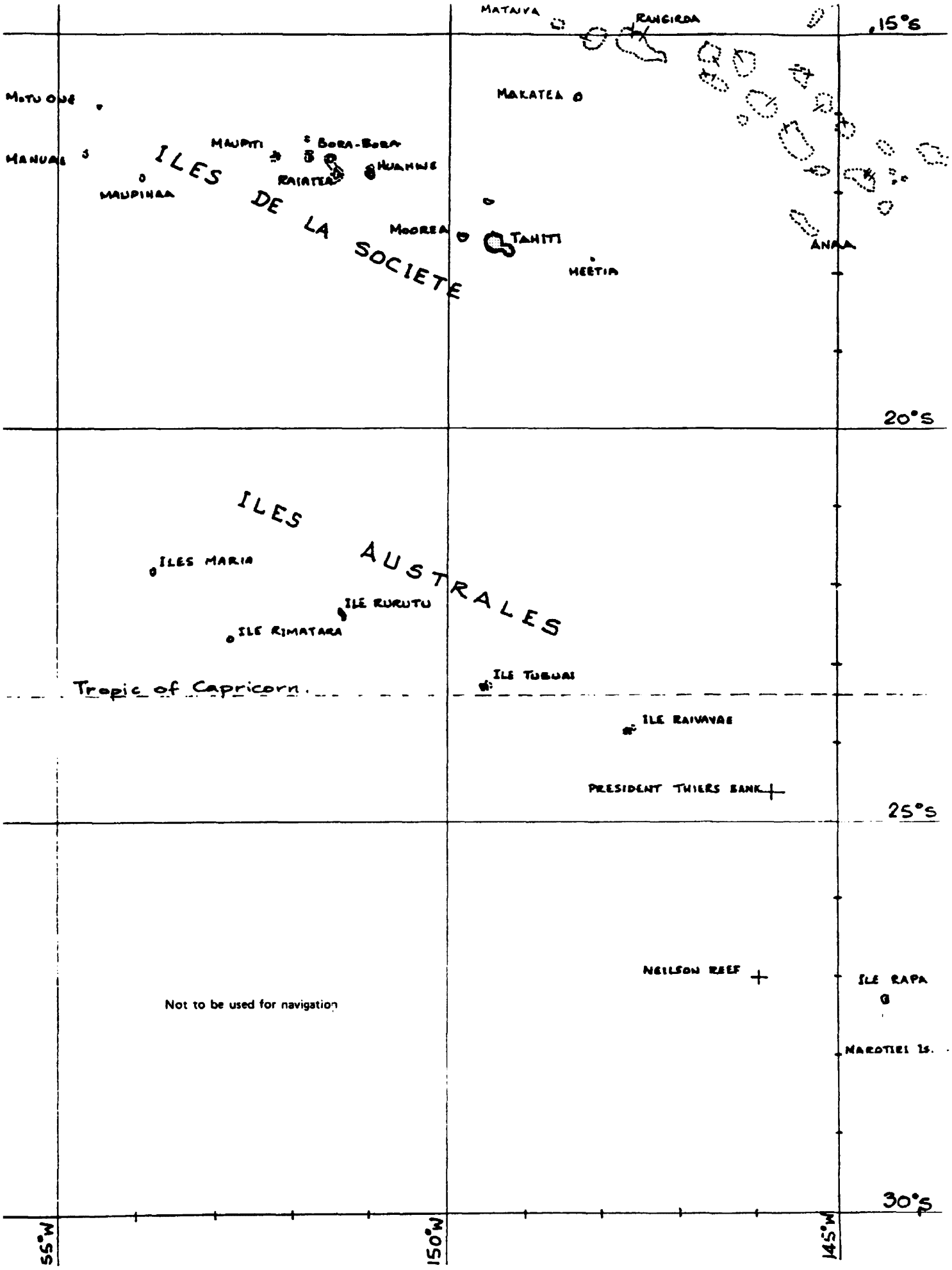
The main islands are fertile and support wild coffee and orange plantations. Agriculture was once developed to a greater degree for support of the warlike villages. Raivavae, for example, once had a social structure to rival Tahiti and a similar influence on the migrations of Polynesians. Destroyed by a sweeping disease till only a small remnant was left, they have no cultural tie with their past. Tubuai once rejected the Bounty's mutineers in a violent way. Rapa, the most exotic of all, shows the remains of fortified villages on mountain peaks, now emptied of all human occupants. Rapa became famous at one time as an island with a disproportionate female population, which it still has.

These islands are within the trade wind belt and so have weather conditions similar to the rest of French Polynesia. The strongest trade winds occur in July. Their more southerly location gives them a wider temperature swing, dropping into the 50°F range in winter.

There are no facilities on these islands and provisions and fuel cannot be obtained in quantity. Life is quieter and less exuberant than in the Society Islands but it is beautiful in its own way. Informal entry can be made at Tubai or Raivavae, though permission to visit the group should be obtained at Papeete. Special permission must be obtained to visit Ile Rapa.



COMB OF VENUS (Murex pecten Lightfoot)
A beautiful Murex Shell


MATAIVA
RANGIROA
15°S
MOTU ONE
MAKATEA
MANUAE
MAUPITI
BORA-BORA
HUAHINE
RAIATEA
ILES DE LA SOCIETE
MAUPIHAA
MOOREA
TAHITI
ANAA
MEETIA
20°S
ILES AUSTRALES
ILES MARIA
ILE RURUTU
ILE RIMATARA
ILE TUBUAI
Tropic of Capricorn
ILE RAIVAVAE
PRESIDENT THIERS BANK
25°S
NEILSON REEF
ILE RAPA
MAROTIRI Is.
Not to be used for navigation
30°S
155°W
150°W
145°W

THE WESTERN AUSTRALES

Iles Rurutu, Rimatara, and Maria are the northwesterly islands of this group, and are administered together. Ile Rimatara lies about 75 miles WNW of Rurutu, and Maria lies another 120 miles further on.

ILE RURUTU

This narrow island is 7 miles long and is oriented about a north-south position. The fringing coral reef lies close along the shore of the island, and no protected anchorage is available behind it. The passages through the reef only allow boats to have access to the shore, and vessels anchored outside the reef sometimes tie stern-to to the stakes that mark the passages.

The main village of Moerai appears very prominent on a northerly approach. The Government Administrator and Gendarme reside here. Anchorage is possible off the passage at the village but the holding ground is poor with hard, flat coral bottom predominating. Since this side of the island is exposed to the force of the trade winds it is not safe to anchor in times of strong winds. There is a tiny harbor in front of the Gendarmerie that can accomodate one yacht in settled conditions. There is also a small harbor and pier 1/2 mile northwest of the Gendarmerie, in front of a large and very visible white church. This is where lighters unload cargo from the trading ship.

The village of Avera is midway along the western side of the island. Anchorage can be taken here, safe and protected from the wind. Since the southwesterly swell causes high surf on this side, landing can be difficult. Thus, in calm weather the landing at Moerai is preferred.

Water and some produce can be obtained but everything must be ferried out to the vessel. An airstrip gives the island access to the rest of Polynesia. The island's population is about 1,600.

ILE RIMATARA

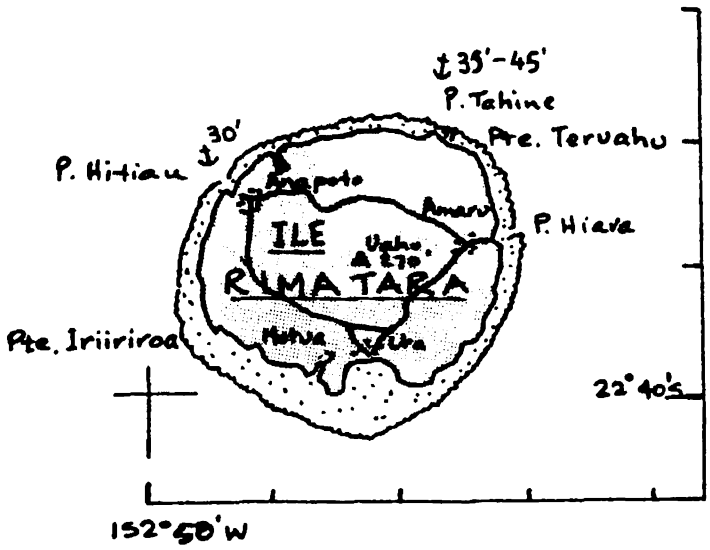
This relatively small island (about 2 1/2 miles across) rises to 272' at its center. It has a fringing coral reef around its shore, cut by a few passages used for landings but not having any sheltered anchorages. On the eastern side is the main village of Amaru which has the Gendarmerie, radio station, stores, bakery, and school. From seaward all that can be seen is a large graveyard with statues and a green cement block boathouse next to it above the beach. The island's population is about 800.

Anchorage off the passage near Amaru is not recommended due to the bad holding. A better anchorage is found in 6 - 7 fathoms, sand, directly north of Passe Tahine. In settled easterly conditions, landing can be made at the concrete landing in the middle of the sandy beach. A better landing can be made on to a sandy beach at Passe Tahine. The weather side can only be used in quiet trade wind weather.

Anapoto is another village on the northwestern side of the island and its large church, school, and concrete wharf are visible from offshore. Dinghy landing can be made at the wharf used by lighters which unload trading ships. The anchorage is on the lee side of the island in 5 fathoms, sand and coral. Passe Hitiau (which leads to Anapoto) may be the only useable one in strong prevailing winds. Local boats are the best way to get ashore safely in rough conditions. An average of one or two yachts per year visit Rimatara.

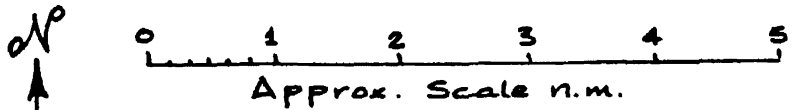
ILES AUSTRALES

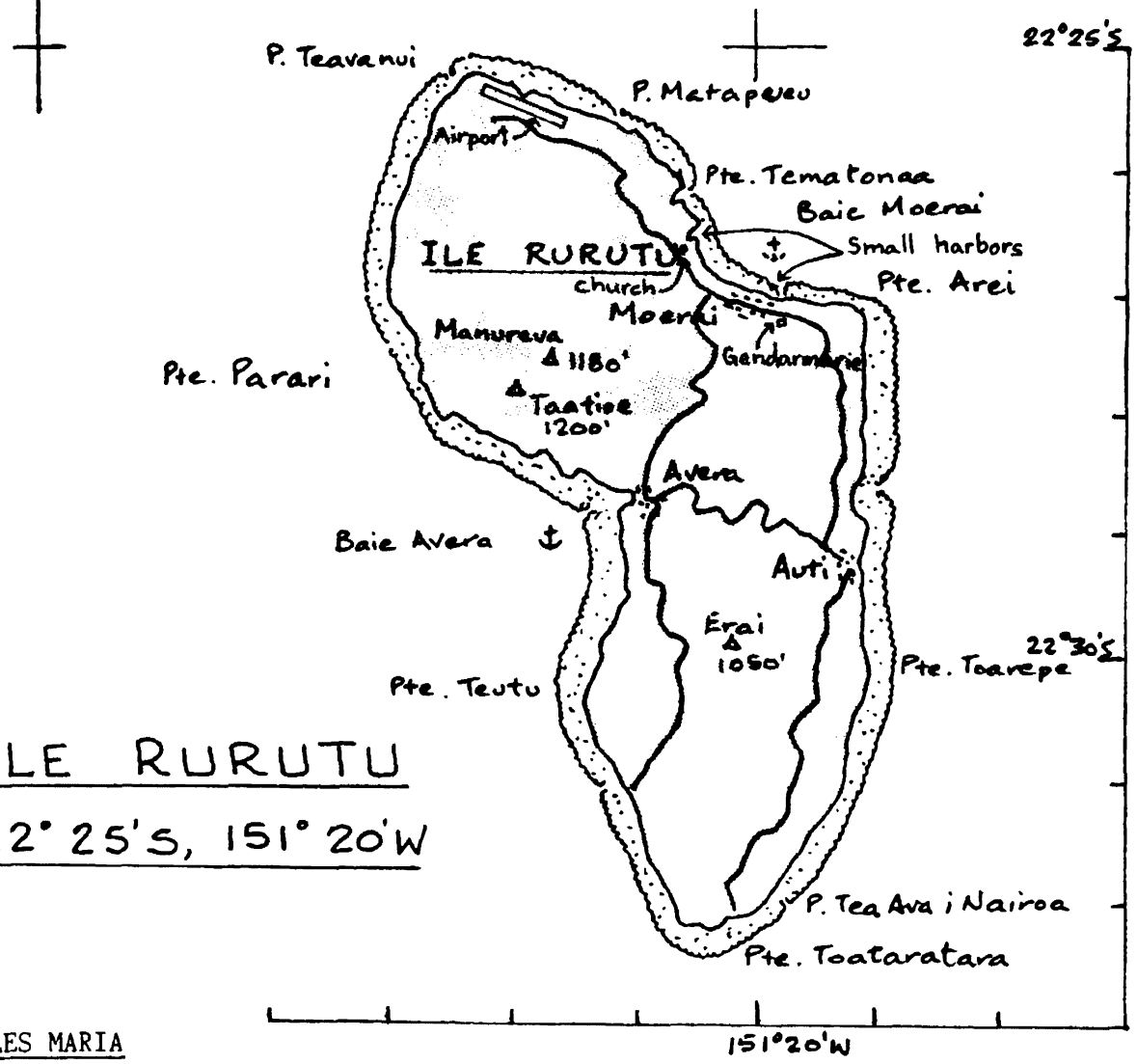
Not to be used for navigation



ILE RIMATARA

22°40'S, 152°50'W





ILE RURUTU

22° 25'S, 151° 20'W

ILES MARIA

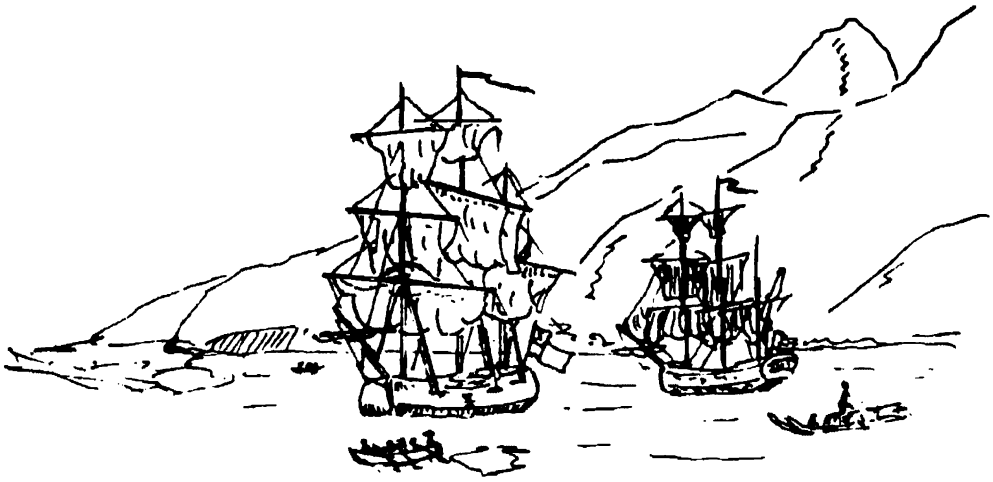
This is a group of four small islets within a triangular coral reef. There is a shallow pass through the reef on the SE side used by lighters which come to pick up copra. The islands are only periodically inhabited, when copra is harvested by the people of Rimatara and Rurutu. There are no safe anchorages.

ILE TUBUAI

This island lies about 115 miles ESE of Rurutu, and 100 miles WNW of Raivavae. From seaward the island may appear to be two separate islands since the high land at both ends--Mount Taita (1,390') and Mount Tonarutu (1,024') is separated by a low-lying intermediate strip. Like Raivavae, the barrier reef lies out from the shore and an entrance allows access to an anchorage within.

The pass is on the northern side and entry is made on a bearing of 156° taken on two red and white triangular beacons on shore, about a mile west of the village of Matura. Once within the reef a vessel can thread a way eastward to anchor off the village in 3 fathoms; if the concrete wharf is unoccupied, one may tie alongside. The wharf has recently been extended and dredged alongside and accomodates ships up to 180' in length. Because of surge, it may be more prudent to anchor in the lee of the wharf than to tie alongside. A few other anchoring spots could be found on this northern side but they are further away from the village. The lagoon is shallow and there are numerous coral heads that prevent travel around the island within the lagoon.

The Government Administrator and local Gendarme are in Mataura and they can authorize entry. There are several other villages on the island and a road goes across and around the island giving access to them. The airport connecting Tubuai to Tahiti lies at the northwestern corner of the island on a low, flat section of shoreline. There is an excellent anchorage just south of Pointe Tepuu, between the southwestern end of the runway and Anua village, but it is a 2 1/2 mile walk to Mataura. There is little available in the way of fuel and provisions, but fruit, vegetables, and coffee may be obtained in season. There are several well-stocked stores, a bakery, post office, and infirmary in Mataura. The population of Tubuai is about 1,500.



THE RESOLUTION AND ADVENTURE IN MATAVAI BAY

ILES AUSTRALES

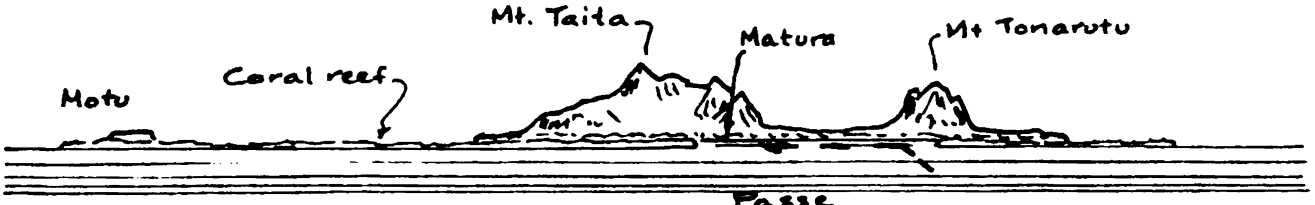
ILE TUBUAI

23° 20'S, 149° 30'W

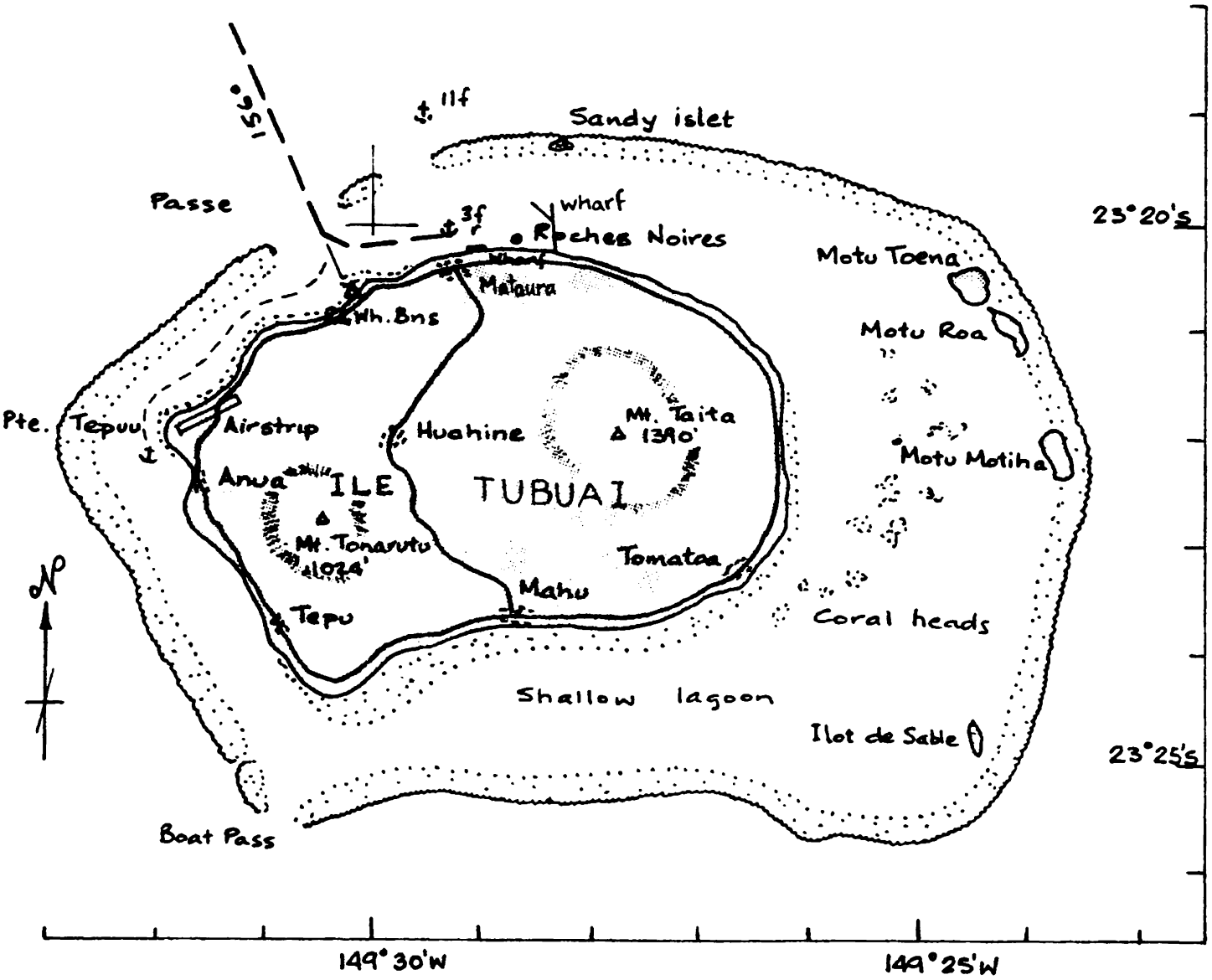
0 1 2 3 4 5

Approx. Scale n.m.

Not to be used for navigation



APPROACHING FROM N. DISTANT ABOUT 2 MILES.



ILE RAIVAVAE

Raivavae lies about 100 miles ESE of Ile Tubai, while Ile Rapa lies 200 miles further southeast. The island has a coral barrier reef that is mostly awash and which lies one to two miles off the coast. Several motus lie along the south and east sides. Passe Teavarue is the main entrance and leads to some protected anchorages. In this regard, the island is the best of the Australes. Two other boat passes are openings in the reef--Passe Teaoa at the south and Passe Teruapupuhi at the northeast corner--but they are encumbered with coral heads.

The island rises to a height of about 1,430' at Mount Hiro near the northeast end of the island, so it is not especially high. The peaks are steep and precipitous, and reach out in two spurs at Pic Rouge and Presqu'ile Vainnana to enclose the main anchorage at Baie Rairue.

Passe Teavarue is part of a wide opening in the reef on the northern side. It is the best to use for entry or exit. Vessels up to 13' draft can use the pass. The tidal stream runs strongly out of the pass in a NNE'ly direction. Enter the pass on a bearing of 162° taken on beacons standing on Rochre Ruatara, which lies close to the coast below Mount Hiro. About ½ mile within the entrance a beacon with a white cylindrical topmark stands west of the entry line. A second black beacon marking a submerged coral head is about ½ mile NNW of Rocher Ruatara. When this beacon bears south turn to a heading of 172°, avoiding any coral heads in the vicinity. When Motu Tuitui (a small, prominently visible, sandy islet in the northwestern part of the reef) bears 261° the vessel turns on to that heading (towards Motu Tuitui) until the turn can be made into Baie Rairua.

The main harbor and anchorage off Rairua village is about 400' to 500' north of the concrete wharf in 8 fathoms, mud, with good holding. If there are no trading vessels in port then it is possible to tie to the wharf. Visibility in the lagoon is not as good as in the Tuamotu and Society Islands.

This anchorage can also be entered through Passe Totoro Ahau, which is the subsidiary entrance on the west side of the wide pass. Though apparently shorter this route requires a closer approach to the reef and requires threading a passage past unmarked coral heads before it joins the main route to Rairua. For these reasons it is not recommended.

An anchorage is also found off the village of Mahanatoa, but as this location is directly exposed to the pass it suffers from any northerly wind. A safer anchorage is further to the east off the village of Anatonu.

Water collected from mountain streams is piped to the wharf at Rairua. Do not drink or collect water that flows through the taro plantations. Fruits and some meat may be obtained at the village markets.

ILES AUSTRALES

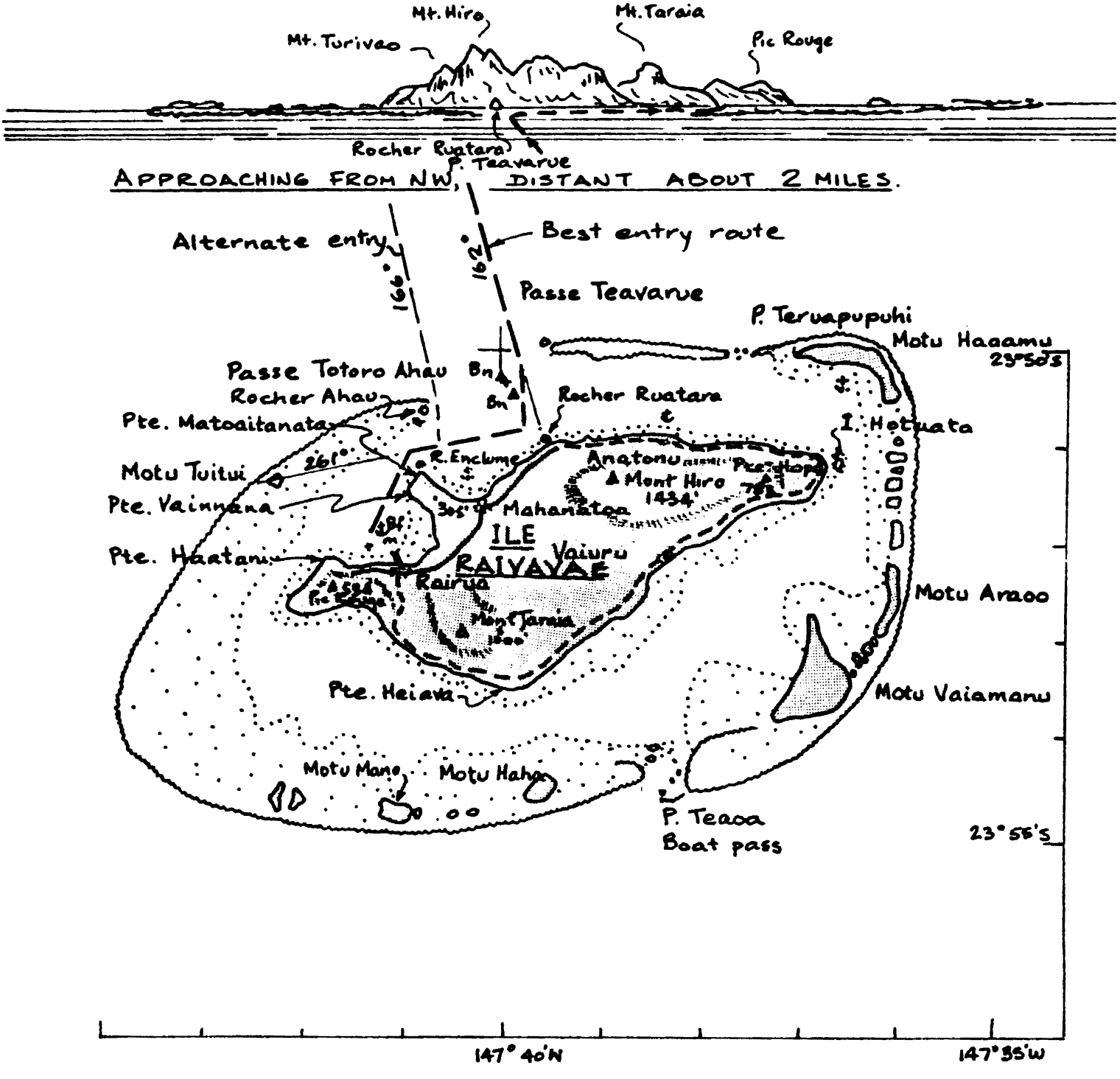
ILE RAIVAVAE

23°50'S , 147°40'W.

0 1 2 3 4 5

Approx. Scale n.m.

Not to be used for navigation



ILE RAPA

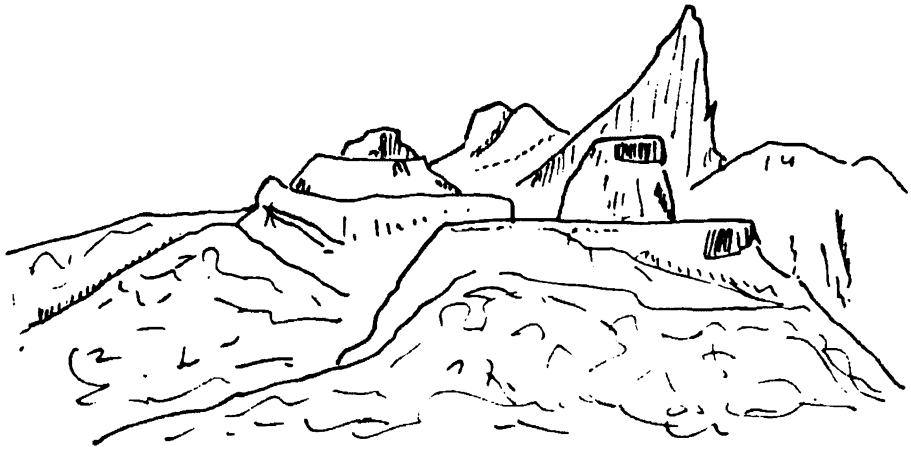
This spectacular, but somewhat forbidding island lies well to the south of the rest of Îles Australes, but it is administered by them. The island is a steep, high, and jagged set of mountain peaks that drop to the sea in cliffs around much of the coast. The highest peak is Mont Perau (2,130') but many of the other peaks exceed 1,200'.

The steep coast shows the lack of offshore dangers, except in the approaches to Baie de Haurei, where the main villages and anchorages are located. This bay is impressive for it appears to be the crater of a volcano which has been breached open to the sea. Shoals and spits block off a good part of the bay and extend well out from each of the seaward points, narrowing the entrance. Thus the approach to and actual entry into the bay is complex, and as the clarity of the water is not as good as elsewhere in Polynesia, the passage needs care.

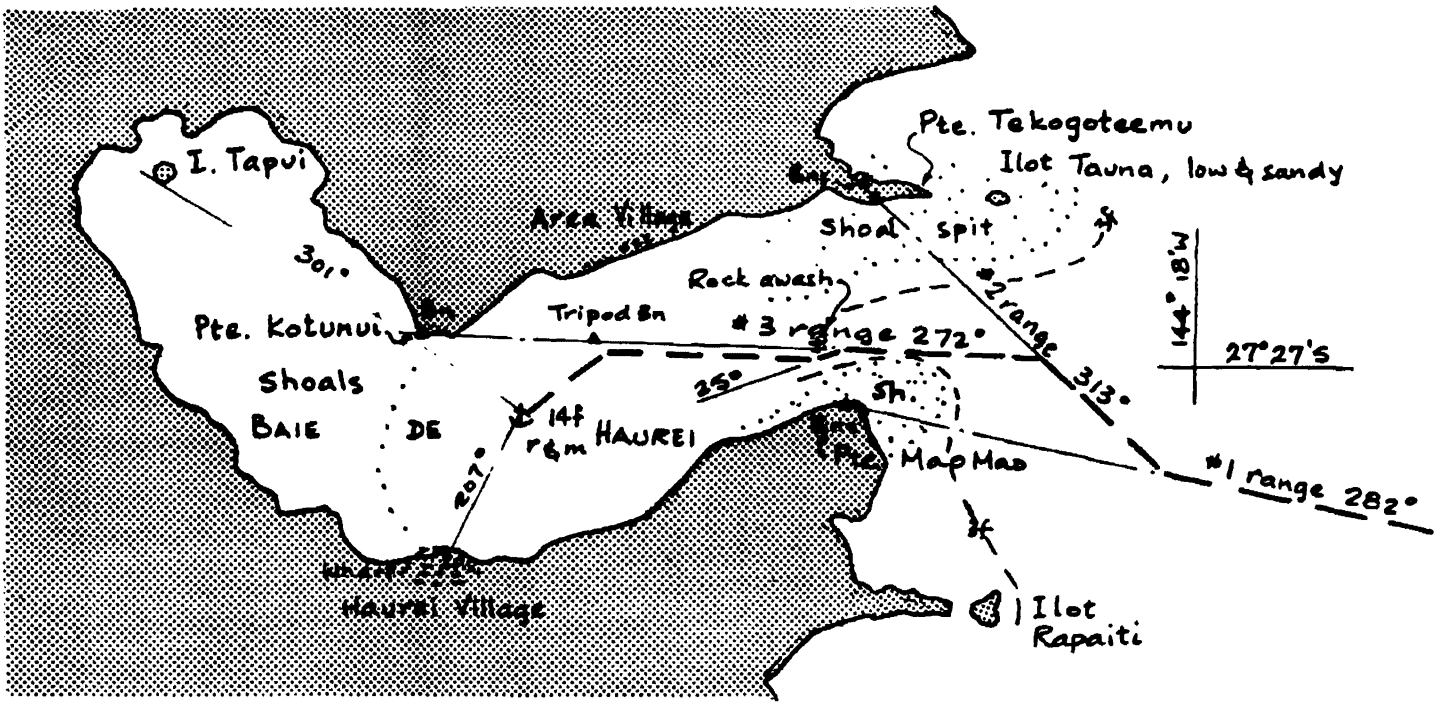
There are three ranges which must be followed into the anchorage, and this has been shown on the detailed sketch. Use this sketch with caution, because it is based on the data in the Pilot and few details of the actual depths and shoals are shown. The anchorage within the bay has rock and mud bottom, and has indifferent holding. Use plenty of scope to assist the anchor. Squalls can funnel down the steep sides of the bay. Incidentally, sharks abound in the bay and around the island.

Part of the spectacular, green-clad, steep pointed hills can tell one of the proud past of Rapa. For wherever these hills appear terraced near the peak it indicates the remains of fortified mountain village strongholds which are now over grown. These forts were built and faced with rock. Warrior tribes lived here and controlled the agriculture in the neighboring fertile lowlands. Then the usual story followed. Christianity and the missionaries brought the people down from the healthy heights and forts, the whalers and traders took the men for sailors or workers until the island was one composed of almost women only. This led to a period when the women became the workforce and Rapa an island of Amazons. This is not the present situation as this period has passed into history.

Rapa is often called Rapa Iti (not to be confused with Ilot Rapaiti off of Pointe Reemavee) to differentiate it from Easter Island which was called Rapa Nui. Archaeologists have not clarified any connection between the two islands except that both have Polynesians living on them. What else could have induced the building of the mountain villages other than a desire to watch the horizons for invading canoes that would be coming with the trade winds from the east?



FORTIFIED HILL TOPS AT ILE RAPA



DETAIL OF BAIE DE HAUREI ANCHORAGE

0 1/2 1

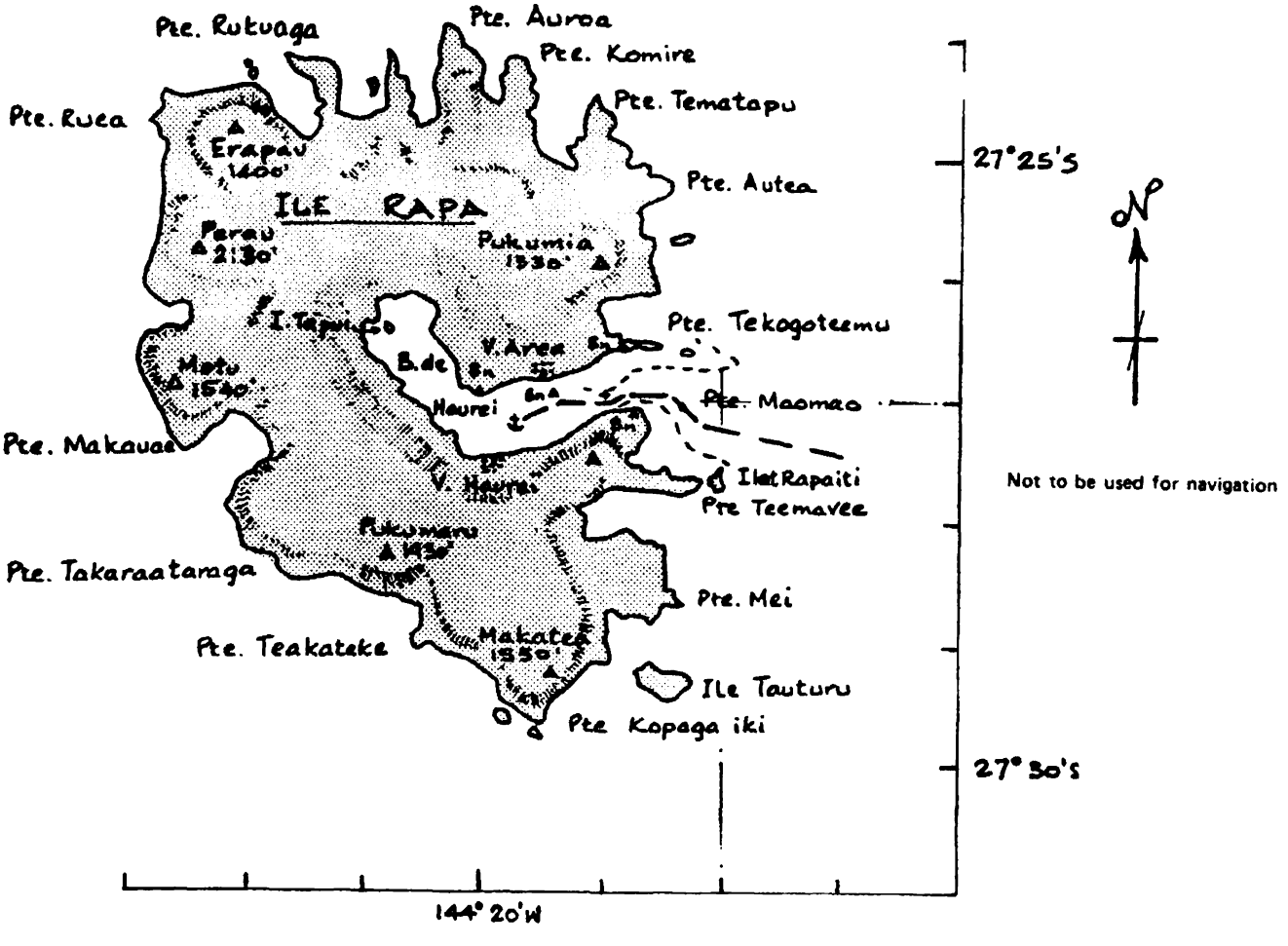
Approx. Scale n.m.

ILE RAPA

27°27'S, 144°18'W.

0 1 2 3

Approx. Scale n.m.



THE COOK ISLANDS

The Cook Islands' flag has 15 white stars in a circle on a blue field. This represents the 15 small islands that lie scattered over a very large ocean area. In fact, the definition of the country includes the land and sea area between 8°S and 23°S Latitudes and also 156°W and 167°W Longitudes. This amounts to an area of over 750,000 square miles, in which lies a total land area of 93 square miles. Many islands of the groups were discovered by Captain Cook, and his name is commemorated in their title.

It has always been convenient to divide the Cook Islands into two geographical groups. The Southern or Lower Cook Islands include Rarotonga, Mangaia, Manke, Atiu, Mitiaro, Takutea, and Manuae (Hervey) Islands. The majority of the aforementioned islands are volcanic islands with fringing coral reefs. The Northern Group includes Palmerston, Suvarov, Nassau, Pukapuka, Rakahanga, Manihiki, and Penrhyn, these all being low-lying atolls.

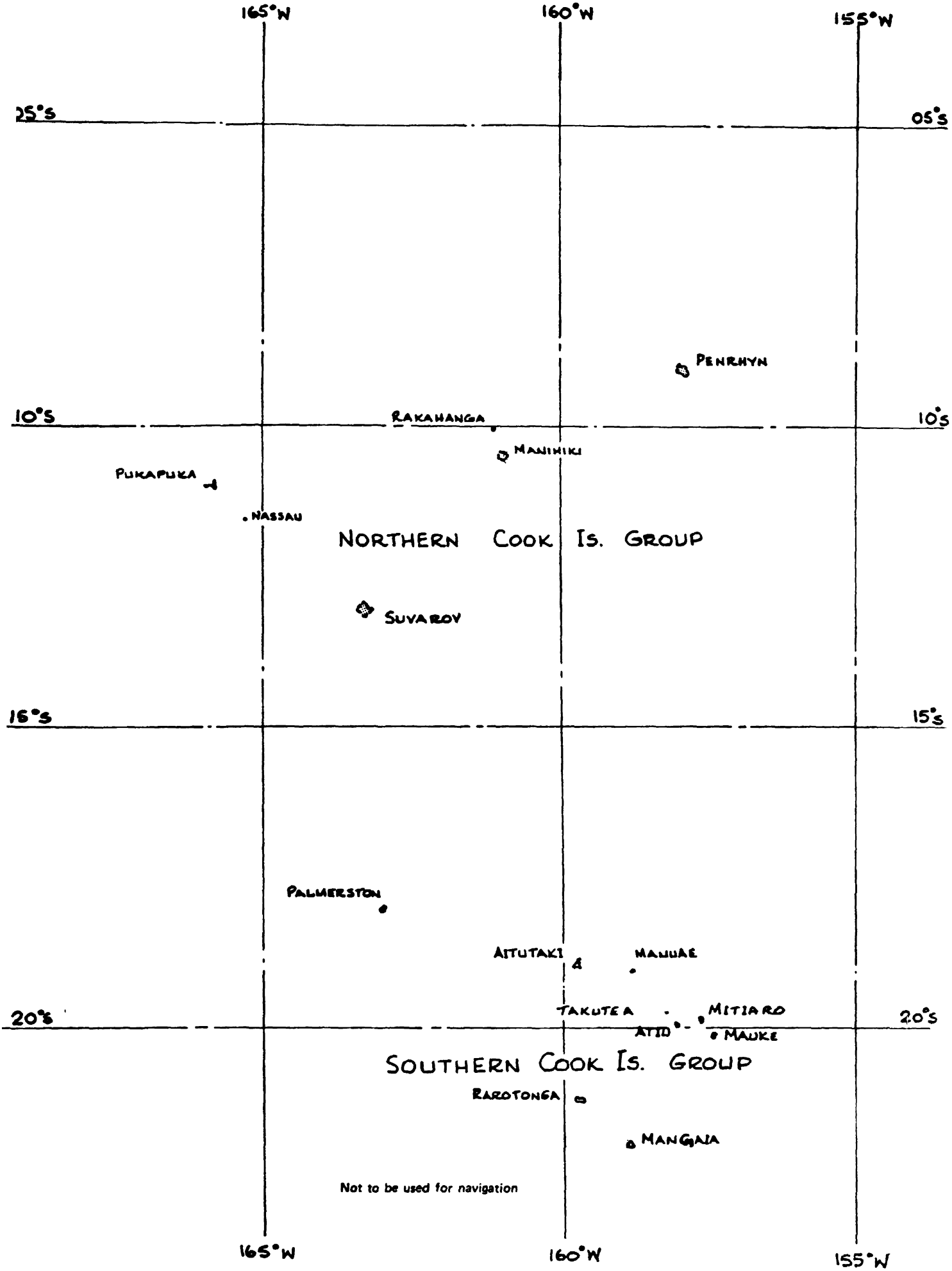
Entry formalities are handled at Rarotonga, Aitutaki, and Penrhyn. Permission to visit other islands of the group can be requested on entry. One reason for entry rules is the government's wish to try to control the entry of disease or pests that might affect their primarily agrarian economy. With the introduction of airports and airstrips on most islands they have been drawn closer, but at the same time opened to more outside pressures and influences. The long term result of this may or may not be good for these generous people. Incidentally, there is no tipping in the Cook Islands.

The first Polynesians in these islands probably came about 500 AD. The major migration to New Zealand which culminated in the Maori culture passed through here, having begun elsewhere in Polynesia. It was from Ngatangiia in about 1350 AD that the intrepid seafarers set out in their great canoes on the last leg of the journey to Aetorea (now called New Zealand) to form the Maori nation.

Since 1965 the Cook Islands have been a self-governing democratic commonwealth affiliated with New Zealand, which subsidizes finances and is responsible for foreign affairs and defence. Thus the Cook Islanders enjoy full New Zealand citizenship, and move freely to and from New Zealand. There are more Cook Islanders in New Zealand than in their own islands. The main language is Cook Island Maori, but English is also spoken with a strong New Zealand accent.

A major influence in these islands has been that of the London Missionary Society, now operating as the Cook Islands Christian Church. The people are strongly church-going and religion is a dominant force in their lives. One should avoid entering or leaving on a Sunday, which is strictly observed as the Sabbath. Visitors should take care to accommodate their dress to the pattern established while enjoying this beautiful country with its friendly people.

The islanders keep their homes and gardens in a neat and well kept manner that contrasts with the untidy sprawl of Papeete. They are true, fun-loving Polynesians, keen on sports and dances. It is well worth attending one of their feast nights which is sure to have dancing entertainment. Though there are many similarities in dance and language to those found in Tahiti, their style is more closely related to the Maoris of New Zealand.


165°W
160°W
155°W
25°S
05°S
10°S
10°S
PENRHYN
RAKAHANGA
MANIHIKI
PUKAPUKA
NASSAU
NORTHERN COOK IS. GROUP
SUVAROV
15°S
16°S
PALMERSTON
AITUTAKI
MANUAE
TAKUTEA
MITIARO
ATIU
MAUKE
20°S
20°S
SOUTHERN COOK IS. GROUP
RAROTONGA
MANGAIA
Not to be used for navigation
165°W
160°W
155°W

RAROTONGA

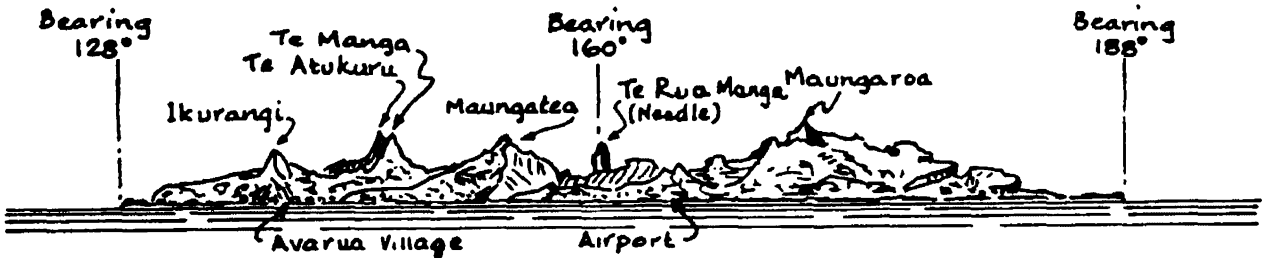
Rarotonga is a beautiful and luxuriantly green, mountainous island within an encircling barrier reef. It has been likened to a miniature Tahiti or Moorea, though it is only about 25 square miles in area with a perimeter drive of 25 miles. The rugged peaks of the interior reach to about 2,000' and their sharp outlines make up for any lack in height. This is the main island of the Cook Islands, and has the Parliament and Administration Buildings, plus almost 5/8 of the total population. It has the main Port of Entry to the Cook Islands at Avatiu.

There are only two harbors--Avarua and Avatiu--both close together in the middle of the north shore. However, Avatiu is the only harbor that can be used by cruising vessels, and it is extremely limited in space and access. A cyclone in 1987 did much damage which will take time to repair. The small, square basin is cut out of the reef with partially reclaimed areas on each side. Silk and Boyd trading vessels also use the harbor, so there is little room left for visiting boats which must moor Tahiti style and always be ready to move for others. When there are strong winds in the north to northeast sectors the surge runs into the harbor, making it most uncomfortable.

A Harbor Commission, whose offices are alongside the basin, regulates entry into the islands. They will clear the vessel and set the limit of any stay. Extensions have to be applied for and a fee is required. Fumigation procedures will be undertaken on vessels coming from such ports as Fiji, Samoa, Tonga, and Tahiti. There is a $20 NZ per person exit fee, payable before port clearance papers are issued.

The harbor at Avatiu is in the middle of the residential and commercial area of the town of Avarua. Stores and other facilities are within walking distance. The public market has a good selection of local vegetables while refrigerated and dried foods from New Zealand are available at wholesale and retail stores. Diesel fuel, propane, and kerosene are available in Avarua, and if enough fuel is needed, a fuel truck will come to Avatiu Harbor. There is regular air service to New Zealand and excellent satellite phone service.

On the eastern side, at Ngatangiia, is the only other sizable entrance into the lagoon. Yachts must obtain special permission to use this pass because it is constricted with fish traps and surf and swell make maneuvering difficult. A local sailing club sails small dinghies in Muri Lagoon, which is a little further south. The reef lies fairly close inshore all around the island, and in periods of heavy swell the surge crashes over the reef to pour into the shallow lagoon.



APPROACHING RAROTONGA IS. APPROX. 3 MILES N. OF AIRPORT

RAROTONGA IS.

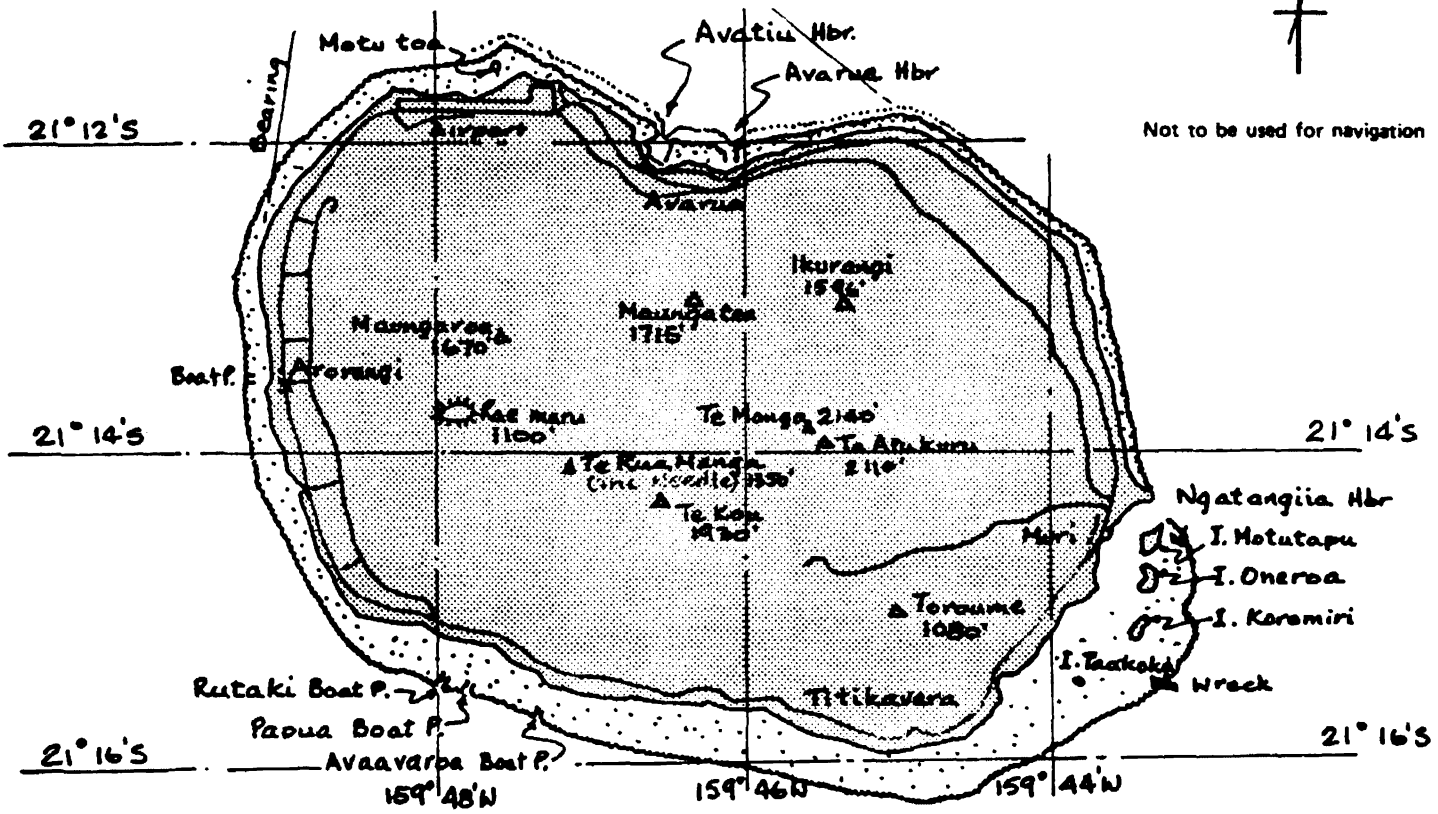
(COOK ISLANDS)

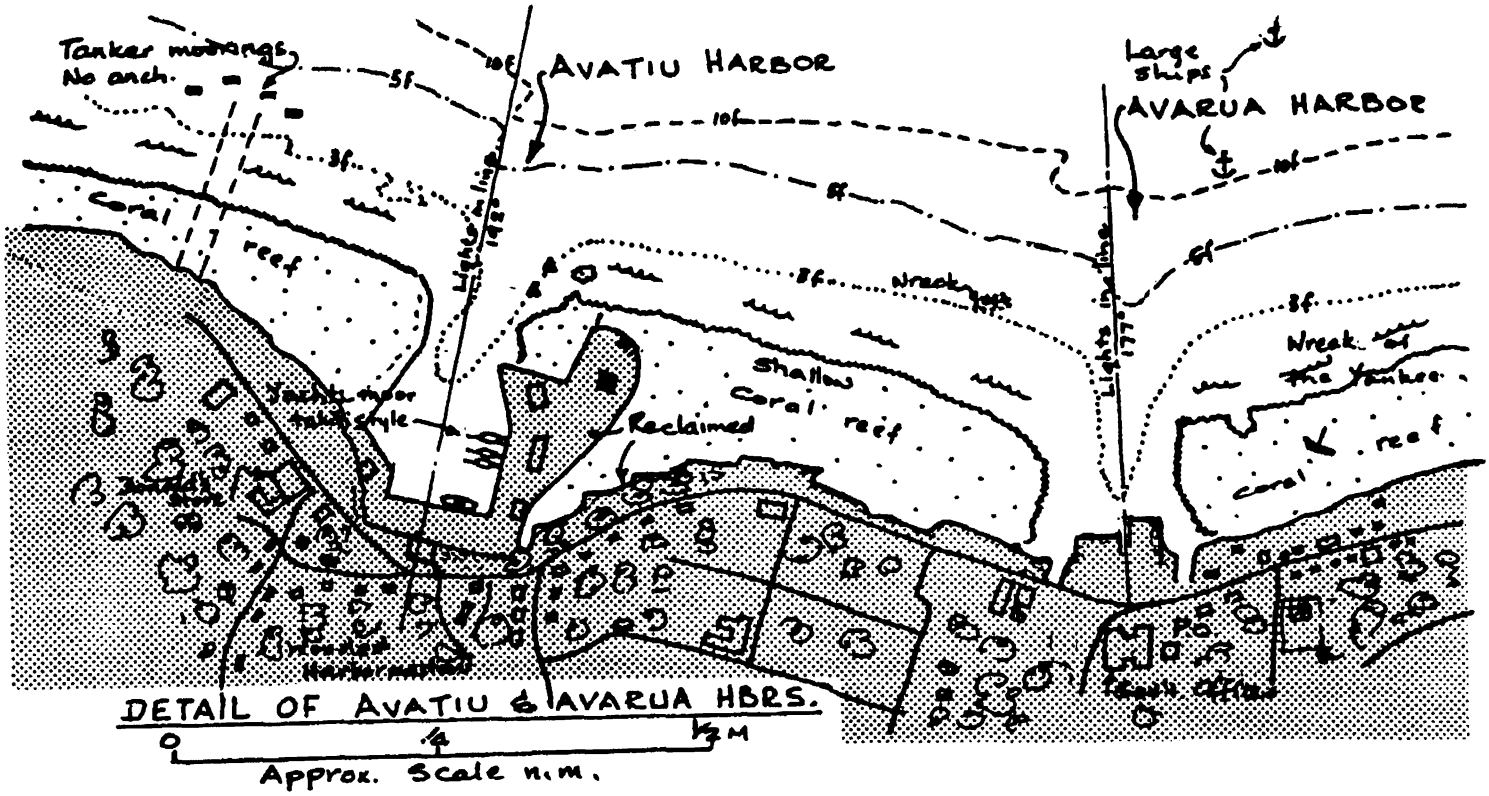
0 1 2 M

Approx. Scale n.m.

N

Not to be used for navigation





DETAIL OF AVATIU & AVARUA HBRS.

0 ¼ ½ M

Approx. Scale n.m.

AITUTAKI

This island has been likened to Bora-Bora, and it is indeed reminiscent of it. It lacks the central rocky peaks, as the highest point is only 390'. It is similar to Bora-Bora in that it is surrounded by a reef, creating a large, shallow lagoon around the central island. In its own way this is as beautiful and pleasant an island as any. Be aware of the strong westerly setting currents south and east of the southern tip of Aitutaki at Motukitiu. At least two yachts have been shipwrecked in this area when approaching during poor visibility; prudence and care is essential.

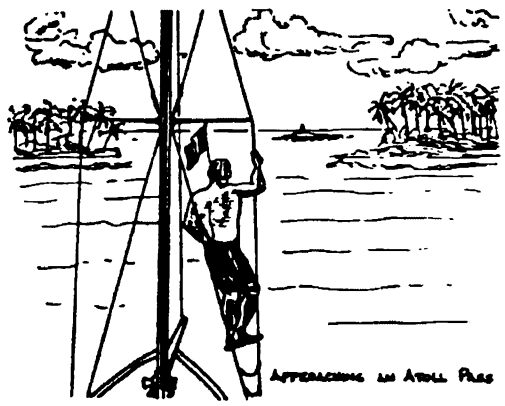
It has one entrance pass, if one can call the long and narrow passage that. The passage leads through the reef to a small and limited basin on the western side of the island. The width of the passage is only 50' to 60', and there is a shallow section where the maximum depth that can be carried at high tide is 6'6" (2 meters). Even a trimaran drawing only a few feet touched in the nearby anchoring area so this can be a limiting factor for some cruising vessels. Because of the very limited swinging room, it is best to anchor fore and aft.

The Port Administration Authority is adjacent to the small basin. The Port Captain often monitors Ch 16 during working hours, and vessels can enter and clear from the Cook Islands through this Port of Entry. Fumigation is done here.

During any stay at Aitutaki a dinghy visit should be made to the islands and waters in the southern part of the lagoon. The water is clear and fish abound. Other parts of the reef show some pollution and loss of various species of coral. Crown of Thorns starfish which eat and damage the coral can be seen, though it is understood that natural predators have been successfully planted here to keep them under control.

Aitutaki is some 150 miles north of Rarotonga, and is well placed to allow visits to other islands of the Cooks, including Palmerston and Suwarrow atolls in the Northern Group. There are only a few stores with limited facilities on the island, though there is a small haul-out yard. One tourist motel--the Rapae--doubles as the main bar. There is a new resort on Mangari Motu south of the airport.

On Friday nights the islanders put on an entertaining show at the motel where they perform exuberantly. The party usually continues on afterwards and the whole island has a heavy head the next day. Though their dances are truer to the old style, it should be noted that the dancers from Aitutaki have been regular winners at contests held in Tahiti.



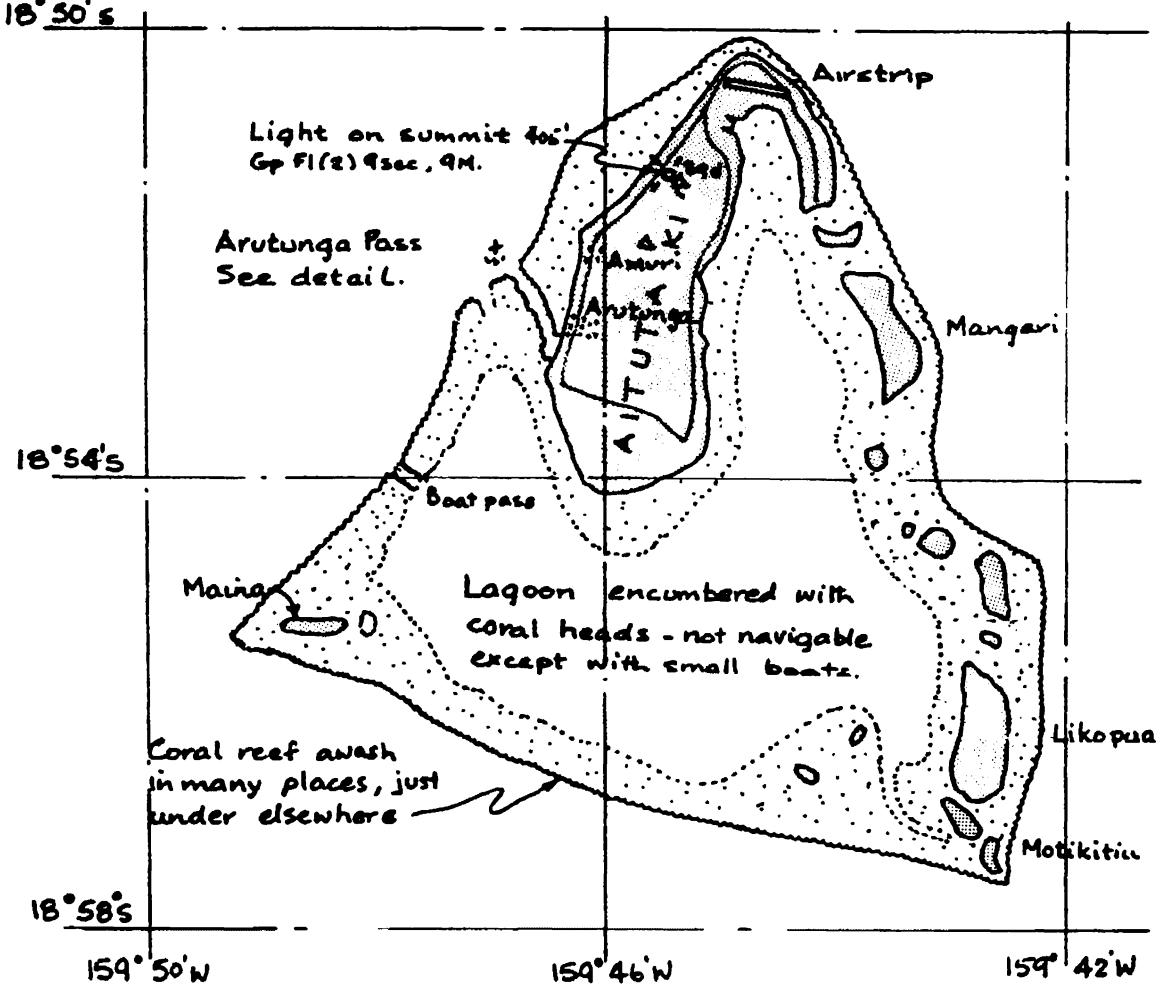
AITUTAKI ISLAND
(COOK ISLANDS)

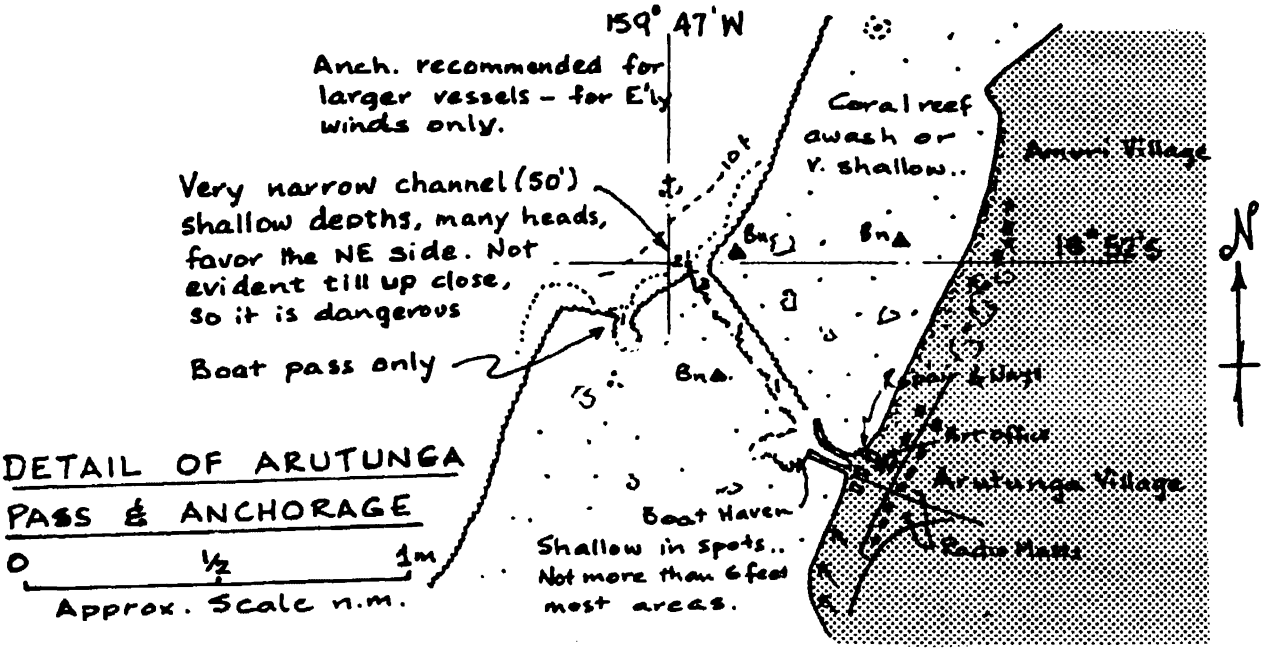
Not to be used for navigation

0 1 2 3 4
Approx. Scale n.m.

APPROACHING AITUTAKI FROM N. THE MOTUS MAY NOT BE SEEN TILL CLOSER IN.

APPROACHING AITUTAKI FROM E. DISTANT ABOUT 7 MILES.





DETAIL OF ARUTUNGA PASS & ANCHORAGE

0 ½ 1m
Approx. Scale n.m.

MANGAIA ISLAND

The most southerly of the Cook Islands, Mangaia Island lies 110 miles ESE of Rarotonga. The island rises to a 554' height in the center, but it is dominated by the Makatea, a formation of raised coral cliffs (named after the high lifted atoll in French Polynesia). These cliffs virtually encircle the island but are most prominent on the northern side where they vary between 150' to 230'. In places the raised wall is over a mile wide, and the coastal road around the island has to adjust to this feature. Many caves, which were used as burial sites, are found in this formation.

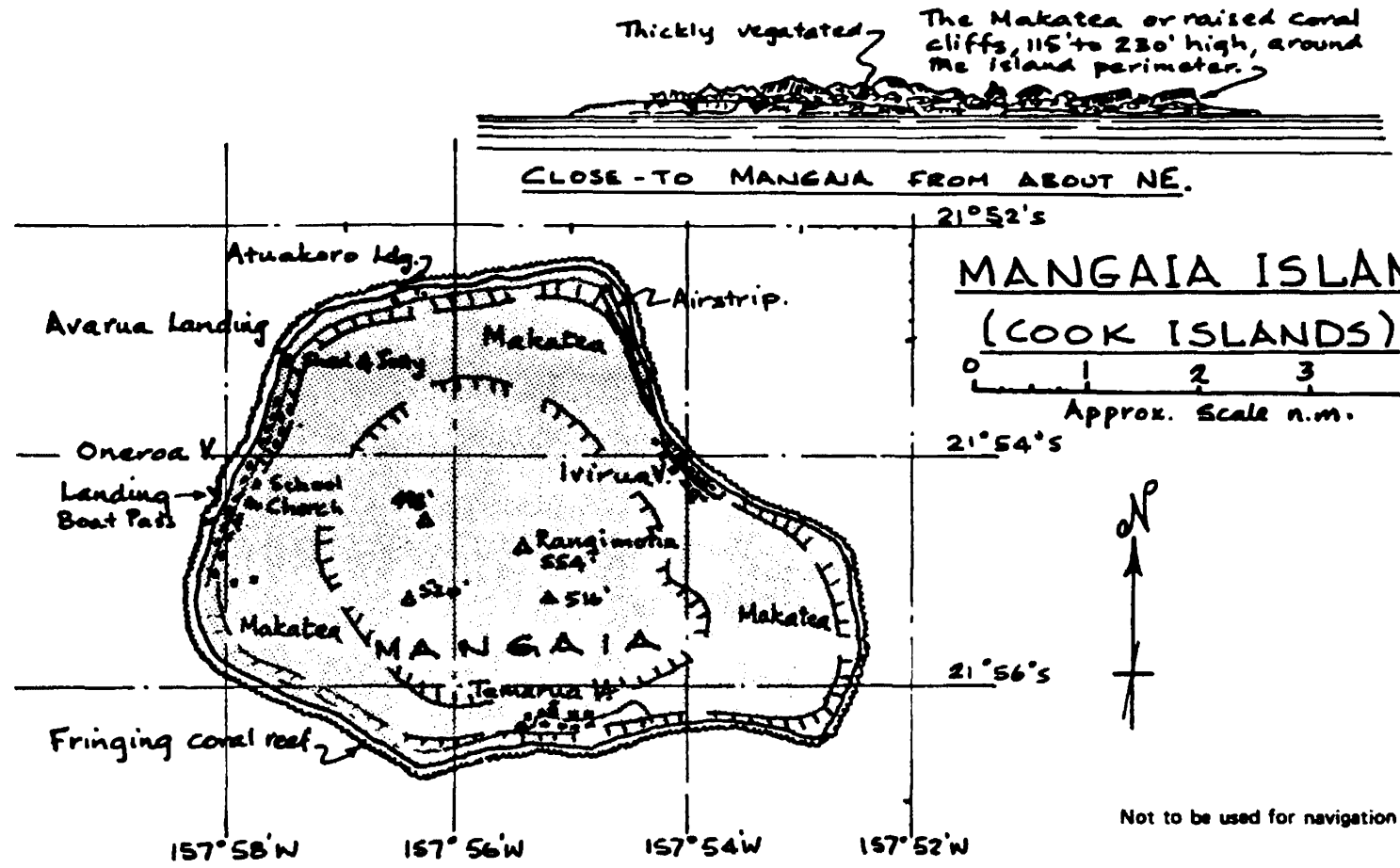
A fringing coral reef, generally visible and extending up to ¼ mile from the shore surrounds the island. There are no harbors, though there are boat passages or landings cut through the reef. One such passage is at Oneroa, the main village which is on the western side of the island. This village shows up clearly from a distance. However, a better landing is at Avarua, about a mile north where the boat passage has been blasted out of the reef to a small wharf. Even here the swell and surge is such that it is advisable to use the local vessels to get ashore rather than to go in yourself. A large shed marks the landing, and a light is sometimes shown if there is shipping in the offing. Southwesterly swells can affect these landings, and at such times a northerly landing can be used. It is essential that someone stay with the vessel for no anchorage is possible at any of these landings.

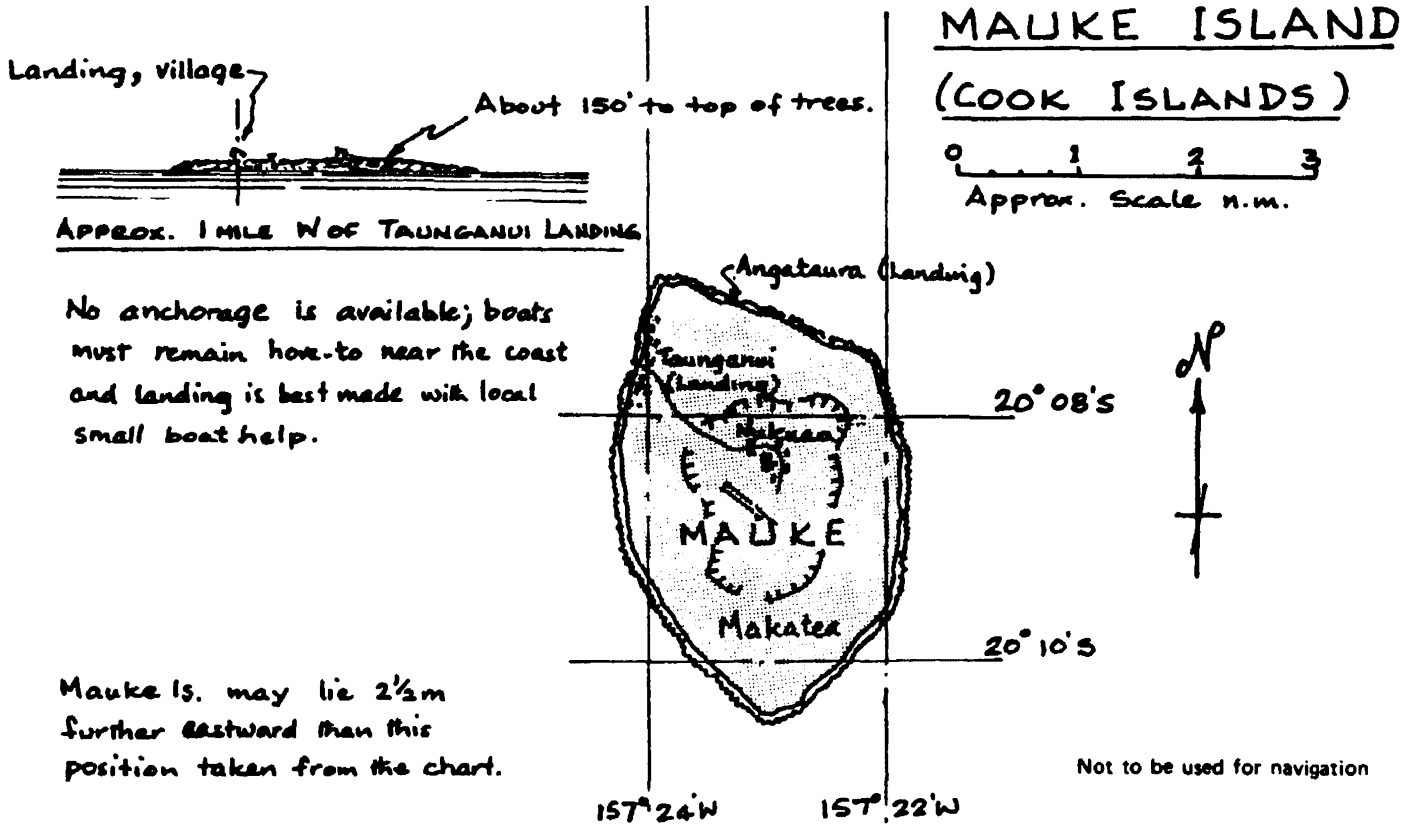
MAUKE ISLAND

This is the most easterly of the Lower Cook Island Group, and is about 150 miles ENE of Rarotonga. The island is relatively low, but shows a type of Makatea in its formation. It is about 150' high, including the trees.

Similar to other islands of this group it is encircled by a fringing coral reef that is never more than ¼ mile from the coast. No anchorage is available anywhere around it. But as the reef is steep-to vessels can come fairly close in if a landing party is to go ashore. There is a good landing place at Taunganui at the northwestern end of the island. This landing can be located by sighting the village and its flagstaff. If the southerly swell is strong an alternative place for landing is on the northern side at Angataura. There are other spots, but they are more difficult to negotiate. In any visit ashore the vessel should be left attended and the trip ashore should be made in local boats.

ANCIENT FISH HOOKS OF PEARL SHELL


Thickly vegetated
The Makatea or raised coral cliffs, 115' to 230' high, around the island perimeter.
CLOSE-TO MANGAIA FROM ABOUT NE.
21°52's
MANGAIA ISLAND
(COOK ISLANDS)
0 1 2 3 4
Approx. Scale n.m.
Atuakoro Ldg.
Airstrip.
Avarua Landing
Makatea
Oneroa V.
21°54's
Landing Boat Pass
School & Church
Ivirua V.
Rangimotia 554'
520'
516'
Makatea
MANGAIA
Makatea
Tamarua Pt
21°56's
Fringing coral reef
N
157°58'W
157°56'W
157°54'W
157°52'W
Not to be used for navigation


MAUKE ISLAND
(COOK ISLANDS)
0 1 2 3
Approx. Scale n.m.
Landing, village
About 150' to top of trees.
APPROX. 1 MILE W OF TAUNGANUI LANDING
No anchorage is available; boats must remain how-to near the coast and landing is best made with local small boat help.
Angataura (Landing)
Taunganui (Landing)
20°08's
MAUKE
Makatea
20°10's
N
Mauke Is. may lie 2½m further eastward than this position taken from the chart.
157°24'W
157°22'W
Not to be used for navigation

HERVEY ISLANDS

These are two small, low islands--Manuae and Auotu--within a coral reef located 55 miles southeast of Aitutaki. There is no passage into the lagoon for vessels, though a landing can be made through Turakina Boat Passage on to Manuae Island. There is an airstrip on the island, but the island is usually inhabited by only a few people engaged in copra collection and working out of Aitutaki.

MITIARO ISLAND

A small, raised coral island, with traces of Makatea, Mitiaro Island lies about 22 miles northwest of Mauke. It is a green and fertile island having a small population. Although it is encircled by a fringing reef there is a landing place on the western side at Omutu, off the village of Atai. An interesting feature of the island is the brackish lake in the interior where edible eels abound.

ATIU ISLAND

Twenty miles WSW of Mitiaro Island is another small island, Atiu, which also is of raised coral and resembles Mangaia with its Makatea. The main villages are all in the higher center (394') of the island, where the church shows prominently from seaward.

The bold, raised cliffy coast has several small bays where landings are located. The fringing coral reef lies fairly close to the island, but landings are possible at Taunganui on the northwestern side or in suitable conditions, at Iotua Ika on the north. Other landings can be seen, but they are more difficult to use. Again, the yacht has to remain manned, and it is best to go ashore, if at all, in the native boats.

TAKUTEA

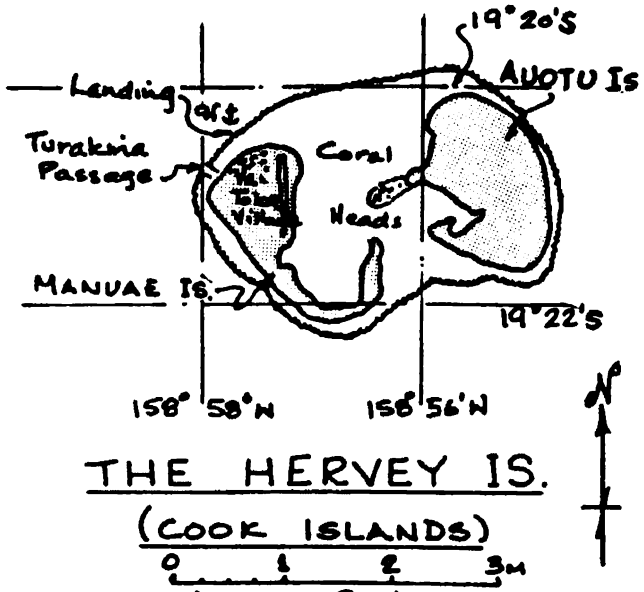
This is a very small island lying about 10 miles northwest of Atiu, from where it may be seen. It is a low, wooded island surrounded by a fringing reef. The island is a wild life sanctuary, though it is visited from Atiu for its coconuts.

A reef extends about 2 miles southeast from the southeastern end of the island, and occasionally the sea breaks heavily across this reef. There is also a shoal extending about 1/3 mile west from the western end of the island. Strong tide rips occur north of this shoal.

A possible landing place is on the north side. However, the dangers inherent in keeping a yacht in this area during any landing do not recommend it and it is best avoided, especially as it is reserved for wildlife and sea birds.

NOTE:- Harvey Is. may be about 5 miles further N'ward than shown below taken from charts.

FROM ABOUT 2 MILES NW OF LANDING.



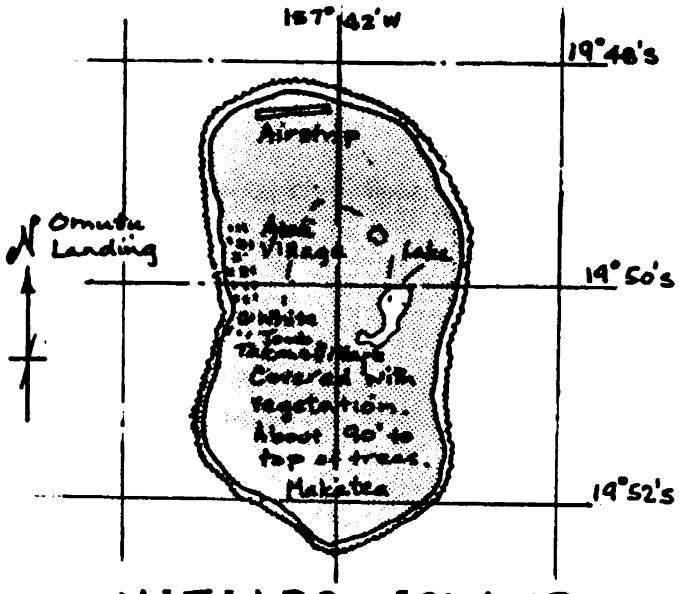
THE HERVEY IS.

(COOK ISLANDS)

0 1 2 3M

Approx. Scale n.m.

FROM ABOUT 2 MILES W OF VILLAGE LANDING



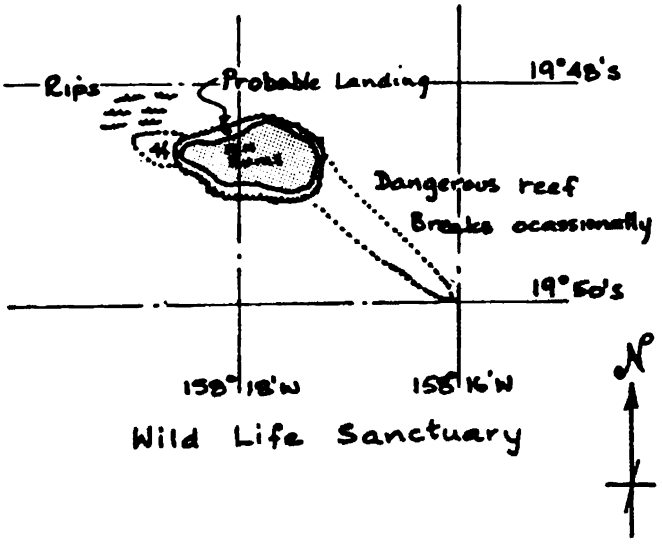
MITIARO ISLAND

(COOK ISLANDS)

0 1 2 3M

Approx. Scale n.m.

Not to be used for navigation



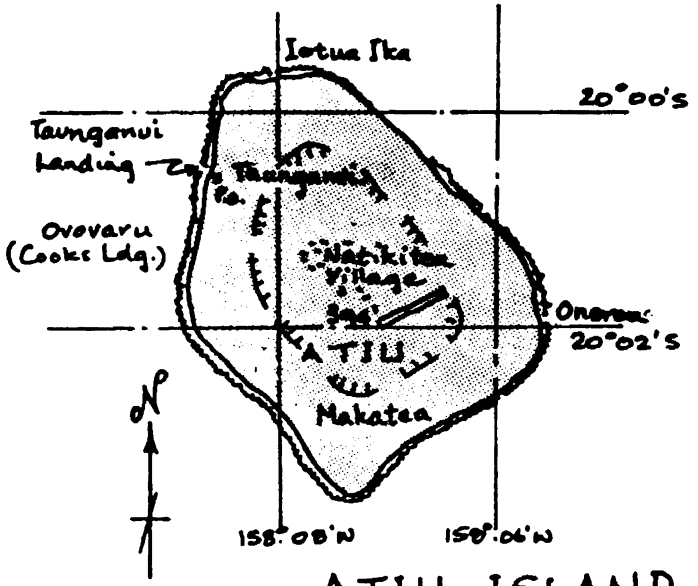
TAKUTEA ISLAND

(COOK ISLANDS)

0 1 2 3M

Approx. Scale n.m.

FROM ABOUT 1 MILE NW OF TAUNGANUI LANDING



ATIU ISLAND

(COOK ISLANDS)

0 1 2 3m

Approx. Scale n.m.

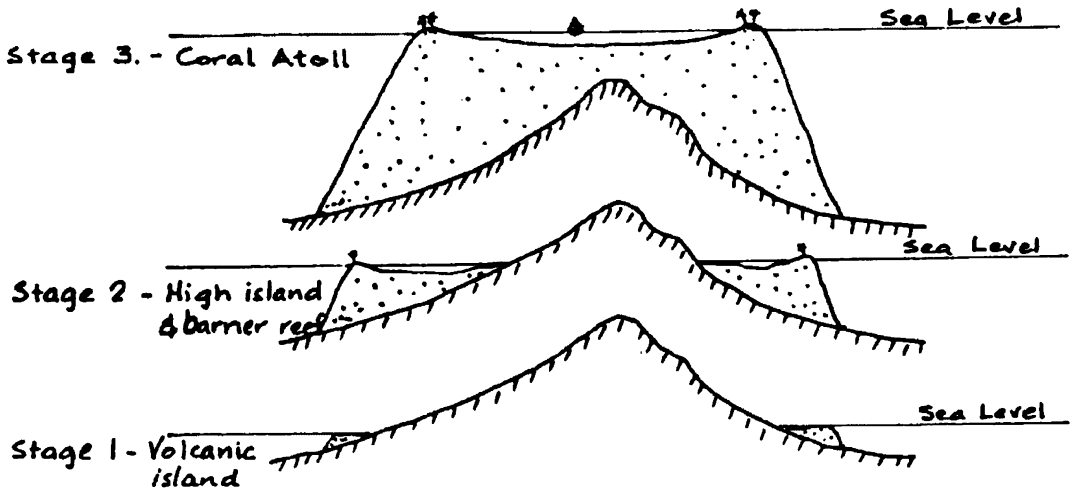
PALMERSTON ATOLL

This atoll lies about 200 miles WNW of Aitutaki. It measures 7 miles from north to south, and 5 miles from east to west. Seven sets of islands are scattered along the coral reef surrounding the lagoon. All the islands are covered by coconut palms, but nevertheless the overall height of the islands is rarely over 50'.

There are several small boat passages into the lagoon, the largest of which is Big Passage on the western side. However, yachts drawing more than 4' cannot enter the lagoon. Islanders will usually come out in their skiffs as soon as they sight a yacht, showing the crew the best anchorage and offering a ride ashore. An anchorage is possible outside the reef in about 10 fathoms, a little south of Big Passage. An anchor watch should always be maintained aboard if the yacht stays here. This anchorage is safe only as long as there is an easterly wind blowing which will hold the vessel away from the reef. As soon as the wind subsides, the current may set the vessel on to the reef. This should be used only as a temporary, daytime stop-over during settled trade wind conditions.

The islanders are the descendants of one patriarchal figure, William Marsters, a Lancashireman who settled on the island with three Penhyrn Island wives in 1862. He fathered 26 children, divided the island and reef into parts for three families and established strict rules about intermarriage. Today his families still live and control the island and are scattered among the other Cook Islands and New Zealand.

A visit to this atoll should include seeing the lovely church built from timbers taken from a wrecked sailing ship, with the pulpit reached by climbing a complete companionway.



STAGES IN A DEVELOPING CORAL REEF (FROM DARWIN)
Imagine the sea level constant, but the land subsiding.

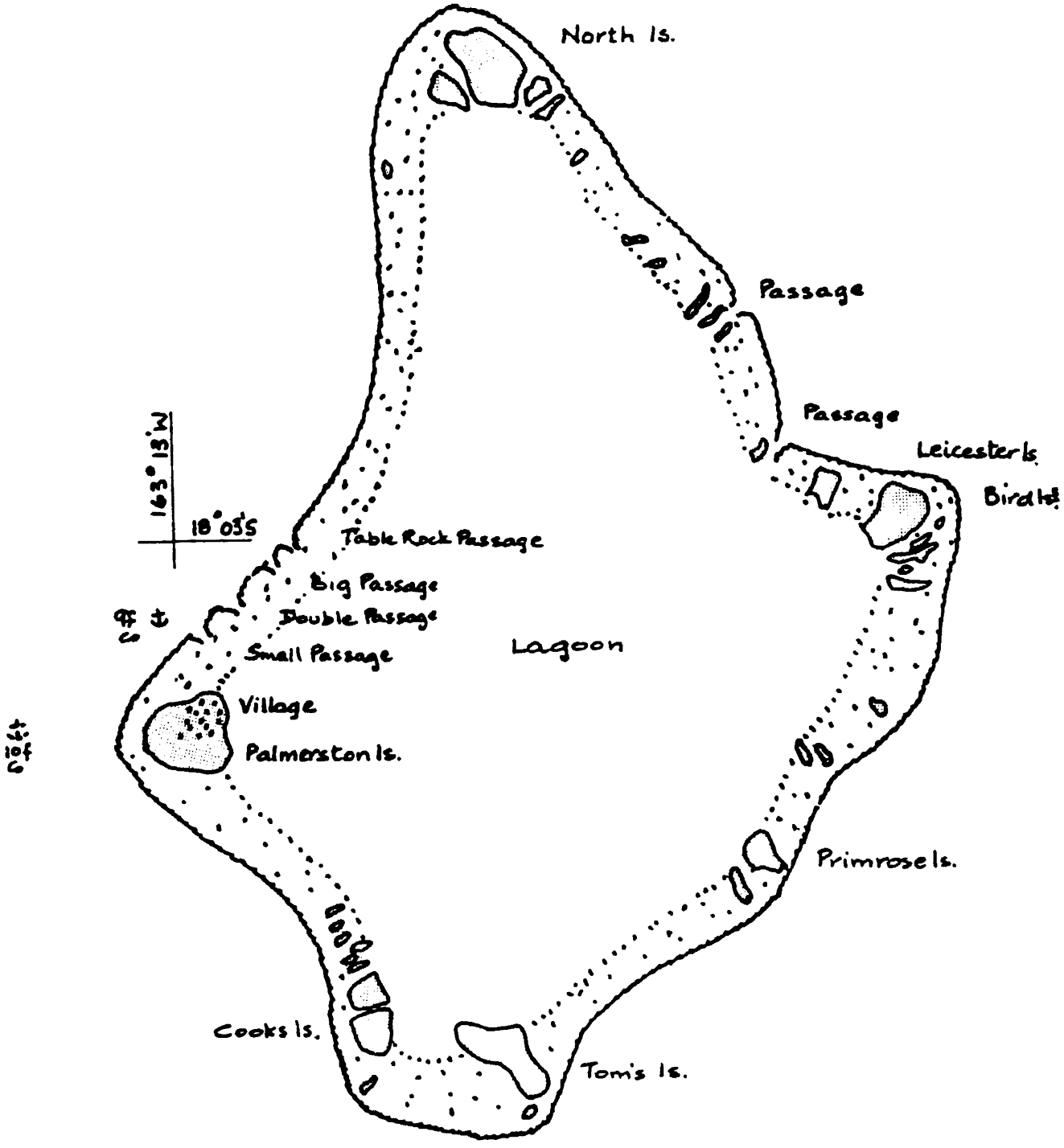
PALMERSTON ATOLL

(NORTHERN COOK ISLANDS)

18°03'S , 163°13'W

APPROX. SCALE N.M.

Not to be used for navigation



SUVAROV (SUWARROW) ATOLL

Like Palmerston Atoll, this atoll also had its unique figure, for it was here that Tom Neale, a New Zealander, lived as a hermit for periods totalling 16 years, from 1952 till his death from cancer in 1978. Many yachts visited the atoll during his residence, and their crews met and were charmed by him. He wrote a book describing his experiences in, "An Island to Oneself."

Suvarov is now a National Park. There may be a caretaker in residence on Anchorage Island. He will request your crew list and make sure you do not stay longer than the maximum two weeks allowed on the atoll. Vessels must already have cleared into the Cook Islands before stopping, but the caretaker may relax this rule. With permission it may be possible to obtain a small amount of water from one of the island's cisterns.

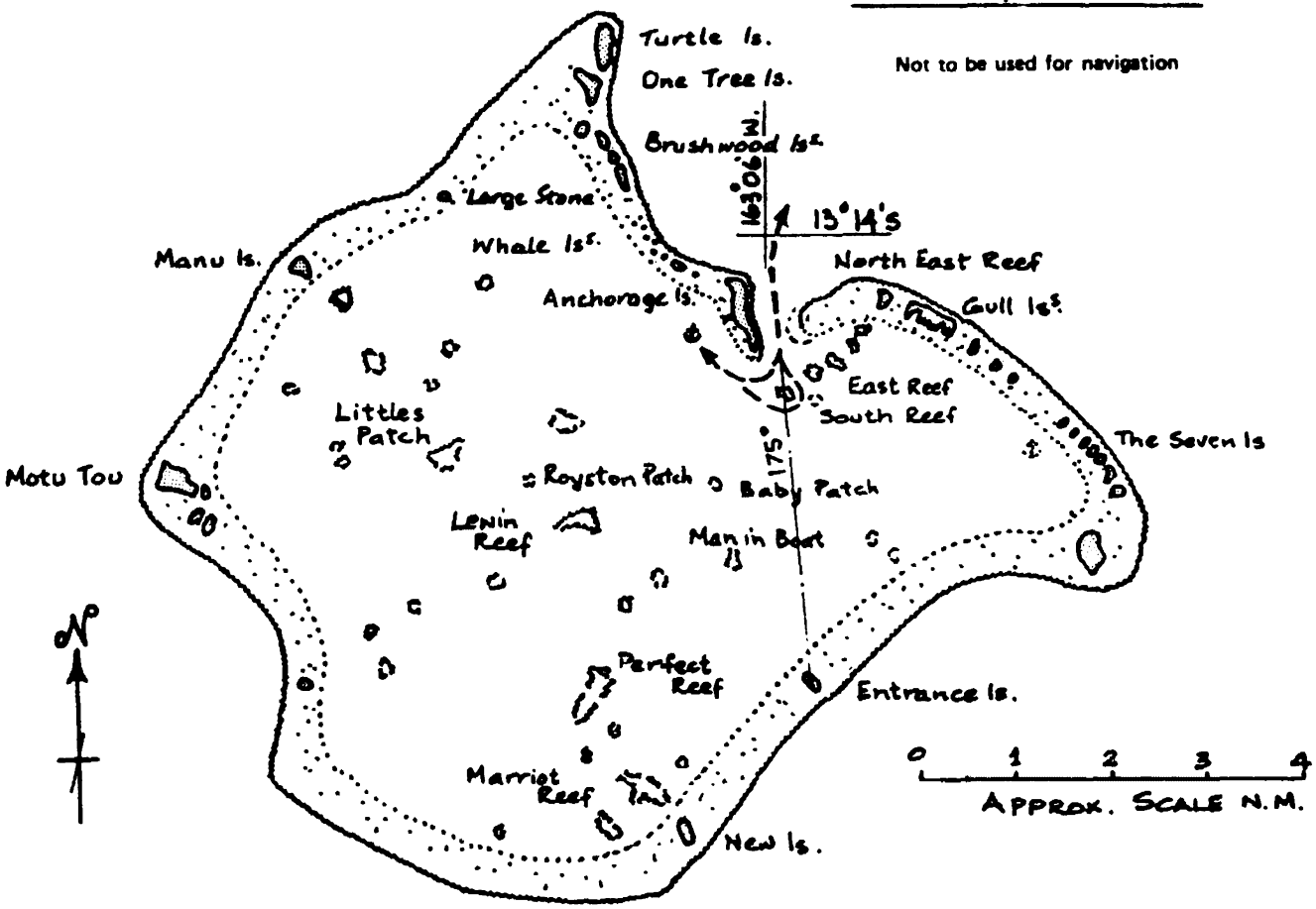
Suvarov is a fairly large atoll, about 11 miles across. Most of the islands are in the northern part of the reef. Anchorage Island is the biggest of the islands and it lies alongside the pass into the lagoon at the north. Tom's Place, a wooden shack, and the small pier he repaired stand on the lagoon side midway along the island shore. Extreme care should be taken in approaching Suvarov; most of the atoll is submerged reef. Many vessels have been shipwrecked on the island, and several have gone aground inside the lagoon.

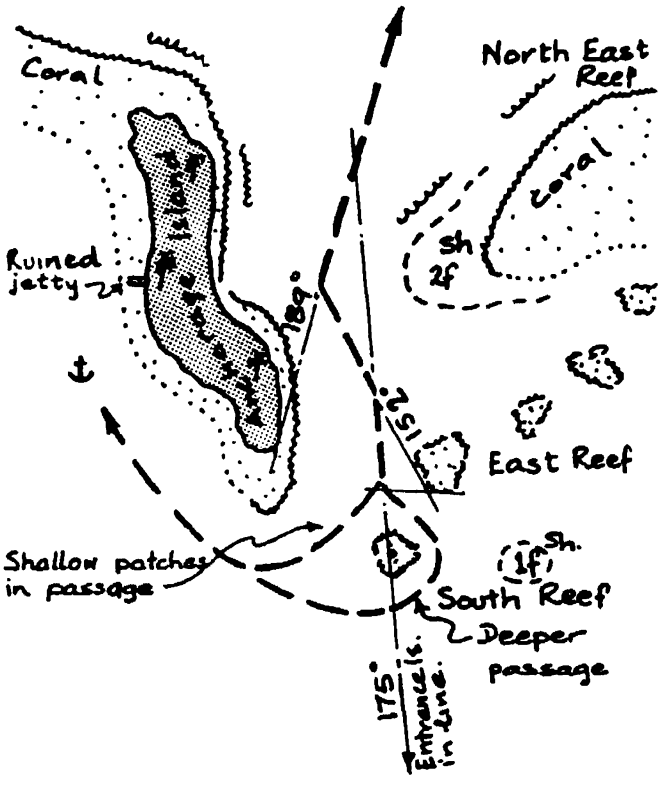
The only entry pass lies between Anchorage Island and Northeast Reef. Several large coral heads with names such as East Reef and South Reef extend across part of the passage near Northeast Reef. A 2-fathom shoal also extends southwest from Northeast Reef, and this causes the entry to be slightly complicated. In good weather and with a calm sea an entry on a bearing of 175° taken across the center of South Reef to Entrance Island on the southeast side of the coral barrier reef will lead straight in past the shoal at the tip of Northeast Reef. The vessel can then pass South Reef to enter the anchorage area. But with any swell and sea the waves break over the shoal and an entering vessel must make the little jog shown on the sketch, keeping to the quietest waters. South Reef is steep-to and yachts have no difficulty in passing on either side. The usual anchorage is off the pier at Anchorage Island.

There are several other anchorages that a yacht can use in the lagoon. In the lee of Seven Islands is one spot, but this corner of the atoll has many coral heads that must be avoided when seeking an anchorage. A row ashore here to the largest islet will be rewarded by a view of thousands of birds in the air, on the ground, and in the trees. The water clarity and plentiful fish make for excellent diving. Be on the look-out for sharks at all times since Suvarov is infamous for the number and aggressiveness of its sharks.

SUVAROV ISLAND
(SUWARROW)
(NORTHERN COOK ISLANDS)
13° 14'S, 163° 06'W

Not to be used for navigation





DETAIL OF APPROACH & ANCHORAGE

0 1000' ½ 1
Approx. Scale n.m.

PUKAPUKA ATOLL (DANGER ISLANDS)

Pukapuka is the westernmost, and the most isolated of the Northern Cook Islands Group. It is formed as a narrow north-south oriented atoll with a long, partially submerged coral reef (Terai Reef) which extends out from its western side for almost 3 miles. The current sets strongly on to the eastern side of the atoll, and this turns the stream so that it sets southward across Terai Reef on the ebb, and northward across the reef on the flood. The current attains a rate of 3 to 5 knots. The reef and currents are the reason for its popular name of Danger Islands. This current set brought many downed airmen to the island during World War II. The island is featured in books by Robert Dean Frisbee and Professor Beaglehole.

There is a small whaleboat passage at the northern end near Yato Village. It is dangerous for unskilled use, for the swell can make landing difficult and even impractical. There is no anchorage, only a lee on the western side of Pukapuka Island where the sea is calm, but where the current set must always be kept in mind. It is of the utmost importance that the vessel remain manned if the island is visited. The palms and trees of Motu Kotawa reach to 125', while those on Pukapuka and Motu Ko are somewhat lower at 70' to 100'.

MANIHIKI ATOLL

This is another low lying atoll, but one with islets around much of its perimeter. These islets are covered with coconut palms which reach about 70'. There is no boat pass into the lagoon. Anchorage may be taken directly off Tauhuna village in 7 to 10 fathoms. The bottom is covered with coral so it is often necessary to dive down to free one's anchor before leaving. Yachts must be ready to leave at once if the wind leaves the easterly quadrant. In settled conditions landing a dinghy at the concrete jetty is possible. A large corrugated iron shed at the head of the jetty has "Welcome to Manihiki" painted in huge letters. Water jugs may be filled at cisterns behind the church. The lagoon is used for growing pearls and the local men are renowned divers.

RAKAHANGA

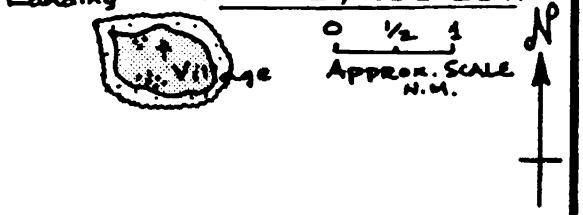
This atoll is only 29 miles NNW of Manihiki, and while smaller, it has a similar appearance and shape. Its closeness to Manihiki has often led to tragedies in the crossings made by local boats between the two islands. The main village, anchorage, and boat pass all lie near the southwestern end of the island. Because of its close proximity to the reef, this anchorage is safe to use only in periods of calm or settled easterly trade wind conditions. If in doubt, use it only as a day anchorage and post an anchor watch. Very few yachts or visitors ever see these islands.

NASSAU ISLAND

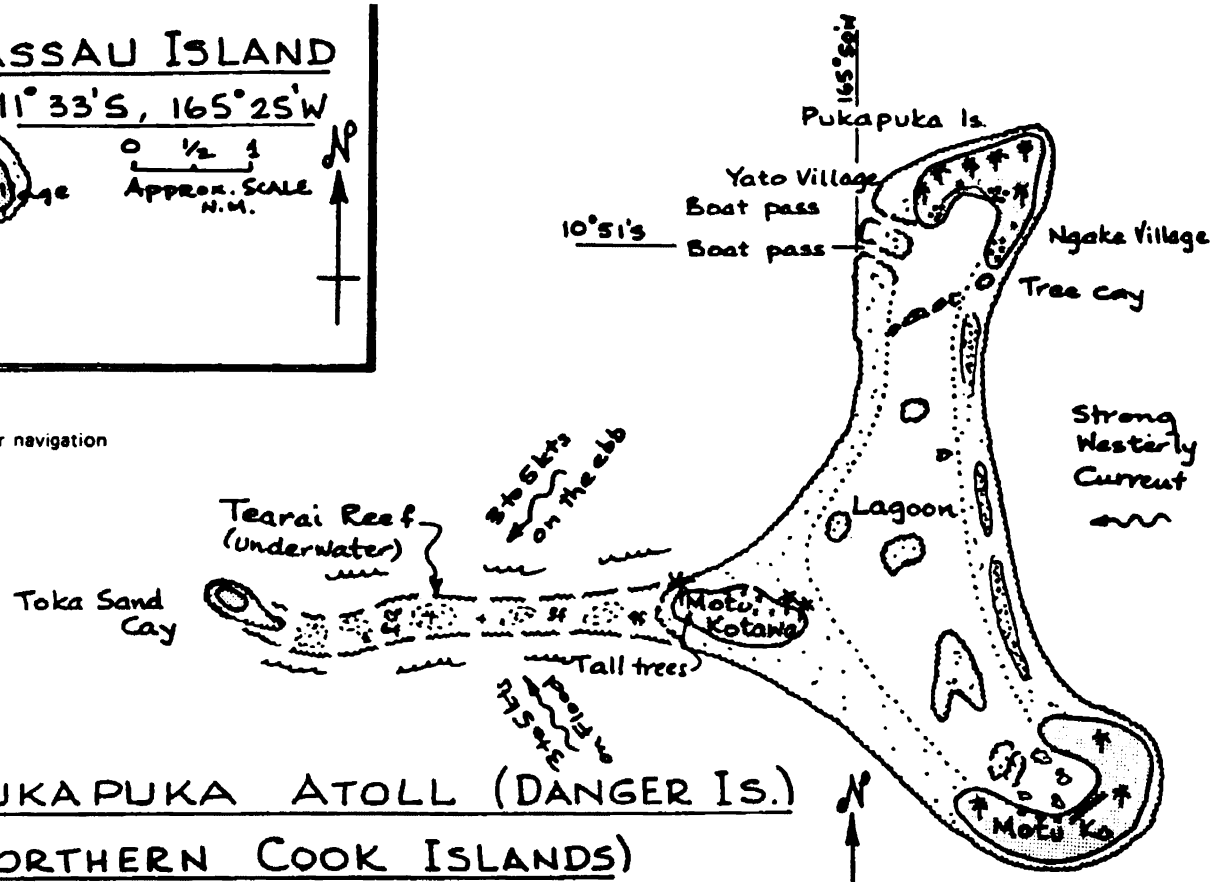
This small island with its fringing reef lies 155 miles northwest of the Suvarov Islands. There is a small village on the otherwise palm-covered island which is worked for its copra by the people of Pukapuka. The only landing is on the reef at the northwestern corner of the island, and local advice and help are essential in getting ashore. Tema Reef lies about 25 miles NNW of Nassau Island. No coral or rock shows above water, but the sea breaks heavily over the reef which is steep-to all around.

NASSAU ISLAND

11° 33'S, 165° 25'W



Not to be used for navigation



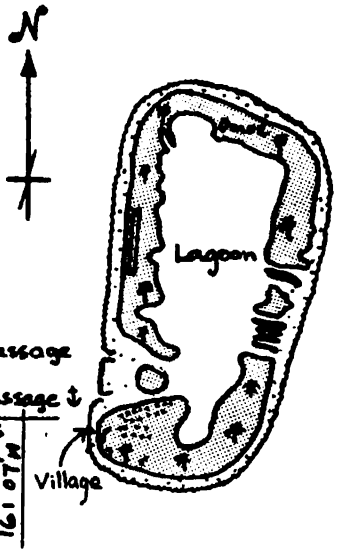
PUKAPUKA ATOLL (DANGER IS.)

(NORTHERN COOK ISLANDS)

10° 51'S, 165° 50'W

0 1 2 3 4 5

APPROX. SCALE N.M.



RAKAHANGA ATOLL

(NORTHERN COOK ISLANDS)

10° 02'S, 161° 07W

0 1 2 3

APPROX. SCALE N.M.

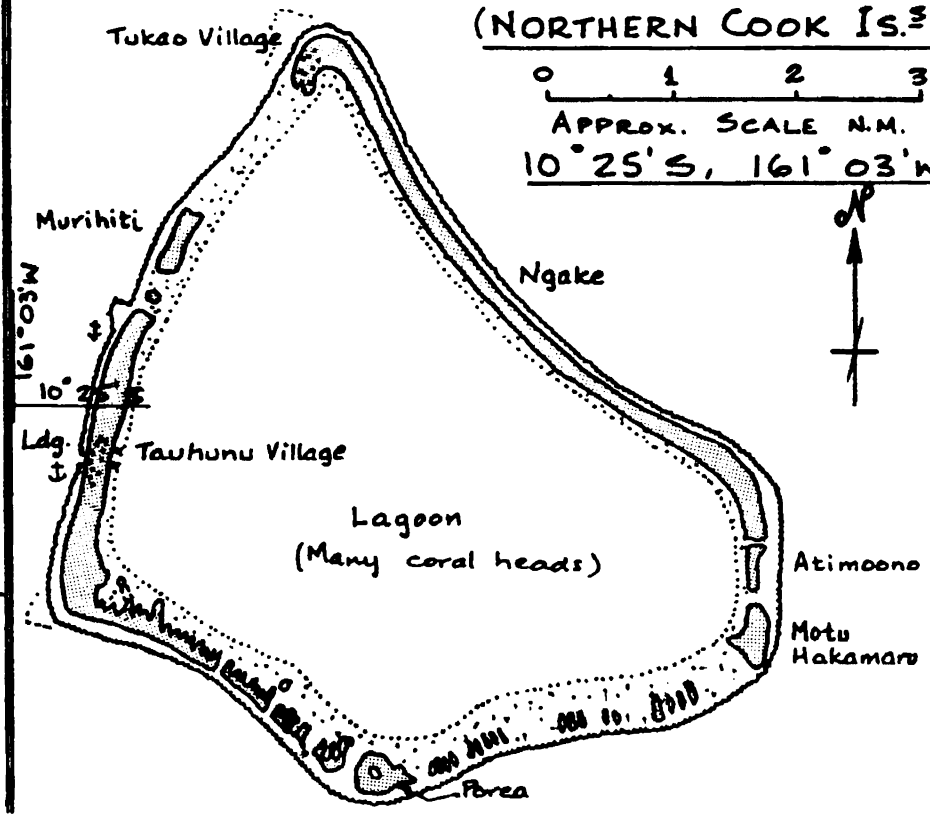
MANIHIKI ATOLL

(NORTHERN COOK IS.)

0 1 2 3

APPROX. SCALE N.M.

10° 25'S, 161° 03'W



PENRHYN ISLAND (TONGAREVA)

This is the northernmost of the Cook Islands, almost 745 miles NNE of Rarotonga and about 400 miles northeast of Suvarov. It is an atoll with many low islets, some quite long, and with coconut palms on almost all of them. Roughly pentagonal in form, it has three passes. On the western side is the best pass, Taruia Pass. Seki Ranga Pass lies at the northwestern corner, and though fairly wide it is shallower (though adequate for yachts) than Taruia Pass, and has a bank extending northwesterly that can cause a rough sea. At the northeastern corner, Takuna Pass is narrow and being on the weather side, it is always affected by the sea. The lagoon has many large coral heads and detached reefs, mostly visible, and with navigable water between them. Good anchorage can be found in the lagoon.

Omoka village is an official Port of Entry on Penrhyn Island. One must check in with Customs, Health and Agriculture officials, each of whom may want to board your boat. There is a $20 (Cook Island or New Zealand currency) per person exit fee if you are not planning on visiting another Cook Island. You will also be charged $1.75 NZ a day anchorage fee, and Agriculture will request $1 US (!) to spray your boat for insects. The Customs Officer will keep your passport until you are paid up and checked out. Money can be changed and beautiful stamps can be purchased at the Omoka Post Office.

The island is well populated, and has an airstrip. There is periodic air and sea service to Rarotonga. The main occupation of the island men is pearl shell diving while the women are skilled weavers.

Taruia Pass is several hundreds of feet wide, but extensions of the reef on either side, some of it visible, reduce the actual fairway to about 300' near the middle. Large vessels having 15' draft have entered via this pass. As is usual with atoll passes the tidal stream is strong, reaching 5 knots at times. Tidal rips extending out from the pass indicate the state of the tide and its force; easiest entry is at slack water or with the first of the flood. However, most handy, powered yachts should experience little difficulty in entering even against a slight ebb stream. The pass should be entered on a bearing of 087° aiming at Te Tautua village which is on the eastern side of the lagoon. If the village is not easily made out, the gap in the palms at the northern end of the village islet can be used. (This is a long island with smaller ones nearby.) Once into the lagoon the vessel can steer by visual means, either northeastward to anchorages in the lagoon or southward to Omoka village.

The channel leading to Omoka village turns close eastward of the coral reef and its little islet, and along a clear passage between the coral heads in the lagoon and the reef. In good light there is no difficulty, and poles usually mark the passage. A wharf is at Omoka with 14' alongside, or one can anchor out from the beach. This anchorage is studded with coral heads and an uncomfortable chop often develops with the prevailing northeast to southeast winds.

Other anchorages can be found in the lagoon. Ruahara anchorage is about midway along the north side of the atoll, about 4 1/2 miles northeast of Omoka. Take care, for there are many coral pinnacles in this area. Another anchorage is across the lagoon, off the village of Te Tautua where there are fewer coral heads and less chop. If anchoring here expect to be visited by aggressive islanders wanting to trade pearls for cash or gear from your boat. When on this side of the lagoon do not use Takuna Pass even though local vessels do.

PENRHYN ISLAND

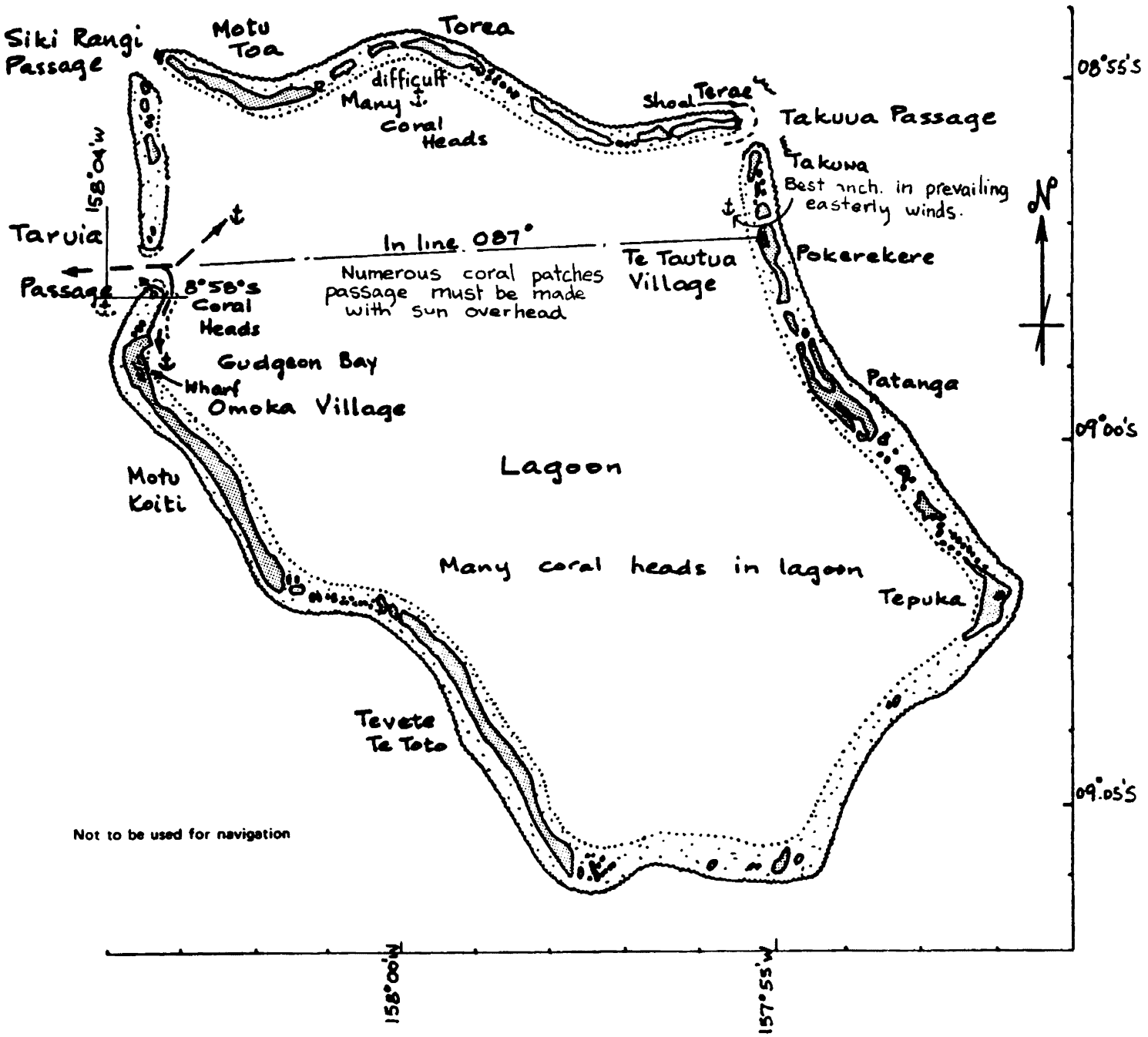
also (TONGAREVA)

08°58'S, 158°04'W

0 1 2 3 4

APPROX. SCALE N.M.

(NORTHERN COOK IS. GROUP)



The islanders are very devout Christians. Swimming, sailing, and working are all frowned upon on Sunday. They will welcome you to their Sunday service, but photographs must not be taken inside the church. It is well worth attending the service to listen to the haunting harmonies of their songs. The dress code must be strictly adhered to, women wearing dresses and hats, men wearing shirts and long pants.

THE HAWAIIAN ISLANDS

The Hawaiian Islands are about 12° of latitude below that of Los Angeles, and thus they lie well north of the equator. They are still true South Pacific Islands, in an oceanic voyaging sense and also from an historical and cultural viewpoint. They are a focus for cruising vessels en route to, or returning from, the southern islands of Polynesia. For those who wish to cruise the Hawaiian Islands it is recommended that they use CHARLIE'S CHARTS of the HAWAIIAN ISLANDS in addition to official navigational charts. The information presented in the following section covers only those key harbors and anchorages that have been favorites for vessels bound further afield.

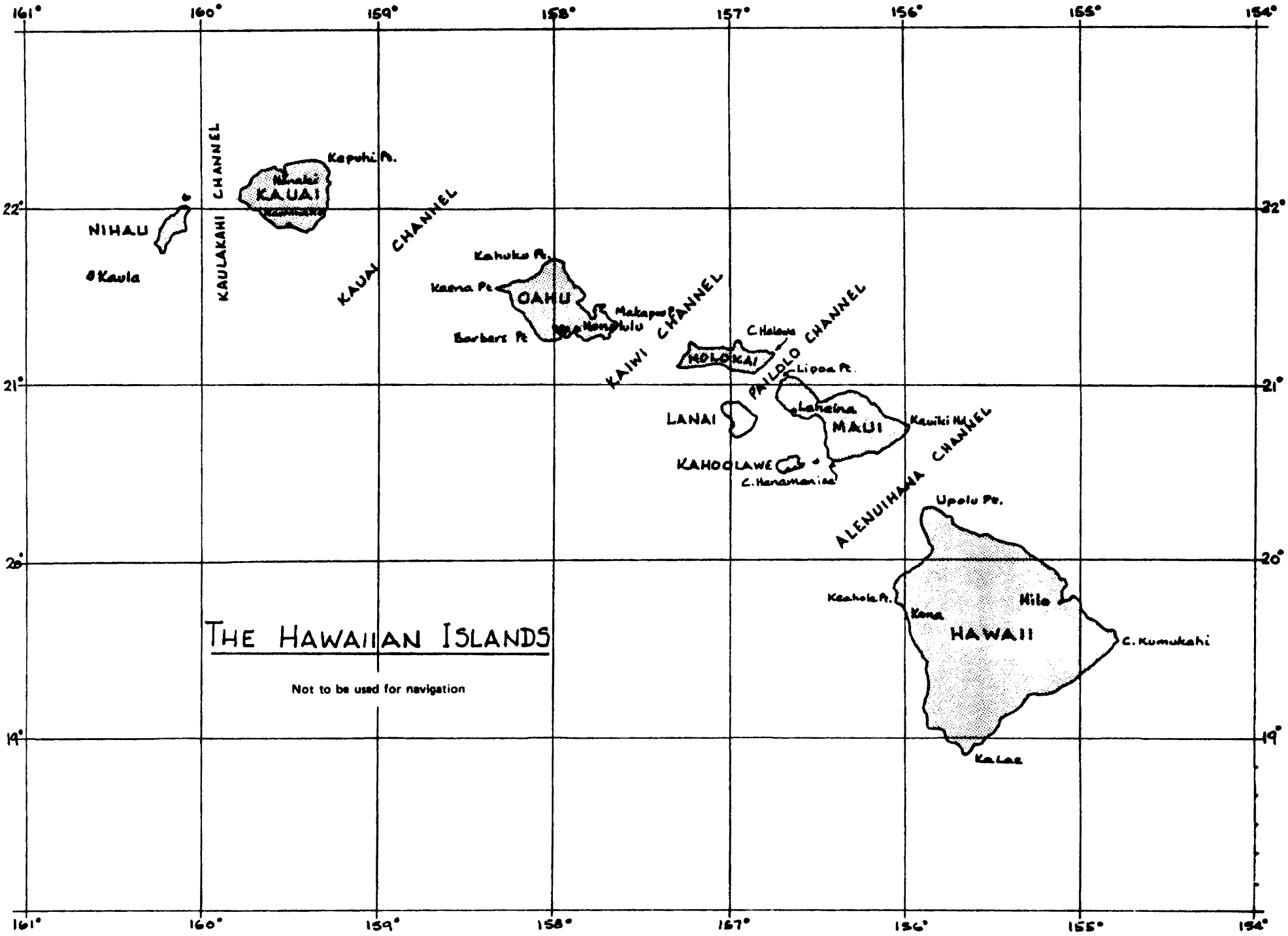
The Hawaiian Islands are an extensive archipelago extending 1,500 miles in a NW-SE'ly direction. They include about 132 islands, shoals, and reefs. Over 99% of the total land mass is concentrated in 8 main islands at the southeastern end, and of these Hawaii (the Big Island) has 60% of the total. The northwestern part has a few tiny islands, and many shoals and reefs, and is mostly a wildlife preserve. Midway, a military base, is the most northwesterly island.

The islands are of the high, volcanic type. Even the smaller islands were once higher and larger, but are now eroded to their present size. Volcanic eruptions and island building continues, apparently occurring at one spot in the Pacific Plate, that now is occupied by the Big Island. As the earth's crust has slid over this spot the other islands have moved northwesterly. Now only the island of Hawaii is growing and in Mauna Kea and Mauna Loa its height exceeds 13,000'. If evaluated from the ocean floor, their true origin, these are the mightiest mountains on earth, well over 30,000' high.

The prevailing winds are the northeast trades, which tend to be predominantly easterly. The trades are more consistent during the summer months, though their velocity and direction can be affected at this time by any hurricane or tropical disturbance in the vicinity of the islands. The trades are accelerated when passing through the channels between the islands, and this can make the crossings unpleasant and sometimes difficult. The direction of the wind favors travel in a northwesterly direction up the chain, as it is necessary to beat in the reverse direction. Hilo, on the Island of Hawaii is the most suitable departure or arrival point since to travel to and from Tahiti one requires the maximum easting. Hilo is the only Port of Entry on the Island of Hawaii though others are located at Kahului on Maui, Honolulu on Oahu, and Nawiliwili on Kauai.

When travelling between Hawaii and the mainland of North America the most important meteorological feature is the Pacific High, a high pressure area off the west of North America. Sailing routes coming to or departing from Hawaii are curved to skirt around this high. The high usually migrates northwesterly to about 38°N, 150°W in July and August, then southeasterly to about 30°N, 130°W by January and February. But this is a statistical generalization and the actual daily movements of the high can vary from such an average. Usual times for travel to Hawaii are June to August, swinging south and then west around the high. Return trips to the mainland are also best in the same months, going north then easterly around the high.

For emergency services, navigation information, and other reasons the US Coast Guard can be called on VHF Channel 16, and voice communication continued on designated channels as requested by the radio operator.


161°
160°
159°
158°
157°
156°
155°
154°
22°
21°
20°
19°
NIHAU
Kaula
KAULAKAHI CHANNEL
Kapuhi Pt.
KAUAI
KAUAI CHANNEL
Kahuku Pt.
Kaena Pt.
OAHU
Makapuu Pt.
Honolulu
Barbers Pt.
KAIWI CHANNEL
C. Halawa
MOLOKAI
PAILOLO CHANNEL
Lipoa Pt.
Lahaina
MAUI
Kawiki Pt.
LANAI
KAHOOLAWE
C. Hanamanioa
ALENUIHAHA CHANNEL
Upolu Pt.
Keahole Pt.
Kona
Hilo
HAWAII
C. Kumukahi
Kalae
THE HAWAIIAN ISLANDS
Not to be used for navigation

THE ISLAND OF HAWAII

This triangularly shaped island, also called the Big Island is in many ways the most attractive in its spectacular features and people. It is the only presently active volcanic island, and has five volcanoes (three of which are dormant). Mauna Loa last erupted in 1975, but Kilauea and its adjacent area has continued to be sporadically active in recent times. One of the recommended trips to take on a visit to Hawaii is to Volcano National Park. Bus tours operate out of both Hilo and Kona to facilitate such a trip.

There is a distinct difference between the two sides of the island in terms of climate. On the windward side, as at Hilo, the regular rains give rise to lush green growth and make for windy, cool, and humid conditions. On the leeward side, as at Kona, it is dryer, hotter, and has gentler breezes (often insufficient for sailing). In between lie the volcanic uplands, where in winter snow lies on the highest slopes. Sugar cane, ranching, and tourism are the main industries. The island, however, retains a rural charm that is missing in others of the group, and the people, particularly at Hilo, are very friendly and helpful.

Historically, Hawaiian consolidation occurred under the chiefs from the Kona area. Honaunau has the City of Refuge, maintained as a National Historical Park, and much interesting information is given by Park Guides. At Kailua-Kona there are other interesting features. Equally important historically is Kealakekua Bay, which was Captain Cook's anchorage in the islands, where he died, and was later buried at sea.

The three main capes of the island are each important features. Cape Kumukahi is the northeasterly point and is a low, black lava mass behind which are cinder cones and several craters. An important light is shown here from a tall structural mast tower. In making for Hilo this landfall is important. The trade wind tends to split at this cape with part going southwesterly down the eastern side of the island, and the rest going northwesterly along the windward coast. The offshore current coming on to the land behaves in a similar fashion.

Ka Lae, the South Cape, is about 63 miles southwest of Cape Kumukahi. It is a windy area with disturbed waters, for the onshore current sets against the wind near the cape. Passage from Hilo to the Kona coast generally means passing Ka Lae in the early morning hours. The cape should be given a berth of at least 2 or 3 miles and the turn made in a slow, gradual fashion, as the seas allow, to avoid any chance of a knockdown.

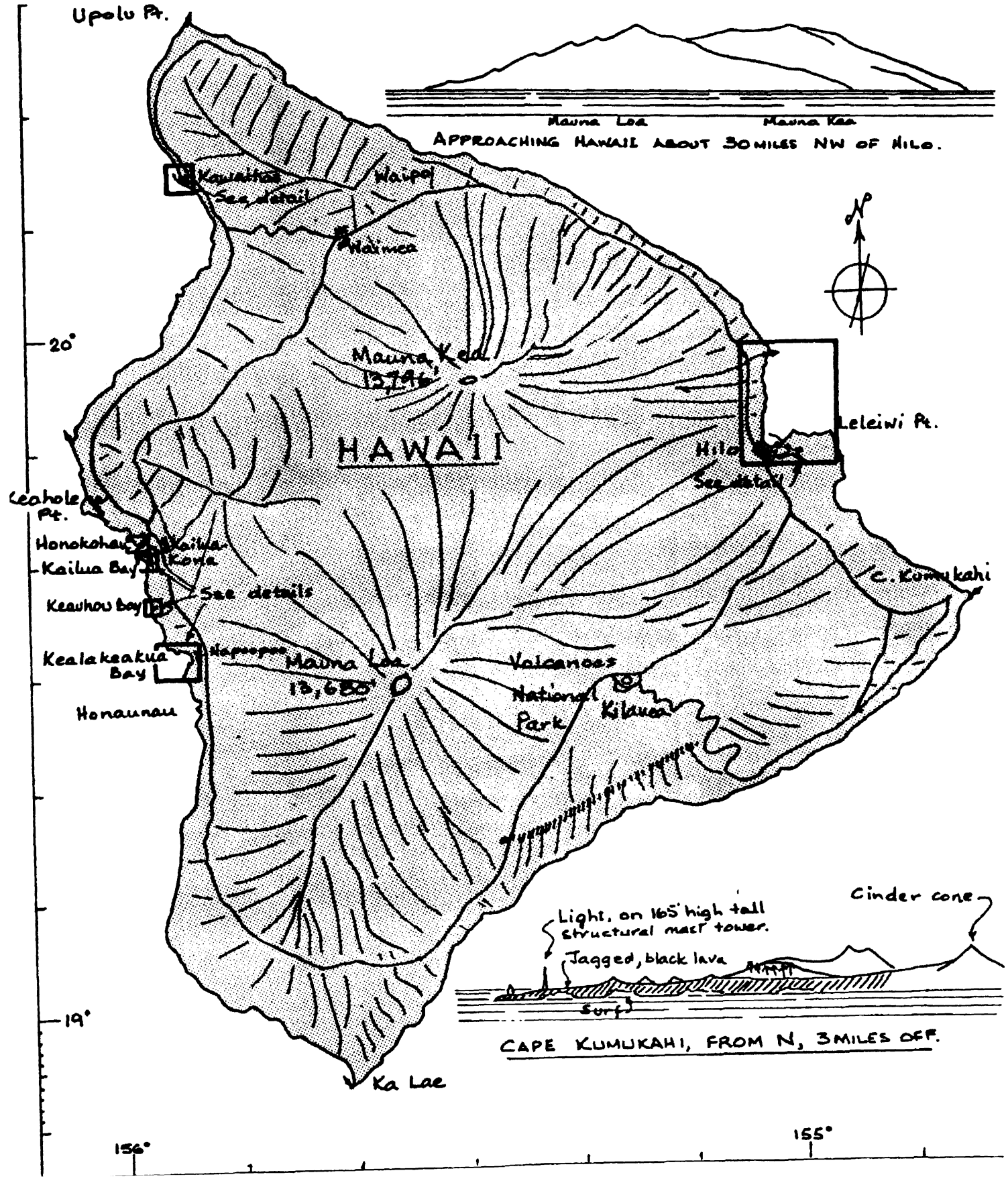
Upolu Point is about 95 miles north of Ka Lae and is the northernmost point. It resembles many of the nearby bluffs, but can be recognized by the radio towers, buildings, and aero beacon. Alenuihaha Channel separates Upolu Point on Hawaii from Maui, and is about 26 miles across. When the trade winds are strong the seas can be rough in the channel, as the winds tend to accelerate at the channel's edges.

From Upolu Point to Cape Kumukahi is a distance of about 75 miles. As the coast is steep and bold a berth of 2 miles avoids all dangers. Hilo Bay is about 19 miles northwest of Cape Kumukahi and is the major indentation in this coast.

ISLAND OF HAWAII

(THE BIG ISLAND)

Not to be used for navigation



HILO

This is the largest city and the only major port on the Island of Hawaii. It is a Port of Entry and if this is your first landfall in the islands you must enter at Hilo before proceeding further on the Big Island (whether the vessel is US or not). As Hilo is the most protected port in the island it is worth going there anyway.

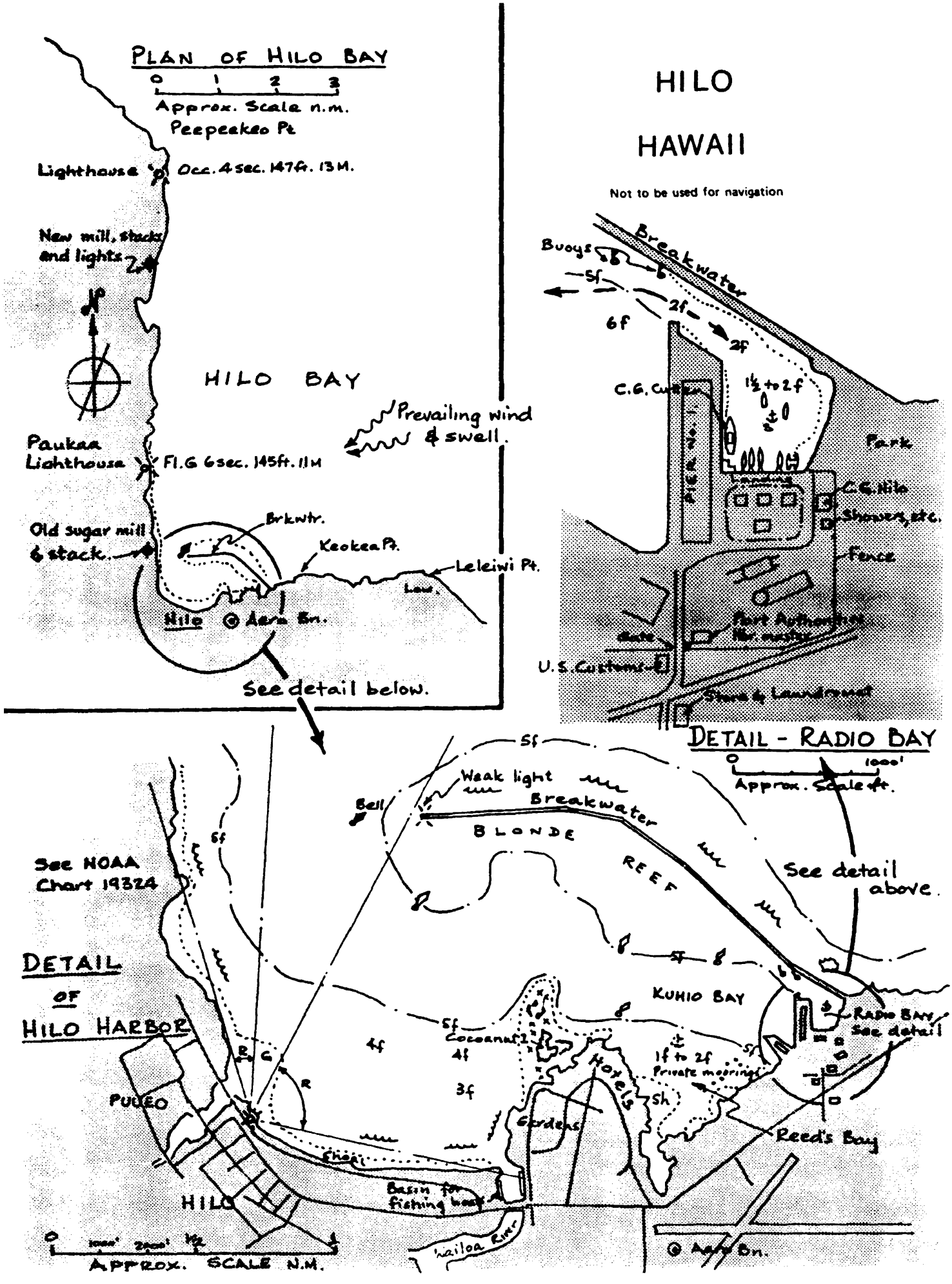
Hilo lies at the head of Hilo Bay. A lighthouse is at Peepeekoo Point, the northwest point of Hilo Bay. A mile or so to the south is a new mill with stacks and bright lights. Do not mistake this for the older mill at Alealea Point which is mentioned in the Pilot and is much further into the bay. The older mill appears to be abandoned. A second light is shown at Paukaa Point which is about 1 1/2 miles north of the old mill. Beyond the old mill the port of Hilo is protected by a long breakwater built on Blonde Reef. A weak light is at the end of the breakwater, and a lighted bell buoy marks the end of the reef. Be most careful in any night entry, when it would be better to stand off till daylight. The swell breaks heavily on the reef and breakwater, especially when the trades are strong. In rainy weather visibility is often greatly reduced. Buoys mark the harbor passage behind the breakwater. At night or after hours one may anchor temporarily in Reed's Bay after passing Cocoanut and Kaulauiaiwi Islands. Many private moorings are found in Reed's Bay. Do not proceed to the head of the bay for it is very shallow.

The small boat harbor in Hilo is at Radio Bay, beyond the main piers and big ship facilities. To reach it one must pass between the end of the piers and the breakwater. Within Radio Bay one may moor Tahiti style to the south wall or anchor in the bay. The skipper can then go ashore to report to the Harbormaster, and to US Customs which is located in a building just outside the port gates. There is an entry fee of $25 US per boat for foreign boats or US boats which have been out of the country. Opposite the Customs is a small store and laundromat. Showers and restroom facilities are near the docks. It is only a short walk to other stores and restaurants.

The holding is good within the small basin, but during heavy weather the wind can blow strongly in the area. The harbor is subject to some surge during winter months, and tsunami waves, while infrequent, can be devastating to Hilo.

The Harbormaster runs the basin and both Ian Birnie (Harbormaster for the entire island) and his agent for Hilo, a friendly Hawaiian named Les, are famous for their hospitality and fairness in their treatment of cruisers. The first 72 hours are free, but if you stay longer you have to pay for these first three days also. This rule applies to all ports in the Hawaiian Islands. Rates are set by the State and there is a 30-day maximum stay in any state-run harbor. Fuel may be purchased at service stations ashore, filling your own jerry cans, and bringing them aboard yourself. The oil companies will only send a tanker to the dock if the order is large, so find two or three other yachts also needing fuel and you'll avoid the nuisance of juggling jerry cans.

Part of Hilo's charm is its somewhat rural style and most people are very friendly and helpful. Although there are few repair facilities and sources of hardware, Honolulu and California are as close as air travel and telephone can make it. One can order and quickly get needed items and have UPS deliver them directly to your boat in Radio Bay.


PLAN OF HILO BAY
0 1 2 3
Approx. Scale n.m.
Peepeekeo Pt
Lighthouse
Occ. 4 sec. 147ft. 13M.
New mill, stacks and lights
HILO BAY
Prevailing wind & swell.
Paukaa Lighthouse
Fl. G 6sec. 145ft. 11M
Old sugar mill & stack.
Brkwtr.
Keokea Pt.
Leleiwi Pt.
Hilo
Aera Bn.
See detail below.
HILO
HAWAII
Not to be used for navigation
Buoys
Breakwater
5f
2f
6f
C.G. Cutter
1½ to 2f
Park
C.G. Hilo
Showers, etc.
Fence
Port Authority
U.S. Customs
Store & Laundromat
DETAIL - RADIO BAY
Approx. Scale ft.
See NOAA Chart 19324
DETAIL OF HILO HARBOR
Bell
Weak light
Breakwater
BLONDE
REEF
See detail above.
KUHIO BAY
Radio Bay See detail
Coconuts
4f
3f
If to 2f
Private moorings
Hotels
Gardens
Reed's Bay
PULEO
Basin for fishing boats
HILO
Wailoa River
Agate Bn.
APPROX. SCALE N.M.

KEALAKEKUA BAY

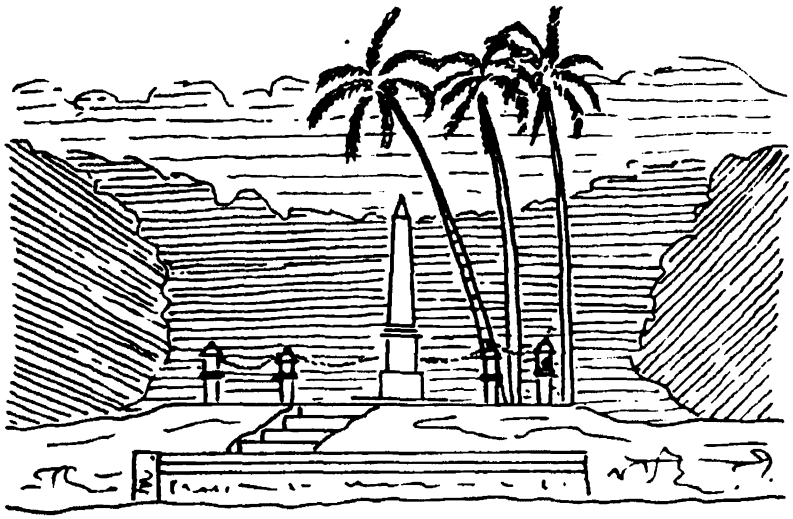
This is the best natural anchorage available in Hawaii. It is a wide and open bay which is dominated by steep, high cliffs along its northern side. Beyond it the volcano's gentle slopes come down to the sea. The cliffs make the bay visible from many miles to the south as you coast up in the calm conditions of the Kona or leeward side.

This is also Captain Cook's anchorage and burial place. In fact, Kealakekua means "pathway of the god." It was the unfortunate chance of his landing here in 1779 on the festival of Lono and thus becoming associated with the god by the priests (for their own ends) that led ultimately to his death. He was killed at Kaawaloa Cove on the western end of the bay where a simple monument now stands.

The bay is part of a Marine Life Conservation District and Underwater Park, and is divided into two zones as shown on the sketch. The allowable anchorage area is in good holding sand among the local boats moored to buoys off the village of Napoopoo. Though it may be in deeper water this location is preferred to a more southerly location because refracted swells seem to affect that location to a greater degree.

The clear water allows one glimpses of the brilliant fishes and corals as you row to the concrete dock, which is oriented at right angles to the beach. Dinghies must be lifted ashore or they will bump heavily against the rough concrete dock. One can snorkel in this area as some tourists do, but a far better spot is across at the monument in the corner of Kaawaloa Cove. The buoy at this location is for the tourist vessel that comes in daily from the hotels further up the coast.

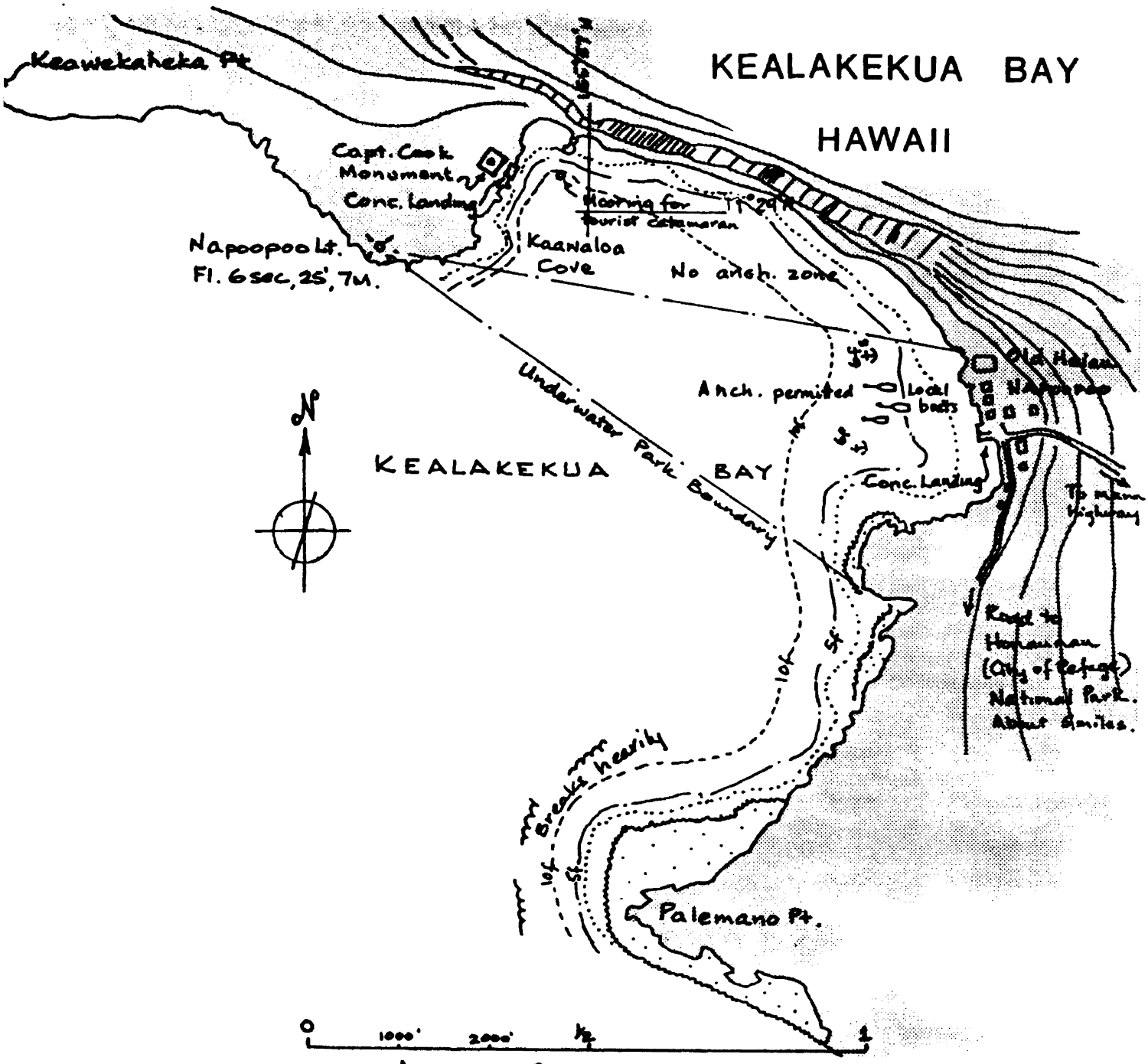
A few miles south along the paved road over the lava takes you to the City of Refuge. It is well worth visiting but it is a long, hot walk. If you are lucky you might be able to get a ride with passing cars (no bus service operates at present). A walk up the hill from Napoopoo will take you to the coffee plantations and mills.



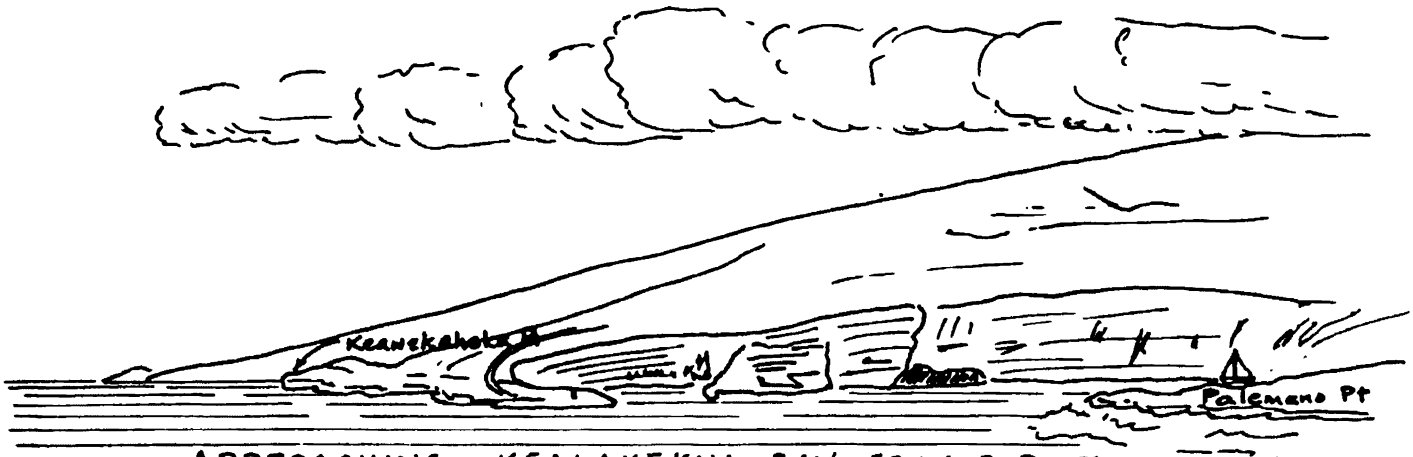
CAPTAIN COOK'S MEMORIAL, KAAWALOA COVE.

KEALAKEKUA BAY

HAWAII



Not to be used for navigation



APPROACHING KEALAKEKUA BAY FROM S, DISTANT 6 MILES

KAILUA BAY AND HONOKOHAU HARBOR

The "gold coast" of Kona with its hotels and tourist activities starts soon after leaving Kealakekua Bay. Only 5 miles further north is Keahou Bay, a very small cove with the Kona Surf Hotel dominating the point. Though it was once a useful anchorage it is now so filled with local boats that transient vessels are left to anchor well out near the entrance with little protection.

Kailua Bay is 5 miles further north. The town of Kailua-Kona is on the shore of the bay. The 'harbor' is heavily used by tourist and charter vessels, and has a pier at which they take on passengers. The Harbormaster's office is at this pier. However, any vessels using this as an anchorage must do so far out from the shore on poor holding ground. The rolling is enough to make an old salt seasick. This is not recommended as an anchorage unless you feel that you must be near the town.

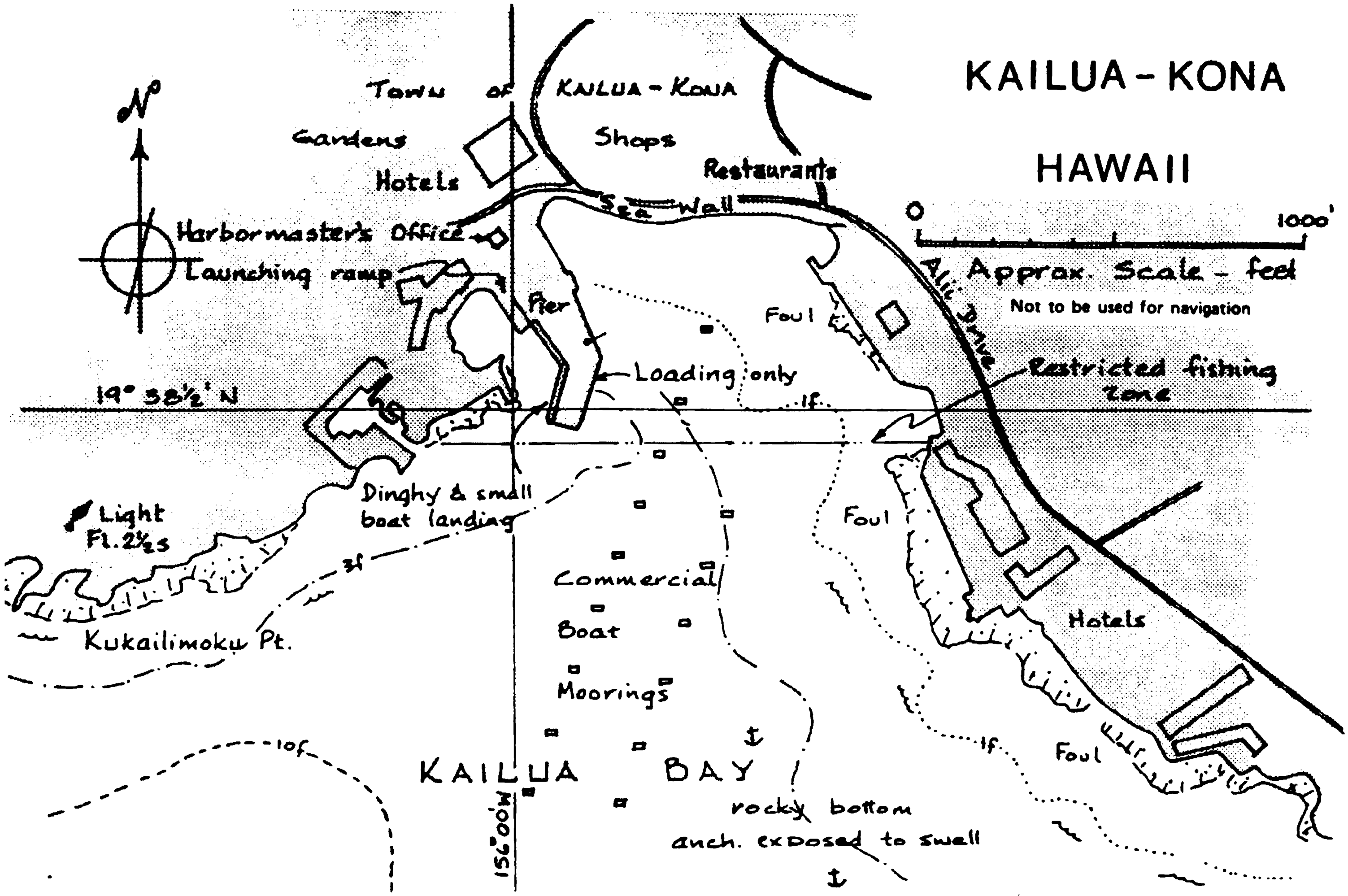
Around Kaiwi Point and only a few miles along is the man-made harbor of Honokohau. It was blasted out of the lava and is a little rough around the edges. It is not spacious, but it gives the best protection in this part of the coast. The harbor is entered from an offshore buoy on a leading light, with an immediate right turn into a wave dissipating basin. Then a left turn through a short channel brings one into the longer main basin. Many sportsfishing charter vessels use this as a headquarters and space is at a premium.

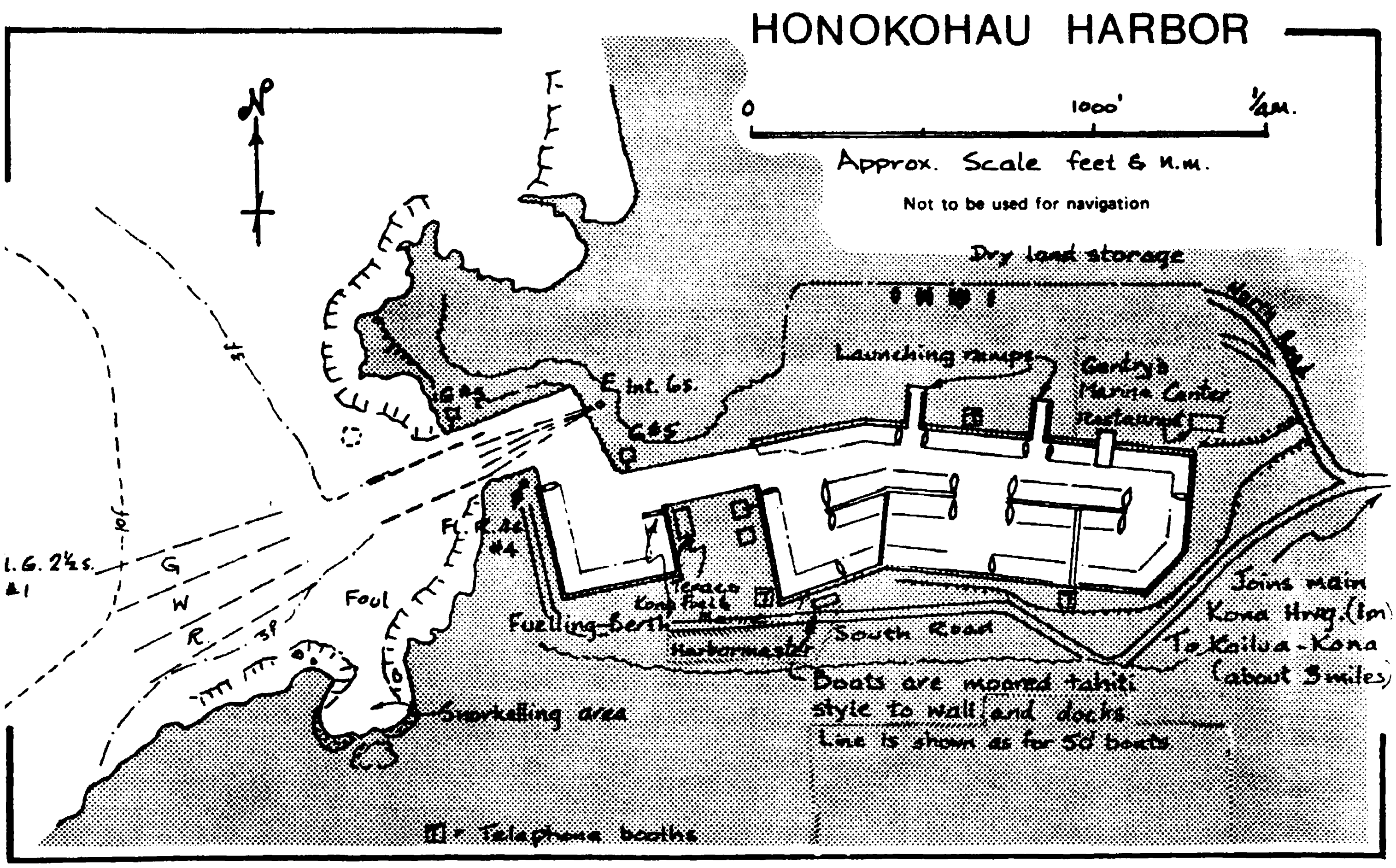
Any stay in the harbor is controlled by the Harbormaster whose office is just east of the fuel dock. He will designate a berth if one is available. There is a fuel dock in the outer basin. It is best to choose the early part of the day to get fuel when the local boats are out fishing as it becomes quite congested and busy from 5:00 pm onwards. There is a small store above the fuel dock and ice is available.

One of the best shipyards in the Hawaiian Islands is located on the north side of the harbor. Painting, welding, refrigeration service, and repairs for electronic equipment, and fiberglass and wood boats are available in the shipyard or at a nearby industrial park. Gentry's Kona Marina, telephone 808-329-7896 has a Travelift and paved work yard and is one of the few places in the Hawaiian Islands that has dry storage facilities for cruising yachts. There is often a waiting list for dry storage, so it is advisable to contact them prior to arrival.

Only 4 miles from Honokohau, the busy town of Kailua-Kona has many stores, restaurants, banks, marine supply stores, and tourist facilities. Although there is no bus service, one can usually get a ride to town with the local traffic.

Kawaihae Harbor is about 19 miles further north. It has a small boat basin within the breakwater as well as an anchorage outside. While getting there may not be difficult normally, this is the area of the "Mumuku" winds. These are the strong trade winds which are funnelled over and through the mountain gap at the valley of Waimea. They can blow with sudden and great velocity in the vicinity of Kawaihae. These winds can make a passage to Kawaihae impossible till they cease, for they may reach 60 knots or more, thus raising steep seas. All one can do is to retreat back to Honokohau and await another day.


KAILUA - KONA
HAWAII
0
1000'
Approx. Scale - feet
Not to be used for navigation
Town of Kailua - Kona
Gardens
Shops
Hotels
Restaurants
Sea Wall
Harbormaster's Office
Launching ramp
Pier
Foul
Alii Drive
Loading only
Restricted fishing zone
19° 38½' N
Dinghy & small boat landing
Light
Fl. 2½s
Kukailimoku Pt.
Commercial
Boat
Moorings
Hotels
KAILUA BAY
156° 00' W
rocky bottom
anch. exposed to swell


HONOKOHAU HARBOR
0
1000'
¼ M.
Approx. Scale feet & n.m.
Not to be used for navigation
Dry land storage
Launching ramps
Gentry's Marina Center Restaurant
Int. 6s.
G #5
Fl. R 4s
#4
I. G. 2½ s.
#1
G
W
R
Foul
Fuelling Berth
Harbormaster
South Road
Joins main Kona Hwy. (1m)
To Kailua-Kona (about 3 miles)
Boats are moored tahiti style to wall and docks
Line is shown as for 50 boats
Snorkelling area
= Telephone booths

LAHAINA, MAUI

Since many vessels proceed from the Big Island of Hawaii on to the 'flesh pots' of Honolulu on the island of Oahu they will cross the Alenuihaha Channel, and can visit Lahaina on the way over. The crossing of the channel can be eased by waiting for light trade winds. Most vessels going over stay in the lee of the coast till at Upolu Point before starting across, for this provides a the best possible slant to the seas and winds.

Once across and past Cape Hanamainoa the effect of the wind is reduced. A short distance further on is the crater anchorage of Molokini. A stop here is only temporary to enjoy the diving. Anchor in the northern curve of the extinct caldera, and note that the bottom is coral and is not good holding. Keep a watch aboard. One may land ashore, but the island is a Bird Sanctuary, while the waters are a Marine Life Conservation Area where no fishing or collecting of coral is allowed.

Lahaina has a small boat harbor which is literally jammed from end to end with commercial and pleasure craft. Space is seldom available for a transient yacht, though the harbormaster will try to find a space, especially if a vessel needs repairs. This is a crowded, tourist oriented town. Parts of the town are maintained as a National Historic Landmark and great emphasis is placed on its history during the days of the whaling ships.

The entrance to the harbor has reefs on either side, marked by privately maintained buoys. A sharp turn to starboard is needed at the entrance, which though it poses no problem in calm weather, can be more difficult in rough Kona weather. The floating museum brig, "Carthaginian II" occupies the outer berth of the Lahaina wharf on the south side of the entrance.

Most transient vessels anchor in the open roadstead off Lahaina, much as the whaling fleet did in the early 1800's. But today there are a far greater number of vessels in the roadstead. The designated anchorage area is too small, and is filled with many permanent moorings. Vessels anchor over a wide area, much of it in 9 fathoms, poor holding, with a little sand over rock or coral. In summer, even though strong trade winds may blow elsewhere the anchorage can be reasonably secure, but it is not unusual to see vessels drag. Rolling of vessels at anchor, especially those further out, can be most pronounced. During any Kona storm the roadstead is open to the south and therefore unsafe, and another anchorage must be sought.

About a mile northwest of Lahaina Boat Harbor, and around Puunoa Point the old, decrepit Mala Wharf is an alternative anchorage which is sometimes preferred to the outer limits of the Lahaina Roadstead. Several good, sandy spots can be found in the bay near the wharf, though one should check the anchor to be certain that it is not on coral. Landing and boat launching facilities are maintained by the State in the lee of the old wharf. It is about a half mile walk to downtown Lahaina's attractions.

Maui's beaches are one of its main attractions. Another is a trip to Haleakala National Park, the largest crater in the world. This is a side trip well worth taking, but it may be necessary to rent a car for the day or arrange for a bus tour.

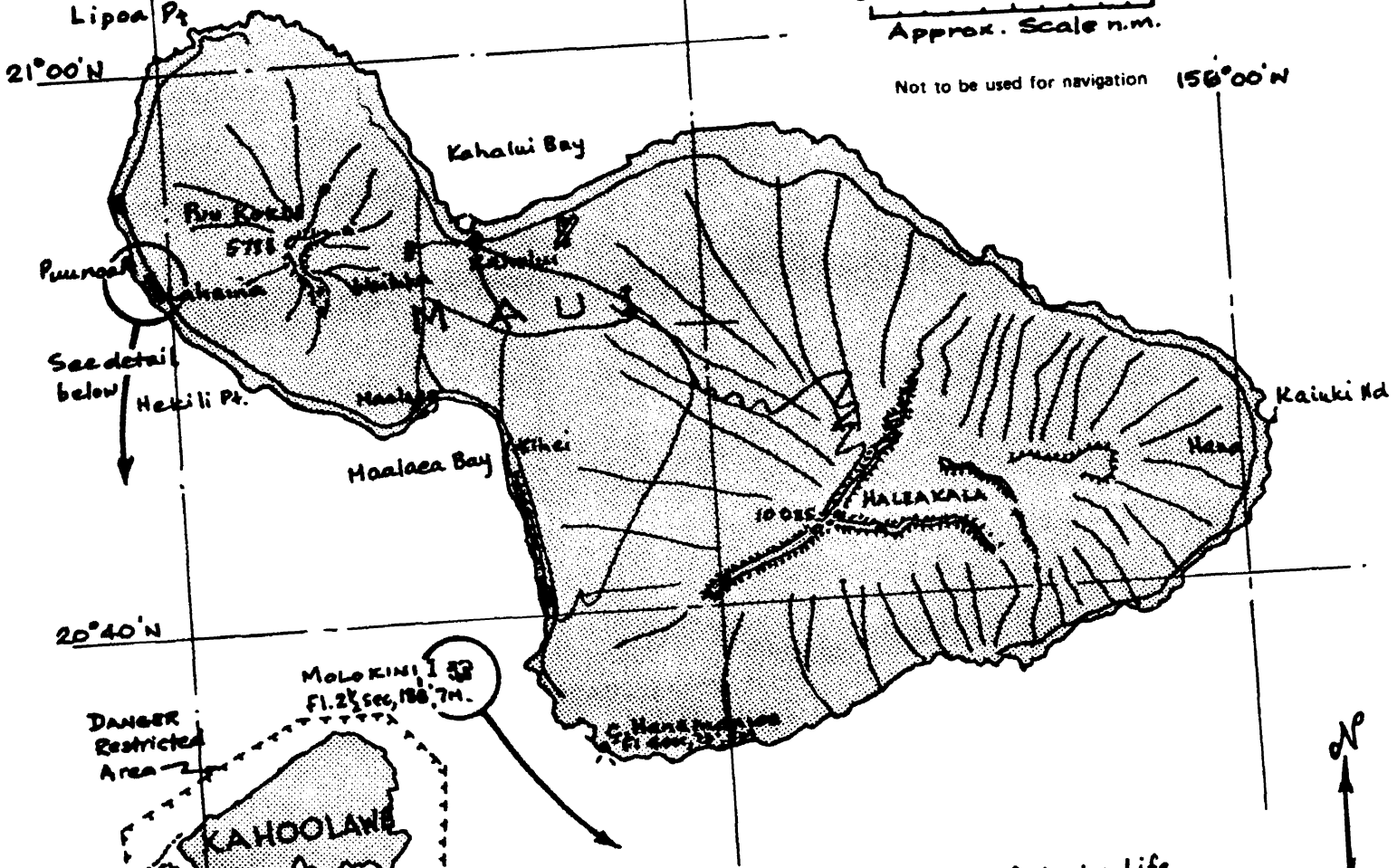
ISLAND OF MAUI

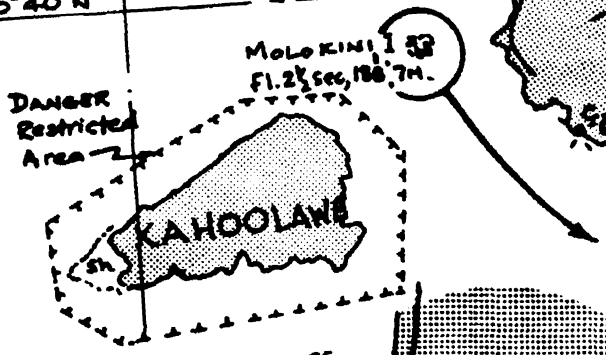
20° 50'N, 156° 20'W

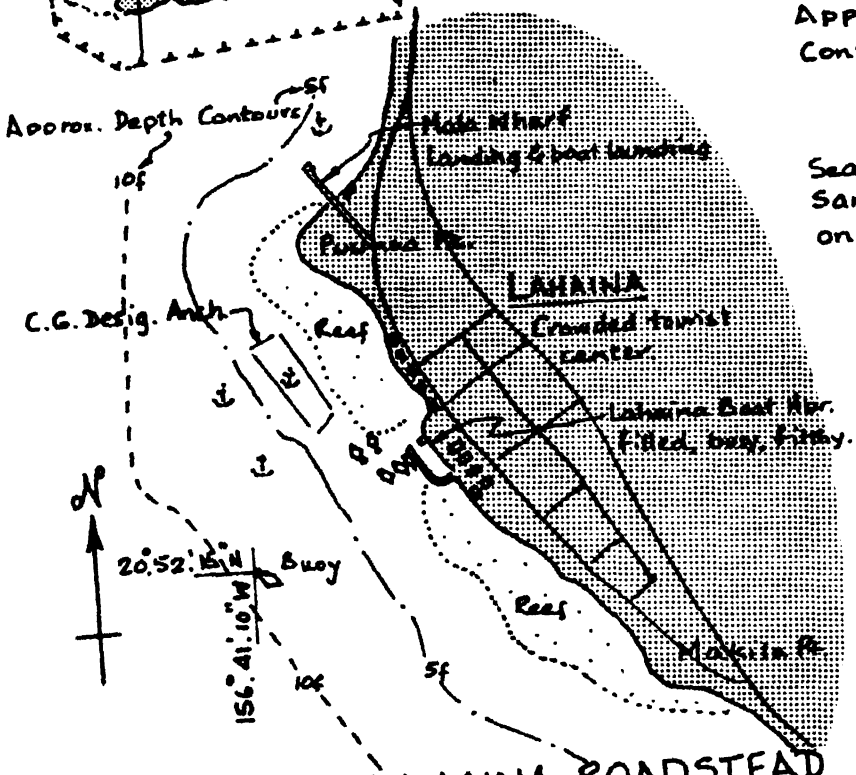
0 5 10

Approx. Scale n.m.

Not to be used for navigation



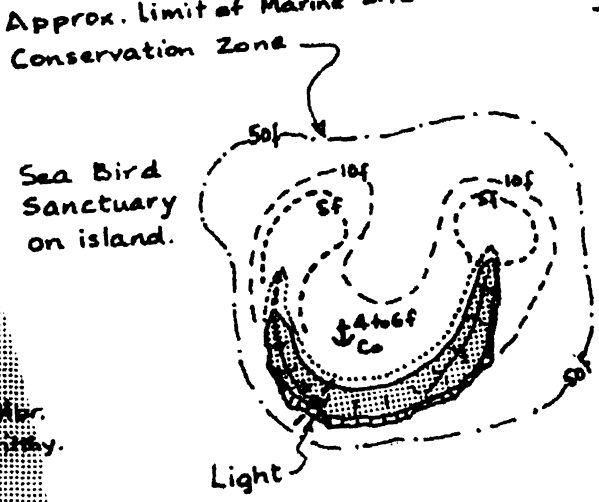




DETAIL OF LAHAINA ROADSTEAD

1000' 0 ½

Approx. Scale n.m.



MOLOKINI ISLAND

0 ½ 1m.

Approx. Scale n.m

Danger - unexploded ordanance may lie on the bottom coral.

HONOLULU, OAHU

The island of Oahu has less than 10% of the land area of the Hawaiian Islands but it accounts for more than 80% of the population. This is primarily due to the city of Honolulu--the hub of the State and the center of all communications and business. Crowded, rushed and extremely tourist oriented, it nevertheless attracts many travellers. Since many yachts will want to visit Honolulu, it will be briefly described in this guide. For greater detail on lights, harbor regulations, mooring areas, etc. refer to the US Coast Pilot or to other detailed guides.

The concentration of population also results in the largest number of boating facilities. Thus many yachts also end up at Honolulu because it may be the only area where they might find space to stay over a winter. Excluding the smaller places outside of Honolulu there are three main small boat areas. These are the Ala Wai Yacht Harbor, Kewalo Basin, and Keehi Lagoon in Honolulu Harbor itself. Kewalo Basin is filled with and completely given over to commercial vessels, but has fuel docks and repair yards where work can be done.

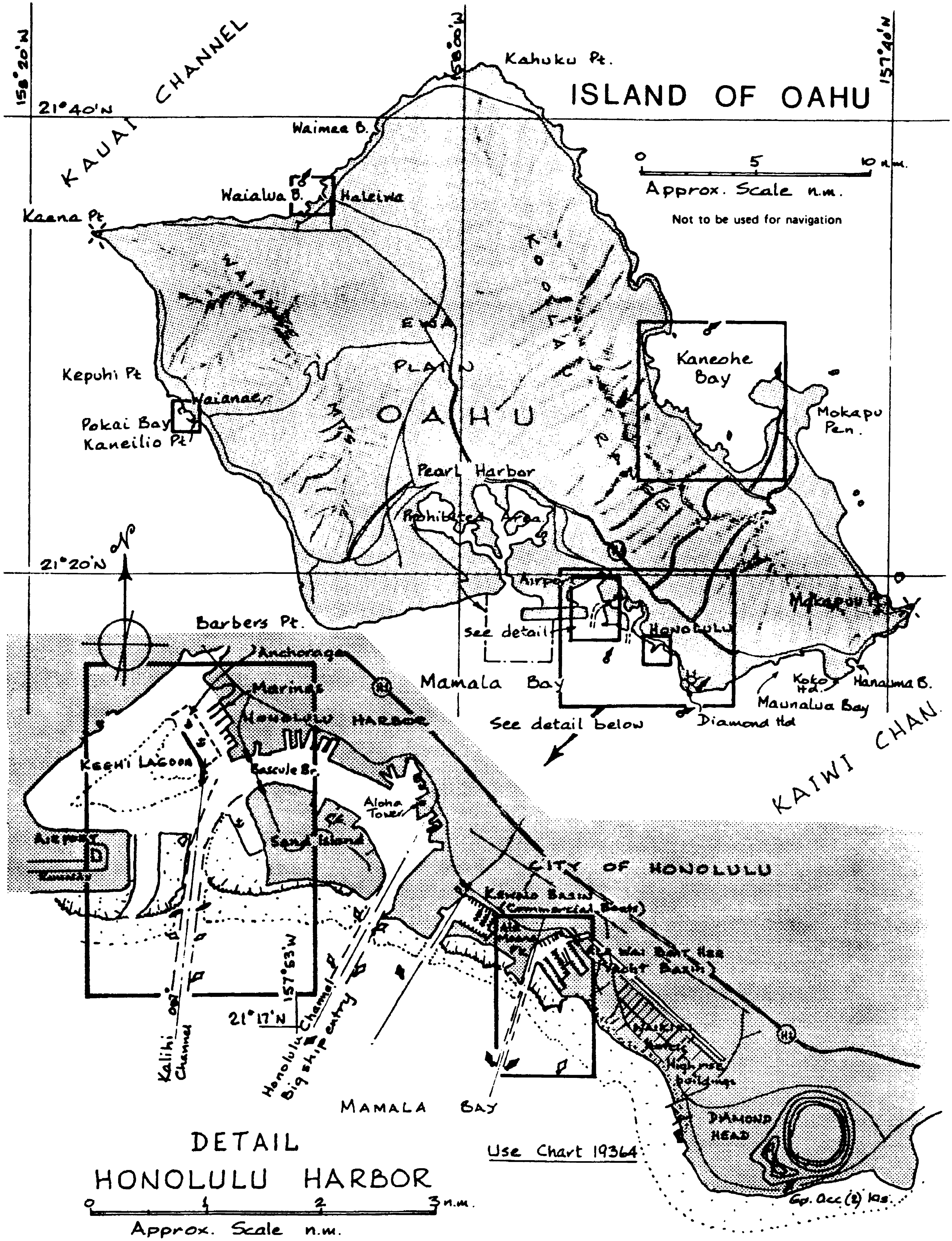
Ala Wai is 2½ miles northwest of Diamond Head (a well known landmark in this well publicized place), and the yacht harbor is entered through an angled channel. Just within the main breakwater is the Texaco fuel dock and a turning basin. One can complete entering details at the fuel dock and determine if any berths are available. One may obtain a temporary berth at the State Marina through the Harbormaster, or be allowed to moor at the Hawaii Yacht Club. There is a small repair yard in the harbor. Behind Ala Wai is the large Ala Moana Shopping Center, and access by bus service to all of Oahu.

Keehi Lagoon is probably the place that most transient yachts will end up at, for it has the only large designated anchorage area (good holding in mud). It is controlled by the State Marina which is opposite the anchorage. A fee is charged for dinghy docking and it is expected that a fee will soon be charged for anchoring in the lagoon. Though restrictions are presently minimal, the crowded conditions of each summer are causing official eyes to review the situation. In addition to the State-run Marina there are two other marinas nearby but they are private and are filled. There is a repair yard nearby. Access to Keehi Lagoon is either through Kalihi Channel, entering through the reef (difficult to distinguish at night), or through the main Honolulu Channel, thence through Sand Island Channel and the bascule bridge which is manned on weekdays only.

The main disadvantage of Keehi Lagoon is the noise of the jets and other air traffic from the nearby airport, and the dust and dirt of commercial operations along the busy waterfront. But since it is likely to be the only available anchorage, all discomforts have to be tolerated.

A few miles westward is the entrance into the fine shelter of Pearl Harbor. However, the harbor is closed to civilian traffic, and no vessels can navigate in the proximity of the entrance channel. It is open to military personnel only, both active and retired, and there are some facilities for them.

Honolulu is the tourist center incarnate. The main tourist area is at Waikiki, but there are many other areas around Oahu worth visiting. There are activities to suit everyone.


ISLAND OF OAHU
KAUAI CHANNEL
158°20'W
158°00'W
157°40'W
21°40'N
21°20'N
Kahuku Pt.
Waimea B.
Waialua B.
Haleiwa
Kaena Pt.
0
5
10 n.m.
Approx. Scale n.m.
Not to be used for navigation
Kaneohe Bay
Mokapu Pen.
Kepuhi Pt
Waianae
Pokai Bay
Kaneilio Pt
OAHU
Pearl Harbor
Prohibited Area
Barbers Pt.
See detail
Honolulu
Mamala Bay
Koko Hd.
Hanauma B.
Maunalua Bay
Diamond Hd
See detail below
KAIWI CHAN
N
Anchorage
Marinas
HONOLULU HARBOR
Keehi Lagoon
Bascule Br.
Aloha Tower
Sand Island
CITY OF HONOLULU
Kewalo Basin
(Commercial Boats)
Ala Wai Boat Hbr
(Yacht Basin)
157°53'W
21°17'N
Kalihi Channel
Honolulu Channel
Big ship entry
MAMALA BAY
Waikiki
High rise buildings
DIAMOND HEAD
Gp. Occ (2) 10s
Use Chart 19364
DETAIL
HONOLULU HARBOR
0
1
2
3 n.m.
Approx. Scale n.m.

THE ISLAND OF KAUAI

Kauai is 63 miles westnorthwest of Oahu, across Kauai Channel. It is the northernmost major inhabited Hawaiian island, only the tiny islands and rocks of the Northwestern Archipelago extending beyond it. It is a unique and beautiful island with its own special sights. A roughly oval island, about 30 miles by 24 miles, it has a central high point of about 5,250 feet; the gentle slopes and gulches of the south and east turning into steep and rugged ridges on the north and west sides. It boasts a spot with the highest recorded rainfall (annual average of 460 inches) at Mount Waialeale, yet the coastal areas get only a fraction of that amount.

The trade winds that bring the rain impinge on and divide along the northeastern side of the island, then follow the north and south coasts to meet some where south west of the island. Thus at Waimea on the southwest, there may be calms or land breezes while strong trades are blowing offshore. The acceleration of the trades is most often experienced off the northwestern coast where they are pinched against the steep Na Pali coast.

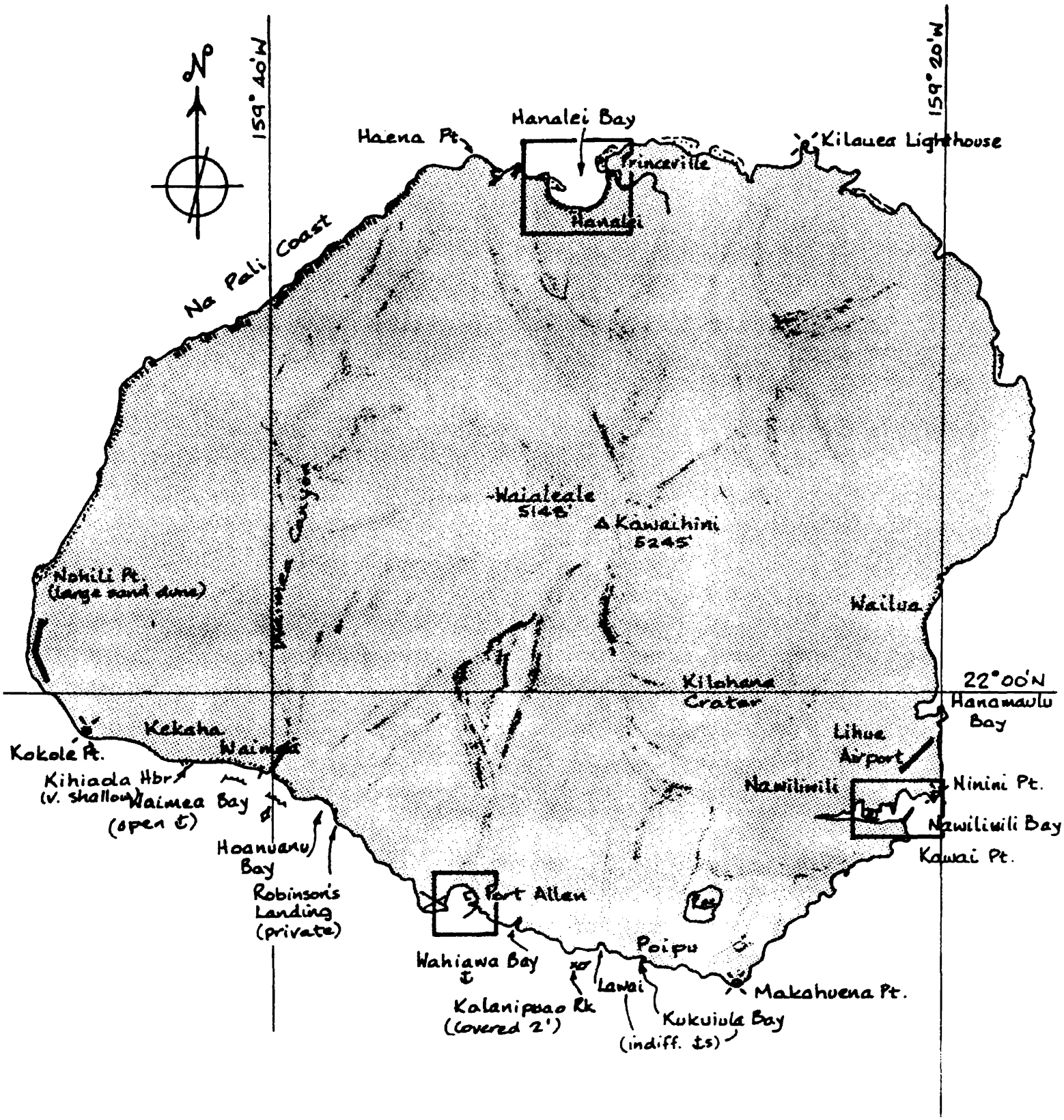
Vessels cruising the Hawaiian Island chain usually make their approach and first stop at Nawiliwili Harbor, the principal port of the island, which is located in the southeastern part of the island. The main town of Lihue is only 2 miles away and the airport is nearby.

On the north coast there is the large and beautiful Hanalei Bay, often used as the last, most northerly stop before leaving the Islands to return to the mainland. Further west of Hanalei Bay there are the steep cliffs and narrow hidden valleys of the Na Pali Coast offering spectacular views and intriguing hiking trails.

On the south coast of the island is Port Allen, the second port of the island, located in Hanapepe Bay. A small boat harbor is located in the bay. Waimea Bay, a few miles further northwest, it is the open roadstead where Captain Cook made his first landing in these islands in January, 1778. Behind the bay is Waimea Canyon with steep walls, deep gorges and many waterfalls.

Off to the southwest, across 15 miles of Kaulakahi Channel lies Nihau, the Forbidden Island. The Robinson family owns the entire island and operates it as a cattle ranch. They have forbidden intrusions for over a century in an effort to preserve the old Hawaiian way of life. Less than 300 people live on the island. The Robinsons live on Kauai in an area surrounded by high barriers of bougainvilla near Makaweli on the road to Waimea.

Nihau has a 1,000-foot tableland at the center, with lower coastal strips at the ends. The small, steep island of Lehua lies off the northern end, while Kaula Island lies 19 miles southwestward of Nihau and is a military area. The southern tip of Nihau is a small steep hill often mistaken for Kaula Island. No harbors are on the island, nor are landings permitted, though fishing boats sometimes use the lee of the island to anchor and rest.



ISLAND OF KAUAI

0 5 10 n.m.

Approx. Scale n.m.

Not to be used for navigation

NAWILIWILI HARBOR

This is a Port of Entry. The small boat harbor lies within the main harbor in Nawiliwili Bay. The outer entrance to the bay, between Ninini and Carter Points is more than 3/4 mile wide. The loom of the lighthouse on the north side of the entrance to the bay is often seen many miles at sea on clear nights. The land runs westerly for 3/4 mile to Kukii Point where a smaller light is located on the shelf below a bluff.

Carter Point lies almost directly south of Kukii Point, and a rock breakwater extends northeastward from it. Concrete interlocking bars at the seaward end of the breakwater give it a spiky appearance. A light is exhibited at the end of the breakwater. The opening into the harbor is almost 1/5 mile wide. Day rangemarkers are on two tanks within the harbor, and a large buttressed warehouse on a bluff above the wharf is clearly visible. A low seawall with the wharf behind seems to run right across the opening, but once past the entrance a sharp turn to the south, then again to the west after rounding the tip of the seawall takes a vessel deep into the harbor. This reversed "S" turn is not difficult for small vessels but gives skippers of large vessels a start.

The small craft basin lies behind a second breakwater about 1/2 mile into the harbor. There is one main pier with berths which can accomodate 12 - 14 vessels, while smaller vessels, catamarans and trimarans having very shallow drafts can anchor in the wide space beyond.

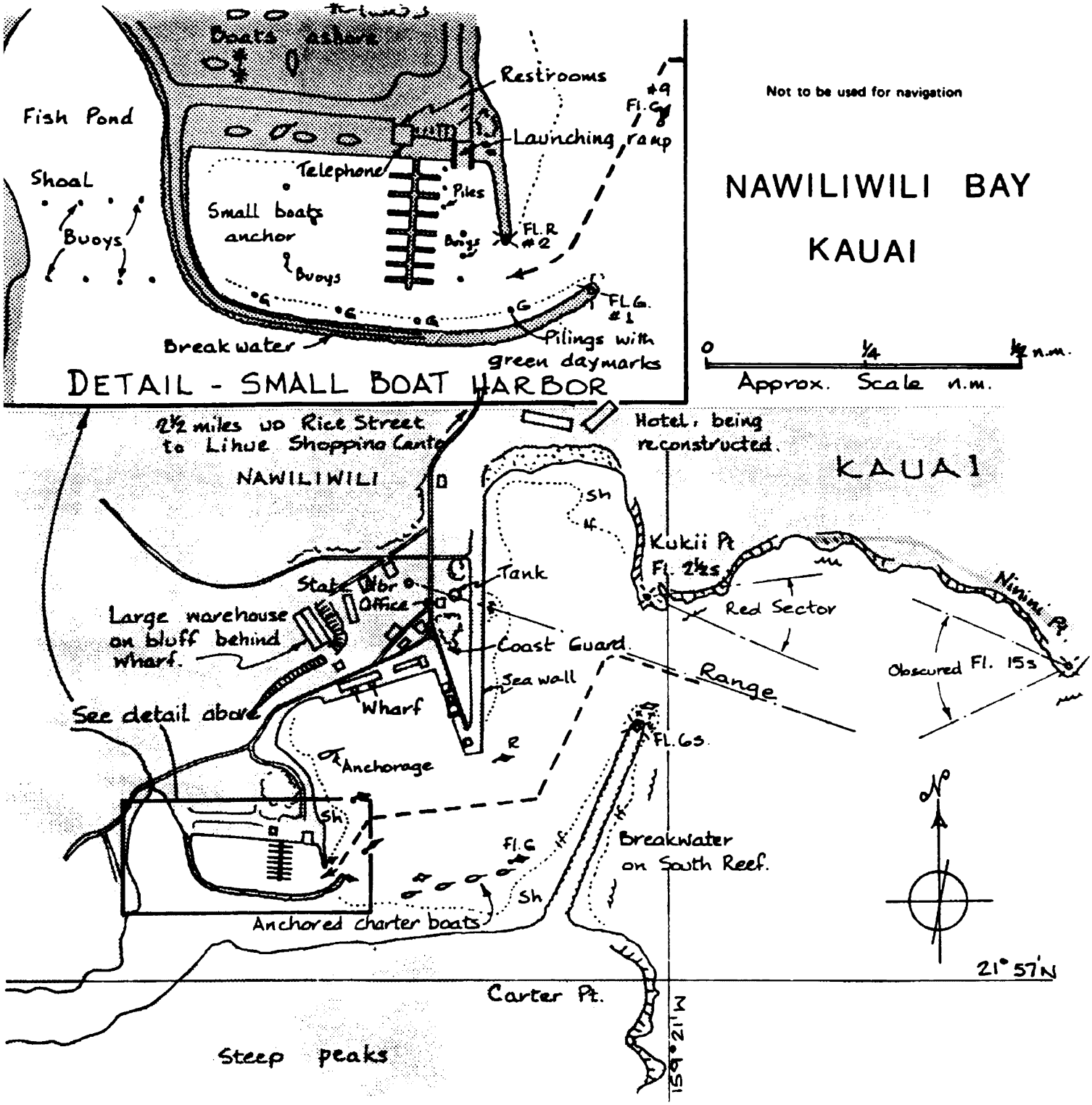
Vessels can also anchor outside the breakwater, between the harbor entrance and the freighter or barge wharf. Buoys for the local charter boats are in a line on the south side of the harbor, and vessels can anchor behind them in Huleia Stream (but care must be taken as this area shoals quickly). In case of over-crowding, a vessel may anchor in the bight north of the main breakwater, off the hotel and beach, but all these areas outside the small craft breakwater are subject to wind and surge.

The harbormaster's office is at the State Harbor Office which is located behind the wharf area. Final approval of your mooring rests with him.

There are a few small shops and restaurants as well as a small marine supply store at the north end of the harbor. Restrooms are available. For major shopping it is necessary to walk or hitch a ride for 2 miles up Rice Street to Lihue, where there are many stores, laundries, and other facilities.

Seven miles southwest of Nawiliwili is Makahuena Point, the southern tip of Kauai. A light is shown here, and a tall loran tower is conspicuous. Avoid Koloa Landing just beyond the point as it is entirely unsuitable.

Kukuiula Bay is 3 miles west Makahuena Point and has a small breakwater and can be used as an anchorage in good weather. However it is affected by surge and is open the south and kona storms. The seas break on the reef in front of and beyond the breakwater, on entry it is necessary to swing wide around and keep to the center of the entrance. From here a visit can be made to a spouting blowhole and to Lawai Bay (featured in "Fantasy Island" as the place where Tattoo welcomed visitors).


Not to be used for navigation
NAWILIWILI BAY
KAUAI
Boats ashore
Restrooms
Fish Pond
Launching ramp
Telephone
Shoal
Piles
Small boats anchor
Buoys
Fl.R #2
Fl.G #1
Breakwater
Pilings with green daymarks
DETAIL - SMALL BOAT HARBOR
0
1/4
1/2 n.m.
Approx. Scale n.m.
2½ miles to Rice Street to Lihue Shopping Center
NAWILIWILI
Hotel, being reconstructed.
KAUAI
Kukii Pt
Fl. 2½s
Red Sector
Niihau Pt.
Tank
State Hbr Office
Large warehouse on bluff behind wharf.
Coast Guard
Obscured Fl. 15s
Range
Sea wall
Wharf
See detail above
Fl.G 5s
Anchorage
Breakwater on South Reef.
Fl.G
Anchored charter boats
21° 57'N
Carter Pt.
159° 21'W
Steep peaks
Small boat harbor
Warehouse
Anchored Charter Vessels
Wharf
Sea wall
Breakwater
AT THE ENTRANCE TO NAWILIWILI INNER HARBOR

INDEX

APPENDIX I: UNIFORM LATERAL SYSTEM

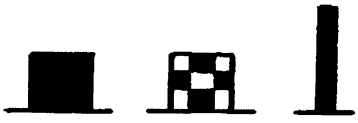
Fairways and Channels

TOPMARKS

Note: T-shapes not used at Channel entry.

Diamond shape not used at Channel entry.

BUOY



MARKING Even numbers, beginning from seaward.

Odd numbers, beginning from seaward.

(In French Polynesia the numbers may not be used)

LIGHTS Red, flashing or occulting (1)
or group flashing or occulting (1+4)
or White, group flashing or occulting (2) or (4)

White, flashing or occulting (1)
or group flashing or occulting (3)
or Green, group flashing (2) or (3).

Special Topmarks inside Lagoon Channels

TOPMARKS

POST

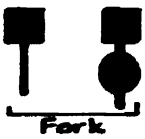
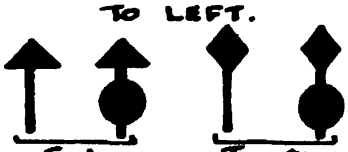
MEANING

Landward Side of Channel

Reef Side of Channel

Landing or Mid-channel.

Middle Ground

	MAIN CHANNEL TO RIGHT.		CHANNELS OF EQUAL IMPORTANCE.		MAIN CHANNEL TO LEFT.	
TOPMARKS						
	Fork	Junction	Fork	Junction	Fork	Junction
BUOY						

LIGHTS In all cases distinctive where possible.

Mid Channel

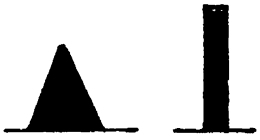
TOPMARKS Shape optional, other than can, cone, or spherical. Cross often used.

BUOY Shape optional, other than can, cone, or spherical.

COLOR Red & White or black & white vertical stripes; topmark red or black as stripes

LIGHTS Different from neighboring lights

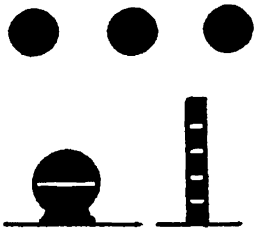
Marking of Wrecks

	TO BE PASSED ON PORT HAND	TO BE PASSED ON EITHER HAND	TO BE PASSED ON STARB'D HAND.
TOPMARKS			
BUOY			

MARKING Marked in white with "W"

LIGHTS Green, Gp.FL.(2) | Green, occulting(1) | Green, Gp.FL.(3)

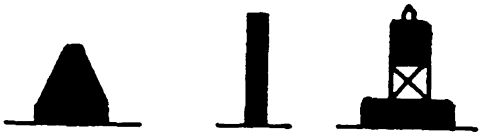
Isolated Dangers.



White or red, rhythmic.

APPENDIX II: UNITED STATES SYSTEM

Fairways and Channels

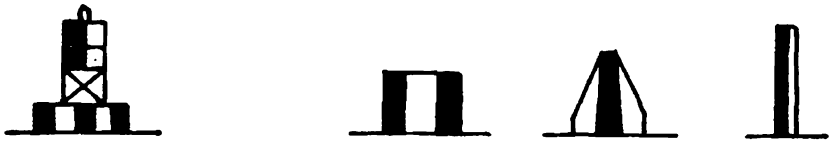
	PORT HAND	STARBOARD HAND
BUOY		
MARKING	Odd numbers, beginning from seaward.	Even numbers, beginning from seaward.
LIGHTS	White or green, flashing or occulting. Quick flashing for important turns.	White or red, flashing or occulting. Quick flashing for important turns.

Middle Grounds

	MAIN CHANNEL TO RIGHT	MAIN CHANNEL TO LEFT
BUOY		
MARKING	May be lettered.	May be lettered.
LIGHTS	White or green, interrupted or quick fl.	White or red, interrupted or quick fl.

Where channels are of equal importance either of the above types are used.

Mid Channel

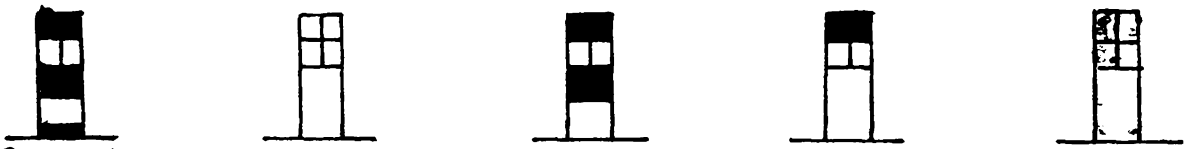
BUOY	
MARKING	May be Lettered.
LIGHTS	White, short - long flashing.

Wrecks or other obstructions

	TO BE PASSED ON PORT HAND	TO BE PASSED ON STARB'D HAND
BUOY		
MARKING	Usually marked WR.	Usually marked WR.
LIGHTS	White or green, quick flashing.	White or red, quick flashing.

Where wrecks or obstructions may be passed on either hand then either type of Middle Ground buoy is used.

Miscellaneous



Special Purpose | Anchorage | Fish Net | Dredging | Quarantine Anchorage

These buoys have no lateral significance and apply to all waters.

CHARLIE'S CHARTS OF POLYNESIA

TIPUTA ANCHORAGE, RANGIROA ATOLL

CHARLIE'S CHARTS
Box 1244, Station A
Surrey, B.C., Canada
V3S 1G0

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