Cruising Guide to the Philippines

For Yachtsmen

By Conant M. Webb

Draft of 06/16/09

INTRODUCTION

The Philippines is the second largest archipelago in the world after Indonesia, with around 7,000 islands. Relatively few yachts cruise here, but there seem to be more every year. In most areas it is still rare to run across another yacht. There are pristine coral reefs, turquoise bays and snug anchorages, as well as more metropolitan delights. The Filipino people are very friendly and sometimes embarrassingly hospitable. Their culture is a unique mixture of indigenous, Spanish, Asian and American. Philippine charts are inexpensive and reasonably good. English is widely (although not universally) spoken. The cost of living is very reasonable.

This book is intended to meet the particular needs of the cruising yachtsman with a boat in the 10-20 meter range. It supplements (but is not intended to replace) conventional navigational materials, a discussion of which can be found below on page 16.

I have tried to make this book accurate, but responsibility for the safety of your vessel and its crew must remain yours alone.

CONVENTIONS IN THIS BOOK

Coordinates are given for various features to help you find them on a chart, not for uncritical use with GPS. In most cases the position is approximate, and is only given to the nearest whole minute. Where coordinates are expressed more exactly, in decimal minutes or minutes and seconds, the relevant chart is mentioned or WGS 84 is the datum used. See the References section (page 157) for specific details of the chart edition used. Be very wary of applying coordinates from one chart to another, as charted features may not be at the same coordinates on different charts. If possible, positions are usually best transferred by range and bearing from a well-defined landmark.

Bearings are true and, where precision is intended, are expressed in degrees from 000° (North) to 359°, measured clockwise. Less exact bearings are expressed by the names or initials of points of the compass.

Depths, heights and distances are given in nautical miles (nm), feet (ft), meters (m), or fathoms (fm), generally intending to be consistent with the current Philippine chart of the area. A conversion chart appears in Appendix A (page 141).

Buoys, lights and other aids to navigation in the Philippines are not as reliably maintained as those in wealthier nations. Never assume that they will be as charted.

Geographical points appear in the Gazetteer (page 127). The Index (page 140) contains references to other subjects.

A RANT ABOUT GPS, ELECTRONIC CHARTS AND THE LIKE

Modern navigation tools can create dangerous overconfidence, especially in the inexperienced and unwary. The devices can and do fail, usually at a very inconvenient time. Expect it. Even more dangerous is failing to understand the limitations of your navigation. GPS may give you an incredibly accurate fix, but that's only half of the problem. There can be uncertainties in the location of charted features, either in relation to the datum set on your GPS or because of older charting methods. Some modern charts of the Philippines are based on surveys as old as the 19th century, and most are based on pre-GPS surveys. A few areas remain unsurveyed.

Most Philippine charts do not indicate the datum used and correction factors for use with GPS are only given on some of the most recent new editions. Given the possibility of divergence between GPS positions and charted positions because of datum shift, and the age of some of the

surveys, it is at least as foolish to rely solely on GPS in the Philippines as anywhere else in the world. If you don't understand what a datum is, this is particularly true.

It is essential to navigate using several independent means of fixing your position as much as practicable. Keep a reasonable dead reckoning plot, and don't get careless. Keeping ahead of the boat and taking reasonable precautions while still able to have been the basis of good seamanship for thousands of years and fundamentally nothing has changed. No matter what the salesmen would like you to think, having a chandler's dream inventory on board (preferably orange, electronic or both) doesn't make you safe. If it creates overconfidence, it has the opposite effect.

AUTHOR'S NOTE

This is very much a work in progress. Only some portions are complete. There are undoubtedly errors and things missed in the rest. Things change, or I got it wrong in the first place. My apologies in advance. Be careful about trusting any single source of information, including this.

I would be very grateful for any corrections or comments. It can take a little time to catch up with me, but any of the following will eventually get there: in care of the Puerto Galera Yacht Club, (Puerto Galera Yacht Club, Sto. Niño, Puerto Galera, Oriental Mindoro, PO Box 30450), or via Email at co_webb@hotmail.com

Please email me if the date on this draft seems old – I intend to keep updating it, and if you are willing to give me comments, I am willing to give you a new draft at the cost of reproduction.

One cruiser I asked for help violently objected. He seemed to think it was immoral to 'exploit' the Filipinos by disseminating this sort of information, and that it would inevitably lead to the debauchery of its people, overdevelopment, and destruction. Aside from it being fairly obvious that Filipinos are perfectly capable of debauchery, overdevelopment and destruction without assistance, I doubt this modest effort will have much effect on the number of yachts visiting the Philippines. It will be many, many years before the Philippines has the sort of crowded sailing like Phuket, the Caribbean or the Med.

Like most sailing directions, this is full of warnings and descriptions of hazards. My first priority has been to help you avoid trouble, so there has been a tendency to focus on the negative. The good points of the Philippines will be obvious to the yachtsman at his first visit. A surprising number wind up staying more or less permanently.

ACKNOWLEDGMENTS

The Philippines are too large for any individual to write a complete cruising guide exclusively from his own experience.

Leslie Pickard and other members of the Manila Yacht Club prepared a photocopied cruising guide to the Philippines in 1986-7 covering W Luzon as far North as San Fernando, the Calamains and NW Palawan, Mindoro and parts of the Sibuyan Sea. It includes photocopied sections of the charts for the anchorages described. It was a valuable pioneering work, and a useful reference in beginning this effort.

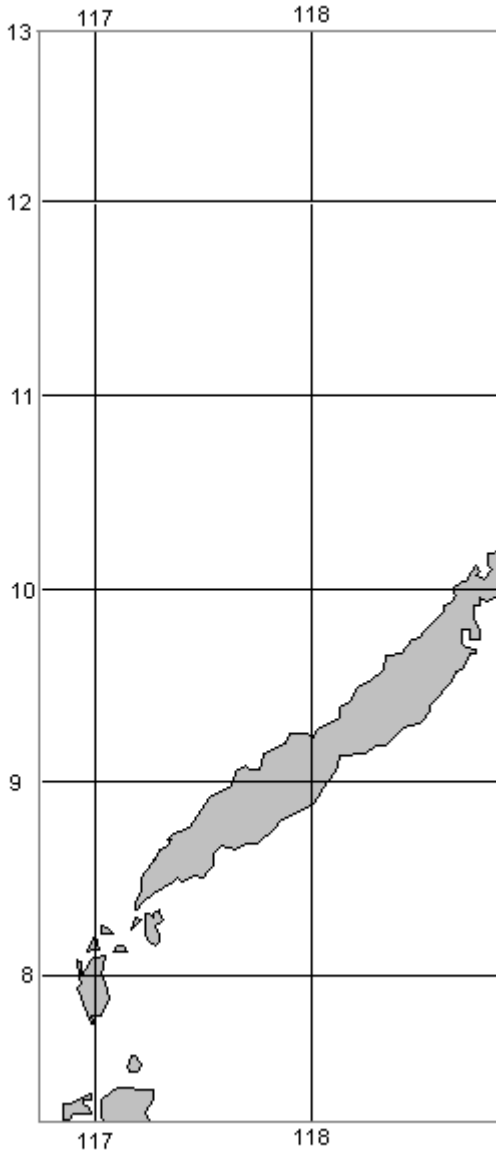
Most important have been interviews with fellow yachties who let me pick their brains:

Name	Boat(s)
Gordon	Chica Amo
Shane Scott	Akila, Blidö
Carl Broquvist	Chom II
Olaf Tomforde	
Fitz & Trish	Columbus
Mary & Terry Iverson	Valkyrie
Mike Bjornback	Taranui II
Mike Tucker	Tayana Lady
Russ Hughes	Karis
R. John Skinner	Naiche
Dan Green	Kalia, Mahi Mahi

Many thanks for their willingness to be interrogated about their movements, sometimes at length. Thanks also to those who preferred not to be identified. While the aforementioned must share in the credit for accurate information, the blame for errors must remain the Author's.

Thanks also to Beth of the Harbor Point Bistro on Muelle Pier, Puerto Galera for allowing me to camp out for days at a time writing. Thanks also to Sven.

CONTENTS



Palawan, Calamian Group, Balabac Strait, Dangerous Ground and Islands of the Sulu Sea

CHARTLETS

TABLES

APPENDICES

CRUISING HIGH POINTS

Many parts of the Philippines rarely see a cruising yacht. Exploring can be very rewarding. The most popular cruising areas are probably the Culion group and the northern end of Palawan, and the area from Manila and Subic down to the Sibuyan and Visayan seas. There is a fair amount of yacht traffic back and forth from Hong Kong, and some yachts travelling East to West via the Surigao and San Bernadino Straits.

The northern end of Palawan, especially around El Nido and the adjacent islands of Culion, Coron and Busuanga consistently get very high praise from cruisers. The Southern end of Surigao has much of the same sort of limestone towers, natural arches and pure white beaches as the Palawan area, but is smaller and less popular.

[Still need to think about this -- **Suggestions needed!**]

CERTAIN CONSIDERATIONS ABOUT THE PHILIPPINES

There are a few things that always come up in general discussion about cruising in the Philippines.

Typhoons

Typhoons do not have to be a terrible worry if you pay attention and take timely action. As in many areas of the world, you will occasionally have to spend some time in a sheltered anchorage waiting for the weather to moderate or waiting to see which direction a developing storm will take. In all seasons it is essential to keep an eye on the weather and know what your plan will be if a typhoon threatens. Good preparation and timely action are your best defenses. See page 20 for a more detailed discussion.

Fish Aggregating Devices (FADS)

FADs (Payao in Tagalog, gacket in Visayan, balsas in Ilonggo) are buoys put in deep water to attract valuable pelagic species of fish, especially tuna. In Philippine waters these range from low bamboo rafts fairly close inshore to steel rafts or cylinders as large as 3-4 m in diameter and 5-10 m long. The largest ones may be anchored in water up to 5,000 m deep, and can be 60 miles or more offshore. They are not lit at night, and have no radar reflector, although some have a palm frond. Other than good watch keeping, there's not too much that can be done about this problem. It's the single greatest risk of cruising in the Philippines.

Fishing Bangkas

The local double outrigger boats are generally called 'bangkas', regardless of whether they are propelled by paddle, sail, small gasoline engine or diesel. Sizes range from barely large enough for one person to well over 100 feet. They are generally poor radar targets. Most do not have running lights. Some only carry a cigarette lighter a flashlight. In some areas the larger ones have some semblance of running lights but the pattern and placement only resemble the rules of the road requirements vaguely. For night fishing, some of the larger ones have powerful arrays of floodlights and some of the smallet ones use pressure kerosene lamps.

They can be found well offshore, routinely asfar as 50-75 miles, usually in groups around good fishing spots like shoals. Sometimes there is no obvious reason for their location. At night, an unlit bangka who sees your running lights and believes you may run them down will use their lighter or turn on their flashlight (if they have one that works). When you alter course to avoid

the ones you can see, the bangkas you are now heading for will use theirs. It can be very frustrating.

I generally try to avoid making inshore passages in the Philippines at night when there is no moon or in order to reduce the risk of colliding with bangkas or the bigger FADs.

See page 35 for a more detailed discussion of local fishing methods.

Crime and Politically Motivated Violence

There is crime in the Philippines like anywhere else. Given the degree of poverty in which the majority of Filipinos live, it is remarkable how little there is. Urban areas are worse than rural areas. By and large it's not a major problem for the cruiser. Before going to urban areas there are a few ingenious scams it's good to be aware of, discussed on page 39.

There are several rural and urban insurgencies in the Philippines that proclaim political motivation, some of whose actions seem at least partially driven by economics. The politically motivated groups are generally not interested in yachts.

As a general matter the Muslim insurgencies are confined to western Mindanao and the Sulu Archipelago, and the communist insurgents tend to be in the mountains rather than the seaside.

See [historical section to come] for a discussion of their development and page 40 about the situation as of this writing. The situation in the Philippines can be fairly fluid, so it is sensible to pay attention to the media. I find the Internet to very helpful tool to keep abreast of Philippine affairs. You can also check whether your consulate has issued any warnings for the Philippines.

Disease and Health

In the Philippines, like anywhere in the world, especially developing countries, it is prudent to take appropriate precautions against certain health risks. None are particularly onerous. The quality and availability of medical care is highly variable, and it is sensible to be somewhat self reliant. See page 45 for a more detailed discussion of these issues.

PEOPLE OF THE PHILIPPINES

HISTORY

Before European Contact

There are many descriptions of the Philippines by Europeans at the time they were "discovered". The earlier history is less clear.

The land is mostly volcanic in origin, except for Palawan. Palawan was at one point connected by land bridge to Borneo, but the rest of the Philippines were never connected with the Asian mainland while humans were around. Humans were making significant sea crossings in and from Southeast Asia as early as 40,000 years ago.

The earliest human remains found in the Philippines so far are part of a skull and jaw that were buried outside Tabon Cave, Palawan. These bones are about 20,000 years old, *Homo Sapiens* (like modern people), and seem to be of a woman with characteristics resembling Australian aboriginal peoples or Philippine Negritos. Negritos live mostly in remote upland areas. They tend to have darker skins, frizzy hair and are of relatively small stature compared to present day lowlanders.

Austronesian speaking peoples probably began to arrive in the Philippines from Taiwan in around 5,000 BC, bringing agriculture, metals, domesticated pigs and dogs, and a variety of other technologies to the Philippines. There was undoubtedly also movement from the South and from mainland Asia. The famous Ifugao rice terraces of central Luzon probably date back to about 2,000 years ago, roughly the time that the first cultivated varieties of rice appear. By the early centuries of the Christian Epoch Austronesian speakers had spread by sea as far East as Easter Island (Rapa Nui) and as far West as Madagascar. When Europeans arrived in the Philippines in the 16th century, the Negritos were speaking Austronesian languages that were more closely related to the nearest lowland group than to languages spoken by other Negritos elsewhere, indicating that there had been prolonged contact and interchange between the Negritos and the Austronesian speaking lowlanders. Older theories specified specific 'waves' of new arrivals to the Philippines based on various types of artifacts supposedly associated with each wave, but radiocarbon dating of organic matter has largely discredited these notions.

By the 9th century AD there was certainly fairly extensive trade between Vietnam and China and some regions of the Philippines. Chinese and Vietnamese pottery of this period was found in excavations in Butuan, Mindanao, along with the remains of two boats, one of which was 15 meters long, large enough to have carried out fairly extensive trading voyages. There seems to be a clear reference to Butuan in the Chinese Sung Shih, or Sung Song, history of 1001 AD.

Most excavations after the 9th century in the Philippines can be dated by the styles of Chinese pottery discovered. In many burials there are many pieces of pottery found with the body. We can only speculate about why.

There were several indigenous forms of writing, one of which survives among the Mangyan peoples of the highlands of Mindoro, and a similar one that survives among the Pala'wan indigineous people of Palawan. Virtually no writing has survived from the pre-hispanic period, and it is controversial how widespread literacy was. The ancient scripts are all similar. The ancient Tagalog form, *baybayin*, had one symbol for each of 17 consonants, with diacritical marks placed above or below each symbol to indicate the vowel associated with the consonant. This seems to be related to Sanskrit or other ancient scripts used on the Indian subcontinent.

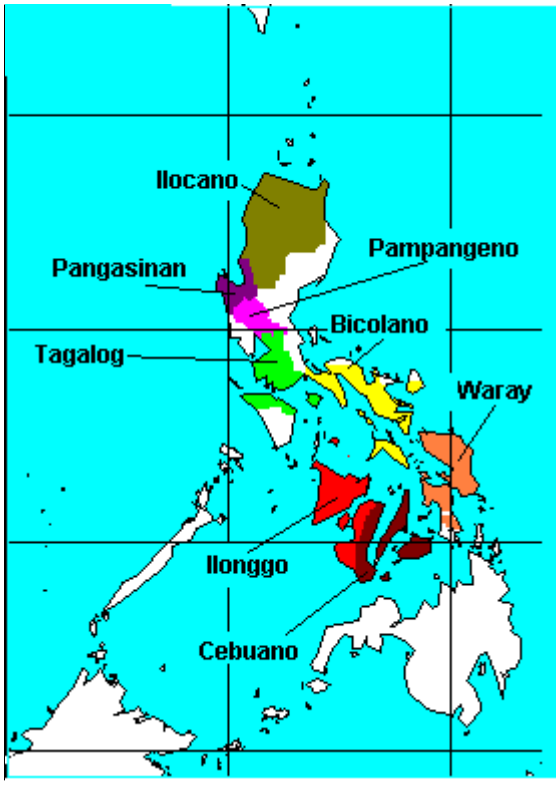
[More to come]

THE CURRENT SITUATION

[To come]

The Philippines are about 83% Roman Catholic, with about 9% Protestant, 5% Muslim and 3% other.

LANGUAGE



Depending on where one draws the line between a language and a dialect, there are as many as 150 different languages in the Philippines. The official languages are English and Filipino. Filipino is essentially Tagalog (pronounced tag-á-log) with some additions from other languages. Tagalog is the language of the Manila region and of films and television. It has been mandatory in school since 1974, and is fairly well understood in most places, much more commonly than English is. The others have fairly strong geographic associations. However, there have been substantial internal migrations, including from rural areas to urban ones and between the rest of the Philippines and Mindanao, depending on the ebb and flow of fighting between government forces and insurgents.

The native languages of about 90% of Filipinos are one of eight languages:

Tagalog - Central and Southern Luzon, including Manila, Northern Mindoro, Lubang Is and Marinduque I. About 14,850,000 first language speakers (24% of the population). Tagalog is the foundation of Filipino, the 'National Language', and is the major language of TV and movies. As such it is used to some degree by many Filipinos (one estimate is an additional 24,000,0000) as a second language.

Cebuano - Eastern Negros, Cebu, and Bohol. About 15,230,000 speakers (24%).

Ilocano - Northwestern Luzon, La Union and Ilocos provinces, Cagayan Valley, Babuyan. ('The right side of the Agno River', according to chauvinists') About 8,000,000 speakers (11% of the population).

Ilonggo (Sometimes also called **Hiligaynon**) - Panay, Guimiras, Western Negros and some of the surrounding islands. About 7,000,000 speakers (10%).

Bicolano - the Bicol region of Southern Luzon - from the East side of the Ragay Gulf to the San Bernadino Strait, Southern Catanduanes, Masbate and some of the surrounding islands. 'Central' Bicolano is spoken by some 2,500,000; together with other closely related Bikol languages about 4,000,000 or 7% of the population.

Waray - Northern and eastern Leyte and Samar. 3,000,000 or about 5% of the population.

Pampangeno - the Central valley of Luzon from the North part of Manila Bay to about Tarlac - Pampangas Province, plus most of Bataan. 2,000,000 or about 2-3% of the population.

Pangasinan -Lingayan Gulf area. 2,000,000 or 2-3% of the population. Pangasinan Province, Luzon.

The Visayan languages, Cebuano, Ilonggo and Waray, are more closely related to each other than to the others. Ilocano and Pangasinan are likewise closer to each other than to the other six.

For a detailed breakdown counting 171 (168 living, 3 extinct) Philippine languages see http://www.sil.org/ethnologue/countries/Phil.html. There are a variety of links to web sites to help learn various Philippine languages in Appendix G.

Of the minority languages about ten are associated principally with the Muslim ethnic groups of the South: Tausug, Maranao, Maguindanao, ….

[Insert English-Tagalog-Visayan sailing glossary as appendix?]

Almost all of the indigenous Philippine languages are classified as Malayo-Polynesian, related to those spoken from Easter Island (Rapa Nui) and Hawaii through Indonesia and Malaysia to as far West as Madagascar. This table shows the translations of some selected words in English and six Malayo-Polynesian languages, giving some indication of the relationships:

English	**Tagalog**	**Visayan**	**Indonesian/Malay**	**Fijian**	**Hawaiian**	**Marshallese**
coconut[1]	niyog	lubi	nyuir	niu	niu	ni
die	namatay	patay	mati	mate	make	lot
eye	mata	mata	mata	mata	maka	maj
fish	isda	isda	ikan	ika	i'a	ek
five	lima	lima	lima	lima	lima	lalaem[2]
leaf	dahon	dahon	daun	drau	lau	bolok
mosquito	lamok	lamok	nyamuk	namu	makika	jokwajok
rain	ulan	ulan	hujan	uca	ua	wot
sky	langit	langit	langit	lagi	lani	lan
two	dalawa	duha	dua	rua	lua	ruo
wind	hangin	hangin	angin	lagi	makani	an[3]
yam	ubi	ubi	ubi	uvi	uhi	iaam[4]

---

[1]In areas where the coconut is indigenous and important people tend to have many different words relating to variety, stages of growth and so on. In Tagalog, for example, there are:

buko - nut ready for drinking
niyog - nut for making coconut milk
tubu - nut about to sprout, right for planting
makapuno - a small, yellow-orange variety of nut

[2] But 'lima bukwi' for five hundred and 'lima dep' for five thousand.

There is an extensive wordlist comparison between Austonesian languages at http://www.geocities.com/Tokyo/8908/firemount/austroframes.html. (Some classifications use 'Austronesian' rather than 'Malayo-Polynesian'.)

[Tagalog alphabet has no letter C, and puts K in its place between B and D]

Despite 350 odd years of Spanish rule, Spanish is not an important language in the Philippines. However, the Spanish period has had an impact on languages spoken in the Philippines. There are many words of Spanish origin in most Philippine languages, and in most markets you will hear spanish numbers used alongside local numbers. For a variety of reasons including the relatively small number of Spaniards that ever were in the Philippines, the use of local languages by the Catholic Church, and the tendency of the Spanish colonialists to return to Spain rather than settle in the Philippines, Spanish did not survive the American introduction of education in English during their occupation of the Philippines. In its pure form, Spanish is still spoken by a few elite families, and a few Philippine universities required proficiency in Spanish until relatively recently.

FILIPINO ENGLISH

The Philippines are promoted as the 'largest English speaking nation of Asia'. This presents a very misleading impression. While one can get by pretty well speaking only English, only a very small proportion of the population is fluent. Be wary of assuming that Filipinos from rural or poor backgrounds understand you in English, even if they say they do. 'Do you understand?' is a useless question most of the time, as the answer will be 'yes', even if the question is not understood.

You will find that some English words used by Filipinos don't have quite the same meanings a native English speaker would expect. [Examples... some trade names as generics e.g. colgate for toothpaste, rayban for sunglasses... wait a while.... it's up to you.... dictionary for book, foreigner for a person of european ancestry. A 'standby' is someone who stands by waiting for casual employment; Someone who is a passenger on an available space basis is a 'chance passenger'. Be careful about the tenses and genders used by Filipinos speaking English.]

Gestures

Various gestures used in the Philippines have different meanings from what a westerner is used to. Beckoning someone to come is done by raising the arm with the palm of the hand toward the person and making a scooping motion downward with the hand and arm. The western style gesture with the back of the hand toward the person is considered impolite and should be avoided. When a Filipino raises both eyebrows it means "yes". This is particularly confusing when the Filipino has his back to the foreigner. Filipinos point to things with their lips sometimes. Pointing at a person with the finger is considered somewhat threatening, and certainly impolite. A Filipino who doesn't understand something you've said will open his mouth.

---

[3] Marshallese uses one word, 'tomean', for 'to sail downwind with the sail on the South and the outrigger on the North'. Marshallese canoes have single outriggers which are always kept to windward. Like most single outrigger canoes, they are tacked by reversing direction.

[4] Iaam is probably a loan word from English. The Marshalls are atolls, unsuitable for growing yams.

CULTURAL ISSUES

This section is about culture in the sense anthropologists might use the word: the shared attitudes Filipinos use to function within their society. Everyone does not share these attitudes, but pretty much everyone is aware of them as norms. Of course, no individual can be relied on to act the way this discussion suggests, but some generalizations may be useful.

For Filipinos the future is very uncertain. There is no social safety netfor the poor. In some form, most people worry where the next meal is coming from. It may be whether they will still be employed in some industrial or agricultural enterprise, whether the crops or fishing will be will be good. There are typhoons, earthquakes, volcanic eruptions, floods, coups, riots, and revolutions. Wealthier Filipinos worry about capricious government and insurgent action. In the 20th century, the Philippines was invaded twice by the Americans and once by the Japanese, there were four or five major counter insurgencies (two of which continue, although somewhat reduced in scale), the Marcos period of authoritarianism and the subsequent EDSA coup. In this century there has already been the semi-constitutional 'EDSA II' coup. In preceding centuries, there were seaborne raiders from the South and massive changes in life and religion forced by the Spanish. Some suggest this led to what some people call a 'culture of uncertainty': a cultural assumption that unpredictable and dangerous things are likely to happen.

Family and other sorts of alliances are very important to most Filipinos. In addition to family, these alliances can be centered on ethnolinguistic groups, friendship, various forms of indebtedness (see 'utang na loob', below) and insurgent or criminal gangs. In politics and business strong ties of loyalty between members of college fraternities are often very important.

It's often hard to say how important being 'Filipino' is to many Filipinos, especially in rural non-Tagalog areas. Many will identify themselves as Ilongga, Ilokano, Cebuano, Tausog or whatever before Filipino. Some of these social structures seem to be ways of compensating for a lack of certainty about the future.

It is accepted in the Philippines that from baptism to death one needs godfathers for everything -- whether to get justice, obtain a passport, or to carry on any kind of business.

- José Rizal, El Filibusterismo (1891)

Another compensating mechanism may be the cheerfulness that Filipinos are famous for. Somehow, no matter how hard things are, Filipinos seem to be able to smile. "bahala na" is the phrase - - something like the Vietnam grunt's 'don't mean nuthin', but not as bitter. Or indo/Malay 'tidak ada apa' - a sense of cheerful fecklessness. What does it matter? Or, who cares?

But there's a limit to the cheerfulness. Filipinos often have a sense of personal pride that seems exaggerated to a Westerner, or at least to Northern European. There's both a Latin pride and machismo and an Asian concept of 'face'. Very serious offense may be taken over what might appear to be very minor to a Westerner. Sometimes Filipinos seem mercurial. They are not so far from the Malays described by Joseph Conrad. Amuck is a word in most Philippine languages as well as in Malay.

An important Filipino virtue is pakikisama - getting along together. It is undesirable culturally to show anger or conflict. Public display of anger is dangerously close to amok. For the foreigner in the Philippines, reacting to frustration with anger is almost never a successful approach. It diminishes the status of the angry foreigner much more than it motivates the Filipino to do anything other than avoid the foreigner in future.

Rumor and gossip

Witchcraft, faith healing and the like
Attitudes toward Foreigners - not uncommon for mothers to threaten their children with a foreigner who will put them in a machine to render the grease out of their bodies. A curious parallel with a Central American tale.
Directions and answers to questions - hiya requires that the question be answered, even if the answer is unknown. Directions will never be detailed. Often the response will be 'doon' ('over there') and a vague wave of the hand
Palabas - showiness, hucksterisim, baffling 'em with bullshit

Hiya - literally means something like 'shame' but has a far more important role in the culture than the Western concept. 'Walang hiya' ('without shame') is a far more serious criticism than 'shameless hussy' would be. 'Shameless' even has a bit of an archaic feel to it in English. Hiya has a sense of social conformity.

Companions for almost everything
Bayanihan
Utang na loob/ godfathers
Bakla
On Boatboys and Boatgirls- labor is so inexpensive that the practice for most resident boats is to hire one or several people to look after the boat. Advances, loans, honesty, ignorance, loyalty, support of the family
Modesty Standards
Don't flaunt wealth - but most Filipinos will assume that you're unimaginably wealthy anyway. In the terms of the average Filipino, you probably are.
Remove shoes before entering a home.
Bula Bula]

CRUISING CONSIDERATIONS

THE BOAT AND HER GEAR

Obviously, the boat must be seaworthy enough for what you do with it. There are many good discussions of seaworthiness in other places. I would add that offshore racing requirements are bare minimums designed to attempt to restrain the overly competitive.

Ground tackle must be adequate, in the worst case, to ride out a typhoon. I carry three ordinary size anchors and one extra large storm anchor. Chain is important to protect the rode against chafe on coral or rocky bottoms, and to keep the pull on the anchor more parallel with the bottom. Some long warps that can be run ashore or used when carrying out an anchor are very handy. It is easy for improperly stowed warps to become horribly tangled, as they are not needed often. The solution is frequent application of stops to a proper coil. Chafe is probably more dangerous to a boat anchored in bad weather than the ultimate strength of the ground tackle. It's a good idea to collect old hose, leather, stout fabric, and small stuff for serving. Careful attention to the way your lines run is also important, as are properly designed chocks, fair leads and bow rollers. Long rodes can be helpful at times when there is no option but to use a deep anchorage.

The Philippines are tropical. Shade is important both at anchor and underway. Awnings to protect the watch while underway and to cover most of the boat while at anchor make a tremendous difference. These should be designed with an eye to collecting rainwater for

drinking. Below decks, good ventilation consistent with keeping the boat seaworthy is important. Insect screens are necessary in calm weather in some anchorages.

Fuel and water containers are necessary, as there are few places to load fuel or water alongside. Unfortunately the containers that are readily available in the Philippines tend to be very poorly made. Bring some extras if you can.

In more remote parts of the Philippines there is usually only very basic medical care available. It is sensible to be prepared to be fairly self reliant when faced with health problems. Many modern drugs are available in the cities, but can sometimes be hard to find. It is quite common for people in rural areas to ask yachtsmen for help with a wide range of medical problems. My policy is to help when I am confident that I understand enough about the problem to be sure that I am not going to cause harm. In addition to a fairly extensive medical kit, some good reference works such as the Merck Manual and the WHO Ship Captain's Medical Guide are invaluable.

Spares, Spares and more Spares [NB outrageous duties will be charged on spares coming in from overseas even if you're a yacht in transit] Impellers, outboard props and plugs, zincs Incidentally, it's a poor idea to have a package to you labeled 'yacht in transit' in the Philippines. The word 'yacht' will make the customs people think that a bigger bribe can be extracted from you.

It is a good idea to have an accurate barometer on board to keep track of the pressure in your area. It can give you one of the earliest and most reliable indications of an approaching storm. A recording barometer (barograph) is convenient. I like weather fax, which can be done either with a dedicated machine or a computer interfaced to a SSB radio.

Ratlines or mast steps can be helpful for visual navigation in coral.

Depth sounder

The quality of fuel available in the Philippines is highly variable. Dirt and water are frequently present, and meticulous cleanliness and the use of good, large filters both when filling your tanks and before the fuel comes from the tanks to the engine are crucial. Unfortunately this may not prevent problems, so a good sump in each tank and good access hatches for tank cleaning are desirable. If the boat size and budget allow, a day tank system can help deal with poor fuel. A day tank is a relatively small fuel tank where fuel is stored for short term consumption. It is filled from the main tanks, often through filters and is generally high and narrow with a good sump for efficient settlement of sediment and water.

Liquid propane (LP) cooking gas is inexpensive and readily available. There are several connections, including the one with a left hand tapered female thread on the bottle the same as is used in the US, Australia and New Zealand. There may be some reluctance to refill your bottles, but the deposit on the local ones is not prohibitive. It may make sense to be equipped to transfer the gas to your own bottle if you require a particular size and shape bottle to fit your propane locker.

Basic foodstuffs are readily available most everywhere in the Philippines. Some luxuries or Western foods can be hard to find.

NAVIGATION PUBLICATIONS

There are three options for charts, pilots, light lists and tide tables for the Philippines. Philippine (NAMRIA: National Mapping and Resource Information Authority), US (NIMA: National Imagery and Mapping Agency), and British Admiralty (BA).

Charts

The US and Philippine chart coverage is similar, and often based on the same original surveys. The numbering is different, as the Philippine numbers are based on the pre-independence US Coast and Geodetic Survey numbers. US charts are generally better printed, but are more expensive and lack some of the detailed coverage available in the Philippine portfolio. BA charts are the most expensive, and do not have as detailed coverage as the US or Philippine charts. As of November 1999, Philippine charts cost 250 pesos for black and white, 300 pesos for color. It was then about 40 pesos to the US dollar.

Charts can be corrected by the appropriate nation's notices to mariners, although I have almost never met a yachtsman who does so regularly. Philippine Notices to Mariners are published by the NAMRIA Coast and Geodetic Survey Department, 421 Barraca Street, San Nicholas, Manila. They are also available on the internet at http://www.namria.gov.ph under the heading 'publications'.

Tide Publications

The most convenient tide publication for the Philippines, by far, is NAMRIA's Tide and Current Tables. It is very inexpensive (200 Pesos for the 2001 edition) and has more detailed coverage than anything else. In the US system the Philippines is covered in pub. _, in the BA system by Volume 3 of the Admiralty Tide Tables

Pilots and Sailing Directions

The NAMRIA Philippine Coast Pilot has a quirky charm. Someone who didn't quite understand the problem did the last revision or two, but it was hard to destroy what had obviously been a very solid piece of work. The US Philippine Islands Sailing Directions (Pub. 162) is less detailed, and seems to have been based on the same original work. Pub 162 is supplemented by SD 120, the North Pacific and Southeast Asia Planning Guide. The BA Philippine Islands Pilot (NP 33) does not cover the West coast of Palawan or the West coast of Luzon. You need the China Sea Pilot, Vol. II, (NP 31) for that. If you want coverage of the Luzon Channel, you need the China Sea Pilot, Vol. III, (NP 32) too.

Light Lists

Light lists are of marginal value in the Philippines, as there are relatively few aids to navigation and they are often poorly maintained. Certainly the mariner should be very cautious in their use. In the Philippine system, there is no distinction made between the luminous and geographic ranges of lights. The stated visible range assumes high tide and a 4.57 meter (15 foot) height of eye. The US light list covering the Philippines is Publication 112. Its substance is available for free on the internet at NIMA Digital Navigation Publications http://164.214.12.145/pubs/, but it seems to have a fair number of errors. In the British system the Philippines are covered in Volume F of the Admiralty List of Lights. The ranges of lights in Pub. 112 follow the Philippine convention.

Chart Agents in the Philippines

The main NAMRIA sales office is at 421 Baroque Street, San Nicolas, Biondo, Metro Manila. Tel (63 2) 241 3494 to 97, fax (63 2) 242 2090, e-mail hgsd@namria.gov.ph. Philippine charts and publications can also be ordered through NAMRIA's website. It has been said that Philippine charts are difficult to obtain by mail. I have never tried. The other NAMRIA map sales offices are at:

Lawton Avenue, Fort Andres Bonifacio, Makati City, Manila Tel (63 2) 810 4831-44 loc 240	DENR - FMS (Ext.) Building Fort San Pedro, Iloilo City Tel (63 33) 336 5480 or 329 2924

Fax (63 2) 810 5467	
DENR - Forest Network Survey Party Room A, 2nd Floor Florentino Bldg. Gen. Luna St., San Fernando City, La Union Tel (63 72) 888 4788	Room 301 Osmeña Bldg II Osmeña Blvd., Cebu City Tel (63 32) 412 1749
DENR-CAR CBFMO (Extension) Building Casa Vallejo, Upper Session Road Baguio City Tel (63 74) 442 2754 or 442 4531	Sto. Niño Extension Tacloban City Tel (63 53) 321 3367/84
Technology Information Center Central Luzon State University Maharlika Hi-Way, Muños, Nueva Ecija, Luzon Tel (63 44) 456 0690	Operation Center, DENR Compound Pasonica Park, Zamboanga City Tel (63 62) 992 1738-9
DENR-PENRO Compound, Barangay Santa Monica, Puerto Princesa City, Palawan Tel (63 48) 433 5638-9	Day Care Center Building DENR Compound Macabalan (Puntod) Cagayan de Oro City Tel (63 88) 856 9050 or 856 4541
DENR Compound, Government Center Rawis, Legazpi City Tel (63 52) 482 0865	FRCD Building, DENR Compound Lanang, Davao City Tel (63 82) 233 01242 [sic]
	Day Care Center Building DENR Compound, Ambago Butuan City Tel (63 85) 226 4404

There is currently no BA agent in the Philippines.

There is one NIMA agent, who also sells Philippine and (often photocopied) BA charts -- Morbai Maps and Charts. They have offices as follows:

Annex FEMII Bldg. Soriano Ave. (Aduana St.) Intramuros, Manila (062) 02-5273233 / 5273227 / 527-7971 to 82 loc. 272	Room 117 Mezzanine Floor CDC Building Osmeña Blvd. Cebu City Tel (032) 256 1864
Davao City American President Lines Bldg., Km. 9, Airport Road cor. Sasa (082) 234-7447	Cagayan de Oro City Julio Pacana St., Licoan Tel. No. MTI (088) 8561756 Pocketbell (125)9024675
Iloilo City Tanza St., Timawa Zone 1 Tel. No. (033) 3381996 E.C. (201650-53) 261706	Zamboanga City 238 B San Jose Road Tel. (062) 9924267
Puerto Princesa City 2nd Floor Olorga Bldg. 94-A Rizal Ave. Tel. (048) 4336678	Batangas City Rizal Ave., Sta. Clara Tel. (043) 7232668

Bacolod City : 90-A Lacson - Taytung St., Tel. No. (034) 433-7329	

As of September 1999, Morbai charged 950 pesos for NIMA, 1,300 pesos for BA and 250 pesos for NAMRIA black and white charts. The peso was around 40 to the US dollar then.

Other Publications

Other publications you may want to consider having on board include:

Rules of the Road
Nautical Almanac
Sight Reduction Tables
International Code of Signals
Bowditch (Formally, the American Practical Navigator, published by NIMA.)
Chart No.1
List of Radio Signals (the Philippines is covered in Admiralty List of Radio Signals Vol. 3 Part 2, NP 283(2)).
Pilot Charts
Chart Index(es)
Ocean Passages for the World

WEATHER -- TRADE WINDS, MONSOONS AND TYPHOONS

The weather of the Philippines is dominated by the interaction between the seasonal monsoons of the Asian continent to the West and the trade winds of the Pacific Ocean to the East. Unlike higher latitudes where there can be quite dramatic changes in a few days, the weather in the Philippines tends to change slowly and is usually similar from day to day. Except for typhoons and local squalls, of course. Other than at the peak of a monsoon, or in the vicinity of a tropical cyclone, the winds tend to be light.

The topography of the Philippines has a substantial effect on local weather. Wind tends to be funneled through gaps in hills or between higher islands. There are fairly predictable lees, depending on the season. Generally, the Northeast monsoon has more pleasant weather for cruising, although there can be nice periods and lousy periods during either season.

Trade winds are the North- and South- easterly winds that blow across oceans between about 30 °N and 30°S, on either side of the doldrums. The name comes from their reliable nature, essential for commerce in the days of sail. They can be explained because equatorial regions get more sun than higher latitudes, and because the earth turns on its axis. Because the sun is higher in the sky in the tropics, the air at the surface gets warmer than the air in higher latitudes. The warmer, less dense air is displaced upward by heavier, cooler air, which causes a surface flow from higher latitudes towards lower latitudes. The earth rotates to the East under this flow, resulting in northeast trade winds in the N and SE trade winds in the S. The turning effect of the earth's rotation on these flows (and others) is known as the cirolis effect. The cirolis effect is the reason that the winds around low pressure areas circulate clockwise in the Southern hemisphere and counter clockwise in the Northern Hemisphere.

[Insert diagram?]

The specific area in the doldrums where the trades converge is nowadays usually called the inter tropical convergence zone (ITCZ). Because much of the airflow is upward, the doldrums tend to

be areas of light, inconstant winds, sometimes accompanied by thunderstorms, (which can substantially help a sailing passage across them). The ITCZ migrates seasonally North and South, from the winter hemisphere to the summer hemisphere. In an average year the ITCZ crosses the Philippines twice, reaching its Southern extreme (in the longitudes of the Philippines) about 10-15° S in February. In July or so the ITCZ gets as far North as 25-30° N, between Taiwan and Japan.

Monsoons are seasonal winds caused by differences in temperature between a continent and an adjacent ocean. The word comes to English from the Portuguese monção, which is in turn from Arabic mawsim 'fixed season'. Indonesians use 'musim', which also means 'season'. Malays are more likely to use 'monsun' for 'monsoon' and 'musim' for 'season'.

The Indian Ocean monsoon provided the sailing trade route between the Middle East and India and the Indonesian archipelago used well before the beginning of the Christian epoch. Unlike the trade winds, monsoons have the useful property of changing direction each year from winds favorable for a passage in one direction to those favorable for a passage back.

Around the Philippines, the monsoons come from the interaction between the Asian continent and the Indian and Pacific Oceans. In Northern Hemisphere summer, the Asian mainland warms up faster than the sea, resulting in a flow of cooler, moist air from the sea to the land, bringing monsoon rains. In winter the opposite happens, with cooler (but drier) air flowing from the mainland out. In both cases the flow is deflected by the cirolis effect. In the Philippines, this means there is a preponderance of Southwesterly winds from roughly May to October, and Northeasterly winds from November to March. Both transition periods are essentially when the ITCZ passes over the area, and are characterized by light, variable winds. The SW monsoon tends to bring rain to the W coasts of the larger islands, while the NE season tends to be wet on easterly slopes, and dry on W coasts. In Tagalog the NE monsoon is called 'amihan' and the SW monsoon 'habagat'. Habagat is also called the Pirate Wind in some places, as it used to be the wind that brought the Muslim raiders up from the South looking for slaves and plunder.

Typhoons

Concern about typhoons should not prevent anyone from cruising in the Philippines. Although they can and do happen any time in the year, about 90% of Typhoons are from June to December. There is usually several days warning of their formation and approach and there are many good harbors of refuge.

Some definitions may be helpful:

'**Typhoon**' is used in the western part of the North Pacific for a severe tropical cyclone, one with force 12 winds (averaging 64 knots) or more. Gusts are usually 30-50% higher. Exactly the same thing is called a hurricane in the Eastern Pacific, the Atlantic and the Caribbean. Severe tropical cyclones, including some with winds less than force 12, are called willy-willies in NW Australia and cyclonic storms in the Indian Ocean. Typhoons can get larger and more powerful than tropical cyclones in other parts of the world. Three sources are commonly suggested for the origin of the name: (1) the Portuguese 'tufão' from Arabic 'tufan', 'smoke'; (2) the Greek tuphon 'whirlwind'; and (3) the Cantonese 'tai-fung'or Mandarin 'ta-feng', both meaning 'big wind'. In Tagalog, a typhoon is called a baguio or bagyo, although 'baguio' is often used more loosely to describe any windy storm or squall.

A **cyclone** is a closed atmospheric circulation rotating counterclockwise in the Northern Hemisphere (clockwise in the Southern hemisphere). 'Cyclone', 'depression' and 'low' all mean the same thing.

A **tropical cyclone** is a warm-core (center warmer than surrounding air); non-frontal cyclone developing over tropical or sub tropical waters and having a definite organized circulation.

Tropical cyclones are classified by their intensity:

Tropical Disturbance: The weakest recognizable stage of a tropical cyclone, with little or no rotary circulation at the earth's surface, although there is possibly some at higher levels in the atmosphere. There may be one closed surface isobar or none at all, and no strong winds. It is usually 100-300 miles in diameter, having maintained its identity for 24 hours or longer.

Tropical Depression ('TD'): The weak state of a tropical cyclone with a definite closed circulation at the Earth's surface, and one or more closed isobars, with wind speeds less than 34 knots (Force 7 or less). U.S. forecasters use a one minute period to measure wind speeds, while the Japanese use a ten minute period, and US forecasters generally do not report the existence of a TD unless it has winds over force 6 (25 knots).

Tropical Storm ('TS'): A warm core tropical cyclone with closed surface isobars and sustained wind speeds of 34-63 knots (Force 8-11). Japanese forecasters use the classification '**Severe Tropical Storm**' **('STS')** for one with wind speeds of 48-63 knots (Force 10 and 11).

Typhoon ('T'): A warm core tropical cyclone with sustained wind speeds of 64 knots (Force 12) or higher. U.S. forecasters use the classification '**Super Typhoon**' for a typhoon with sustained wind speeds of 130 knots or higher.

STRUCTURE

Exactly why some cyclones grow while others die out in the early stages is not completely understood. Once developed, however, the gross structure of a typhoon is clear. At the surface of the earth, the center of a typhoon has a very low barometric pressure. The central pressure might be 960 hPa in an average typhoon. Low extremes are 870 hPa, recorded in typhoon Tip in 1979, and 877 hPa, recorded in 1958 about 750 nm East of Manila by a drop sonde from a reconnaissance aircraft. At the center is the famous 'eye', a circular (usually) area some 10-15 miles in diameter with little wind and clear skies or very light cloud. It is analogous to the spiral vortex that sometimes forms as water is running down a drain, but the other way up. The air in the eye is warm and very humid. As it spirals upward the water condenses, releasing additional heat to the air. The plume of air ascending above the eye may be as much as 8° C warmer than the surrounding air. The major conversion of energy that drives the storm is the latent heat of condensation released to the ascending air. For the storm to continue to exist there must be the right upper level conditions to remove the warm air from the vicinity of the eye or it would cool and allow the low to fill. High level winds play a part. The cyclonic circulation of the typhoon at the surface gradually dissipates with height, being replaced at altitudes above 40,000 feet or so by an anticyclonic circulation centered several hundred miles away from the eye of the storm.

Immediately surrounding the eye are the strongest winds in the typhoon, with torrential rain and heavy cloud. The winds generally diminish as one moves away from the eye, in spiral bands of rain and wind, separated, as one moves away from the center, by wider and wider areas of relative calm. In an average typhoon the area of force 12 (64 kt) winds might extend over an area around 100 nm in diameter, with gale force (33 kt) and above over 400 nm. In a large typhoon these areas might be 200 and 600 miles across. In a few 'super' typhoons the area of force 12 winds has been 300 miles across with the area of gale force winds 1300 miles across.

The eye is usually circular, but fast moving storms sometimes have elliptical eyes with the longest axis parallel to the direction of movement of the storm. Aircraft crews and radar have on occasion observed rotating elliptical eyes, double eyes and even concentric eyes.

Wind

The maximum wind speeds in severe tropical cyclones are difficult to measure, as wind recording devices tend to be blown away or destroyed by flying debris. Weather reconnaissance aircraft often report wind speeds in the 130-150 knot range, and land stations have made measurements as high as 150 knots. As a rough guide the maximum surface wind in a typhoon can be estimated by the following formula:

$$V_{max} = K\sqrt{1010-P_c}$$

Where:

V_{max} = Maximum Velocity, in knots

K = a constant between 14 and 16; and

P_c = the central pressure of the typhoon, in hPa.

In the Northern Hemisphere, the highest winds will be found on the **right** side of the cyclone when facing in the direction the cyclone is moving. Because low pressure areas in the Northern Hemisphere have counterclockwise circulations, motion of the cyclone adds to the wind velocity to the right of the cyclone track and subtracts from the wind velocity on the left side.

Seas

The strong winds in a typhoon generate big seas. In an average typhoon seas of 35-40 feet are common; in a big one they can be 45-50 feet. Waves of 60-90 feet have been reported. Seas will obviously be much smaller if there is intervening land. The highest waves in a Northern Hemisphere cyclone are found on the **right** side of the cyclone when facing in the direction the cyclone is moving, because the winds are stronger and they have more time to push against the waves since the storm and the waves are moving in the same direction. Seas in the vicinity of the eye are very confused.

Because waves move out of the storm area at 40-50 knots, the swell generated by a tropical cyclone will frequently be present hundreds of miles ahead of the storm. The swell from a tropical cyclone usually has a relatively long period (time from crest to crest) of 15-30 seconds. At sea, this swell can be your first warning that there is a storm in the vicinity.

Rain

Rainfall in typhoons is heavy. As described above, the rain forms in spiral bands around the center of the storm until there is a ring of continuous torrential rain surrounding the eye. Rain is particularly heavy over land, because air pushed up by the land cools and can hold less water. One phenomenal example is 47 inches (1.19 meters) of rain in 24 hours recorded during a typhoon in the Philippines in 1911.

Surge

The low pressure of a typhoon over the sea creates a 'dome' of water higher than sea level. At sea, this is not noticeable, but as the storm approaches a coastline the water piles up, raising the sea to levels that can be catastrophic when combined with the heavy rainfall, especially if the storm's

Category	Central Pressure (hPa)	Winds (Knots)	Storm Surge Above Normal (ft)
1	980 or more	64 - 82	4 - 5
2	965 - 979	83 - 98	6 - 8
3	945 - 964	99 - 121	9 - 12
4	920 - 944	122 - 135	13 - 18
5	Less than 920	above 135	over 18

landfall happens to coincide with high tide. The surge effect is worst on a low, concave coast (like Bangladesh) because the surge is concentrated. The Saffir/Simpson Hurricane Scale, above, was developed to predict storm surge.

DEVELOPMENT AND MOVEMENT

Most tropical depressions do not develop into typhoons, and it is not easy to predict which ones will. Nonetheless, there are some factors that seem necessary for their growth:

- A large enough area with sea surface temp over 26°C (78.8°F) (some would say 28°C). The warm water must also be deep enough (e.g. 200 feet).
- Below normal pressure (under 1004 hPa) in low latitudes.
- An existing depression of some sort moving at less than 13 Kt.
- Easterly winds decreasing in speed with height but extending upward to at least 30,000 feet.
- Moderate to strong outflow at high altitude, but strong vertical wind shear in the troposphere can 'blow the top off' the exhaust plume, causing the surface low to fill and the storm to rapidly weaken.
- Tropical Cyclones do not form close to the equator, as the cirolis effect is too small -- Never within 3° of the equator, and rarely within 5° of the equator.

The areas in the Western North Pacific and China Sea where tropical cyclones usually first reach typhoon intensity migrates North and South during the year. In an average year, it is something like this:

Period	Latitude
January - April	3°-10° N
May - June	4°-12° N
July - August	9°-25 °N
September - Mid October	10°-20° N
Mid October - Mid November	5°-17° N
Mid November - December	3°-12 °N

In the Western Pacific, the depressions that eventually become typhoons are first detected fairly evenly from 180° to the South China Sea, with about 1/3 within about 500 nm of Guam. Because developing storms generally move Eastward with the trades, the locations they become typhoons are more heavily concentrated in the area between Guam and the Philippines, with a substantial number in the South China Sea.

Movement

A textbook northern hemisphere tropical cyclone moves to the West or WNW in the trade wind belt at 4-13 knots until it slows to 2-8 knots, 'recurves' to the N or NNE and then moves rapidly off at 20-50 knots. Generally the storm will move in the direction of the 'steering' air currents it is embedded in, meaning the pressure-weighted mean air flow from the surface to about 30,000 feet and about 8° of latitude wide. The actual tracks of typhoons are far more variable than this would suggest, however. They wander southward, make loops, stop and reverse course to the East and do all sorts of unexpected things sometimes. Generally slower moving storms tend to move more erratically.

In the case of tropical depressions, uncertainties in the location of the center can lead to what seems to be very erratic motion.

A typical typhoon stays at typhoon intensity for 9-10 days; some only for a day or two, and a few as long as a month. The reasons they die off are usually a little clearer than growth, as many go ashore or into cold water.

FREQUENCY

In the Northwest Pacific as a whole, about 25-30 tropical cyclones reach storm stage each year, of which 15-20 reach typhoon stage, perhaps five of which get big enough to have maximum winds over 130 kts. The number of typhoons crossing the Philippines in an average year is something like this:

Month	Number	% of years' Typhoons
Jan	0.6	3%
Feb	0.4	2%
Mar	0.4	2%
Apr	0.5	3%
May	0.6	3%
Jun	1.3	7%
Jul	3.1	16%
Aug	3.5	18%
Sep	2.8	14%
Oct	2.5	13%
Nov	2.6	13%
Dec	1.5	8%

Generally typhoons cross the Philippines in the North in Summer and in the South in Winter.

SIGNS OF AN APPROACHING TYPHOON

In the 21st century one is likely to have first warning of the formation or approach of a typhoon from some sort of weather report (see page 29). However, reports have limitations, or may not be timely. It remains useful to be able to recognize the classic signs of an approaching typhoon yourself. As well as warning of the proximity of a storm, your own observations may help you to estimate its position and direction of travel.

If there is no intervening land, the first sign that a storm is in the vicinity is often the characteristic long period (15-30 second) swells, coming from the direction of the storm. Swells are pushed out in all directions from the storm, but (in the Northern Hemisphere) will be most pronounced when they come from the right hand side of the direction of the storm's motion. The swells might be perceptible as far as a thousand miles from a large storm.

An active band of thunderstorms may precede the storm by a couple of days. When the center of the storm is 500-1,000 miles away, the ordinary daily pattern of weather changes. The thunderstorms are gone, the sky is bright and cloudless, temperatures are above normal, and the barometer rises a little. [I think this is from a subsidence of air from the upper level anticyclone.].

A corrected pressure 3 hPa below average that persists for a day or more should raise your concerns. If it drops to 5 hPa below average, you should be deciding what action to take.

The following table gives the correction (in hPa) to be applied to account for daily (diurnal) pressure variation around the Philippines:

Local	Latitude		Local	Latitude	
Time	0°-10°N	10°-20°	Time	0°-10°N	10°-20°N
0001	-0.6	-0.5	1200	-0.7	-0.5
0100	-0.1	-0.1	1300	0.0	+0.1
0200	+0.4	+0.4	1400	+0.7	+0.7
0300	+0.7	+0.7	1500	+1.3	+1.2
0400	+0.8	+0.7	1600	+1.5	+1.3
0500	+0.7	+0.5	1700	+1.5	+1.2
0600	+0.2	+0.1	1800	+1.1	+0.9
0700	-0.3	-0.4	1900	+0.5	+0.3
0800	-0.9	-0.8	2000	-0.2	-0.2
0900	-1.3	-1.2	2100	-0.7	-0.7
1000	-1.4	-1.2	2200	-1.0	-0.9
1100	-1.2	-1.0	2300	-0.9	-0.8

A pressure drop of 3 or 4 hPa in 24 hours is a convincing sign of the approach of a serious storm. As the pressure begins to drop, the wind may change to an unusual direction. By then there will be a few cumulus clouds, not very high up.

About 3-600 miles from the center of the storm, cirrus clouds (high altitude with a feathery appearance) will typically show up in the direction of the storm late in the afternoon or evening, followed in several hours

by cirrostratus clouds (a thin, milky haze at high altitude). There may be a ring around the sun or moon, and the sky at sunrise or sunset has a lurid ruby or crimson color. The clouds lower and thicken. Brief showers from tall cumulus clouds begin. The barometer begins to drop unsteadily and more rapidly (over 1 hPa/hr), the showers become much heavier and the wind increases markedly, to perhaps Force 6-8 (22-40 Kt). As the storm gets closer a towering black wall of cloud, known as the 'bar' of the storm, becomes visible on the horizon. There may be a darker portion of the bar that indicates the direction of the center of the storm. If the center of the storm continues to approach, even higher winds and more intense rain will accompany it. The pressure drop can be as fast as 40 hPa in 20 minutes in the neighborhood of the eye.

In the Northern Hemisphere, the half circle of a storm that is to the **right** of the storm's track is called the **dangerous semicircle** because: (1) the wind is stronger and the seas higher than to the left of the track, (2) the counterclockwise circulation of the storm means that the direction of wind and sea tends to push a vessel toward the storm's track, and (3) if the storm recurves it will turn right, towards a vessel in the dangerous semicircle. Actually, the quarter circles ahead of the storm are the worrisome ones. The half circle of the storm on the **left** is called the **navigable semicircle**, although there is a current trend to call it the 'less dangerous semicircle,' (as if one needs a reminder that typhoons are dangerous). The navigable semicircle is a better place to be than the dangerous semicircle for essentially the same reasons that the dangerous semicircle is dangerous. In the navigable semicircle: (1) there is less wind and smaller seas, (2) the weather tends to push the vessel away from the storm track, and (3) if the storm recurves it will move away from the vessel. In the navigable semicircle, a vessel can keep the wind and sea broad on its starboard quarter and go away from the track, while in the dangerous semicircle a vessel must go to weather.

Weather reports are most helpful when the storm is far away. As the storm gets closer, weather bulletins are less helpful because there can be important changes during the lag between observation and reception of the report. Remember that in the Northern Hemisphere the circulation around any low, including a typhoon, is counterclockwise. Therefore, if your back is to the wind the center of the storm will be to your left. More exactly, while the center is several hundred miles away the center will be 90°-135° from the wind direction. (I.e. the wind direction plus 90°-135°) Perhaps 110° in front of the storm and 120°- 135° to its rear. Closer to the center the wind blows more directly down the isobars so the center is closer to 90° from the wind. There are wind shifts associated with squalls, so use the wind direction between the squalls.

A second technique is to observe changes in the wind direction. This also can be confounded by the relatively brief changes associated with squalls. For a stationary vessel in the Northern Hemisphere, wind shifting to the right indicates that the vessel is probably in the dangerous semicircle. It is essential to consider the movement of your vessel with respect to the storm. For example, a vessel moving rapidly away from the storm track or outrunning the storm (not too difficult when the storm is moving slowly) will experience wind shifting to the left, regardless of where it is. It may be prudent to stop long enough to discern the correct semicircle. If, while stopped, the wind direction remains constant, it blows harder and the barometer falls, you are close to immediately in front of the storm. If the wind direction is constant, its speed is falling, and the barometer is rising, the storm is moving off.

TACTICS

For a yacht, the best place to be when a typhoon is in the vicinity is a good harbor. The worst place is on a lee shore. Typhoons can be evaded sometimes when the storm is at a distance, or even survived at sea when there is no alternative, but a storm doesn't tire as easily as the crew of a small yacht, and you may not have the sea room you need. Don't forget that if there is no land

between you and the storm its swell may reach you well before the storm and slow your speed substantially. Lastly, the storm may not go where you expect it.

The first problem is to decide what to do. Establish your position, and keep tracking the storm. Think carefully about what you expect the storm to do, and what it might do. Taking into account the changes in wind and sea conditions you anticipate, what are your alternatives given your vessel and crew? A maneuvering board may be useful to solve the relative motion problems. If it is impossible to get into an ideal harbor in time, it may be sensible to settle for a less perfect harbor and sit out the storm ashore. It's better to lose the boat than to lose the boat together with its crew. One of the worst mistakes you can make is to head for land when you don't have time to reach harbor. You will want all the sea room you can get if the storm gets bad before you are securely in harbor.

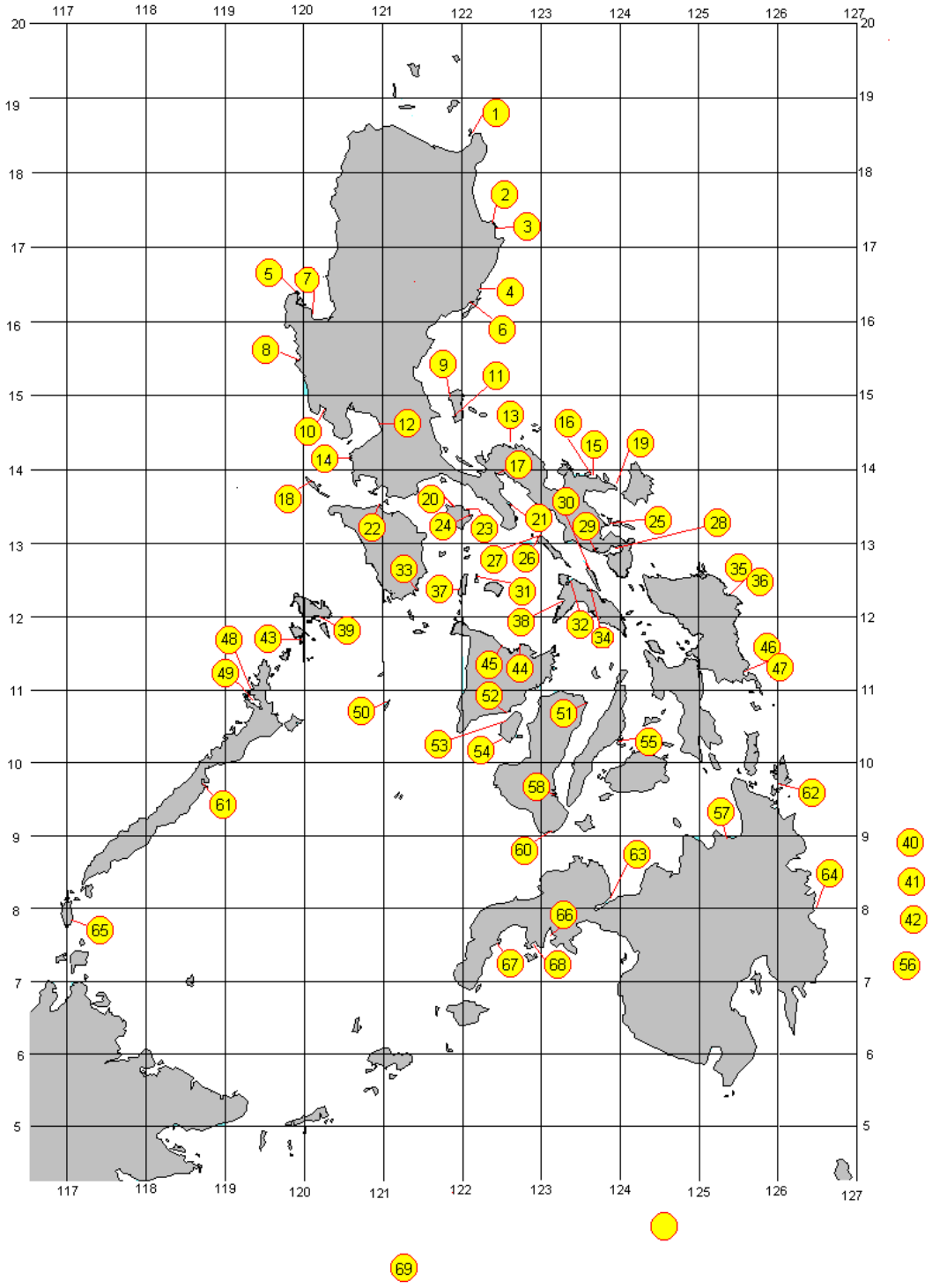
Surviving a Storm At Sea

It won't be pleasant, but a well found yacht and its crew have an excellent chance of surviving in even mind boggling conditions if the crew doesn't panic and do something foolish. Like most areas of seamanship, preparation is the key. If it appears that you are likely to be forced to ride out a typhoon at sea, take all possible steps to prepare the boat and crew while you have time. Secure ports, ventilators and hatches, strike all loose gear below and firmly lash everything in place. Charge your batteries. Consider establishing a radio schedule if possible. Feed and rest the crew. Distribute motion sickness medication before people get sick. Prepare food that can be eaten without additional work. Close unnecessary sea cocks. Check the operation of bilge pumps and pump the bilge. Prepare storm sails, warps, sea anchor or ground tackle as appropriate. Check the condition of tools necessary to cut away the wreckage if dismasted. Do not resort to alcohol or other drugs. Check safety harnesses, lifejackets, flashlights.

The exact tactics to use, whether running under storm sails or bare poles, heaving to, using a sea anchor, dragging warps or a drogue, lying ahull or whatever depends on the conditions, your crew and the configuration of the boat. It's a very good idea to try your various tactics out and get some experience with your particular boat in less than survival situations.

Many yachts that were abandoned by their crews in bad weather are found after the storm to have survived, sometimes drifting for months with open hatches and no functioning bilge pump. You are never safer in a rubber life raft. Never, ever, abandon ship too early. Work to save the boat. Evacuation by helicopter or to another vessel in rough weather is not as easy as the inexperienced might think, and involves a significant risk to the rescued and, often, the rescuer.

Panic is the biggest risk.



TYPHOON REFUGES

The list is culled from as variety of sources, including charts, pilots and conversation. It is not exclusive, and smaller yachts may be able to enter places not normally considered typhoon shelters. The Author has visited every refuge with an entry under 'Quality', assessed as a combination of shelter, holding ground, bottom contour and ease of access for those without local knowledge.

They are arranged in the table from North to South.

Typhoon Refuges

Lat (N)	Lon (E)	Name	No.	Island	Quality	Page	Charts (Phil)
18° 31'	122° 08'	Port San Vicente	1	Luzon (N)		64	4276
17° 19'	122° 23'	Port Dimalansan	2	Luzon (E)		65	
17° 15'	122° 26'	Port Bicobian	3	Luzon (E)		65	4276
16° 26'	122° 13'	Diapitan Bay	4	Luzon (E)		65	4227
16° 24'	119° 54'	Bolinao	5	Luzon (W)	Excellen	58	4238
16° 14'	122° 06'	Casigurian Bay	6	Luzon (E)		65	4278
16° 04'	120° 06'	Port Sual	7	Luzon (W)		58	4239, 4209
15° 29'	119° 55'	Port Matalvi	8	Luzon (W)	Excellen	55	4266
14° 56'	121° 50'	Hook Bay	9	Polillo		65	4277
14° 50'	120° 14'	Subic Bay (Yacht Basin)	10	Luzon (SW)	Good	53	4212
14° 43'	121° 56'	Polillo Harbor	11	Polillo		66	
14° 34'	120° 58'	Manila Yacht Basin	12	Luzon (SW)	Good	52	4236A
14° 19'	122° 37'	Dahican Bay	13	Luzon (E)		66	4274
14° 11'	120° 35'	Hamilo Cove	14	Luzon (SW)	Good	69	4257
13° 58'	123° 39'	Masamat Bay	15	Quinalasag		66	
13° 56'	123° 32'	Lamit Bay	16	Luzon (E)		66	4271
13° 55'	122° 27'	Viñas River	17	Luzon (SE)		86	4218 (Plan)
13° 49'	120° 12'	Port Tilic	18	Lubang		70	4338
13° 48'	123° 56'	Pitogo Bay	19	Luzon (E)		67	
13° 32'	121° 52'	Port Balangacan	20	Marinduque		76	4453
13° 32'	122° 36'	Port Pusgo	21	Luzon (SE)		86	4454
13° 31'	120° 57'	Puerto Galera	22	Mindoro	Excellen	73	4344
13° 30'	122° 04'	Santa Cruz Hbr	23	Marinduque		77	4453
13° 25'	122° 07'	Masagasai Bay	24	Marinduque		77	4453
13° 15'	123° 55'	Coal Harbor	25	Batan		66	4237
13° 08'	122° 58'	Port Busing	26	Burias		87	4454
13° 07'	123° 02'	Port Busianga	27	Burias		87	4218(?)
12° 55'	123° 55'	Sorsorgon Bay	28	Luzon (S)		88	4219
12° 52'	123° 42'	Port Panlatuan	29	Luzon (S)		88	
12° 40'	123° 35'	Port San Miguel	30	San Miguel		87	4454
12° 35'	122° 16'	Port Romblon	31	Romblon	Fair	79	4453
12° 31'	123° 23'	Port Barerra	32	Masbate		89	4412, 4455
12° 22'	121° 24'	Soguicay Bay	33	Mindoro		75	4339
12° 22'	123° 37'	Masbate Harbor	34	Masbate		89	4219, 4455
12° 18'	125° 21'	Helm Harbor	35	Samar (E)		90	
12° 17'	125° 23'	San Ramon Bay	36	Samar (E)		90	
12° 15'	121° 58'	Looc Bay	37	Tablas		80	4339
12° 13'	123° 15'	Nin Bay	38	Masbate		89	4412, 4455
12° 11'	119° 52'	Gutob Bay				113	
12° 03'	120° 10'	Dipulao Cove				113	

12° 00'	120° 12'	Coron Harbor	39	Busuanga		113	4351
11° 57'	123° 35'	Port Cataingan	40	Masbate		89	4418, 4455
11° 56'	124° 27'	Santo Nino Harbor	41	Santo Nino		91	4420, 4456
11° 46'	119° 58'	Halsey Harbor	43	Culion		115	4342
11° 49'	124° 42'	Port Aguirre	42	Samar (W)		91	4420
11° 36'	122° 43'	Capiz Bay/Port Capiz	44	Panay		82	4413
11° 35'	122° 29'	Port Batan/New Washington	45	Panay		82	4413
11° 15'	125° 34'	Matarinao Bay	46	Samar (E)		90	
11° 14'	125° 32'	Pambuhan Harbor	47	Samar (SE)		90	4467
11º 03'	124º 23'	Palompon		Leyte		92	
11° 00'	119° 20'	Port Cantaaba	48	Palawan		116	4316, 4349
10° 33'	122° 32'	Santa Ana Bay	53	Guimaras	Fair	95	4448, 4416
10° 25'	122° 31'	Tandog I (South)	54	Guimaras	Good	95	4416
10° 10'	124°22'	Jau I		Bohol	?	103	
10° 09'	125° 36'	Gaas Inlet		Dinagat		107	
10° 07'	119° 14'	N&S Verde Is		Palawan (E)		122	
10° 07'	119° 14'	N Verde I		Palawan (E)		122	
10° 05'	118° 12'	Ulugan Bay / Oyster Inlet	56	Palawan		118	4318, 4366
10° 55'	119° 15'	Malampaya Sound	49	Palawan (W)		117	4316, 4349
10° 51'	121° 02'	Cuyo	50	Cuyo		124	4336
10° 50'	123° 34'	Danao River	51	Negros (NE)		96	4463
10° 42'	122° 35'	Iloilo River	52	Panay		89	4448
10° 18'	123° 54'	Cebu Harbor	55	Cebu		99	4446
09° 53'	123° 50'	Calape Bay		Bohol		104	
09° 44'	118° 44'	Puerto Princessa	61	Palawan (E)		123	4343
09° 41'	126° 00'	Port Sibonga	62	Middle Bucas		107	4638
09° 34'	123° 08'	South Bias Bay	58	Negros (E)		97	4430, 4466
09° 03'	123° 07'	Port Bonbanon	60	Negros	Excellen	98	
09º 00'	125º 20'	Nasipit	57	Mindanao (N)		106	4647
08º 08'	123º 51'	Port Ozamiz	63	Mindanao (N)		106	4640
08º 00'	126º 26'	Catarman Anchorage	64	Mindanao (E)		108	4627
07° 49'	117° 04'	Balabac Harbor	65	Balabac		125	4347
07º 35'	123º 05'	Dumanquilas Bay	66	Mindanao (S)		109	4650
07º 31'	122º 26'	Port Banga	67	Mindanao (S)		109	4651
07º 29'	122º 54'	Port Sibulan	68	Mindanao (S)		109	4642
07º 23'	124º 11'	Polloc Harbor	69	Mindanao (S)		109	4654
06º 56'	122º 11'	Masinloc Anchorage	70	Mindanao (S)		109	4645
06º 51'	126º 14'	Balete Bay	71	Mindanao (E)		108	4625
06° 42'	121° 58'	Port Isabela	72	Basilan		110	4543
06º 33'	124º 03'	Port Lebak	73	Mindanao (S)		109	4653
06° 00'	121° 19'	Dalryrimple Harbor	74	Jolo		110	4541
05° 02'	119° 46'	Port Bongao	75	Tawi Tawi		110	4546
		Cabahan I		Tablas	?	81	
10º 35'	124º 02'	Port Carmen		Cebu		100	4427, 4465
		Malag Bay		Mindanao (S)		109	4656

Weather Forecasts

Modern satellites and aviation have reduced the extent that forecasters need to rely on ship reports, but comparing the weather maps for any particular time prepared by different agencies demonstrates that the same information can be analyzed quite differently.

Weather forecasts and warnings reported in the Philippine media are hardly adequate. Warnings tend to come late, aren't very detailed, and are usually in Tagalog. I highly

recommend a weather fax. While in the Philippines or in the Northern part of the South China Sea, the most useful broadcasts are those of JMH, the station of the Japan Meteorological Agency, Tokyo. The fax broadcasts of AXI, Darwin and BAF, Taipei are also sometimes useful. A second best alternative is listening to NPM, the US Coast Guard voice station in Guam on SSB radio. NPM broadcasts forecasts and warnings prepared by the US Joint Typhoon Warning Center, (JTWC), now located at Pearl Harbor, Hawaii. Some find the toneless computer generated voice of NPM depressing. A 'bare essentials' forecast and warnings is broadcast on WWV hourly. Some swear by the ham radio nets, particularly Rowdy's Net at 0000Z on 14320 kHz.

Excellent forecasts and imagery are available on the internet. There is a list of links to the internet on weather and other subjects relevant to cruising in the Philippines in Appendix G on page 151.

There is a lot of uncertainty in predicting the path of a tropical cyclone. JMH expressly predicts a circular zone of uncertainty for the storm's future positions. The average errors of JTWC in predicting the 24-, 48-, and 72-hour positions of western North Pacific tropical cyclones are 116, 227 and 345 nm, respectively, over a 16-year period (1978-93). Measuring the accuracy of forecasts this way has introduced another bias - a tendency for track forecasts to be 1 to 3 knots too slow over the storm's life.

JTWC does not report a TD until it reaches 25 knot intensity, so it is not uncommon for other agencies to report the presence of a TD before JTWC. The Japanese reported and predicted wind strengths are generally lower than the U.S. ones because the Japanese use a longer period for average wind speed (ten minutes instead of one minute) and differences between the algorithms for predicting wind speed from satellite data.

Tropical cyclones originating West of 180° and East of the Malay Peninsula (100°E) are assigned numbers from 01W to 99W by JTWC when they reach tropical depression stage, beginning with the first tropical depression in each calendar year. Any hurricane which crosses 180° from the East retains the Hawaiian name (and number xxE) assigned by the Central Pacific Hurricane Center, Honolulu, but is redesignated a typhoon.

Starting January 1, 2000, there is an international list of names for tropical cyclones of storm strength and above in the Western North Pacific. This should eliminate much of the confusion that used to be caused by various nations using their own names, although PAGASA, the Philippine forecasting agency, is still using a local list of names.

The new international names are listed in Appendix C on Page 144

PHILIPPINE TYPHOON WARNINGS

The Philippine forecasting agency, PAGASA, uses the following signals for tropical cyclone warnings. Generally, if signal No. 2 is declared for an area all shipping stops.

No.1

As a result of a tropical cyclone, winds of 16 - 32 knots may be expected in at least 36 hours or intermittent rains may be expected within 36 hours. (When the tropical cyclone develops very close to the locality - a shorter lead time of the occurrence of the winds will be specified in the warning bulletin)

No.2

As a result of a tropical cyclone, winds of greater than 32 Kts and up to 54 Kts may be expected in at least 24 hours.

No.3
As a result of a TROPICAL CYCLONE, winds greater than 54 Kts up to 100 kt may be expected in at least 18 hours.

No.4
As a result of an intense typhoon, very strong winds of more than 100 kt may be expected in at least 12 hours.

RADIO AND WEFAX SCHEDULES

Voice

Voice forecasts are broadcast at the following times and frequencies:

Station	Format	Location	Frequencies (kHz)	Time of Forecast (GMT)	Time of Forecast (Philippine)
NRV	SSB (J3E)	Guam	6501 (ITU 601), 13089 (ITU 1205)	0330, 0930, 1530, 2130	1130, 1730, 2330, 1530
WWVH	HF	Kauai, Hawaii	2500, 5000, 10000, 15000	49 minutes after each hour	

Ham

Rowdy's net has been an institution among SE Asian yachties for decades. Although on an amateur frequency and run by some pretty serious hams, you will hear a lot of unusual call signs. No Ham Nazis on this net!. The net is at 0000Z on 14320 kHz, upper sideband. Occasionally if there is a lot of interference the net is moved to 14323 kHz. Rowdy or whomever is running the net in his absence generally gives the weather at 0030Z.

Wefax

The full schedules of the fax broadcasts of JMH (Japan Meteorological Service, Tokyo), BMH (ROC Meteorological service) and AXI (Meteo Australia, Darwin) are in Appendices D, E and F, respectively.

El Ninõ and la Nina Years

[To come]

TIDES AND CURRENTS

Tides

There is a mixture of tide types in the Philippines. In areas relatively open to the Pacific Ocean, such as Davao and Legaspi Port, the tides are semi-diurnal, with two high waters each day. In San Fernando (La Union), and points North on the West Coast of Luzon, most of the time the tides are diurnal, with one high water a day. Otherwise the tides are mixed diurnal and semi-diurnal, having two high waters a day of close to equal height (semi-diurnal) a day or two after the moon crosses the equator, with one high increasing in size and one decreasing until there is only one high water a day (diurnal) a few days after the moon is at its maximum declination (N or S). This is called a tropic tide. The greatest range of tide is usually when the moon is at its maximum declination rather than at full or new moon.

Most Philippine charts and tide tables are based on a mean lower low water (MLLW) datum. It should be remembered that at times low water can be below this level.

During the year the greatest range of tide occurs in June and December, and the least in March and September.

Currents

TIDAL CURRENTS

OCEAN CURRENTS

MONSOONAL CURRENTS

CORAL WATERS

Biology

The organisms that make up coral reef communities vary from reef to reef and have complex interactions that are not completely understood. The most obvious element of a reef is usually coral, but algeal deposits make up a significant portion of the calcium carbonate that makes up the stony structure of a reef. Also important is debris including shells of crustaceans, snails, mollusks, tube worms and so on, cemented together with algal secretions.

Reef building corals are animals of the phylum cnidaria (coelenterates in older literature) which also includes sea anemones and jellyfish. Cnidarians are multi-celled animals with specialized tissues including a simple nervous system. They are radially symmetrical with a central mouth surrounded by tentacles equipped with stinging cells (nematocysts). The mouth of a cnidarian is the only opening of its simple sac-like gut. Some reef building corals are a single organism (a polyp), but most are colonies of many polyps budded off a single original polyp, connected by a thin sheet of tissue. Colonies have interconnected nervous systems and may share other functions. The calcium carbonate skeleton secreted by the coral polyps is in the form of a cup around the polyp. As the polyp grows it continues to secrete its skeleton, building outward. Almost all reef building corals contain symbiotic single celled brown photosynthetic organisms called zooxanthelle.

Corals are polytrophic feeders, obtaining nourishment from a combination of (1) the organic products of photosynthesis secreted by the zooxanthelle, (2) zooplankton captured by the tentacles surrounding the mouth or by sheets of mucus secreted along the colony surface, and (3) direct absorption of organic material from sea water. The relationship between the zooxanthelle and the coral allows the coral to be very efficient in its use of nutrients.

CONDITIONS FOR GROWTH

Coral reefs flourish only in limited ranges of water temperature, depth, clarity, turbulence, sedimentation, and salinity. There are no coral reefs in areas with water temperatures lower than about 20° C (68°F) . The warmest water that can be tolerated by coral reefs depends on the particular species of coral, but is usually 30°-35°C, but some reefs flourish in the Persian Gulf at water temperatures around 40°C. In order for the zooxanthelle to get enough light, corals must be in reasonably clear water, grow best in depths less than 25 m, and are rarely found deeper than 50 m. Too much light, especially at the UV end of the spectrum, can also inhibit growth. The optimal salinity for most coral is around 35 parts per thousand (seawater generally ranges between 34-37 PPT) but some corals can temporarily tolerate fluctuations down to 18 parts/thousand or as high as 70 parts/ thousand. Turbulence such as wave action and surge can physically break coral, selecting for more robust forms of colony, and areas with strong current often have restricted growth.

ECOLOGY

[To come]

From the standpoint of food production, a square km of reef in good condition produces some 20 metric tons of fish each year. A square km of reef in poor condition produces less than five tons.

THREATS TO REEFS

Crown-of-Thorns Starfish

Among the predators that feed on coral is the Crown-of-Thorns Starfish (*Acanthaster Planci)*, which *feeds* by thrusting out its stomach and digesting polyps in situ. In the 1950s (about the time that scuba gear began to become widely available) population explosions of the Crown-of-Thorns were first observed on some reefs in the Pacific. For the next couple of decades, it was believed that these population outbreaks threatened the reef as a whole, and were the result of some ecological imbalance that would have tragic effects. Since then, some outbreaks have been observed to stop eventually, allowing the reef to recover. It seems that the population dynamics of the Crown-of-Thorns is not understood that well yet, and the earlier alarm was unnecessary.

Coral Bleaching

Coral bleaching is a symptom of other stresses rather than a problem in itself. Most of the pigmentation of coral is in the zooxanthellae. Under certain adverse conditions the zooxanthellae are lost, exposing the white calcium carbonate skeletons of the coral colony. The stresses or environmental changes that may cause bleaching include disease, excess shade, increased ultraviolet radiation, sedimentation, pollution, salinity changes, and temperature increases as small as 3 degrees C. The exact mechanisms of bleaching and its causes are not understood.

Sedimentation

Destructive fishing practices: Blast fishing and Cyanide Fishing

Mechanical damage: Storms, anchoring, dredging

Eutrophication

REEF TYPES

Darwin and all that.

Atoll

Patch

Fringing

Barrier

Navigation In Coral

Reef edges and coral heads often rise vertically from the bottom. Therefore, soundings change very abruptly and cannot be relied on for warning of the presence of a reef. Charts may be unreliable because of changes in the reef since the survey. The rate of change of depth over a reef varies greatly and is not always predictable. The fastest changes are due to movement of sand and rubble. In severe weather very significant changes can occur in a day or two. The branching varieties of coral have the fastest growth rates, which can be on the order of one foot per year. The more solid varieties might grow a third this fast.

In clear water under good lighting conditions visual navigation can be extremely reliable. The best lighting is when the sun is fairly high in the sky, behind the observer. The higher the observer can get the better. Often it is useful to put a reliable observer aloft or on the bow. It is essential to establish a clear set of signals beforehand for the helmsman, including particularly

whether the lookout will point to obstructions or in the direction that the boat can safely be steered.

Some find polarizing sunglasses useful. In any event, sunglasses must not have any tint that interferes with the observer's perception of color.

Deep water generally appears dark blue, shading through lighter blues to turquoise, then yellow-brown to darker brown as the depth decreases. Exactly what depth is associated with what color varies with the water clarity and the color of the bottom. If the bottom is white sand, for example, shallow water has a lighter blue color and there is no yellow or brown tint. Sometimes what seems to be a shoal is only a patch of algae or grass on the bottom. If a shoal seems to be moving, it is probably the shadow of a cloud or a school of fish. Water clarity can change for a variety of reasons, including runoff from rains and the bottom getting stirred up by wave action. In many areas close to high land, the water is cloudy on an ebbing tide, but clearer on the flood. In very clear water one tends to underestimate depth.

Some swell can be useful, as it produces breakers on reef close to the surface and may create changes in swell pattern over shallows. In a glassy calm visibility can be difficult because of reflection off the surface.

In time, an attentive sailor can learn to see reefs and maneuver safely around them. Forward looking depth sounders of various types can be helpful, but is essential that the user devote enough time to learning the most accurate and effective way to use his particular unit. It is equally essential to gain practical experience using such a device in controlled circumstances before relying on it.

The hand lead is still (it appears in Egyptian stone carvings 5,000 years old) a valuable tool. In murky water it gives the user a sense of the nature of the bottom, can be carried in a dinghy and can be used to check depths at various points around the boat if aground or in close quarters. It is not subject to electrical failure or calibration errors.

Minimize the potential for serious consequences from an error: proceed with bare steerage way when in dubious situations, be aware of tides and currents, and always give lee shores a generous margin, particularly if there is any swell.

Anchoring

Anchoring directly in coral should be avoided to reduce damage to the coral and because it is very easy to foul your anchor. There is usually somewhere near a reef that it is possible to anchor in mud or sand. Be cautious about your swinging room around coral. It's easy to be close to a steep sided coral head (bommie) or reef edge and be unaware of it. In an area with bommies, be careful that when swinging your rode doesn't get wound around and under bommies and get fouled. Not only is this destructive to the coral and make it impossible to raise anchor without diving, but it also can shorten the effective catenary to the point that it can no longer absorb jerks on the line. Two anchors often make it possible to control your swing. Coral can be very abrasive to a fiber rode, so I prefer to use chain where contact with coral is possible. The greater weight of chain (and I use short link BBB chain) also allows for the same security with less scope.

Another problem is a 'coral hardpan' bottom, where algal deposits of calcium carbonate have made a smooth, level stone bottom that no anchor can hold on. The hardpan often has a thin layer of sand on top of it, making it hard to distinguish from a nice sandy bottom. It is useful to back down on your anchor to see if it is holding well. In some cases it may be helpful to use two anchors in tandem (i.e. one after the other on the same rode, separated by 5-10 meters).

FISHING METHODS

[I need to insert a section in on the various sorts of fishing boats and gear in the Philippines -- both as a matter of interest and for safety:

- Bangkas trawling

- Use of lights and Payao

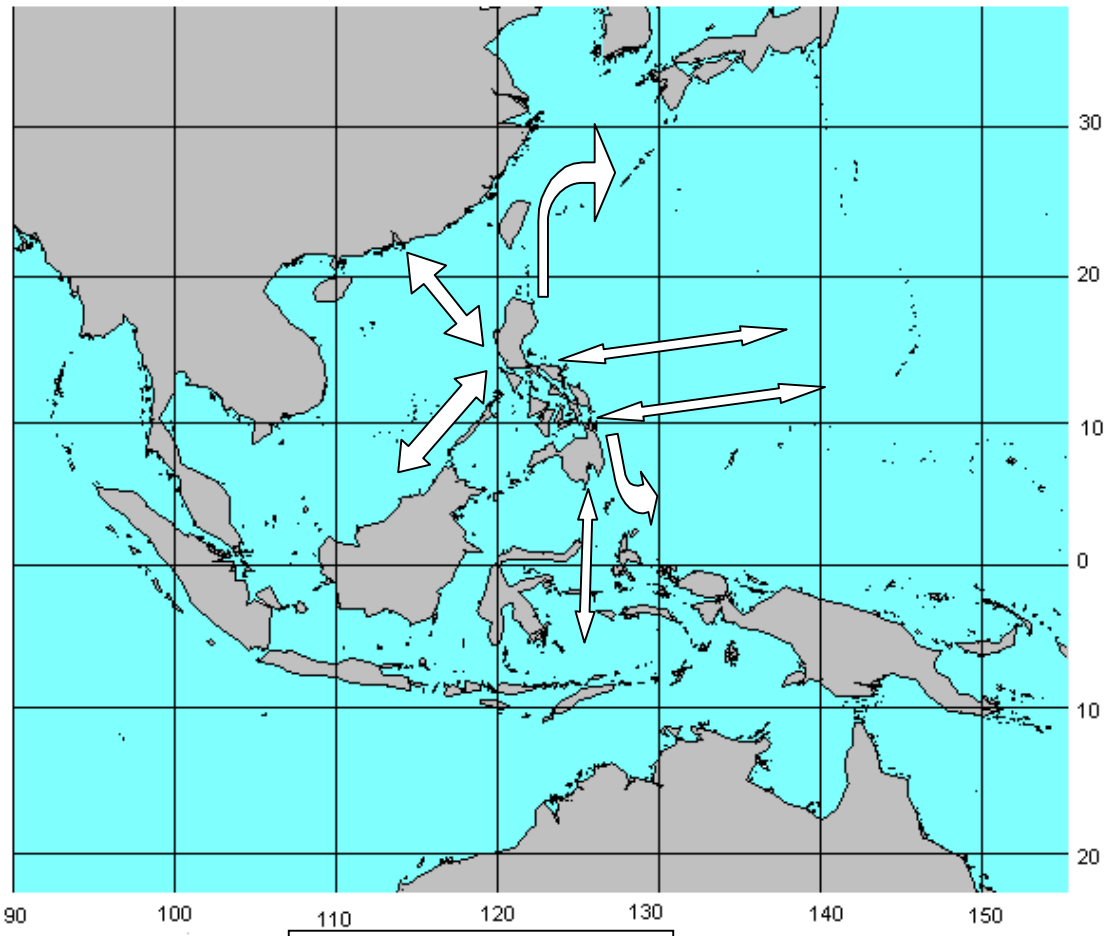
- Fish traps

- Impoundments for Bangus and other fish raising

- Pearl and other shellfish farms]

PASSAGES TO AND FROM THE PHILIPPINES

If under sail or low powered, it is better if at all possible to avoid trying to go against the wind and associated currents of the trade winds or the monsoon.



Routes to and From the Philippines

Hong Kong

This is a fairly common route. The South China Sea is notorious for its short, steep chop and light airs. There is a lot of commercial and fishing traffic.
Many older charts do not show the offshore oil installations between 50 and 100 miles offshore of Hong Kong, close to directly on the great circle from Hong Kong to Manila. They are well lit and excellent radar targets.

	To Hong Kong	To Philippines
SW Monsoon (Apr-Sept)	Easy passage from most points. May wish to coast up to Bolinao to reduce distance of passage and potential exposure to typhoons, especially during the latter part of the monsoon. Make allowance for lee current.	Early in season, make southing until past Macclesfield Bank, then make Easting. Later in the season, head as far to weather as possible, expecting to make landfall on NW coast of Luzon, then coast down. Can be very time consuming.
NE Monsoon (Nov-Mar)	Coast as far N on W coast of Luzon as Bolinao or even Cape Bojeador for less severe NE wind and swell. Beware of Pratas Reef.	Head directly to Bolinao or points South allowing for lee current.

Japan

It is possible to island hop between the Philippines and Japan with relatively few long legs at sea. However, the Northern part of the Philippines, Luzon Strait, Taiwan and the southern islands of Japan are typhoon alley during the summer and fall. Winter is an uncomfortable time to be sailing as far north as Japan, so the best time for a passage is early in the Spring.

The Kurishiro Current gives a strong northward push on the passage to Japan. On the way South it may be easier to go via the Marianas or Carolines.

	To Japan	To Philippines
SW Monsoon (Apr-Sept)	The best time is in the early spring, before there is a lot of typhoon activity.	Consider going via the Marianas.
NE Monsoon (Nov-Mar)	A miserable time to try this trip. Both adverse winds and winter storms.	You may want to wait for Spring.

Malaysia, Singapore

	To Singapore	To Philippines
SW Monsoon (Apr-Sept)		
NE Monsoon (Nov-Mar)		

Indonesia

Moluccas

Melaka Strait

	To	To Philippines
SW Monsoon (Apr-Sept)		
NE Monsoon (Nov-Mar)		

Belau, Guam, Carolines

	To	To Philippines
SW Monsoon (Apr-Sept)		
NE Monsoon (Nov-Mar)		

West Coast USA

Northern Route

Central route with Westerlies

	To	To Philippines
SW Monsoon (Apr-Sept)		
NE Monsoon (Nov-Mar)		

From Western Equatorial Pacific

REGULATIONS

Ports of Entry

The exact status of various ports changes from time to time, and things don't seem to work according to rules anyway. You can clear in at any of the ports or subports below, but if you have been in the Philippines or more than 21 days you are supposed to go to a district office at a larger port to clear out.

In some instances it is preferable to travel overland from a good anchorage to a port of entry or delay clearing in until you are at a port with a good reputation. I would avoid San Fernando and Subic, for example. . If you are leaving the Philippines for Malaysia or Hong Kong, the authorities there don't seem to much care whether you cleared out anyway.

Name	Immigration Office	Port(s)	Island	Province(s)
Immigration District I				
San Fernando	District Office	Port of San Fernando	Luzon	La Union, Ilocos Sur
Laoag	Field Office	Laoag Airport	Luzon	Ilocos Norte, Abra, Kalinga-Apayao
Dagupan	Field Office	Subport of Sual	Luzon	Pangasinan
Baguio	Field Office	Baguio City EPZ	Luzon	Benguet, Mountain Province
Immigration District II				
Iligan	District Office		Luzon	Isabela, Nueva Vizcaya, Quirino
Aparri	Field Office	Port of Aparri Subport of Claveria	Luzon	Cagayan, Ifugao
Basco	Field Office			Batanes
Immigration District III				
Manila	District Office	Port of Manila Cavite EPZ	Luzon	Metro Manila (ex NAIA), Rizal, Cavite, Bulacan

Marivales	Field Office	Bataan EPZ Subport of Marivales Subport of Limay	Luzon	Bataan
Olongapo	Field Office	Subic Airport, SBF Port of Subic, SBF Subport of Limay	Luzon	Zambales
Angeles	Field Office	Clark Airport Clark Eco Zone	Luzon	Pampanga,Tarlac
Cabanatuan	Field Office	Subport of Baler		Nueva Ecija, Aurora
Immigration District IV				
Batangas	District Office	Port of Batangas	Luzon	Batangas
Lucena	Field Office	Subport of Siain		Quezon, Laguna
Calapan	Field Office		Mindoro	Occidental and Oriental Mindoro
Boac	Field Office		Marinduque	Marinduque
Puerto Princessa	Field Office	Subport of Puerto Princessa	Palawan	
Puerto Galera	Officer from Calapan 3 days a week	Mindoro		
Immigration District V				
Legazpi	District Office	Port of Legaspi Subport of Tabaco Subport of Jose Panganiban	Luzon	Albay, Sorsorgon, Masbate, Northern Samar
Daet	Field Office			Camarines Norte, Camarines Sur
Virac	Field Office	Subport of Virac	Catanduanes	Catanduanes
Immigration District VI				
Iloilo	District Office	Port of Iloilo	Panay	Iloilo, Antique, Guimiras
Kalibo	Field Office		Panay	Aklan
Bacolod	Field Office	Subport of Pulupandan	Negros	Negros Occidental
Immigration District VII				
Cebu City	District Office	Port of Cebu Mactan EPZ	Cebu	
Cebu Airport		Cebu-Mactan Airport		
Dumaguete		Subport of Dumaguete	Negros	Negros Oriental, Siquijor
Tagbiliran	Field Office	Subport of Tagbiliran	Bohol	Bohol
Immigration District VIII				
Tacloban	District Office	Port of Tacloban Subport of Isabel	Leyte	Leyte, Biliran
Maasin	Field Office	Subport of Maasin	Leyte	Southern Leyte
Catbalogan	Field Office	Subport of San Jose	Samar	Eastern Samar and Western Samar
Immigration District IX				
Zamboanga City	District Office	Port of Zamboanga Zamboanga Airport Subport of Basilan	Mindanao	Zamboanga del Norte, Basilan
Pagadian	Field Office		Mindanao	Zamboanga del Sur, Lanao del Sur
Jolo	Field Office	Subport of Jolo Bongao Border Crossing Station		Sulu, Tawi-Tawi
Immigration District X				
Cagayan de Oro City	District Office	Port of Cagayan de Oro	Mindanao	Misamis Oriental, Bukidnon, Camiguin
Iligan	Field Office	Subport of Iligan	Mindanao	Lanao del Norte
Ozamis	Field Office	Subport of Ozamis	Mindanao	Misamis Occidental
Butuan	Field Office	Subport of Nasipit/Masao	Mindanao	Agusan del Norte, Agusan del Sur
Surigao	Field Office	Port of Surigao	Mindanao	Surigao del Norte
Immigration District XI				

Davao City	District Office	Port of Davao	Mindanao	Davao del Norte, Davao del Sur, North Cotabato
General Santos City	Field Office	Subport of Dadingas	Mindanao	South Cotabato, Sarangani
Mati	Field Office	Subport of Mati	Mindanao	Davao Oriental
Cotabato	Field Office	Subport of Parang	Mindanao	Maguindanao, Sultan Kudurat

Immigration and Visas

Foreigners of most nationalities likely to be on a yacht are routinely granted a 21 day visitor's permit on arrival in the Philippines. If you have an opportunity to visit a Philippine consulate within 90 days before arriving in the Philippines it is possible to get a 59 day tourist visa for a nominal fee. Visa and tourist permit extensions are available from immigration officers in either class of port, in two month increments for a period of up to one year, upon payment of fees of around 1,000 pesos per month. There is a larger fee at six months. There is also an additional fee for 'express' treatment, which is not mandatory, although some immigration officials occasionally claim it is.

Customs

There are relatively high tariffs on many items in the Philippines, often in order to preserve a franchise for local interests. Tariffs are arbitrarily applied, often appearing to be an attempt to generate bribes. It is usually best to avoid having to have spares and so forth shipped to you in the Philippines. No duty is charged on vessels in transit, and in practice many yachts remain indefinitely in the Philippines without any duty being assessed.

Corruption

Official corruption is unfortunately a fact of life in the Philippines. At the level most commonly encountered by yachtsmen, customs and immigration officers will expect gratuities, usually at a pretty modest rate. It is particularly a problem in places like Subic Bay or San Fernando, Luzon, where the behavior of yachts arriving from Hong Kong has caused the going rate to be over ten times that charged in other places. It's a difficult problem to respond to. If the bribes solicited are modest, it's probably best to pay with a smile.

When the amounts get higher, it may be wise to object. Asking to see an official schedule of fees may help, as may asking for the officials to show you their identification and requiring an official receipt for all fees.

CRIME

Hustles

While the Philippines has its share of violent crime, the cruising yachtsman is far more likely to encounter various sorts of fraud and deception. Rigged card games and investment opportunities too good to be true are fairly common. Another trick is to induce the victim to drink a beverage laced with a powerful animal tranquilizer. Usually the victim is found in a stupor without watch and wallet.

A Filipino claiming to be a friend or acquaintance, sometimes the immigration officer who saw you on arrival, may approach you intending to gain confidence for the execution of some scheme. It is extremely unusual for a bona fide Philippine immigration officer to approach a tourist on the street. If someone identifies himself to you as an immigration officer in a context where it is possible that he is an imposter, it would be sensible to insist that they accompany you to a police station before any discussions take place.

I was approached by a fellow claiming to be an immigration officer, who asserted that he had been at the desk when I came to the Philippines by air. I had arrived by yacht, and cleared in several hundred miles away. He proffered a surprisingly good-looking immigration identity card, but disappeared very quickly when I suggested we stroll down the street to the police station.

Moneychangers on the street who offer very favorable rates of exchange are usually highly proficient at sleight of hand.

Lastly, there have been reported cases of foreigners being set up with bar girls who are under age or who claimed that their customer raped them. Usually the problem is resolved by a sizable payment.

Violent Crime

[Kidnappings]

[Boloings - generally crimes of passion]

Insurgencies

An important factor in the makeup of all insurgencies in the Philippines is their relationship with the existing power structure. Much of Philippine politics is not ideological, but a struggle over the spoils of power. Leaders of insurgents often form overt or covert alliances with political factions, including the government. A number of prominent Philippine officeholders were coup leaders or guerrilla leaders at some stages of their careers. Major landowners and businesses must come to terms with local insurgents in some respect, and in some cases regionally powerful figures find insurgents to be a useful foil against the authority of the central government.

For the cruising yachtsman, there is not much danger presented by the various insurgencies. It is wise to stay away from areas that are in a state of unrest (and in some cases open warfare), but in most of the country people live their lives with little interference.

Insurgencies in the Philippines fall into four somewhat overlapping classes:

1. Bandits seeking economic gain.
2. Communists seeking to change what they see as social inequities resulting from the present social order, which they describe as semi-feudal neocolonialism.
3. Muslims seeking a better deal for their ethnic groups (it is well to remember that there are 10-13 different ethno-linguistic groups in the Philippines who are predominantly Muslim, and that there are often major schisms among members of the same ethnicity.)
4. Vigilantes and 'private armies' seeking to advance the interests of their sponsors, which may be private parties or governmental agencies.

Particular groups sometimes have characteristics of several of these classes, and frequently change in character. One example is the Huk survivors who changed from communist peasant guerillas to gangsters deeply involved in prostitution and drug trafficking in Angeles City.

THE COMMUNISTS

In summer of 1920, after the Russian Revolution and as the civil war was winding down, the Second Communist International Congress in Moscow adopted resolutions proposed by Lenin and the Indian revolutionary M. N. Roy to promote communist revolution in industrialized countries through their Asian colonies. The Second International saw British India as their primary target for subversion, but by 1924 or so Comintern agents began to arrive in the

Philippines to spread the gospel according to Marx and Lenin. The first formal communist party in the Philippines was formed in 1930 in Tondo. Its founders had previously been involved in various socialist labor and peasant organizations, including the Philippine Labor Congress, a union formally affiliated with the Red International of Communist Unions.

It would be a mistake, however, to see the various communist movements in the Philippines only as part of Moscow (and, later, Beijing) - directed conspiracies. While there has clearly been aid of various sorts from foreigners from time to time, the insurgencies have also drawn support from nationalistic sentiment and unideological (or certainly non-communist) rebellion against oppression. The Huks drew much of their support from rebellion against the Japanese and their puppet forces, and, after the war, from peasant rebellion. The NPA could have never prospered without Marcos' repression. Now, in 2001, the NPA seems to deliberately recruit among ethnic minorities who feel (with some reason) that they do not get fair treatment.

Historical Sketch

With the Japanese invasion and rapid collapse of American and Filipino resistance in late 1941 and early 1942, the core of a communist inspired peasant resistance to landlords in central Luzon formed the Hukbo ng Bayan Laban sa Hapon, (People's Anti-Japanese Army) also known as the Hukbalahap or simply the Huks. The Huks fought hard against the Japanese, one of many resistance movements in the Philippines. After the war the Huks were disarmed and treated as bandits by the American military, unlike some other resistance forces that perhaps better deserved such treatment.

After a brief foray into open participation in the political process ending with the badly flawed 1949 election, the Huks returned to guerilla war against the Philippine government in Central Luzon. By the mid '50s, the Huks had been mostly suppressed by a combination of military action and some modest land reform and relocation of landless Huks to Mindanao. The Huks survived in some form until the late 1960s, and the founding of the New People's Army (NPA).

The NPA looked to China rather than Russia as its inspiration. It grew rapidly as Ferdinand Marcos moved to more purely authoritarian rule in the early 1970s, but had severe setbacks in the late 1970s as a result of effective military and police action. The NPA succeeded far better than the Huks in bringing their activities to many parts of the Philippines, but badly lost support after the EDSA revolution in 1986. There are still probably several thousand NPA fighters, and there are still clashes between Philippine military and police forces and the NPA.

The NPA

NPA in 2001

The New People's Army (NPA) is the military wing of the Communist Party of the Philippines (CPP). It is currently active in some rural areas, and seemed to be experiencing a mild resurgence during the Estrada administration after its steady decline since the late 1980s. Some of the resurgence is probably a result of government resources being diverted to Mindanao and the Sulus for operations against MILF base areas and the Abu Sayyaf Group. Some is also attributable to the failures of the Estrada government.

The NPA continues to attack police and military targets and to assassinate local government officials. There may be some grounds for concern over several recent reports of NPA fighters operating jointly with MILF forces in Mindanao, which may indicate the possibility of broader cooperation. In 1999 the US State Department estimated the NPA's strength was between 6,000 and 8,000 fighters. NPA cadres have been reported to have 'infiltrated' recent demonstrations calling for President Estrada to resign for the purpose of creating disruptions that would be

blamed on government forces, but no such disruptions seem to have occurred. [Add discussion of the far left's participation in 'EDSA II' in contrast to their absence from EDSA I.]

Jose Maria Sison and Early Days

Jose Maria Sison was the founder and seems to remain the principal leader of the NPA from his self imposed exile in the Netherlands. He was born in 1939 in Cafugao, Ilocos Sur. He studied political science at the University of the Philippines where he began his radical leftist and nationalist career. In 1959 he founded the Student Cultural Association of the University of the Philippines (SCAUP), which was apparently intended to allow him to continue his involvement in student politics. After his graduation with a BA *cum laude* in 1960 he was briefly employed by UP as an instructor, but was dropped from the faculty for his political activities. In 1963 he joined the old Communist Party of the Philippines (Partido Kommunista ng Pilipinas--PKP). The PKP was then in decline in the wake of the failure of the Huk insurgency. Sison became head of the PKP's youth department and founded the Kabataang Makabayan (KM). On October 24, 1966 Sison was involved in demonstrations against the Vietnam War and a summit meeting between US president Lyndon Johnson and leaders of Australia, South Vietnam, South Korea, Thailand, Malaysia and the Philippines. The demonstrations were violently suppressed by police, and Sison and others were arrested.

By the late 1960's Sison campaigned for 'rectification' of the PKP 's ideology from Moscow to one more in line with Beijing. The leadership (Lava) eventually expelled Sison and his followers from the party.

Sison and a small group of followers formally founded what is now called the Communist party of the Philippines (CPP) as the CPP (Maoist) on December 26, 1968, Mao's 75th birthday. The schism was based on both Sison's personal enmity for Lava and other PKP leaders and ideological factors. There were similar breaks from Moscow to Beijing among several communist movements around the world at about this time. In early 1969 Bernado Buscayno ('Commander Dante') became commander of the NPA by defecting to the CPP with his unit of some sixty former Huk fighters. Some sources claim that the then-governor of Tarlac Province, Benigno Acquino, jr., and/or Congressman Jose Yap were instrumental in introducing Buscayno to Sison, and that 'Commander Dante's' renegade Huks had been used to intimidate voters on behalf of Acquino and Yap.

Initially the NPA attempted to form a secure 'base area' in Tarlac Province of Central Luzon, where the Huks had long been active and where Acquino was then governor. It has been suggested that early funding and refuge was given the NPA by Benigno Acquino's in-laws on their vast Hacienda Lusita in Tarlac province. In any event, the fledgling NPA made fairly rapid progress in its first few months, increasing to perhaps 300 fighters.

The government had 'demilitarized' Tarlac province in November of 1968, believing that the Huks had been suppressed. As word of NPA activities began to reach the government, it thought it had another resurgence of the Huks to deal with, and in April of 1969 recommenced counterinsurgency operations. In June documents were captured that showed that a new force espousing a Maoist ideology was involved. The military redoubled its efforts, and the fledgling NPA forces were nearly encircled and destroyed by the military. The survivors fled to the mountainous Isabela Province in Northern Luzon to regroup.

The situation changed with the 'first quarter storm' demonstrations and riots of January - March 1970 in Manila. Sometimes characterized as 'an outpouring of popular anger' there was certainly also an element of manipulation by Marcos' political opponents. It is still an open question who was behind the two hand grenades thrown at the speakers' platform of the Liberal Party rally at Plaza Miranda in downtown Manila in August 1971. Ten were killed and 66 wounded,

including virtually all of the Liberal Party leadership except for Benigno Acquino, who was late attending the rally. Some claim Marcos was behind the grenading, and some claim the NPA was, and that it had warned Acquino. Marcos suspended habeas corpus in response.

As the Marcos regime increased its repressive measures against any and all opposition, culminating with the declaration of martial law in 1972, the NPA/CPP became one of the few options for opponents of the regime. Unlike the peasant leadership that had characterized the Huks, the NPA/CPP was able to recruit a fair number of university students. Sometimes these sons and daughters of the middle and wealthier classes were shocked to discover how the vast majority of rural Filipinos lived. By 1972 the NPA had grown to some 950-1,300 fighters.

The NPA had apparently approached the Chinese for material support as early as 1969, some of which was forthcoming. On July 5, 1972 the fishing trawler M/V *Karagatan* was interrupted by Philippine Constabulary forces while unloading arms on the East Coast of Isabela Province. In the ensuing firefight, the NPA was able to save only about 200 of the 1200 Chinese-made M-14 rifles aboard. A second attempt came to grief in 1974 when its NPA crew put the *Doña Andrea* aground on Pratas Reef while on their way to China. The crew was picked up by a Hong Kong bound freighter, where the local authorities had no difficulty identifying them but quietly handed them over to the Chinese. Marcos suppressed both incidents, but dispatched Imelda to woo Chairman Mao and in 1975 negotiated an end to Chinese support for the NPA in exchange for diplomatic recognition of Beijing.

In April 1973 the CPP founded the National Democratic Front (NDF) as a political front organization. The NDF was intended to assist in generating grassroots support for the CPP by forming alliances with various organizations with compatible aims to the CPP. Other front organizations aimed at students, workers and the church were formed under the NDF umbrella. The NDF's affiliation with the CPP was well known, forcing the NDF to remain underground.

Decentralization and Growth

Sison and Buscayno, were arrested and more than a dozen CPP and NPA leaders were captured or killed during 1976 and 1977. This led to a deliberate policy of decentralized leadership among the NPA, which proved reasonably effective.

The Huks had made few and relatively ineffectual efforts to establish operations in areas other than central Luzon, allowing the government to concentrate its forces and destroy the insurgents. Consequently, the NPA pursued a strategy of dispersing their efforts in various rural and poor parts of the Philippines, principally Northern Luzon, Bicol, Samar and Northern Mindanao.

The 1980's - Purges and Peoples' Power

[To come]

The 1990's

Edsa II

Ideology

The CPP espouses a classical Maoist line, leaning heavily on Mao Zedong's writings, as adapted for Philippine conditions largely by Sison in his book Philippine Society and Revolution, published in 1970 under his first nom de guerre, Amado Guerrero. "Under the absolute leadership of the Party, the NPA wages a protracted people's war, made possible and dictated by the chronically crisis-ridden semicolonial and semifeudal conditions of the Philippines", according to a 1994 article in what seems to be a quasi-official NPA website. The ultimate aim is to overthrow the Republic of the Philippines (referred to as the US-Marcos, US-Acquino, US-Ramos, or US-Estrada Regime, as appropriate) by "encircling the cities from the countryside and

accumulating strength until it becomes possible to wage nationwide offensives and seize the cities." Presumably this is to be followed by the establishment of 'people's democracy' and eventually the 'pure communism' that no communist government has yet been able to deliver.

Other Communist Groups

Alex Boncayo Brigade

[More to come on various communist lost commands]

[Muslim Groups]

Piracy

The entire Southeast Asian archipelago has provided an ideal environment for piracy for centuries, and has a reputation that is likely to persist for a long while irrespective of the facts. The blanket statements about all of the region being unsafe that one might hear at a yacht club bar in Sydney, San Francisco or Auckland obviously need to be taken with a truckload of salt.

The well organized syndicates who have been responsible for the disappearance of tankers and cargo vessels along with their crews in the last decade in Southeast Asia are uninterested in a target as small as a yacht. There simply isn't the same value in a yacht as there is in a merchant vessel carrying something like diesel fuel or metal ingots, readily marketable, valuable and hard to trace. In these operations the money is big enough to procure the protection of high government officials and law enforcement authorities. These gangs to pick their targets with excellent knowledge of their cargoes, crew and schedules, and in some cases seem to have been able to delay loading or clearing of ships to set them up for later interception indarkness.

Smaller operations can pose a risk to yachts, but the actual incidence is very small. By all means avoid Southwestern Mindanao and the Sulu Archipelago. In other parts of the Philippines piracy no more of a problem for the cruiser than in most other parts of the world. The Philippine Navy and Coast Guard work at trying to eliminate the problem, but they have limited resources. While they may solicit modest gifts, they have not generally been implicated in piracy.

When evaluating reports of piracy it is wise to consider other explanations for the reports. There have been a few killings and disappearances in the last twenty five years that may have been piracy or may have been garden variety spousal murder. Some hostile acts against yachts have been fishermen whose gear was recklessly damaged by the yachts. Yachtsmen brandishing arms may have provoked some.

On the topic of carrying arms aboard, my sense is that it is wiser to be unarmed. Effective use of weapons requires regular practice and a delicate sense of who is truly hostile and who is not. Both of these are quite difficult on a small yacht. I have seen heavily armed men in bangkas several times in the Philippines. In every instance they turned out to be military or police patrols. Consider how unwise it would be for a yachtsman to open fire on six or eight men armed with light automatic weapons and grenade launchers.

The last reported piratical attack on a yacht in the Philippines seems to have been

[Peer Tangvald SSCA 79-168 -- wife killed allegedly in attack in Sulu Sea]

1980s - attack on large German yacht leaving Iloilo after refit.

Gangs operating in entrance to Manila Bay (in 1980s?)

Current advice on piracy can be had [KL Piracy Center, MARADS, State Department, Media (caution about sensationalist reporting) and other yachties]

[Caution about unnecessary display of wealth, reminder of the relative poverty in the Philippines, note that the situation can be fluid, possible effect of further unrest in Indonesia]

[I'm still not clear on the correct balanced view of this issue]

HEALTH

Disease

MALARIA

STDS

The Philippines are a popular destination for sex tourism. In most towns of any size there are girlie bars, and at some levels of society a very freewheeling approach to sexual matters. Combined with an obstructive attitude on the part of the Roman Catholic church to reasonable education and measures such as free or subsidized distribution of condoms, poverty, ignorance and mediocre medical care, it is not surprising that there are many and varied sexually transmitted diseases present in the Philippines, including HIV/AIDS, hepatitis B, herpes, syphilis and gonorrhea. If you partake, use a condom and be careful.

FOOD & WATER BORNE DISEASES

CIGUATERA

TB

Like many developing countries, tuberculosis is still endemic in the Philippines, although there is a reasonably effective program under way to try to eliminate it. The risk to a healthy, well nourished person not in prolonged contact with a carrier is small, and the varieties common in the Philippines are not drug resistant. However, if you suspect that you might have contracted it, make sure your doctor knows you may have been exposed.

Medical Kit

Hazardous Marine Life

Dangerous marine life is not a terrible problem in the Philippines. There are the usual risks associated with coral waters. The basic rule is to be very cautious about touching anything underwater that you don't recognize.

JELLYFISH

Jellyfish of genus Chirodropia, very similar to *Chironex Fleckeri*, the famous 'box jellyfish' of Northern Australia, are present in warmer Philippine waters. In late summer they have been found as far North as Bolinao and Lingayen Gulf. The local names are 'salabay' or 'cubo'. These jellyfish are not as dangerous as their Australian relatives, but there are said to be as many as 5-20 deaths in the Philippines each year attributed to their stings.

The tentacles (and in some cases the bell) of jellyfish contain stinging cells (nematocysts) that inject a venom into the victim when given the right stimulus, such as contact with exposed skin. The immediate effect is intense pain at the site of the sting, and generally a reflexive attempt by the victim to remove the tentacles adhering to the skin. Adherent tentacles are a convincing sign that a Chirodropid jellyfish stung the victim. In a severe sting the victim may lose consciousness and stop breathing as soon as 5-10 minutes after being stung. There is a characteristic 'whip weal' mark: a white line where the tentacle touched surrounded by red inflammation. The color can be masked by skin pigmentation, however, and the inflammation takes some time to

develop. In a fatal envenomation, the victim may die before there is time for the inflammation to arise.

Most Chirodropid stings are on the legs in under 2 m of water, typically in hot, still water in a sheltered inlet over a sandy bottom. It is very difficult to see Chirodropid jellyfish in the water, but the jellyfish have rudimentary eyes and will avoid a slow moving wader or swimmer if they can. Children playing in the shallows are particularly at risk because their small body size results in a greater concentration of the venom.

If a Chirodropid sting is suspected, the first thing to do is to prevent the victim from being stung more. The adherent tentacles will still contain substantial numbers of undischarged nematocysts, containing additional venom that may seriously worsen the victim's condition if they are allowed to discharge. The victim **must** be restrained from attempting to remove the tentacles, as they will likely trigger further envenomation as well as spreading the envenomation to the victim's forearms and the back of his hands. It seems that the skin on the palms and fingertips is too thick for significant numbers of nematocysts to penetrate. **Never** rub the affected area with sand or bare hands and **never** apply alcohol, either of which will cause further nematocyst discharge. The Philippine folk remedy is to apply calamansi juice. I am unaware of any evidence whether or not this works. The undischarged nematocysts are best dealt with by rinsing them with vinegar (5-10% acetic acid) for at least 30 seconds. If no vinegar is available, the tentacles can be gently removed with tweezers or bare hands if necessary. With bare hands the rescuer may feel some tingling in the fingertips, but should suffer no serious adverse effect because of the thicker skin. It is unnecessary to remove tentacles that have been inactivated with vinegar, but it may be useful to save a sample for identification of the Chirodropid species involved.

Keep the victim as quiet as possible, and watch to make sure that his condition does not worsen. Give CPR if necessary. If the sting is serious (covering the surface of more than half of a limb, impairing consciousness or breathing, hypotension or irregular heartbeat) apply bandages and a splint to compress the affected area and immobilize it. The effect of compression and immobilization is to reduce the rate that the venom is dispersed throughout the body from the stung area by restricting circulation in the affected area and eliminating the 'muscle pump' effect. Evacuate to a good hospital if possible. Be cautious if a victim who was in great pain and struggling becomes quiet and cooperative. This may indicate the onset of impairment of consciousness associated with life threatening stings.

There is an antivenin available in Australia for *Chironex Fleckeri* that has been used with great success both to relieve the symptoms of envenomation and to reduce the scarring that often results from a bad sting. Its usefulness for the Chirodropid species found in the Philippines is not clear.

Other jellyfish in the Philippines may give a painful sting, but are probably not likely to cause serious problems. Vinegar can be used to prevent further envenomation, but other treatment will hopefully be unnecessary.

CONE SHELLS *(CONUS)*

A few species of the genus *conus* are found in the Philippines. Cone shells all have a stinging tooth on the end of their proboscis that can protrude from the narrow end of the shell. In some cases the venom injected through the tooth can be fatal to people. The symptoms begin with [ischemia], cyanosis and numbness and tingling or a sharp stinging or burning sensation in the area of the wound. Numbness then spreads rapidly, involving the entire body and is pronounced about the lips and mouth. In severe cases paralysis and death may ensue. First aid is compression and immobilization bandaging, followed by respiratory and cardiac support as available. Immersion in hot, but not scalding water may help to relieve the pain.

The only way that anyone gets stung by a cone shell is by handling it. Don't pick up a cone shell with your bare hands. The old story that it is safe to pick up a cone shell by the big end is not completely accurate. The proboscis is long and flexible, and in some cones can easily reach the big end.

LION AND STONEFISH (*SCORPAENIDAE*)

There are a variety of fish with stinging spines of the *Scorpaenidae* family in the Philippines. There are three groups within the family: the beautiful *pterois* (lionfish, zebrafish; *lolong, tandang*) with long slender spines and fins, *scorpaena* (scorpionfish; *tamalingking*) with shorter, more robust spines and s*ynanceia* (stonefish; *lupo*) with stout, short spines. This is pretty much in the order of severity. All have sharp dorsal spines that inject venom when the loose sheath that covers the spine is pushed back. With *pterois* and *scorpaena* the most likely cause of a sting is handling the fish in ignorance or accidentally. With s*ynanceia* the most likely cause of a sting is stepping on it.

Stonefish are exceptionally well camoflauged and are often present in shallow coral waters. It may be a good idea to wear some sort of shoes if wading around rocky or corraline shallows.

In all cases the sting is extremely painful, and may involve the entire limb and lymph nodes. Generally the pain peaks in 60-90 minutes, and will last about 12 hours if untreated.

SHARKS

Compared to places like Queensland or the Solomons, there are very few sharks in the Philippines, possibly because of intensive fishing. The survivors pose little risk to swimmers. There are a few dangerous sharks, notably the tiger shark (*Galeocerdo Cuvier*), but attacks are quite rare.

CROCODILES

In Surigao, Siargo and possibly close to North Borneo there are occasional reports of saltwater crocodile attacks. Crocodiles can be extremely dangerous to a swimmer or wader. It would be wise to ask the local population about recent sightings before swimming in these areas. In most Philippine languages crocodile is 'buaya'.

SEA SNAKES

Several species of sea snake are found in the Philippines. Some are very poisonous, but they are extremely unlikely to bite a person. Their mouths are quite small, and it is physically difficult for them to bite a person. Unless badly provoked they are not aggressive, although sometimes they will approach a swimmer or diver out of curiosity.

In the unlikely event of a bite, use compression and immobilization bandaging.

FIRE CORALS (*MILLEPORA SP.*)

Fire corals appear in a wide variety of shapes and colors. Some varieties are encrusting and some have various branching forms. If you touch it with bare skin, you will quickly understand how it got its name, as ther is an immediate burning sensation. Later there will be a red welt that sometimes blisters. Fire corals generally like areas with substantial current and fairly strong sunlight. An anchor line or a mooring is perfect. The stings do not present a serious health risk, but it is fairly common for the encrusting types to grow on anchor and mooring chains that have been in place for a month or more. Gloves are probably in order if you are working with something that is likely to be encrusted.

Some recommend hot water or meat tenderizer as a first aid measure.

EMERGENCIES

Self Reliance

The best way of handling emergencies is to prevent them from occurring in the first place. The Philippines is not the place for you if you expect to have someone around to bail you out of whatever trouble you get into.

SAR

Evacuation Assistance/SAR

AFP SAR HQ,
GHQ Philippine Air Force
Villamor AFB, Pasay City
Metro Manila

(63 2) 911 7996; 911 6385

Mayday Procedures

Hyperbaric Chambers

Don't expect these to be in working order without checking first.

Subic Bay
(63 47) 252 7952
Subic Bay Freeport Zone
SBMA, Olongapo City
Contacts: Lito Roque, Rogelio Dela Cruz

Manila
(63 2) 920 7183; 921 1801 loc 8991
AFP Medical Center
V. Luna Road
Quezon City
Contacts: Jojo Bernado, M.D., Fred C. Martinez

Cebu
(63 32) 310 709 (?) (Chamber) 232 2464-8 loc. 3625
VISCOM Station Hospital
Camp Lapu Lapu
Lahug, Cebu City
Contacts: Mamerto Ortega, Macario Mercado

OVERHAUL AND REPAIR FACILITIES

There is a scarcity of really good yacht hauling and repair facilities in the Philippines. It certainly possible to safely haul your boat and have various kinds of work performed, but you are likely to be promised much more than the actual capability of most yards. Be especially cautious when evaluating hauling arrangements, especially renting cranes from third parties.

Most workers need to be closely supervised, and the hammer, pliers and pry bar school of mechanics is far too common.

Cagayan del Oro, Mindanao
Subic (Travel lift)
Manila Yacht Club (Maybe...)
Marivales
Port Sual

Maya Maya (planned)
Port Carmen
Cebu Yacht Club
Iloilo
Payao, Guimiras (slipway for multihulls only)
[Others?]

YACHT CHARTER

There are no large charter operations in the Philippines. Bareboat charter has not come to the Philippines. There are several single boat operations doing crewed charters.

LA ESPERANZA

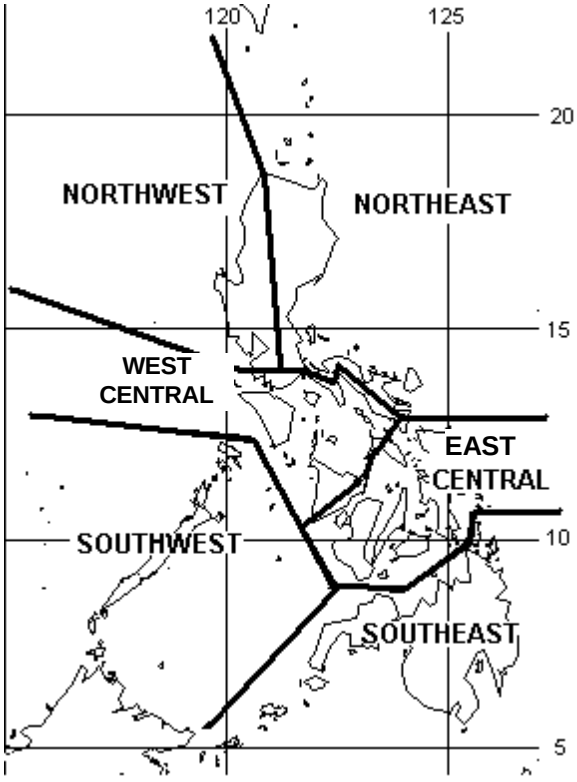
http://dgte.mozcom.com/esperanza

Baras Beach Resort (see page 95) can refer you to a few crewed charters.

DELIVERY SKIPPERS

There are a number of foreigners residing in the Philippines who do yacht deliveries on occasion. Inquiries can be directed to the major yacht clubs. Check references carefully.

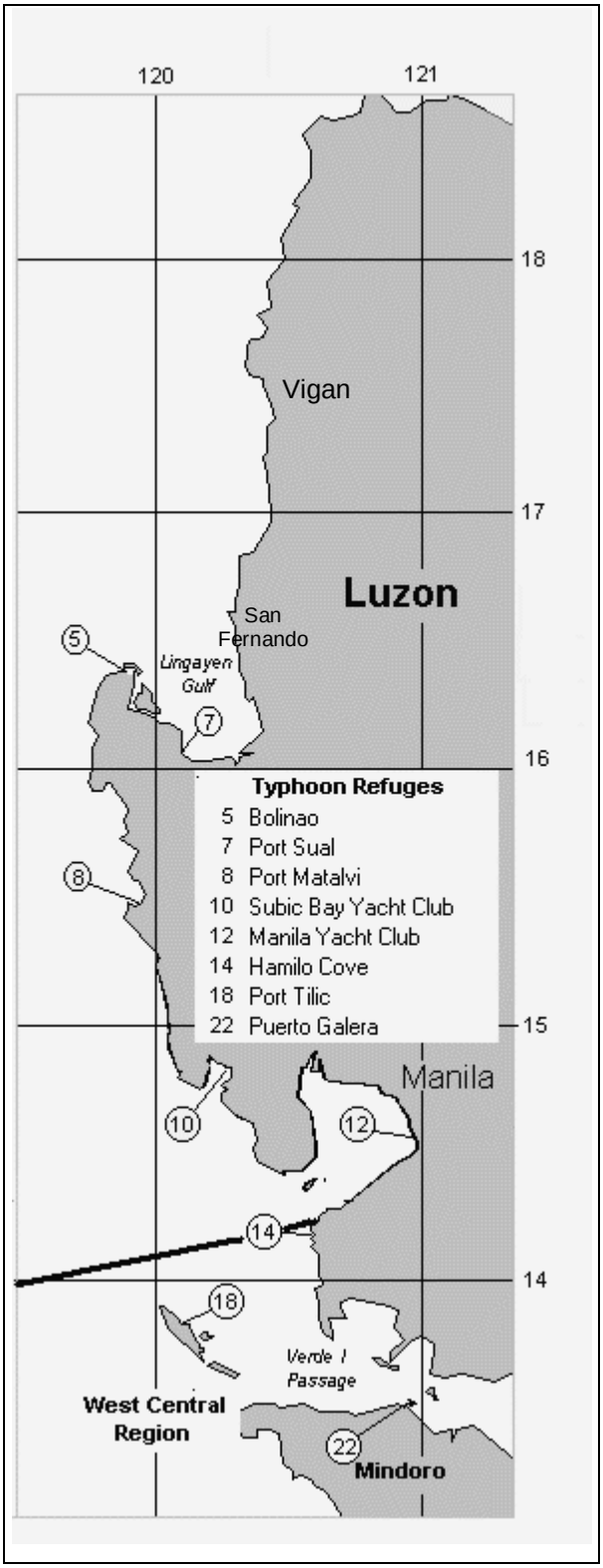
THE REGIONS



This book divides the Philippines into six regions as indicated on the chartlet to the left. The Northwest Region includes Manila Bay, and the west coast of Luzon from there to Cape Bojeador. It is mostly of interest to sailors based in Manila and Subic, and those travelling to or from China and Japan. The Northeast Region covers the northern and eastern coasts of Luzon and its offlying islands. Yachts do not often visit it. [And is not yet dealt with very comprehensively here.] The East Central region includes the heart of the Visayas, and covers the principal approaches to the San Bernadino Strait and the Surigao Strait from the west. The West Central Region includes the islands of the Sibuyan Sea and the resort port of Puerto Galera. There is excellent cruising in the Southwest Region - Palawan, the Calamain and Cuyo Islands The northern part of this area has some of the best cruising in the Philippines. It is frequently described as 'magical'. The Southeast region includes The Sulu Archipelago and the Western part of the island of Mindanao, which presently are probably too dangerous for cruisers because of conflict between government troops and various groups of Muslim insurgents and general lawlessness. The north and east coasts of Mindanao are more peaceful, although it is probably a good idea to aquaint yourself with recent developments before going.

4708 Philippines, Southeastern Part
4707 Philippines, Southwestern Part

NORTHWEST REGION



This area covers the west coast of Luzon from Manila Bay to Cape Bojeador. The cruising yacht is most likely to be here while traveling between the Philippines and China or Japan.

The wind and swell conditions are very much influenced by the season. During the NE season the coast is pretty benign, although the swell can make some anchorages rolly. During the SW season much of the coast is a lee shore, and few anchorages other than the best will be tenable. The swells tend to get larger in the North after the SW monsoon has been blowing strongly for a while. Cape Bojeador has something of a reputation for rough seas.

The typhoon refuges in the section are marked on the chartlet to the left. Close to the region, Hamilo Cove (page 69) is a typhoon refuge just South of Manila Bay. On the North Coast of Luzon, Aparri (page 63) is fair shelter if it's not too bad a blow. Port San Vicente is further East along the N Coast.

The major ports of entry in the region are Manila, San Fernando and Subic Bay. There are subports at Sual and Marivales. [It must be possible to clear in at Port Salomague?]

The region is discussed from Manila north.

Manila Bay

Phil 4236A Fairways and Anch. -- Manila Hbr
Phil 4211 Approaches to Manila Bay
Phil 4255 Manila Bay and Approaches [Marirelo]
Phil 4243 Manila Bay -- Manila to Cavite

Manila Bay is filthy, with lots of fishing and commercial traffic, plastic bags and fishing bangkas. Metro Manila now has a population of at least 10 million, and is struggling with typical developing country problems of pollution, traffic, overcrowding, crime and the like. Marivales and Corregidor can be interesting stops, but otherwise the bay has few attractions for yachts. Manila is the Tagalog heartland -- its Pasig River is the river probably meant in the original 'taga ilog' - '[the language of] the people of the river'.

MANILA YACHT BASIN AND MANILA YACHT CLUB (14° 34'N, 120° 58'E)
Phil 4236A Fairways and Anch. -- Manila Hbr
Phil 4211 Approaches to Manila Bay
Phil 4255 Manila Bay and Approaches [Marirelo]
Phil 4243 Manila Bay -- Manila to Cavite
The charted Manila Yacht Basin is used by the Manila Yacht Club, the Philippine Navy, and some small fast ferries.

The Manila Yacht Club has moorings, a 16 ton travel lift and small hardstand, 35 ton slipway, fuel pier, bar and restaurant, and fairly good security. Recent work on the breakwaters of the yacht basin look like they will significantly improve the safety of yachts in the event of a typhoon. The club seems somewhat ambivalent about visiting yachts, and has modified its policies several times in the last few years. As of November 1999, the Manila Yacht Club permitted visiting yachts to moor for the first week free, and then at an accelerating schedule depending upon whether the owner is a member of a yacht club with a reciprocity arrangement. Visiting yachts pay three times the members' rates for hauling, slipping and so on, but negotiate for repair work on the same basis as members. Non members pay a 20-30% premium on food and drink. [VHF 12?]

Manila Yacht Club
2351 Roxas Boulevard
PO Box 1085
Manila, Philippines
Tel 632 521 4457
Fax 632 521 6434
Email: myc@i-manila.com.ph

Some boats have been in places like the mouth of the Pasig River, but I'd give it a miss.

CORREGIDOR (14° 23'N, 120° 35'E)
The best anchorage is in the small cove on the North side, off the pier. The bottom profile is quite steep. The island is a pleasant place for walking around, and there is an interesting museum in the old world war II fortifications.

EL FRAILE I (14° 18'N, 120° 38'E)
Not a cruising destination as such, the WWII fortifications on this island make it resemble a warship at a distance.

CAVITE HARBOR (14° 29'N, 120° 54'E)
There are some commercial shipyards here that will sometimes work on yachts. Otherwise not much to recommend it.

PUERTO AZUL YACHT CLUB (14° 17'N, 120° 42'E)
Puerto Azul, Ternate
Cavite
Office: 15/F PCI bank tower II, Makati Avenue, Makati city
Tel. No.: (632)813-3690 to 98]

MARBELLA MARINA (BAY TO SW OF AZUL)
Has Marcos-era resort once notorious for the white sand that Imelda had brought in for a beach party. The marina is reported to be still operating.

Marivales to Lingayen Gulf

The West coast of Manila Bay and all of Bataan is predominantly Tagalog.
Phil 4210 Dasol Bay to Capones Is [Sta Cruz Hbr, Iba Anch]

Phil 4266 Ports Masinloc and Matalvi and Palauig Bay
From Subic to Santa Cruz is Zambales Province, with a mixture of Tagalog, Zambal and Ilocano Speakers.

MARIVELES (14° 26'N, 120° 29'E)
Fairly well protected, except from the South. Anchorage can be had anywhere in the bay, although sometimes the holding is indifferent. Bataan Marina is reported to have closed. [Anybody recent news?]

[The Bataan Marina has a small basin with room for a few yachts to lie alongside and a hardstand. The basin has had repeated problems with silting, and has severe surge in strong southerly winds. A crane must be rented in order to haul boats. Be cautious about the cranes, as there have reportedly been a number of near misses. The stands I saw on the hardstand were inadequate to be safe in a bad blow. Having said that, there are some excellent tradesmen in the area from various commercial repair and shipbuilding operations. The bar and restaurant at the marina are pleasant, and the marina is about a five minute tricycle ride to town.

Bataan Marina
Bataan Export Processing Zone, Bataan
Tel. No.: (63)(47) 561 3944 /45, Fax: (63)(47) 935 5145
E-mail: batmar@mozcom.com
Marina Manager: Frank Backes / Tom Dreyfuss]

Marivales has a fairly large market as well as some hardware stores and the like. A ferry runs directly to Manila and there is also bus service.

It is said that in the early 17th century a 17 year old novice named Maria Velez at the Santa Clara Convent in Manila eloped with a Franciscan monk to Camaya, as Marivales was then called. They intended to catch the Acapulco galleon there for Mexico. Unfortunately, the galleon did not sail immediately, and the lovers were apprehended by a notary and a dozen arquebusiers sent in pursuit by an alderman of Manila. The monk was sent to teach religion and morality to the 'Visayan tribes' and the nun was sent back to the City of Mexico for perpetual reclusion in a convent. It is said that this led to the names of Corregidor (Alderman) Island, which lies between the rocks known as Fraile (Friar) and Monja (Nun), and that Mariveles is named after Maria Velez.

SUBIC BAY (14°45' E, 120° 15'N)
The old US Navy base at Subic Bay has been closed since 1991. It is now a 'Free Port' administered by the Subic Bay Management Authority (SBMA)[tel?]. Vessels are required to report in and out of the freeport [at? procedure?]. Call Subic Bay Port Operations on VHF 16 when passing Grande Island. Subic is a port of entry, but the 'unreciepted fees' tend to be very high. If behind the breakwater at the Subic Yacht Club there is adequate shelter for a typhoon, but other places in the bay are more problematic. The Olongapo River used to be viewed as a typhoon refuge for small craft, but has silted up since the eruption of Mt. Pinatubo.

Supplies of all sorts are readily available inside the freeport or in the neighboring town of Olongapo. Most of the 'duty free' shops in the freeport do not seem to be significantly less expensive than outside the freeport, but the selection may be better than in many other parts of the Philippines. There are literally dozens of restaurants. Many of the sailing and flying fraternity meet at Vasco's, which is close to the bunkering facility on the road to the airport. Fuel in quantities under five thousand liters is no bargain, but large power yachts can sometimes save a couple of pesos a liter at one of the two fuel piers. [Names, pos'ns]

[History; keep an eye out for smuggler loading cigarettes for (?) China in their fast 78-80' steel boats]

The Subic Bay Yacht Club [located] is a very ambitious recent development with a huge clubhouse and marina, several restaurants, deli, pool, tennis courts and so forth. The development is now in serious financial difficulties. In the past it did not welcome visitors, but now allows visiting yachts to stay in the marina, at exorbitant prices and with little access to the facilities. There are many vacant berths. Call Subic Bay Yacht Club Marina on VHF 72. The future is uncertain. At the South end of the same basin as the SBYC is Watercraft Venture Corporation (Bldg 1031, Rizal Hi-way, Subic Bay Freeport Zone, Tel (63) 047 252 1739 or 1740. Ray Wolff, manager). Watercraft has some sort of franchise from the yacht club as a repair facility. Watercraft has a small floating dock with a dozen slips or so and a couple of moorings which are sometimes made available to visiting yachts, particularly if they have some work performed. There is a [capacity?] travel lift and a hardstand. Reportedly the work performed by Watercraft Ventures is expensive and of highly variable quality. The yacht basin is reasonably convenient to stores and restaurants.

Subic Bay Yacht Club
Subic Bay Special Economic Zone, Olongapo, Philippines
Tel. No.: (63)(47)2525211, Fax: (63)(47)2526587
Manila office: (632)8115735 Fax: (632)8115730/4
email: mach1@mail.subictel.sequel.net
Commodore: Vic Vic Villavicencio
Marina Manager: Danny Calapatia
[Subic Bay Waterfront Development Corp., 15th Fl Pacific Star Bldg, Sen. Gil J. Puyat cor Makati Ave., Makati tel 02 811 5730-33 fax 2 811 5192 5194 5735]

It is also possible to make arrangements (with SBMA?) to have a boat hauled by one of the large freeport cranes, or to lie alongside one of the many less used piers. [who to contact?]

In light Northerly weather almost any anchorage in the bay is acceptable, although inside the freeport the SBMA has a marine patrol which may chase you away. Permission to anchor is supposed to be obtained from [SBMA VHF 16?], but sometimes the patrol chases you off anyway. In rough weather or the Southerly season there can be a nasty swell in the bay.

Inside the freeport, in Northerly weather the best anchorage is probably off beach [scuba shack] [pos'n?], which is convenient to shopping in the freeport. If possible, Ilanin and Triboa Bays [positions], would be the preferred anchorages in Southerly weather, although not convenient to supplies.

Outside the Freeport anchorage can be had in the far NW extremity of the bay off the barrio of Cabitaogan [pos'n] close in to the mouth of the Cayuay River, where a bit of shelter can be had from Southerly weather. There's not much in the way of supplies here. In Northerly weather a more pleasant anchorage is off Gains Beach in Calapacuan [pos'n] E of Pequella I.

Also outside the freeport is the narrow west facing Port Binangay [Pos'n], which can be acceptable unless the weather is westerly enough than the swell begins to run up the bay, becoming steeper and higher as the bay shoals and becoming thoroughly unpleasant or even dangerous. Some supplies might be available at the barrio at the head of the bay. [I believe that this bay is a favorite of smugglers --dangerous?]

[define freeport borders]

THE HISTORY OF Subic

[By far the largest and most impressive peacetime project was the construction of Cubi Point Naval Air Station in the Philippines, the largest single construction job ever tackled by the Seabees. At Cubi, Seabees cut a mountain in half to make way for the nearly 2-mile-long runway, blasted coral, and filled in a section of Subic Bay that is almost a mile wide and nearly 2 miles long. The Seabees took nearly 5 years and 20 million man-hours to construct the air station and its adjacent aircraft carrier pier that is capable of docking the Navy's biggest aircraft carriers. The amount of coral and fill required for the job-some 20 million cubic yards-was equal to the task of building the Panama Canal.

-from a USN Manual]

PORT SILANGUIN (14° 46'N, 120° 05'E)
Despite the name, there's not much in this bay except a few fishing huts. It is scenic and provides a secure anchorage in all but Westerly weather, although even in good weather there can be gusty winds down the hillsides. Fish can be purchased from local fishermen.

IBA (15° 20'N, 119° 58'E)
Phil 4210 Dasol Bay to Capones Is [Sta Cruz Hbr, Iba Anch]
This anchorage is useful only in fair weather during a settled Northeast monsoon, behind the corner of the fringing reef shown in the plan on chart 4210. Iba is the capital of Zambales Province with a fairly large market and bus connections.

PORT MATALVI (15° 29'N, 119° 55'E)
Chart Phil 4266 Ports Masinloc and Matalvi and Paluag Bay

Port Matalvi is an excellent large natural harbor suitable as a typhoon refuge for yachts and small ships. The entrance is a little complicated. Chart 4266 is still more or less accurate, although it appears that a sandbar may have built up a bit off the South end of the Southernmost point of Salvador I, reducing the depth at that point of the recommended track to around 16 meters. The concrete marker in front of Iagat I has been incorrectly reported to be further to the West than shown on chart 4266, but the mark is as charted.

The recommended track commences at a position charted on chart 4266 at 15° 31' 08"N, 119° 52' 48"E, bearing 064° to Salvador Head, 120° to a white painted concrete marker on the reef in front of Iagat I and about 140° to the red roof on Luan I. From that point, proceed toward the beacon at 120° until the red roof on Luan I bears about 225°. At that point (charted as 15° 30' 05"N, 119° 54' 42"E) turn to 195° until between Luan and Matalvi Islands, then go up the middle of the harbor. The buoy charted in 15° 30' 07"N, 119° 54' 30"E to mark the submerged reef extending about half a mile NNE of Luan Island has been reported missing since at least 1967. The pier charted on the south side of the harbor is only faintly visible as ruins.

There are several floating fish farms in Port Matalvi, but plenty of space for a fleet of yachts to anchor. The further East one goes in the harbor the better the shelter is and the shallower the water. There is some tidal current, particularly towards the West end.

The village at the W end of Port Matalvi has a sari-sari store, and good water in the Southeasterly season. For ice and other provisions, and even a little 'foreigner food', there is a reasonable market in Masinloc. Masinloc is most easily reached by bangka, easily hired in Port Matalvi, or by a reasonably powerful dinghy. The landing is the small beach at about 15° 32' 27"N, 120° 56'

48"E, with dangerous breaking reefs on both sides. For the first time it would probably be better to hire a bangka for local knowledge.

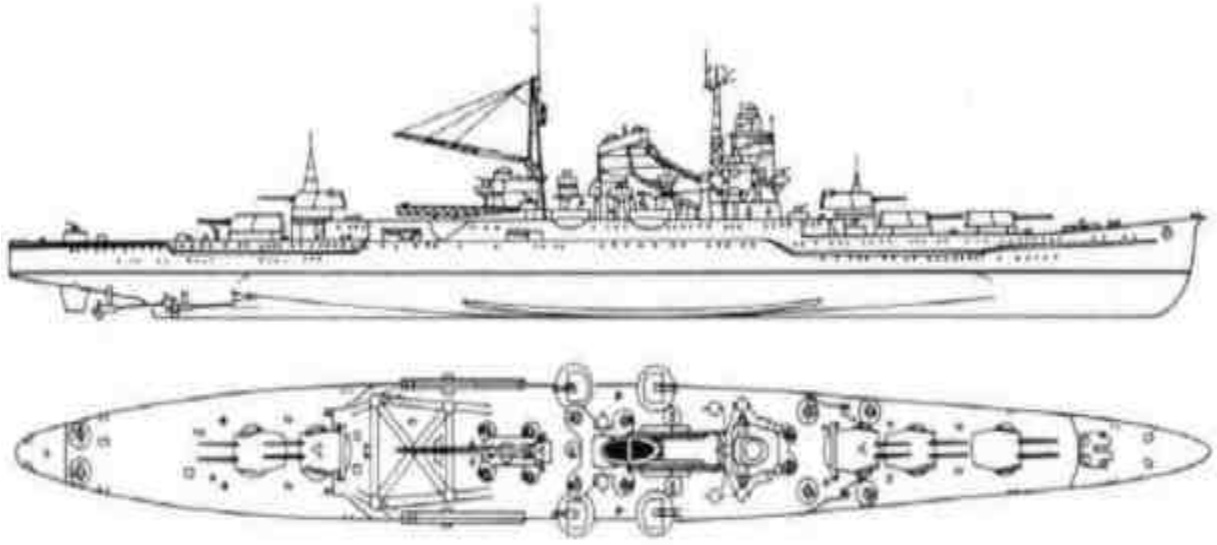
There are a number of other practical anchorages in the islands North of Port Matalvi.

MASINLOC HARBOR (15° 31'N, 118° 58'E)
Chart Phil 4266 Ports Masinloc and Matalvi and Paluag Bay
Also known locally as Matalvis Bay, Masinloc Harbor is used by some larger fishing boats and is more convenient to the market in Masinloc town. The buoyage shown on chart 4266 was not present in 1999. Pickard says the chart is inaccurate in its depiction of "Palang Reef", but there is no reef of that name on my copy of the chart.

PORT MASINLOC (15° 33'N, 118° 56'E)
Chart Phil 4266 Ports Masinloc and Matalvi and Paluag Bay
This is not a particularly good anchorage for a yacht, although often used by ships calling at one of the ore loading facilities at Masinloc. The white beacon charted on the North side of Salvador I was still there in 1999, but the bouyage is substantially different from that shown on the chart. Bani Point now has a large red and white horizontally striped chimney on it and a pier extending to the Southeast. Don't confuse with Masinloc Anchorage, Mindanao (page 109).

DASOL BAY
Good shelter can be hard to find in this area except for in light weather. Caiman Cove and Tambove Roads (15° 45'N, 119° 45'E) , both at the N end of Dasol Bay can be OK in moderate Northerly weather. It may also be possible to tuck in behind one of the islands in SW weather, but is likely to be rolly.

The Japanese Mogami-class heavy cruiser *Kumano* (Captain Hitomi Soichiro) was finally sunk here by American aircraft from the carrier USS *Ticonderoga* on November 25, 1944. Her wreck is somewhere off Hermana Mayor I in the North end of Dasol Bay, and is said to be diveable.



A Mogami class Heavy Cruiser, after rearmament in 1939

Kumano was a hard ship to sink. She was the leading cruiser of Japanese Cruiser Division Seven when VADM Kurita's First Striking Force of six battleships, six heavy cruisers, two light cruisers and eleven destroyers caught the badly outgunned American Task Unit 77.4.3, known as Taffy

Three, in the famous Battle off Samar of October 25, 1944. Taffy Three was composed of six escort carriers (CVE) and their screen of three destroyers and four destroyer escorts. (See page __ for a description of the Battle off Samar). Seventeen minutes after opening fire, at 0727, *Kumano* had her bow mostly blown off by a torpedo fired by the American destroyer USS *Johnston* (DD - 557, CDR E. Evans) during the screen's near suicidal torpedo attack on the Japanese. The damage reduced *Kumano's* speed to ten knots and forced her to retire from the action. During the night of October 25-6 she made her way back through the San Bernadino Strait and the Visayan and Sibuyan Seas and around the southern end of Mindoro I towards Coron. On the morning of the 26th she was attacked by aircraft from USS *Hancock* (CV-19), and lost all but one of her eight boilers. [There is said to be a classic photo of this attack - If I can find it I'll put it in] After emergency repairs she reached Coron and refueling there from a fleet oiler, she limped to Manila, where temporary repairs were made that got four boilers working and patched up her bow to the point that she was capable of fifteen knots.

At 0100 November 5 *Kumano* and damaged heavy cruiser *Aoba* left Manila for Takao, Formosa with convoy MA-TA 31, composed of three marus and three landing craft screened by four subchasers. The convoy was making about 12 knots. *Aoba* had been nearly sunk on October 23 in a torpedo attack by submarine USS *Bream* (SS -243) in 14°06'N, 119°37'E, off Manila Bay. The late night departure was a change from the ordinary procedure of a daybreak departure. This was either smart or lucky, for seven hours after the departure of the convoy, at 0800 on November 5, Manila Bay was badly hit by aircraft from the fast carriers of TG 38.3, the first of two days of strikes on targets on Luzon Admiral Halsey's TF 38. The convoy anchored at Santa Cruz on the night of November 5-6, leaving at 0700 on the 6th, intending to spend the next night in San Fernando. Submarines *Guitarro* (SS-363), *Bream* (SS-243), *Raton* (SS-270) and *Ray* (SS-271) had different plans. In about 16°11N, 119°44'E, at 0905, *Guitarro* fired three torpedoes, which missed or prematured. *Bream* fired four at 0943, which were evaded by both cruisers. *Raton* then fired six, which *Kumano* sighted at 1042 and evaded. *Ray*, approaching on the other side, was startled to hear *Raton's* torpedoes pass overhead, but finally hit home with two of four torpedoes at 1048. *Kumano* went dead in the water and listed 11 degrees to starboard, but remained afloat. While maneuvering in shallow water to administer the coup de grace, *Ray* struck an uncharted coral pinnacle, destroying her sonar and starting leaks in her forward torpedo room, forcing her to retire.

Kumano was towed back to San Jose by the tanker Doryo Maru, where her crew again began to try to make her seaworthy. During a typhoon on November 10, She broke loose from her makeshift mooring, but did not go ashore. She had lost her anchors along with her bow off Samar. On 19 November she survived an air attack by TF 38 aircraft, with no hits. The next day they had one boiler and one engine back on line, which Chief Engineer Horiyama Sakae believed would give them six knots. Finally, on the 25th came the air strikes that delivered five torpedo hits on the port side. Within three minutes *Kumano* had a 45 degree list, and then she rolled over and sank.

SANTA CRUZ HARBOR (15° 46'N, 119° 52'E)

4210

This is a fair anchorage in the Northerly season, but can be uncomfortable during the SW season unless there is very little swell. Definitely not suitable for bad weather. Enter between Hermana Mayor and Hermana Menor islands on a course of 060° to [mark?]. Either head E toward the bell tower South of the town of Santa Cruz, or turn onto 123° toward the pier in Baluate.

AGNO BAY (16° 08'N, 119° 47'E) (CHECK POS'N)
An open roadstead. The Balincaguin River in the S part of the bay is reported to have 1.5 m over the bar at low water. At high water vessels of 2.1 m draft once went 2 miles up the river to the town of Agno. I doubt that it is still possible. A fair anchorage can be had in the NE monsoon near the mouth of the river or SE of Rena Point.

BOLINAO (16° 24'N, 119° 54'E)
Chart Phil 4238 Bolinao Hbr and Approaches
Bolinao is an excellent harbor in any sort of weather including typhoons. Beware on entering the harbor that you do not conclude that the old and new lighthouses form a range (or leads). They would put you on the reef to the South of the entrance. The correct line is 153° to the lighthouse, as indicated on the chart. The new lighthouse is the one in back with the orange spiral staircase around the outside. The roof of the house next to the lighthouse is no longer red. The most secure anchorage is in about 16° 23'N, 119° 55'E, around the corner from the lighthouse, depending upon the anticipated wind direction. There are a number of floating and pen type fish farms for raising bangus (milkfish, [sci name]), but there is plenty of room to anchor. In settled conditions it may be more convenient to anchor closer to town, either in front of the concrete bangka breakwater (uncharted, obvious on the S side of the channel as you enter) or in front of the lighthouse. There is some current in both places, and it is not unusual to sail around some while at anchor.

Bolinao has a pretty complete rural market, as well as local restaurants etc. Wine is available on Fridays at the bank. The biggest day for the market is Saturday. The catholic church in the center of town, built in 1609, the Bolinao Museum on the outskirts of town, and the University of the Philippines Marine Research Institute (the big blue roof) may be worth a visit. The church was fortified by the British during their short occupation in [1762(?)].

The coast guard detachment based at the lighthouse seems to be more vigilant and competent than the run of the mill. Beware of the dangerous power line running from the mainland to Santiago island up the strait from Bolinao Harbor beyond the anchorage. It has killed at least one person already. There is a low highway bridge from the mainland to Cabarruyan Island making travel inside the islands to Lingayen Gulf or the Hundred Islands impossible except by dinghy.

Lingayen Gulf to Cape Bojeador

Phil 4207 Cape Bojeador to Vigan
Phil 4208 Vigan to San Fernando
Phil 4209 Lingayan Gulf
Phil 4238 Bolinao Hbr and Approaches
Phil 4239 Port Sual to Comes I
Phil 4246 San Fernando Harbor
Phil 4283 Harbors on the West Coast of Luzon [Nagabungan Bay, Dirique Inlet, Darigayos Inlet, Santiago Cove, San Esteban and Nalvo Bay, Solvec Cove, San Ildefenso Harbor, Salomague Harbor and Lapog Bay]

LINGAYEN GULF
Lingayen is a derivation of the [Hindi? Sanskrit?] *Lingam*, the phallic symbol of Shiva. The Boninao Peninsula and the Southern part of Lingayen Gulf is Pangasinan province. Lingayen is the capital. Ilocano and Pangasinan are spoken.

SANTIAGO ISLAND, SE SIDE. (16° 21'N, 119° 57'E)
Chart Phil 4238 Bolinao Hbr and Approaches
There is a quiet anchorage well protected from all but NE winds in the inlet in the reef between Santiago and Cabarruyan Islands. Enter with some care of the large number of fish traps, keeping to the north side of the channel and following it in until abeam of Siapar Island in about 6 meters, mud. Although it appears possible from the chart to go into the bays inside of Narra I,

there are dangerous, low power lines running between Siapar and Narra Is (16° 21.0'N, 119° 56.5'E) and between Narra and Cabarruyan Is (16° 20'N, 119° 57'E). Expect a courteous visit from representatives of the coast guard detachment based in Bolinao to check your papers if you stay longer than overnight.

TAMBAC BAY (16° 14'N, 119° 57'E)
Tambac Bay is shallow, (~2.7 m) but with care a reasonable anchorage should be possible, unless it has gotten filled with fish traps.

HUNDRED ISLANDS/LUCAP BAY (16° 12'N, 120° 02'E)
There is a highway bridge from the mainland to Cabarruyan Island, making the channel impassable by yacht.

PAO BAY (16° 08'N, 120° 06'E)
A good sheltered anchorage in 7-9 m, but be careful of the S of Bangar(?) Pt., and the 9' shallow in the center of the channel. The N part of the bay is quite shoal, and may now be full of fish traps and impoundments.

CABILITAN BAY (16° 05'N, 120° 06'E)
Good anchorage in all seasons, although maybe a little deep.

PORT SUAL (16° 04'N, 120° 06'E)
4239, 4209
Looks good enough for typhoon shelter. There is a local shipyard with a slipway where it might be possible to haul a yacht. A secondary port of entry.

DAGUPAN CITY (16° 05'N, 120° 20'E)
A port of entry with reasonably good supplies available. In 1987 Pickard said that it was possible for a yacht to go up the Dagupan River, as the bar was 6 feet deep at low water. I would seek current local knowledge before trying it, as ash from the volcanic eruption of Mt. Pinatubo in 1991 silted up many rivers in the area. In Southerly weather it should be safe to anchor off the beach.

SANTO TOMAS (16° 15'N, 120° 22'E)
Pickard says there is an anchorage frequented by fishing boats behind the charted sand spit. Limited facilities.

SAN FERNANDO (16° 37'N, 120° 18E)
San Fernando is the capital of La Union province, which is primarily Ilocano speaking. The China Sea yacht race run every other year from Hong Kong has often finished here. The effect is obvious. By the time your anchor is down in the bay, a steady stream of bangkas will have begun to arrive offering to sell you water, ice, fish, or anything else. It is a port of entry. Immigration, customs and health officials will be delighted to clear you in or out for unreciepted 'fees' more than ten times those charged in other parts of the Philippines.

The harbor is open to the Northwest, and can be rolly even in Southerly weather. It would be marginal in Northerly weather, although one could go south of the arm of the harbor.

The pair of buoys that show the entrance on the chart weren't there in July 1999. The range was impossible to discern in daylight, and not apparent at night. Some reefs are marked with stakes, and the entrance is wide.

Facilities are otherwise generally good.

In Northerly weather it is possible to anchor South of the peninsula.

DARIGAYOS INLET (16° 49'N, 120° 20'E)
4283
Looking at the chart, might be an OK fair weather anchorage in Southerly conditions.

SANTIAGO COVE (17° 17'N, 120° 25'E)
Phil 4283 Harbors on the West Coast of Luzon [Nagabungan Bay, Dirique Inlet, Darigayos Inlet, Santiago Cove, San Esteban and Nalvo Bay, Solvec Cove, San Ildefenso Harbor, Salomague Harbor and Lapog Bay]
A much more pleasant anchorage than it appears from the chart or from outside. Tuck in behind the breaking reef on the South side as far in as you dare (in about 4 meters of water for me) and there won't be much swell in the Southwest monsoon. It would also be pretty good in the Northeast monsoon. There is a small village and motel / resort in the cove, so some facilities may be available. The church tower indicated on the 1909 plan of Santiago Cove on chart 4283 was still there in 1999, although partially obscured by palm trees. As in 1909, the best approach is along a line bearing 67° to the church tower. There is a pier at the head of the cove that appears to dry at low tide. Larger bangkas get into the mouth of the river over a bar that nearly dries at low tide. The cove is open to the West, so it would not be a good refuge in bad weather.

PORT SAN ESTEBAN AND NALVO BAY (17° 21'N, 120° 26'E)
Phil 4283 Harbors on the West Coast of Luzon
In Northerly weather Port San Esteban is dangerous, as Suso Shoal, immediately North is reported to enlarge swell. The tower as shown on Phil Chart 4283 is now (1999) a circular ruin. There was a relatively modern pier that looked like it might be on the other side of the inlet than the charted pier. In Southerly weather, Santiago Cove, about five miles South, is preferable.

Nalvo Bay, about one mile North of San Esteban, would seem to be a reasonable fine weather anchorage in Northeasterly weather. [See directions on page 5-12 of the PCP]

SOLVEC COVE (17° 27'N, 120° 26'E)
The holding ground is reported to be bad because the bottom is sand over coral hardpan. Despite the poor holding, the cove would probably be pretty good in Northerly weather, although marginal in Southerly weather.

SANTA (17° 29'N, 120° 24'E)
The bay is open to the South and West, and is therefore only suitable for the Northeast season. There is a reasonable anchorage in the Northeast part of the bay by the municipality of Santa in 10-15 meters, sand, about half a mile off the uncharted mouth of the Abra River now (1999) there. There can be gusty winds down the mountains in the evenings. Limited supplies are available in Santa, but a good range of provisions and some hardware and mechanical services are available in Vigan, which is about a 20 minute jeep ride to the North. There is an attractive old Spanish church in Santa. Vigan is the capital of Ilocos Sur province and was one of the very early Spanish settlements after Manila [expand history]. There are many good old Spanish buildings. Ilocano is spoken.

There is a hotel with a good restaurant on the road to Narvacan, about 20-30 minutes South of Santa.

PANDAN (17° 32'N, 120° 22'E)
By the N mouth of the Abra River

SAN ILDEFENSO (17° 39'N, 120° 21'E)
4283
The old harbor is a ruined pier protected by a ruined breakwater to the NW. Probably not good for much. Anchorage can be had in either monsoon on one side or the other of Pinget I. In SW weather, on the N side of the island E of the point, as close in as comfortable. In NE weather, anchor on the S side in 11m 0.5 nm S of the island.

LAPOG BAY (17° 44'N, 120° 22'E)

SALOMAGUE HARBOR (17° 47'N, 120° 25'E)
Many smugglers of cigarettes to Taiwan and mainland China use Salomague to load their cargoes. They generally leave yachties alone. The customs officials are particularly rapacious here, however, and are best avoided if possible. [It must be a port of entry, then, if there are customs officials? or was my informant deceived by someone representing themselves as a customs officer?]

BADOC I (17° 55'N, 120° 25'E)
From here North is Ferdinand Marcos' old province of Ilocos Norte, presently governed by his son 'Bong Bong' Marcos. Ferdinand is something of a demi god here, so be cautious about making flippant comments. Ilocano is spoken, and the provincial capital is at Laog.

CABUGAO BAY (17° 50'N, 120° 26'E)

PORT CURRIMAO (18° 01'N, 120° 29'E)
Port Currimao proper is OK during NE weather. See PCP 5-8. The bay to the North of Gabot Island is a good anchorage in Southerly weather.

LAOAG RIVER (18° 12'N, 120°35'E)
The Laoag River bar is impassable, but anchorage is possible in fair weather off the mouth (NE only?)

DIRIQUE INLET (18° 28'N, 120° 34'E)
4207, 4283

The inlet is sheltered from all directions except Southwest, but in Northeast weather this is a reasonable anchorage in all but bad weather.

NAGABUNGAN BAY (18° 29'N, 120° 34'E)
4283

It is reported that local sailing vessels used to use Nagabugan Bay as an anchorage in NE weather. There is substantial reef on both sides of the entrance, and caution is in order while entering. Swinging room may be a problem.

CAPE BOJEADOR (18° 30'N, 120° 34'E)
In conditions of contrary wind and current there are frequently large, steep and confused seas off Cape Bojeador.

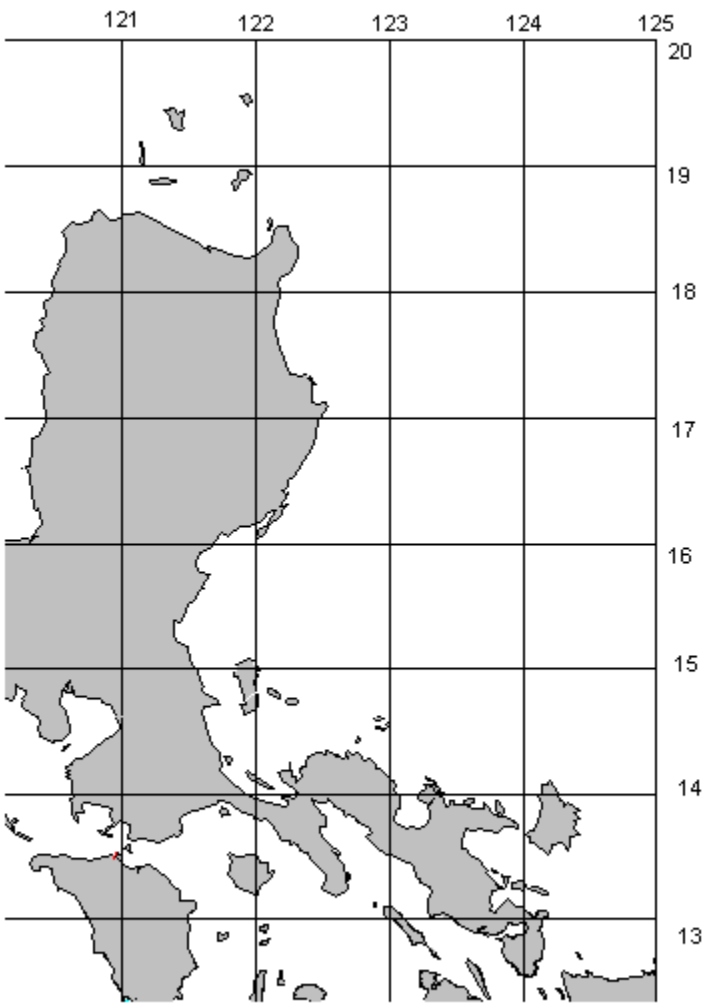
Scarborough Shoal and Pratas Reefs

SCARBOROUGH SHOAL (HUANGYAN ISLAND) (15° 08'N, 117° 45'E)
Scarborough is claimed by both the Philippines and the Peoples Republic of China, and has been the scene of some confrontations between the Philippine Navy and the Chinese. In May 1999 a

Chinese fishing boat was sunk in a collision with a Philippine Navy ship. On November 3, 1999 when the Philippine Navy's LST 542–class landing ship Benguet (LT 507) ran aground there.

PRATAS REEFS (PRATAS I, TUNG SHA TAO) (20° 40'N, 116°50'E)
BA 362
A roughly circular area of reefs some 10-12 miles in diameter with a low island on the West side. Reasonably close to most routes to and from Hong Kong. Many vessels en route to Hong Kong have wrecked here. The island used to be occupied by ROC marines, and is said to presently be garrisoned by ROC civilian coast guards.

NORTHEAST REGION



This region is still very incompletely treated here. Yachts are very few and far between.

Luzon North Coast

The people on the North Coast of Luzon are a mixture of Ilocanos and Ibnags. The Western part is Ilocos Norte province , and the Eastern is Cagayan Province. Cagayan's capital is Tuguegeno, inland of Aparri on the Cagayan River.

Aparri (18° 22'N, 121° 38E)

Phil 4260 Aparri Anchorage and Part of Cagayan River

The only reasonable anchorage is up the river. There is [sometimes?] a 3-4 knot current in the Cagayan River. The mouth of the river is 14-16 feet deep, and shoals fairly soon as one ascends. Aparri is a port of entry. The officials in Aparri have a reputation for rapacity.

Port San Vicente (18° 31'N, 122° 08'E)
Phil 4276 Harbors on the Northeast Coast of Luzon [Port Imee, Engano Cove, Port San Vincente]
Phil 4276
Typhoon Refuge, but the holding ground is not that good.

Port Imee
Phil 4276

Engano Cove (18° 35'N, 122° 08'E)
Phil 4276

There is supposed to be a reasonable anchorage in the small cove on the SW side of Cape Engano (18° 35'N, 122° 08'E), albeit open to the W and NW.

Luzon Strait

Phil 4204 Balintang Channel - Luzon Strait
Phil 4206 Pata Pt to Cape Bojeador
Phil 4276 Harbors on the Northeast Coast of Luzon [Port Imee, Engano Cove, Port San Vincente]
Phil 4260 Aparri Anchorage and Part of Cagayan River

BABUYAN IS
Phil 4229 Babuyan Is
4279 Harbors in Babuyan Is [Banoa Anch, Calayan Landing and Cibang Cove, San Dionisio, Barugan Cove, Port San Pio Quinto, Musa Bay]

Banoa Anch

Calayan Landing and Cibang Cove

San Dionisio

Barugan Cove

Camiguin I
The bay on the West side of Camiguin I is said to be a nice anchorage. Don't confuse with the Camiguin I off Mindanao.

Port San Pio Quinto

Musa Bay

BATAN IS (20°55'N, 121°55'E)
Phil 4205 Batan Is
4280 Harbors in Batan Is [Mayan ldg, Basco, Mahato, Balugan By, Uyugan, Sabtang, Sabtang Channel]
There are about 15,000 inhabitants of the three principal islands Itbayat, Batan and Sabtang, who call themselves Ivatans and who are very similar to indigenous Taiwanese. There are no well protected anchorages.

The tidal currents flood W and Ebb E, and can be as much as 5.5 kts to the N and S of the group.

Itbayat I (20°46'N, 121°50'E)
The largest island of the group

Mayan Ldg
On the NW corner.

Batan I
Error! Not a valid link.

Basco (Baluarte Bay)(20°27'N, 121°58'E)

On the W side of the island. Anchorage is only good in NE monsoon, in 10 m, sand with the S part of the town and Mt. Irada in line bearing 000°.

Mahato
Passage in reef large enough in the old days for 50 ton schooners to be hauled up on the beach before SW season.

Balugan Bay (20° 26'N, 121°59'E)
Pt. Conta Costa N of 2 bays on the E side Batan I with good shelter in SW monsoon. See PCP 4-4

Uyugan

Sabtang I
Anchorage can be had in the SW monsoon off the town with the church bearing 225° in 18-20 m, 140 m off the beach.

Sabtang Channel

Luzon East Coast

Subject to the big swells that have traveled across the Pacific. Not a lot of yachts here, and pretty sparsely populated in most places.

4220 San Bernadino Strait and Samar I
4221 Albay Gulf and Part of Lagonoy Gulf
4222 Lagonoy Gulf to Lamit Bay and Cataduanes I
4228 Cape Engano to Dingalan Bay
4268 Harbors from Alabat to Pitogo Bay [Port Alabat (14 06N, 122 03E), Sangirin Bay, Tabgon Anch, Canimo Pass and Mercedes, Pitogo Bay]
4269 Harbors of Catanduanes [Cabugao Bay, Bagamanoc and Anajao, Cobo Bay, Port Manamrag, Pandan Bay, Gigmoto Bay, Kalapadan Bay]
4277 Harbors on the East Coast of Luzon [Baler Anch, Dibut Bay, Dingalan Bay, Umiray River, Basiad Bay, Port Lampon, Hook Bay, Polillo Harbor(14 44N, 121 56E), Mauban Anch, Port Apat]
Phil 4237 Tabaco Bay, Coal Harbor and Legaspi Port
[Other charts to come]
JB Miller Bay (18°12'N, 122°17'E)

Said to be a good anchorage but exposed to the E

Port Dimalansan (17° 19'N, 122° 23'E)
Typhoon refuge

Port Bicobian (17° 15'N, 122° 26'E)
4276
Typhoon refuge

Diapitan Bay (16° 26'N, 122° 13'E)
4227
Typhoon refuge

Casigurian Bay (16° 14'N, 122° 06'E)
4278
Typhoon refuge.

POLILLO IS
Phil4275Polillo Is
4277

Hook Bay (14° 56'N, 121° 50'E)
4277

Typhoon refuge, best in 15 m mud, in the NE arm.

Polillo Harbor (14° 43'N, 121° 56'E)
Typhoon refuge

Polillo Strait

Dahican Bay (14° 19'N, 122° 37'E)
4274
Typhoon refuge. Said to be rolly. Don't confuse with the Dahican Bay [on Bucas Grande I off NE Mindanao] described on page 107.

LAMON BAY TO CATANDUANES I

Port Lampon (14°40'N, 121°37'E)
Good in NE

Cagbalete I

Balesin I

Alabat I

Port Alabat
4268

Lopez and Caluag Bays

Basiad Bay (14°10'N, 122°37'E)
Many obstacles, good anchorage said to be South of drying reef in 5-6m, mud.

Santol Bay

Capalonga

Indan (Vinzong)

Camino Is

Mercedes (Daet River)
4268
River has 2.4m

San Miguel Bay

Butauanan I and Bay

Port Tansog

Lamit I

Lamit Bay (13° 56'N, 123° 32'E)
4271
Typhoon refuge

Masamat Bay (13° 58'N, 123° 58'E)
On the NE side of Quinasalag I is said to be a typhoon shelter.

Coal Harbor (13° 15'N, 123° 55'E)
Typhoon refuge. Not a bad anchorage for visiting Legaspi City.

Quahalsag Bay

Bani

Lahuy I
4268
Several anchorages in intricate channel especially between NE Lahuy and Basot I.

Pitogo Bay (13°58N, 123°56'N)
Supposed to be a typhoon shelter in a small inlet on the N side of the bay.

Phil 4283 Harbors on the West Coast of Luzon [Nagabungan Bay, Dirique Inlet, Darigayos Inlet, Santiago Cove, San Esteban and Nalvo Bay, Solvec Cove, San Ildefenso Harbor, Salomague Harbor and Lapog Bay]

CATANDUANAS I TO SAN BERNADINO STRAIT

Muqueda Channel

Catanduanes I
Catanduanes is a province of the same name. The capital is Virac. Bicolano is spoken.

Pandan I

Port Anajao (13°57'N, 124°21'E)
Said to be the best anchorage on the island.

Gigmoto

Kalapadan Bay

Cabugao Bay
the port for Virac

Lagnoy Gulf
Camirinas Sur province. A mixture of Biconano, Ilocano and Visayan is spoken.

Rosa I

Atulayan I and Bay

Malanao

Kalanga Bay (13°16'N, 124°02'E)

Guinanyan I (13°18'N, 123°58'E)

Tabaco Bay, San Miguel I
(4237)

Cagraway I

Batan I
There's another Batan I in Luzon Strait. See page 64.

Batan Harbor (12°12'N, 124°03'E)

Rapu Rapu I

Albay Gulf
[Van Noort 1600]

Legaspi City

Matnog Bay (12°35'N, 124°06'E)

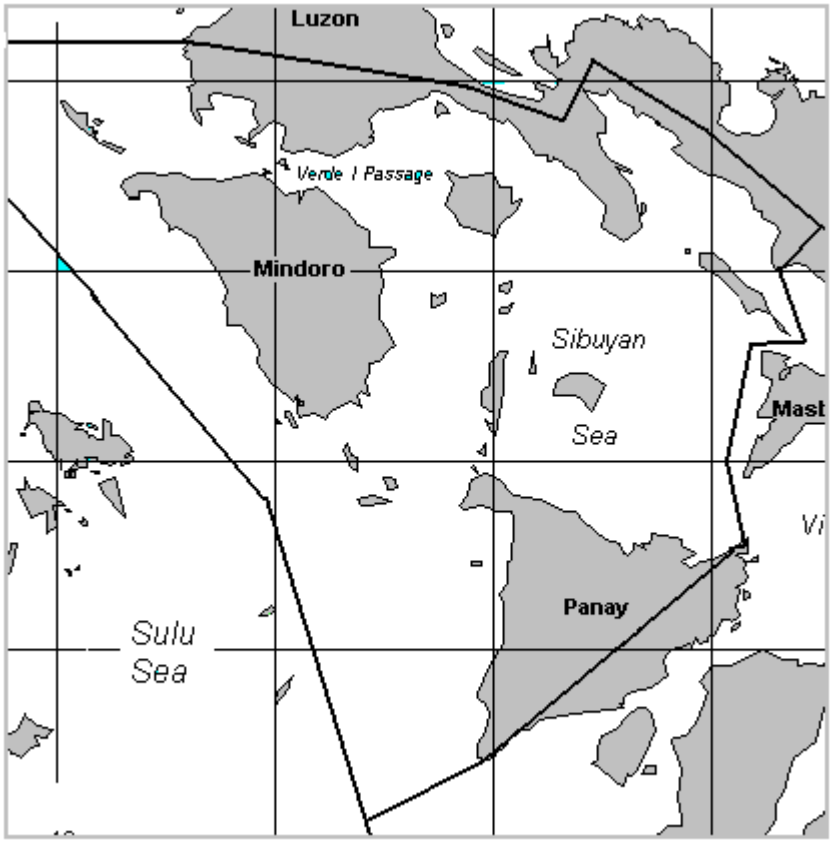
Gubat (12°55'N, 124°10'E)

San Bernadino Strait

[to come]

WEST CENTRAL -SOUTHWEST LUZON; MINDORO; SIBUYAN SEA; N AND W PANAY, BURIAS, TICAO AND MASBATE;

4706 Philippines, Central Part
Phil 4305 Mindoro and Vicinity
Phil 4405 Visayan Sea



West Central

Region

Luzon - Manila To Cape Santiago

Phil 4257 Anch. in vicinity of Verde Is Passage [Nasgubu, Taal, Lemery, Balayan]
Phil 4256 Batangas
Phil 4256A Batangas Bay and Vicinity
See page for Manila Bay.

KUTAD COVE
Just N of Hamilo, a reasonable anchorage in fair NE weather.

HAMILO COVE (14° 11'N, 120° 35'E)
Phil 4257
Excellent shelter in the NW corner of the inner cove with good holding ground in about 10 m, mud. Certainly fine for typhoon shelter, although the proximity to Manila makes crowding a problem in typhoon weather. Limited supplies (including ice) are available from the small barrio of Papaya on the SE side of the cove, located behind a stone breakwater that does not appear on chart Phil 4257. One of the nicest anchorages in the area.

LOOC COVE (14°09'N, 120°35E)
Only really suitable for picnics in light NE weather. Reputed to be the planned home of the Evercrest Yacht Club, with a marina. There are several other Loocs: Looc Bay, Lubang (page 71) and Looc Bay, Tablas (page 89)

TALI BEACH (14°05'N, 120°36'E)
There is a pretty good anchorage for NE weather at the W end of the cove in sand.

MAYA MAYA (14°07'N, 120°37'E)
In the NE corner of Nasgubu Bay is David Stone's Maya Maya Beach Resort. There is a small, shallow area enclosed by a breakwater and some moorings outside. Fine to visit in light NE weather, but open to SE. Visiting yachts are welcome. Fuel and water is available and there are limited repair facilities (but no lift). Generally expensive and not particularly attractive. They monitor VHF 68. Email mmyc@mayamaya.com, Website: http://www.mayamaya.com

WHITE SANDS (14°07'N, 120°37'E)
On the E arm of the same bight as Maya Maya, also a fair weather anchorage in the NE season. Please stay outside the swimming area marked by the orange buoys.

WAWA
The river just S of Nasgubu Point is too silted up to enter. [check this, PCP says 2.5 m below MLLW in 1990] Anchorage in NE weather can be had in about 5 m sand just off the river mouth. Most routine supplies and buses to Manila can be had at Nasgubu (pop 76,000, 1990), which is a short trike ride from Wawa.

FORTUNE ISLAND (14°03'N, 120°29'E)
On December 4, 1600 the galleon *San Diego* sank off Fortune I in action with the Dutch *Mauritius*, flagship of Oliver van Noort, after the *San Diego* had successfully boarded *Mauritius*. Accounts differ, but it appears the S*an Diego* was grossly overloaded. The white coral beach on the SE of Fortune I was where the survivors swam ashore. The wreck was located in 53 meters of water by a French team led by Frank Goddio in 1991 and excavated over the next few years. Some of the artifacts are on display in the National Museum in Manila.

Lubang Islands
Phil 4338 Lubang Is [Golo Pass]

LUBANG I (13° 48'N, 120° 10'E)

PORT TILIC (13° 49'N, 120° 12'E)
Charts 4257, 4338

The harbor is reputed to not be as good a typhoon refuge as it appears on the chart, with poor holding ground. Pickard recommended that yachts not be left unattended here, but I do not know whether because of poor anchorage or larcenous inhabitants. Limited supplies are available.

GANTIN BAY (13° 44'N, 120° 12'E) AND TABJIN BAY (13° 42'N, 120° 14'E)
Phil Chart 4338.
Gantin and Tabjin Bays are adjacent to each other on the South coast of Lubang Island. During the NE monsoon, both can provide reasonable anchorage. My preference is Tabjin, on the West side of the charted protruding reef, as the shelter is a little better. No facilities are available. There is also an attractive cove with a small sandy beach about another mile East, which looks like a nice spot for a picnic.

On the night of July 3, 1694 the galleon *San Jose* was lost on Lubang in a typhoon on her maiden voyage. 400 were lost.

Lt. Hiroo Onada, Imperial Japanese Army, held out on Lubang until 1974, when he finally was convinced to give himself up. Lt. Onada had originally been stationed on Lubang in December 1944, after the American landings on Leyte and at San Jose, Mindoro. Onada had been trained in a Japanese military intelligence school for operations behind enemy lines. His orders were to destroy the airfield and the pier at Port Tilic, and to generally disrupt enemy activities until the Imperial Japanese forces returned. When Onada arrived on Lubang Japanese forces on the island were some 75 combat soldiers, about 55 aviation maintenance personnel at the airfield, and about 77 miscellaneous radar, air intelligence and naval personnel.

US forces landed on Lubang a the end of February 1945. By the end of March organized resistance on Lubang had ceased and the roughly 50 surviving Japanese had split up into groups of three or four soldiers. The Japanese government surrendered on August 15, 1945, but there continued to be occasional clashes between patrols and the small groups of Japanese survivors until April, 1946 when 41 of the Japanese concluded that the war was over and surrendered. Lt. Onada was left with a group of four soldiers: himself, Akatsu, Shimada, and Kozuka. They were armed with four rifles, several hand grenades, two pistols and about 2,000 rounds of ammunition. Onada's group kept constantly on the move, subsisting on cows, chickens and crops 'requisitioned' from the locals. In 1949 Akatsu left the group and surrendered. He returned to Lubang with a search party that attempted to convince the remaining three that the war was over with leaflets and by loudspeaker, but the three discounted it as an American trick. Shimada was killed in 1954 in a clash with Philippine troops training on Lubang. This provoked another search party with loudspeakers, leaflets and a brother of each of Onada and Kozuka. Again Onada and Kozuka remained unconvinced, and were gratified at the resources the Americans were devoting to deceiving them. There was another large Japanese search party in 1959, again without success. In 1965, Onada and Kozuka obtained a short-wave radio receiver in one of their raids on a small village, and began listening to Japanese broadcasts. Kozuka was killed in a clash with police in 1972, which provoked yet another unsuccessful search party from Japan, this time including Onada's brother and sister.

Finally, in 1974, Onada walked into the camp of a solitary Japanese adventurer who had gone to Lubang to look for him in a fit of whimsy. Onada agreed to surrender if he received orders to do so from his superior officer. This was arranged in a few weeks. Onada still had his samurai sword, rifle and some ammunition.

The various search parties had left copies of Japanese newspapers that had been found and read by Onada and the others, and since 1965 they had regularly listened to the radio. Somehow, they managed to convince themselves that the war continued. He marveled at reports of the winter Olympics held in Japan - how wonderful that the Olympic spirit allowed nations to compete in sport even during the war!

LOOC BAY (13° 43'N, 120° 16'E)
Phil Chart 4338.

Not to be confused with the Looc Bay on Tablas I.

AMBIL I (13°48'N, *********)
There is a cove opposite Tagbauan Pt., Lubang. It can get gusty at night (?)

MALUVATUAN I (13°52'N, 120° 23'E)

GOLO I (13°39N, 120°23'E)

TANAWAN PT
4338
In NE weather it is possible to anchor in a cove on the S side of Golo I about 2.5 nm E of Tanawan Point Light.

GOLO PASS (13°39'N, 120°23'E)
Narrow, divided in two by rocks, strong current, not recommended.

Verde Island Passage Area
Phil 4214 Verde I Passage

CALAVITE PASS
The wind gets funneled down the pass, so there can be choppy seas with cross wind and tide. Like the Verde Island Passage, the tide floods East and ebbs West, but the monsoonal character of the current is stronger. If the wind and tide are adverse in the NE season, you can wait in one of the anchorages on Lubang or Golo Is or on Mindoro behind Ibitu (Binuagan) Point (page 86). Bangkas heading NE in unfavorable conditions of wind and tide usually stay very close to shore on the Mindoro side of the pass.

VERDE ISLAND PASSAGE
The wind is usually Easterly or Westerly in the Verde Island Passage because of the high ground on both sides. Tidal currents flood East and ebb West, but the current in the N part of the passage flows around Balayan and Batangas Bays. There is also a monsoonal element to the current, especially in the SW season. There are often rips and eddies between Malabrigo and Escarceo Points. An unpleasant chop can appear when the wind and current are in opposite directions. You can expect a fair amount of commercial traffic.

LUZON SOUTH (CAPE SANTIAGO TO)

Balayan Bay (13° 50'N, 120º 48'E)
Very deep and steep-to.

Papagas Bay (13º50'N, 120º40E)
Within Balayan Bay, between the NE side of Cape Santiago and San Pedrino Point (13º 51'N, 120º 43'E). The bay is deep and bordered by reef, but it is reported that there are two small openings at the head of the bay where sheltered anchorage can be had.

Maricaban I (13° 41'N, 120° 50'E)
4257

The cove south of Sepoc Point can be idyllic in fair Northeasterly weather, although completely open to the Southwest. No supplies. 5-6 m, sand.

Port Maricaban is on the North side of the island in the strait formed by Aban I. Despite being mentioned in pilot books and cruising guides as an anchorage, it is poor, with very little room, strong tidal currents and mediocre holding on a coral bottom. Some modest supplies may be available in the village. Further North up the channel, there is more room but the bottom is quite deep and still coral.

The area to the North around Sombrero I and Anilao is popular for diving, mostly because it is close to Manila.

Batangas Bay (13º43'N, 121º00'E)
Batangas is a port of entry, and a dusty, noisy town. It is a busy port with several commercial ship yards and fairly complete services, as well as being a couple of hours from Manila (depending on traffic conditions). It is not a terribly good place for a yacht. Go to Puerto Galera and take a ferry.

Mainga Cove (13º 46'N, 120º 57'E)
6 nm north of Cazado Pt. Said to be more protected in SW conditions for small vessels in Batangas Area. I'd still go to Puerto Galera.

Culebra I (13º 38'N, 120º 57'E)

There is a small resort, and in settled weather room to anchor off the W side of the island.

Verde I (13º 33'N, 121º 04'E)
Generally pretty steep-to. There is said to be a reasonable anchorage in the bay on the N side on southerly weather.

NORTH COAST OF MINDORO I (CALAVITE TO CALAPAN)
The coast between Calavite Point and .....

Ilog Anchorage (13º 29'N, 120º45'E)
An open roadstead at the mouths of the Cervantes and Matabang Rivers (neither of which are navigable). The port for the town of Abra de Ilog, with ferry service to Batangas.

Minolo Cove (13º 31'N, 120º 55'E)
About half of a mile E of Minolo Point, anchorage can be had in 10-15m.

Balateros Cove (13º 31'N, 120º 56'E)
Just to the West of Puerto Galera, has a ramp for the ro-ro ferry to Batangas. Little Balateros Cove is a nice spot in Southerly weather.

Puerto Galera (13° 31'N, 120° 57'E)
Phil Chart 4344 "Port Galera and Varadero Bay".

Puerto Galera is one of the best natural harbors in the Philippines, safe in all weather including typhoons. It is made up of four bays: Muelle, Dalaruan, Boquete and Kalaw. There are two channels into Puerto Galera, known locally as the Manila Channel (NW) and the Batangas Channel (N). The flood tide flows in the Manila Channel and out the Batangas Channel. The easiest entrance to Puerto Galera is usually the NW (Manila) Channel. There is a range at 125º between a white triangular beacon and the light at the top of the bluff opposite the entrance.

Municipal regulation of Puerto Galera Bay seems to be in a fairly constant state of flux. Anchoring fees of approximately 30 pesos per day are presently levied by the town, but rarely collected. Common sense and good seamanship indicate that the central portion of Muelle Bay off the pier needs to be left open for ferry and bangka traffic. Most yachts not using the moorings in Dalaruan or Muelle Bays anchor in the NW corner of Boquete Bay. Anchoring is prohibited in Kalaw Bay.

If you are in Puerto Galera during a typhoon, be aware that the bays will fill up with local shipping and bangkas also taking refuge. The better places to be are those where a dragging freighter will go aground before it hits you. Mostly, this means on a mooring in Muelle or Delaruan bays. Some years ago the famous French diver and film maker Jacques-Yves Cousteau's ship *Calypso* was in Puerto Galera during a typhoon, and was intentionally beached by the crew in the Eastern end of Kalaw Bay.

The Puerto Galera Yacht Club, located on the West side of Muelle Bay, has a pier and dinghy dock, approached by the marked channel. The water is too shallow in the channel and alongside the pier for anything but dinghies. Water is available on the dinghy pier, and the clubhouse at the top of the stairs has a bar and restaurant, showers and a small office. The yacht club maintains some moorings in Dalaruan and Muelle Bays, and can be contacted on VHF 68. Visiting yachts are made very welcome. Ask at the Yacht Club for their current information sheet.

Puerto Galera Yacht Club
Sto. Niño, Puerto Galera, Oriental Mindoro
PO Box 30450
Tel/Fax +63 (0)43 442 0136
Website : http://pgyc.org

A variety of ferries operate between the Puerto Galera area and Batangas, North across the Verde Island Passage. Puerto Galera is a good spot to leave a boat for a trip to Manila or for a longer absence.

There are a variety of resorts in the surrounding area, generally focusing on scuba diving. A fair range of food, ice, drink and local hardware and services are available in Puerto Galera, but prices tend to be higher than elsewhere in the Philippines. Propane bottles can be replaced or sent out for refilling. Better services are available across the passage in Batangas, about one hour away by ferry. There are several restaurants on the pier in Muelle Bay and in the surrounding area. Sabang Beach has resorts, restaurants, several girlie bars and the like. One, the Sunset Disco, shows classic silent comedy films and Mr. Bean (subtitled in Swedish) on two large video screens on either side of the stage where the girls dance.

There is a somnolent coast guard detachment in Muelle Bay, and an immigration officer in the Municipal complex Monday through Wednesday. Visa extensions are available. It is possible to clear in and out of the Philippines at Puerto Galera.

There is a local shipyard on the point at Dalaruan Bay, which performs work on surprisingly large vessels (up to 150 tons or so). It has no means of lifting vessels, all underwater work being performed by careening.

The mountains above Puerto Galera provided a refuge for Capt. Fumio Nakahura of the Imperial Japanese Army until 1980.

Varadero Bay (13° 30'N, 120° 58'E)
Phil Chart 4344 "Port Galera and Varadero Bay".
This is not that good an anchorage, despite being marked on the chart and mentioned in various pilots and sailing directions. The bottom is rock and sand. Depending on wind direction, there can be substantial swell. The object on the drying reef on the SE corner of the bay is locally said to be the boiler of a Japanese warship sunk during WWII.

San Teodoro (13º 26'N, 121º 01'E)
An open roadstead only good in the SW monsoon.

Baco Is (13º 29'N,121º 10'E)
In light NE weathere there is a nice anchorage on the SW side of the center I very close to a sandy beach in about 8 m or on the SW side of the southernmost in about 3 m. The southernmost has a nice reef for snorkelling.

Calapan (13º 26'N, 121º 12'E)
Phil 4257
Not really a great place for yachts. Calapan is the capital of Mindoro Oriental province, and it is a fairly busy port for ferries to Batangas. The commercial pier is on the E side of the point.

Anchorage can be had in 3 m to the S of the pier.

Silonay I (13º 27'N, 121º 13'E)

Anaganaho I (13º 26'N, 121º 13'E)

Eastern Mindoro

Phil 4218
Phil 4305
Phil 4453 Harbors of Romblon, Marinduque and Maestra de Campo Is [Romblon Harbor, Port Balanacan, Santa Cruz Harbor and Masagasal Bay, Torrijos Bay, Port Conception]

POLA BAY (13º 10'N, 121º 28'E)

SOGUICAY BAY (12° 22'N, 121° 24'E)
4339 Anch. SE Mindoro and Tablas I [Loga Bay, Lagara Cove, Buruncapt Pt.]
Typhoon Refuge, but many fish traps.

LAGARA COVE AND PANDAN BAY (12° 17'N, 121° 23'E)
4305, 4339

Reasonably good anchorages in Northerly weather. No supplies except for fish from villagers.

Luzon - Tayabas Bay to Bondoc Pen

Phil 4218, 4267
This section is mostly Quezon province. Lucena is the capital. Most of the people are Tagalog speakers.

COLOCONTO BAY (12° 42'N 12° 27'E)
Phil 4218
Small and foul

LUCENA (TAYABAS RIVER)(13°49'N, 121°36E)
PCP says 137 m wide, 1.8 m at bar, increasing inside. There is an overhead power cable, height unknown. There is a planned new marina and yacht club [check with Danding for details]

PAGBILAO BAY (13° 50'N, 121° 44'E)
PCP 5-60 for directions

PAGBILAO GRANDE I (13° 50'N, 121° 46'E)

Capulaan Bay (13º 53'N, 121º 47E)
NE monsoon

PORT LAGUIMANOC (13° 50'N, 121° 48'E)
4267
PCP 5-61

UNISAN (13° 50'N, 121° 58'E)

[PITOGO (13° 47'N, 122° 05'E)
Check this one - confusion with Pitogo Bay? (page 67)]

MACALEON (13° 45'N, 122° 08'E)

GENERAL LUNA (13° 41'N, 122° 10'E)

TAGABAS BAY (13° 36'N, 122° 16'E)
Supposed to be the best anchorage between Port Laguimanoc and Ragay Gulf.

CATANAUAN BAY (13° 35'N, 122° 18'E)
Good only in NE weather.

MULONAY (13° 31'N, 122° 24'E)
At the mouth of the river of the same name. Approach with the church bearing 070°, anchor in 9m, sand, about 0.4 nm off on the shore reef is abeam to port.

For the Ragay Gulf, see page

Marinduque
Chart Phil 4218

Marinduque is a province in itself, with the capital at Boac. The population of the island (185,000, 1990) is mostly Tagalog.

PORT BALANACAN (13° 32'N, 121° 52'E)
Chart Phil 4453, 4218

Two small but very well protected anchorages surrounded by high hills. Typhoon Refuge in the inner harbor. Beware of dangerous electric cable crossing to island in center and to N shore. There is a power barge that can be noisy if anchored close to the statue of the Virgin Mary. Jeeps are available to Boac, and ferries to Lucena. [see p.54 pub 162 for directions.]

SAN ANDREAS ISLANDS (13° 34'N, 121° 51'E)
Two small islands W of San Andres Pt. A reef connects the two islands that dries at extreme low tides. Tide rips to the W.

SAYAO BAY (13° 32'N, 121° 55'E)
Too steep for anchoring.

CALANCAN BAY (13° 32'N, 121° 59'E)

SANTA CRUZ I (13° 31'N, 122° 07'N)
There is an uncharted concrete causeway on SE side of island that runs SSW for 90 m.

MANIUAN I (13° 32'N, 122° 07'E)

MOMPOG I (13° 31'N, 122° 11'E)

SANTA CRUZ HBR (13° 30'N, 122° 04'E)
Chart Phil 4453

The biggest town on the island. It boasts a Spanish church built in 1714. There is a good anchorage to the West of the pier, with easy access to town. Ordinary supplies are available.

Typhoon Refuge

MASAGASAI BAY (13° 25'N, 122° 07'E)
Chart Phil 4453

Typhoon Refuge possible to the N of the center of the island. The entrance to the S is only suitable for very shallow draft boats at high tide.
Santa Cruz Harbor

GASAN (13° 19'N, 122° 34'E)
Open to SW winds. Can be rolly in NE. There's a small market N of town, across the bridge.

ELEFANTE I
(just S of Marinduque) has a Japanese resort called the Fantasy Elephant Club [maybe closed?]. Supposed to be a good anchorage in sand, but deep, on a small shelf on the N. side.

TRES REYES IS (13° 14'N, 121° 50'E)
Gaaspar, Melchor and Baltazar Is. Cliffy.

In 1980 the wreck of a 200 year old Chinese trading junk was discovered 100 m N of Gaspar I in 38 m of water. It was excavated, yielding much porcelain, but the occasional piece still shows up.

BOAC (13° 27'N, 121° 50'E)
The capital of Marinduque province. A lousy place to anchor, but excellent for provisioning.

Islands Between Marinduque and Tablas

These are part of Romblon Province.

MAESTRI DE CAMPO ISLAND (12° 56'N, 121° 43'E)
Phil 4453, 4218

Maestri de Campo (sometimes Maestro de Campo or Maestre de Campo) I is 344 m high. with two possible anchorages on the S side and a cove on the NW. Just off the North coast lies the wreck of the ferry *Mactan*, an interesting dive site with the top of the wreck about 80' below the surface.

Bakhawan Bay (NW Cove) (12° 57'N, 121° 41'E)
This is a pretty good anchorage in fair weather, although the best depths are mostly found close to shore. Good shelter during the NE season.

Port Concepcion (12° 56'N, 121° 43'E)
Phil 4453, 4218

Very limited supplies available. Port Concepcion proper is the Western leg of the bay, which is the best anchorage, as far North as possible. During the NE season heavy squalls can blow down

the mountains. There are two small Japanese wrecks from WWII off the end of the stone pier, and an older wreck in the middle of the bay. As visibility is generally poor, none are that interesting for diving. Not a good anchorage in E or SE winds. The municipality has begun to charge 100 pesos a day for anchoring.

Agbatang Bay (12° 54'N, 121° 42S)

Agbatang Bay is not as good an anchorage as Port Conception, but is beautiful in fair NE weather. On entering keep the two stakes to port. Anchor in about 9 m about 100m from the top of the bay. The residents of the area are very friendly.

Mactan Wreck

[History of wreck -- apparently was taking on water in bad weather, skipper was able to beach and get the passengers off, but then slid off to present position.]

[Chartlet to locate *Mactan* Wreck]

The *Mactan* is lying on her starboard side on a sandy bottom with the bow in about 30 m and the stern in about 50 m with the top of the wreck in about 25 m. The wreck is reputed to be covered in spectacular soft corals. It is in about 12° 57.06' N, 121° 42.95'E, somewhat to the East of the wreck charted on Chart 4218. It can be located for diving by echosounder in the vicinity of the intersection of the range of the church and the end of the point to the West, and a blue roof in the village and the West side of the same point

DOS HERMANAS IS (13° 02'N,121° 55'E)

Depths generally preclude anchoring here. There is a small indentation on the Northeast side of Carlota I off a coral spit that can be used in Southerly weather. In light weather one can also anchor in 6m, sand off the West end. The diving is unexceptional.

BANTON I (12° 13'N, 122° 04'E)

There are two or three nice coves in the NW corner of the island with deep but feasible anchorages. One of the coves has a water pump in the rocks on the shore, with friendly people. The coral gardens on the East side of the island are a nice shallow diving area (around 10 meters). There is also one of the most spectacular wall dives in the Philippines off the cliffs at the East end of the North coast, under some graffiti reading 'batch ' or 'class of 93'. The wall is very close to the cliff. There can be a substantial current.

Jonestown, the main town just South of Tugbungan Point, has a stone pier with a reasonable anchorage in SW weather in 7-12 meters, sand. Jonestown has a nice Spanish feel, and is very clean.

On the West side of the island is the village of Mainit ('hot' in Tagalog) - the beach is reputed to be hot at low tide from volcanic action.

Just SE of Banton I in 18 m is a shoal with many fish - a good dive.

BANTONCILLIO I (12°53'N, 122° 00'E)

The island is a small, pyramid shaped rock. In NE weather anchorage can be had in a cove on the West side in very clear water over nice staghorn corals. The effect of the current sand mining operation remains to be seen.

SIMARA I (12° 48'N, 122° 04'E)

What appears on the chart to be a bay on SW corner is a bight in mangrove swamp fully enclosed by reef. In fair weather it may be possible to anchor close to the ferry pier and prominent

concrete shed off the town of Corcuera, just W of the S point of the island. The beaches have been removed by sand mining.

RANGER REEF
A small reef with 12 feet of water over it is 2.2 nm ESE of the peak of Simara I. Heavily damaged by blast fishing.

Romblon, Tablas, Boracay, and Sibuyan Is

Phil 4410 "Tablas I and Vicinity" (Tablas, Romblon, Boracay);
4411 Sibuyan and Romblon Is (Romblon, Sibuyan)
This is all Romblon province, together with the smaller islands to the North. The population of 227,000 (1990) speaks mostly Visayan and Hiligaynon/Ilonggo.

For the East coast of Mindoro see page 75; for the North coast of Panay see page 82.

ROMBLON GROUP

Cobrador I
Nice white beach with good snorkeling

Alad I (12º 37'N, 122º 15'E)
For NE weather, there is a very pleasant anchorage on the S side just in the lee of Bombon Point in about 50' at the edge of the reef. The village has several sari-sari stores and there is water. Said to be some good diving to the SW and NE of the island. There is a second nice looking cove to the W.

Lugbung I
Forms Port Romblon. Nice Beach. In NE weather there is a nice anchorage in the lee of the sandspit running to the SSE off the SW end of the island.

Romblon I

Port Romblon (12° 35'N, 122° 16'E)
Chart 4453

A good, but deep, anchorage in an interesting, clean little town, capital of Romblon province. There is a market, and fuel is available. Ice can be obtained on a days' notice. Romblon is famous for its marble, said to equal the best Italian marble. There is a magnificent Spanish church (1726) and two forts built in 1640, one on Santiago hill overlooking town and one in San Andres. There is ferry service to Batangas and elsewhere. Although listed as a typhoon shelter, the depth of the harbor makes sheltering a yacht problematic. If time allows, Looc Bay, Tablas might be a better choice. The best anchorage in fair weather is in about 20 m at the N end of the S bay. In bad weather I would consider anchoring at the S end of the S bay with a few lines ashore.

The charted shallower area on the NW side of the S bay is partially taken up by an ongoing reclamation project.

The bays on the E side of Romblon South of Port Romblon look good from a distance. There is a nice little resort in one of them from where you can either trike or bangka into town.

TABLAS I
Phil 4410 "Tablas I and Vicinity" (Tablas, Romblon, Boracay)

The main route for shipping between Manila and points South passes N and E of Tablas I. Looc Bay is a good typhoon harbor, and in better weather sheltered anchorages may be found on both sides of the island depending on the season.

Shortly before midnight on December 20, 1987 the Sulpicio Lines ferry M/V *Doña Paz*, (2,215 tons) en route from Tacloban, Leyte to Manila (stop in Catbalogan, Samar) collided with the Caltex tanker M/T *Vector*, in Tablas strait. The ships erupted in a fireball. There were at least 3,000 passengers on the *Doña Paz*, and possibly as many as 5,000. There were 28 survivors, mostly badly burned. Probably the worst peacetime marine disaster in history. [5] Testimony of survivors alleged that there was no one on the bridge of the *Vector*, and that the Captain of the *Doña Paz* was drunk and playing ma-jong at the time of the collision.

The major town on Tablas is Odiongan, on the South shore of Odiongan Bay. The bay and associated port of Poctoy, some 1.8 miles NE by road from Odiongan, are not terribly good anchorages. There is an airport.

Looc Bay (12° 15'N, 121° 58'E)
4339 Anch. SE Mindoro and Tablas I [Loga Bay, Lagara Cove, Buruncapt Pt.], 4410

Excellent shelter in all weather, including typhoons. There is also a Looc Bay on the SE end of Lubang I. (Page 71) with which this should not be confused. Be wary of Looc Reef and the reef off Cauit Point, both shown on the chart. Some limited supplies are available in the village of Looc, but most requirements would be more easily met by taking a jeepney to Odiongan.

Directions:

From a point bearing 091° from Agoho Point, head towards Agoho Pt. until the summit of Mt. Lunas (ht 1556 ft, 474 m) bears 055°, then turn to 055° through the channel (46 m) until either (1) for the South arm of the bay, Cauit Pt bears 331° then South, or (2) for anchorage off the town of Looc, remaining on the course of 055° until Cauit Pt bears 294°, and then steer 144° to the anchorage.

There is a green flashing light on Looc Reef on a concrete pylon.

San Agustin
Open to the N, E and SE. Possibly OK in settled SW weather.

Carmen Bay (12° 37.0'N, 122° 07.2'E)
Carmen Bay is a wide bay open to the SE, S of Tablas Summit between Campaig Pt and Baillan Point. There is a very placid anchorage in the far NW corner of the bay, in 20' coral. It is sheltered from NE winds. There is a waterfall ashore that is a nice place for a shower.

Tugdan (12° 19'N, 122° 05'E)

The lee of Tugdan Point might be fine in settled SW weather.

Lauan Cove (12° 12'N, 122° 03'E)

Good in SW weather

Calaton Cove (12° 11'N, 122° 03'E)

---

[5]The loss of RMS *Titanic* in 1912 had 1513 dead. In wartime, the highest casualties in the loss of a single vessel was probably when Soviet submarine S-13 (Cdr A. Marinesko) sank the transport *Wilhelm Gustloff* in the Baltic Sea on the night of 30-31 January 1945. The *Wilhelm Gustloff* was carrying close to 7,000 people fleeing the advancing Soviet army. There were 904 survivors.

South of Calaton Point reasonable shelter can be found from NE winds, There is no market, but water is available. The reef edge is pretty abrupt in the head of the bay. Anchor in 10-15 m to make sure you're off the reef. A pretty spot.

Calbahan I

It may be possible to sneak in behind here. It has potential as a typhoon hole if not too shallow.

Santa Fe

Open to the SW. A good quick alternative to Looc Bay in NE weather.

CARABAO I
There is one town, San Jose, with a population of about 7,000 (1990). A nice anchorage can be had on the E side off a sandy beach during the SW season.

BORACAY ISLAND (11° 58'N, 121° 55'E)' (FORMERLY BOROCAY I)
chart 4410

A touristic island heavily promoted for its long white sand beach, claimed to be one of the best in the world. Many opportunities for entertainment. Some supplies are available. Anchorage to the West of the island inside the reef can be approached from the North through a pass said to be "opposite Friday's" or from the S end of the island, commencing at a point about 0.5 nm off the reef, due west of the S end of the island. Proceed E until a white painted rock is sighted on the beach, then toward the rock and then N parallel with the beach about 100 m off. Anchorage can be had in about 4m opposite 'Sir Albert's' There is a lot of bangka traffic inside the reef. Anchorage may also be had outside the reef in about 7 m on the SW side of the island.

A quieter alternative is off the SE of the island, where it is also possible to work in between the reefs in good visibility.

All should be approached with caution and in good visibility. All are only appropriate in settled weather, as it may be difficult to exit the anchorage in darkness or bad weather.

[insert Chartlet]

The passage between Boracay I and Panay I is deep and clear of dangers, but can have strong tidal currents.

For the North coast of Panay, see page 82

SIBUYAN I (12° 25'N, 122° 35'E)
4411
Sibuyan is very mountainous and much less developed than Tablas and Romblon. The only anchorages are partly protected roadsteads.

Cauit Point (12° 16'N, 122° 38'E)
At the S end of the island by Azagra Barrio, anchorage can be had on either side of the point depending on the season.

Mading (Magellanes) (12° 30'N, 122° 31'E)
In the SW season

Espana
Anchor SW of island in the NE season.

Cresta De Gallo I (12° 12'N, 122° 42'E)
5.8 nm SE of Cauit Pt., Sibuan I. Reefs in the area are good diving. Supposed to be able to anchor off the S end in settled weather.

See page 89 for Masbate.

Panay Island

The treatment of Panay is split up into North, South, East and West. For the N coast of Panay from see below. For the East coast of Panay (from point see page 92. For the West coast of Panay (from Pucio Point to Naso Point) see page 83. For the short section of S coast, between Naso Point and the South end of the Iloilo Strait, see page 83.

Panay is composed of four Ilonggo-speaking provinces: Antique, Aklan, Capiz and Iloilo. San Jose is the capital of Antique, which extends along the West coast. Aklan is along the West end of the North coast, with its capital at Kalibo. Capiz is along the East end of the North coast, with its capital at Roxas. Iloilo is along the Southeast coast, with its capital in Iloilo City.

NORTH PANAY

Treated from East to West from Pucio Point to Bulacare Point (11º 31'N, 123º 09'E).

Buruanga Point (11° 52'N, 121°53'E)
It looks like there may be a reasonable anchorage in NE weather to the S of the point in 6-9 m. It may be possible for a shallow draft yacht to enter the Buruanga River at high tide.

Ticlan (11°56'N, 121° 56'E)
Charts 4414, 4410
On North Coast of Panay just across from Borocay. There is a Petron station right on the beach to service the bangkas that make the Borocay run. In reasonable weather an easy place to load fuel in containers across the beach.

Port Batan (New Washington) (11° 35'N, 122° 29'E)
Chart Phil 4413
The Aklan River was dredged in 1986 up to New Washington. New Washington is probably well enough protected to be used as a typhoon refuge. Caution is required for shifting sand banks, tidal flow and missing buoys. The outer buoy was there in 1999. New Washington is the port for the provincial capital of Kalibo, which might be a better place for provisioning than New Washington. Banga Bay is a possible alternative to New Washington as a typhoon refuge.

Sapian Bay (11° 33N 122º 36E)
There is an anchorage about 50 m from 2 small islands protected from the NE. Generally the bay is very shallow and has many fish traps and impoundments. Some charts of the area between here and N Negros may have mixed fathoms and meters in places.

Olutaya Island(s)
Maybe nice?

Port Capiz (11º 36N, 122º 43'E)
Although there are big breakwaters, the channel is very narrow and the chart inaccurate from silting and shifting sand. Stay very far to the N edge of the channel if you want to go in, but in NE weather the best shelter is probably outside. Inside in Capiz Bay is a possible choice for a typhoon refuge, but the Port Batan area about 15 nm East is probably better.

Pilar Bay (11º 33N, 123º 00E)

Jintolo Channel (11° 48'N, 123° 05'E)
See page 89 for Masbate Island.
Between Panay and Masbate. On October 26, 1944 American planes from light carriers supporting the landings on Leyte caught and sunk the Japanese light cruiser *Kinu* and destroyer *Uranami* here. They were on the way to Manila after landing reinforcements at Ormoc, Leyte.

WEST PANAY
Phil 4414 Northwestern Panay
Phil 4415 Southwestern Panay [San Jose de Buenavista]
Treated South to North from Pucio Point to Naso Point. The West coast of Panay is a succession of long beaches between low headlands. None of the rivers are navigable, and most of the available anchorages are really only useable in light NE weather. There are many FAD buoys and unlit fishing bangkas making night sailing hazardous.

For the N coast of Panay see page 82. For the East coast of Panay see page 92. For the S. Coast, from Naso Point to the South end of the Iloilo Strait, see below.

Pucio Point (11°46'N, 121°51'E)
The coast running E of Pucio Point may provide a lee for anchoring in NE weather, especially about 10 miles East in Pandan Bay (11°44'N, 122°05'E). Pandan Bay is, however, fairly steep and deep.

Maniguin I (10°36'N, 121°41'E)
25 miles SW of Boracay with large steep-to fringing reefs. Not really a safe anchorage in any season, but popular dive destination from Boracay and nice short stop in good weather.

Lipata Point (11°28'N, 122°03'E)
Is said to provide the best anchorage in the area in SW weather, which isn't saying too much.

Batbatan I (11° 28'N, 121° 54'E)

Anchorage can be had in NE weather in a small indentation on the SW side off a small village off the reef in about 15 m. Be cautious approaching the reef as it is quite steep. In SW weather it may just be possible to hang off the N side of the island off the Batbatan village.

Maralison I (11°25'N, 122° 01'E)

. San Jose de Buena Vista (10° 44' 121°56'
A reasonable anchorage during the NE monsoon, exposed to the South and West. The capital of Antique province, with bus and ferry service.

Bayo Point (10°27'N, 121°55'E)
The indentation to the SE might be promising in NE weather.

Nogas I (10° 25.1'N, 121° 55.3'E)

SOUTH PANAY
Phil 4415 Southwestern Panay [San Jose de Buenavista]
Treats Panay from Naso Point (10°25'N, 121° 56'E) to the south entrance of the Iloilo Strait.

Juraojurao I (10° 25'N, 121° 58E)
Although called an island, Juraojurao is in fact connected to the mainland on the N. There is a safe anchorage in NE season in mud in 5-10 m. on the W side. Supplies may be available in the village of Anim-y opposite Nogas I .

There are a profusion of FAD buoys along the coast of Panay between Naso Point and the South end of the Iloilo Strait.

For Iloilo strait see page 94. For Guimaras see page 95. For the West coast of Negros I see page 99.

South and West Mindoro

Treated S to N. See page 73 for N Mindoro, page 75 for East Mindoro.

Semirara Islands
This group is off the Southern tip of Mindoro, and is part of Antique Province, which is mostly the West coast of Panay.

Semirara Island (12° 05'N, 121°10'E)
Chart 4337 doesn't show the new Dapdap breakwater and pier for loading coal in Iloga Bay on the E side. In NE weather a reasonable anchorage can be had in about 5m after a cautious approach N of the main section of Iloga Bay, but the many fish traps and impoundments fill what appear on the chart to be the best spots. In SW weather it may be possible to anchor deep in Iloga Bay close to the coal loading facility, but it is very dirty with foul smoke. No supplies of note are available.

In late 2000 and early 2001 there was a plan to dispose of some of metropolitan Manila's garbage by barging it to Semirara and dumping it there. The plan seems to have been cancelled by president Estrada as one of his last official acts before the 'EDSA II' change in power after strong protests and a court order prevented the unloading of the first two barges of garbage.

Sibolon I (12º 06'N, 121º 35'E)
Said to be possible to anchor off the SW side in 11 m.

Laluya I

Libagaco I (12º 12'N, 121º 30'E)

Pangiatan Cay

Mangarin Bay (San Jose)(12° 21'N, 121° 03'E)
Phil 4340
Can be a bit rolly with swell. The shore of the bay is fairly steep to, so be cautious not to get too close. It is also possible to anchor in the mouth of the river to the S of the town. A fairly wide range of supplies are available in San Jose, which has a population of over 100,000. There is an airport. Charted reefs can be difficult to make out. Ilin Strait (12° 16'N, 121° 06'E), which goes between Mindoro and Ilin Island (below) is well protected, but depth, traffic and fish traps on both shores make anchoring difficult. Try in 14-16 fathoms (25-30 meters) at the North end about 250 meters off the Mindoro side. Not adequate for bad weather.

Ilin I(12° 14'N, 121° 04'E)
Phil 4340
There are some possible anchorages in the NE season off the SW coast.

Ambulong I (12º 13'N, 121º 01'E)
Phil 4340
Ambulong I is separated from Ilin I by the Ambulong Strait and fringed with reef all the way around. The flood current sets S and the ebb N through the strait. Siliong Bay (12° 11'N, 121°04'E) between the E side of Ambulong and the SW of Ilin is reported to have poor holding ground. On the SW side, Bognao Inlet (12° 12'N, 121° 01'E) looks fairly promising as an anchorage on the chart, which shows a small bay with one fathom depth in the entrance. Likewise, on the Southeast side, Cocurrayan Inlet (12° 12'N, 121° 02'E) behind Buri I lloks reasonable on the chart for most weather, although probably conditions of good visibility would be necessary to see the reef.

Sabalayan Anchorage (12° 50'N, 120° 46'E)
Charts Phil 4305, 4337
Quite a nice anchorage in NE weather to the SE of Sablayan Point. With care, it is possible to enter the lagoon in the NE part of the bight, although the shelter is perfectly adequate outside the lagoon. Be sure to leave enough room for ferries to get to the pier -- they sometimes arrive in the middle of the night. A fairly reasonable range of supplies is available in the town of Sabalayan located a little North of the bay. In SW winds anchorage would be best to the North of the Pandan Islands. The French managed Pandan Island Resort, on the S side of N Pandan I, toward the E end, welcomes visiting yachts. A nice stop for a good meal ashore. The resort also runs a bangka to town. They ask that yachts use the moorings provided and not anchor on the reef.

On the night of 8-9 July 1944 the US submarine *Nautilus* (SS-__,) landed 19 men and 12 tons of supplies on North Pandan I by rubber boat.

Mamburao Bay (13º 12'N, 120º 26'N)
Mamburao is the capital of Mindoro Occidental province. Steer 060° to the prominent provincial capital building E of the town proper to avoid the reef. The bay is open to the S and W, the reef affording little or no protection. The beach is quite flat, and anchorage must be made fairly far off the shore. Holding is mediocre in soft mud. Mamburao is something of a fishing and boat building center, with many large bangkas around. There is an airport. Smaller bangkas can enter the river, which has depths of 2-3 ft at low tide. There are some small coves to the W that may have enough space for a small yacht to anchor in NE weather. Beware of the reefs.

In the 1760s Iranuns from Mindanao had established a semi-permanent base for raiding here. The Spanish, along with native auxiliaries, were eventually motivated to deal with it in 1770, when the Iranun captured a large Chinese junk bound for Manila, forcing the galleon *San Joseph* to sail for Acapulco with a partial cargo.

In NE weather there can be strong, gusty winds off the coast between Sabalayan and Mamburao.

Igsoso Bay (13° 16'N, 120° 31'E)

Anchorage is possible in center of bay in about 16 m. The bottom is very steep.

Paluan Bay (13° 23'N, 120° 25'E)
4343, 4305
The best anchorage is in the NE corner of the bay off the town of Paluan in 3-4 m. Pamutsin Cove, on the W edge of the bay, is filled with fish traps and impoundments. A fair range of fresh provisions is available. Only a reasonable anchorage during the NE season.

Ibitu (Binuagan) Point (13º 27' (29'?)N, 120º 18' (19'?)E)
Shelter can be had during the NE monsoon in the small bay S of the point in about 10m, sand, about half a mile from the beach at the head of the bay. It is said to be possible to anchor in the next bay South as well. A good place to wait for the tide in the Calavite Passage.

See page 72 for discussion of the Calavite Passage and the North coast of Mindoro.

MINDORO STRAIT

Apo Reef (12° 40'N, 120° 25'E)
4337

Diving at Apo reef is supposed to be best in March, April and May. There is a reasonable anchorage in between the reefs, adequate in fair weather. Apo Island, with the lighthouse to the W of the reef should not be confused with the Apo I off S Negros (page 98, in 9° 05' N, 123° 16' E). In NE weather it is possible to anchor on the SW side of Apo I to the W of a white sand beach in about 6 m, coral. In SW weather it is possible to anchor to the E of the sand spit at the S end of the island, with care for the coral heads.

Luzon - Ragay Gulf to Burias Pass

The East side of the Ragay Gulf is Quezon province, mostly Tagalog speaking.

GUINAYANGAN (13º 53'N, 122º 30'E)

CAGMANABA BAY (13º 05'N, 123º 19'E)
Good shelter.

PASCAO ANCH. (13º 29'N, 123º 02'E)

KAIMA BAY (13º 42'N, 122º 45'E)

The East side of the Ragay Gulf is Quezon province, mostly Tagalog speaking.

PORT PUSGO (13° 32'N, 122° 36'E)
Phil 4454
Typhoon refuge.

VIÑAS RIVER (13° 55'N, 122° 27'E)
Typhoon refuge.

GUINAYANGAN (13º 53'N, 122º 30'E)

CAGMANABA BAY (13º 05'N, 123º 19'E)
Good shelter.

PASCAO ANCH. (13º 29'N, 123º 02'E)

KAIMA BAY (13º 42'N, 122º 45'E)

PANGANIRAN BAY (13º 01'N, 123º 24'E)
Provisions available at Mugorodongdong, but mediocre anchorage.

Burias and Ticao Islands

BURIAS I (13° 00'N, 123° 15'E)
Chart Phil 4218, "Ragay Gulf to Tayabas Bay"
Treated clockwise from Port Busing (NW corner)

Port Busing (13° 08'N, 122° 58'E)
Phil 4454

Town of San Pascal Typhoon Refuge

Port Busianga (13° 07'N, 123° 02'E)
Phil 4454

Said to be an excellent typhoon refuge. See PCP 5-73.

Dampalan Bay 13° 02'N, 123° 06'E

Nonoc Bay 12°56'N, 123° 11'E

Port Boco Engaña 12°47'N, 123° 19'E
Not recommended- deep, hard bottom, little room.

Nabasagan Bay 12° 51'N, 123°13'E

[3 unnamed W and SW facing bays on SW side]

Ilog Bay 13°00'N, 123°04'E

Guinduganan Point

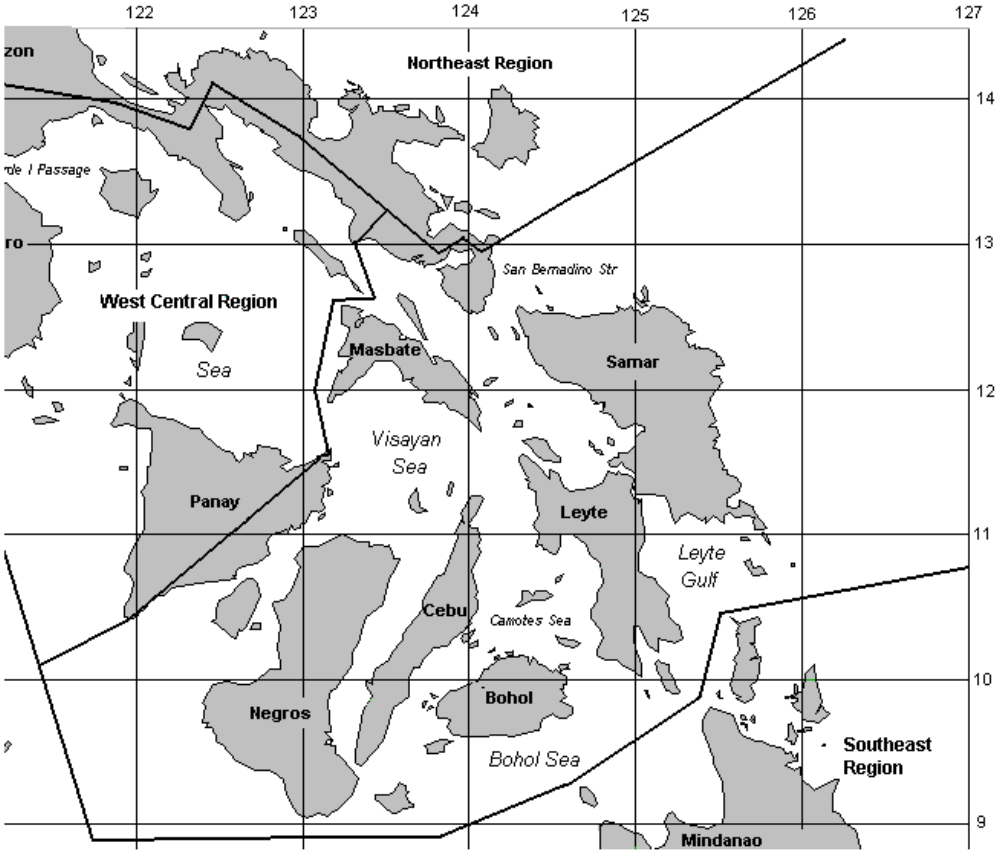
Guinduganan Bay (13° 02'N, 122° 58' E)

ISLANDS OFF NW POINT OF BURIAS

TICAO ISLAND (12° 30'N, 123° 43'E)
Phil 4219 "Passages Between Luzon and Masbate"

Port San Miguel, San Miguel (12° 40N, 123° 35E)
4454
Typhoon refuge

EAST CENTRAL REGION



Luzon - Burias Pass to San Bernadino Strait

4454 Harbors on Burias and Ticao Is and Ragay Gulf [Port Pusgo, Pasacao Anch, Port Busin, Port Busainga, Port Boca Engano, Port San Miguel, Port San Jacinto, Taclogan Bay]
Phil 4219 Passages between Luzon and Masbate and Sorsogon Bay
Phil 4220 San Bernadino Strait and Samar I
Phil 4218 Ragay Gulf to Tayabas Bay

For Tayabas Bay, see page 75.

TINANOGAN BAY

PORT PUTIAO (12° 52'N, 123° 40'E)

PORT PANLATUAN (12° 52'N, 123° 42'E)
The NW arm is said to be a good typhoon refuge in 3-4 m, mud.

SORSORGON BAY (12° 55'N, 123° 55'E)
4219

Typhoon Refuge

BUTAG BAY (12° 37'N, 123° 56'E)
Open to the S.

SINANGATAN BAY (12° 33'N, 124° 01'E)

GINABLAN BAY
About 3/4 nm E of Sinangatan Bay. A good spot to wait for a favorable tide for the San Bernadino Strait.

SAN BERNADINO STRAIT
[to come]
For Samar see page 89

Masbate

Phil 4455 Harbors on the Coast of Masbate [Port Barrera, Masbate Hbr, Port Cataingan, Nin Bay]
Phil 4412 Western Masbate
Phil 4418 Southeastern Masbate

MASBATE ISLAND
Both Bicol and Visayan, as well as Waray, Cebuano, Hiligaynon and Tagalog are spoken in Masbate. There are very few tourists.

PORT BARRERA (12° 31'N, 123° 23'E)
Typhoon refuge.

MASBATE HARBOR (12° 22'N, 123° 37'E)
Masbate town is the capital of the province of Masbate, which also includes Burias and Ticao. There is an airport with flights to Manila. Anchoring in the harbor is prohibited -- one must secure to the wharf. Typhoon Refuge.

PORT CATAINGAN (11° 57'N, 124° 03'E)(CHECK POS'N)
Typhoon Refuge

NIN BAY (12° 13'N, 123° 15'E)
Typhoon Refuge

LOOC BAY (12° 10'N, 123° 15'E)
Yet another Looc. Anchorage to the east of the island separating Nin Bay from Looc Bay. 10'.

NORO BAY (DEAGON I)
38 nm from Maripipi (?) anchor in 5 m sand 4-500 m off beach on NW coast of Island. Protected in both NE and SW weather.

JINTOTOLO ISLAND (11° 50.5'N, 123° 07'E)
In fair weather it is supposed to be possible to anchor off the S tip of Masbate.

Samar

Phil 4220 San Bernadino Strait and Samar I
Phil 4420 Calbayog to Tacloban
Phil 4456 Harbors of Samar and Leyte [Jibatan R, Santo Nino Harbor, Parasan Harbor, Biliran Strait, Port Pomplon]
Samar is the third biggest island in the Philippines.

SAN JUANICO STRAIT
The Tacloban Bridge is supposed to have a vertical clearance at high tide of 101 Feet. There is also a high power line.

NORTH SAMAR
There is supposed to be good diving in the Balicuatro islands.

SAMAR, EAST AND SOUTH

Helm Harbor (12° 18'N, 125° 21'E)
Typhoon Refuge

San Ramon Bay (12° 17'N, 125° 23'E)
Typhoon Refuge

Matarinao Bay (11° 15'N, 125° 34'E)
Is this a typhoon shelter?

Pambuhan (Pambugan?) Harbor (11° 14'N, 125° 32'E)
Typhoon Refuge

Calicoan I (10° 57'N, 125° 47'E)
4423

Site of the new/proposed Caliocan Yacht Club and Marina on the W side.

Guiuan (11° 02'N, 125° 43'E)
4423, 4467

Gordon points out that the reefs here are complex and risky.

Manicani I (10° 59'N, 125° 38'E)
4423

Gordon mentioned that it was possible to anchor here but not a great spot from his POV.

Homonhon I (10° 45'N, 124° 43'E)
4423

Magellan's first landfall in the Philippines in 1521. The best anchorage is E of the S end of Montoconan I in the middle of the bight. 11-20 m, sand. Good for all except SW weather. The best approach is to follow the W coast of Homonhon about 500 m off.

Suluan I (10° 45'N, 125° 57'E)
4423

Easternmost island in approach to Surigao strait. Gordon thinks may be a couple of miles off its charted position. Excellent anchorage in bight between reefs on SW corner of island off village of Granadas, protected in all but SW weather. Nice people. Pretty remote, with no air service.

SAMAR SEA

Santo Nino Island

Santo Nino Harbor (11° 56'N, 124° 27'E)
Phil 4420, 4456
Well protected cove with small village listed in US Pilot as typhoon shelter. Presence of many fishing boats might be a problem in blow.

Canahauan I.

Port Aguirre (11° 49'N, 124° 42'E)
Phil 4420

Said to be reminiscent of the Yasawas (One of the garden spots of Fiji). Pub 162 says a typhoon refuge.

Capul I
Home of the Abaknun people, who are the northernmost of the Samal-Bajau speakers. The Samal or Bajau are known as 'sea gypsies' having once lived almost entirely on their boats.

Leyte

SAN PEDRO BAY (11° 10'N, 125° 05'E)
4423

G said shallow, some nice anchorages on E side (Mariboot?)

G said good anchorage is off the Sea Stakes Resort

TACLOBAN CITY (11° 15'N, 125° 00'E)
4423

G said best anchorage off Leyte Park Hotel -- a nice Frenchman, ex sailor.

MAASIN
Maasin is a nice, fairly substantial town with a reasonable anchorage. A ferry port. Good place to do a small resupply. Nice resort reported SE of the town. It may be better to anchor S of the town off the village of Ichon.

DARAM IS
Gordon liked Campa't Bay, Parasan I.

BILLIRAN I (11° 35'N, 124° 30'E)
4420

G says nice place

NAVALM
Does not recommend poor protection in harbor and wreck.

BILLIRAN STRAIT (11° 27'N, 124° 29'E)
4456

Now a bridge across the strait. G estimated overhead clearance as around 50'.

BUNGA
G said nice of the beach, town of Cabugayan (?) just up the road

MALAPASCUA I11°55'N, 124° 07'E
Is there more than one Malapascua? I have also the position

11 20.6'	124 06.4'

For it.

Beware of wind shifts at sundown. Famous for it. Beautiful beach and offlying reef.

[if this is the island mentioned as 50 nm E of Sigcogon I, anchorage in 6m sand to NW of I (SE conditions?) SW of a lighthouse 3-400 m off beach protected from NW(?).]

(Off N Cebu: There are supposed to be 3 Japanese wrecks in 30-40m 2-5 nm W and NW of Malapascua. Many sea snakes in the vicinity of Gato I.

There is also a reasonable anchorage in fair NE weather to the S.

SAN ISIDRO, LEYTE
Pretty big commercial hbr. Not bad for provisioning.

PALOMPON (11° 03'N, 124° 23'E)
big commercial hbr

Good anchorage, supplies, water & ice available. Looks nearly typhoon quality on the chart.

ORMOC
unsafe in typhoons, but nice place to visit

Panaon I south of Leyte) east coast village of Caligangan. Friendly people, yachts unusual.

Panaon Strait between Leyte and Panon Island has an uncharted bridge with an unreliably reported height of 12 m. Check before trying. Narrow strait with strong tide.

Liloan Harbor (10° 10'N, 125° 07'E)

Don't confuse with the Liloan Bay on Cebu, page 100

SURIGAO STRAIT
[to come]
See page 106 for Hinatuan Passage; page 105 for Northern Mindanao.

CANIGAO I (10° 15'N, 124° 45'E)
4426

Anchorage close to shore on the NE side

East Panay
(From Bulacare Point (11° 31'N, 123° 09'E) to the South end of Iloilo Strait)

Treated generally N to S

See page 95 for a general discussion of Guimiras and Iloilo Straits.

For North Negros see page 96.

Gigante Is (11° 34'N, 123° 19'E)

Many shallow reefs in the area. The bay on the SW side of S Gigante I has a small village, white beach, and a partial breakwater to shelter bangkas. It may be possible for a smaller yacht to get behind the breakwater at high tide. S. Gigante I has spectacular limestone cliffs and many caves, many of which are not fully explored. One is cathedral-like with white monkeys and a fresh water pool. Local guides to the caves can be obtained in the village behind the breakwater. Yachts are not uncommon, but still get a friendly reception.

The bay in the SSE of South Gigante is good shelter in Northerly and Westerly weather, There are several large shellfish raising floats, easily avoided in daylight.

In SW weather the best shelter is in Gabi Bay, between N and S Gigante

There is a small market in Gabi

Antonia I, to the W of the Gigantes is good shelter in NE weather.

Bolbogon I (Balbagon?) 11°35'N, 123°16'E
Has a small resort that was closed in 1999. In the NE season there is a reasonable anchorage on the SE side.

There may be an error in the chart off the NW of the Gigante group where a reef is charted as 4 fathoms under the water when it is 4 Fm above. Be careful!

Calaghaan I

Bayas I

Bancal Bay (11º 32'N, 123º 10'E)
This area may have some interesting anchorages during the SW season.

Estancia (11º 27'N, 123º 10'E)
There are reasonable, albeit somewhat open, anchorages in several places around Estancia, depending on the weather. Estancia has a nice large market, ferry service direct to Manila and bus service to Iloilo and other points on Panay. Estancia prides itself on its dried fish.

Sigcogon (11º 27'N, 123º 15'E)
There is a nice looking cove for NE weather on the SW side just N of Bouang Point. In SW weather, there is a likely looking cove in the bight S of Tunaguin Islet.

Calagnaan I (11° 30'N, 123° 12'E)
Apad Bay is a reasonable anchorage in most weather. Estancia is reasonably close for shopping.

Odionangan Bay (11º 21'N, 123º 07'E)
Maybe OK in SW weather.

Concepcion Bay (11º 15'N, 123º 07'E)
Looks OK for SW weather. There is supposed to be a good market in Concepcion.

Pan de Azucar Island (11° 19'N, 123° 10'E)
4417

A spectacular looking extinct volcano. The coves N and S of Sombrero I, off the SE of Pan de Azucar Island, are nice places to anchor, depending on the season. There is a sari-sari store in the village by the sand spit between Pan de Azucar and Sombrero.

Platagata Bay
looks good for SW weather.

Igbon I (11º 13'N, 123º 10'E)
The two coves on the S protected by the two islets look good for NE weather.

Tagubanahan I (11º 08'N, 123º 07'E)
5 m anchorage in sand and coral on W of island opposite resort good for NE weather.

Apiton Cove (11º 10'N, 123º 05'E)
There are some fish traps, but plenty of room to anchor in the mouth of the cove in 4-6 m. For NE weather.

Ajuy Bay (11º 09'N, 123º 04'E)
In NE weather there are a number of reasonable anchorages in this large, shallow bay. Try in the E part of the bay sheltered by the islet off Binahan I. Ajuy is a market town.

Nasidman I (11º 05'N, 123º 01'E)
There appears to be a nice anchorage for NE weather S of the sand spit about midway up the W side of the island.

Culasi Bay (11º 05'N, 122º 59'E)
Culasi is a market town with ferries to Bacolod and Iloilo, but the bay is quite shallow and open.

Pedada Bay (11º 04'N, 122º 58'E)
The bulk of the bay is quite shallow, but in NE weather a nice quiet anchorage can be had just inside Nautin Point in 3-4 m, mud. It might be reasonable inside Pedada Point in SW weather.

We were persistently and somewhat drunkenly approached for donations by the 'Culasi Fisherman's Association'. They said that there had never been a yacht there before.

Cañas Bay (11º 03'N, 122º 56'E)

Barotac Bay (11º 01'N, 122º 56'N)
Rather open and shallow. Barotac Viejo has ice and other supplies.

Iloilo City (10° 42'N, 122° 35'E)
Iloilo is one of the major cities of the Philippines. It is the capital of Iloilo province, and a port of entry. There are good supermarkets for provisioning, and a wide variety of services available. There is a substantial commercial shipyard with a graving dock and at least one slipway. The easiest place for a yacht to anchor is probably a bit South of the city, during the NE season [describe] but anywhere seems to be a bit problematic. I prefer to anchor on Guimiras Island.

The river (or possibly one of the abandoned graving docks on the North side) would be a good place to sit out a typhoon, but in ordinary times is dirty and noisy and may be a security problem.

Iloilo Strait
[currents]

None of the charted buoys are present.

From the North, the South channel carries the vast majority of the commercial traffic. The least depth in the North channel is 4-5 m.

[S channels]

South of Iloilo there are many FADs. Probably best not to sail at night here.

GUIMARAS I

Guimiras is a relatively rural place, and another island province. Mangoes are a local specialty. Toward the end of the NE season it may be difficult to find good water. The Southeast coast of Guimiras has many small steep limestone islands, with natural arches and pocket beaches. It is a very scenic area, nice for exploring in a dinghy. The island is treated counterclockwise beginning opposite Iloilo city.

Baras Beach Resort (10° 33.15' N, 122° 31.23'E)

On a beautiful little bay formed by two cliffy islets. There is room for a couple of yachts to anchor in around 10 m, coral. A few yachts (including the owner's) stay here full time. The resort has a modest bar and food service, and welcomes yachts. The anchorage is mostly open to the SW. The best approach is from due South -- the Western entrance doesn't have much water. The resort brings in most of its supplies and guests by bangka from Iloilo City, and it is possible to ride along and do some provisioning.

PO Box 486 Iloilo City,

63 912 520 0820

barasbeach@iloilo.worldtel.phil.com

Santa Ana Bay (10º 33'N, 122º 32'E)

Charts 4448 (20,000) and 4416

A fair typhoon shelter, the bay is partly open to the WSW. Depending on the weather one can anchor off Puyo in the South or in the larger bay to the North. Fresh water is available at the mouth of the Puyo River. Markets are 20 min away by trike or jeep. There is a small restaurant on the pier in Puyo, and a slipway for multihulls where some repairs can be done.

Igang Bay (10º 31'N, 122º 31'N)

Probably better in SW weather.

Lusuran Point (10º 29'N, 122º 29'E)

There are a couple of small bays on the south of the point that may be worth exploring in NE weather. many fishing boats shelter behind the point itself.

[Unknown] Cove (10º 27'N, 122º 30.4'E)

looks nice, don't know how deep it is - there is 5-6 m about 30 m off the entrance.

Tandog I (10º 25'N, 122º 30'E)

In the SW season a reasonable anchorage can be had between the N end of Tandog I and Guimiras. In either season there is a very well protected anchorage between the S end of Tandog and Guimiras, in 6-8m mud. The one on the South is of typhoon quality if you work up between some of the islets.

[other islands to come]

The prohibited anchorage between SE Guimiras and Negros is said to be from unswept mines from WWII.

Beware of FADs in the South entrance to the Iloilo Strait.

Negros

Treated islands to N, then clockwise from the Danao River

NORTH NEGROS

Guintacan

Jilontangan I (11°10'N, 123° 50'E)

Bantayan I (11° 12'N, 123° 45'E)

Chart 4405 (200,000)

Bantayan is a low, sandy island with some nice beaches, a small community of foreigners and a very pleasant laid-back atmosphere. The two major towns are Bantayan, on the SW and Santa Fe on the SE. A reasonable range of supplies is available. Bantayan Town can only be approached at high water by vessels drawing less than 6'. Anchorage can be had off Bantayan Town in 4.5-6 m about 1.5 nm away from the town with Bantayan Light bearing 078° and the church bearing 115°. Probably best in NE conditions. Perla Reef, which bares at low tide, is to the WNW of this anchorage.

Directions: Approach from a point 2 miles W of Patao Islet on a 130° range formed by a large tree on Bantayan I and the center of Panagatan I, passing S of Perla Reef and then heading E when the reef bears 316°.

In Northerly weather anchorage can be had off the S coast of Bantayan to the W of Santa Fe. In SW and light NE weather good anchorage can be had off the Bigud pier, some 4 nm North of the Santa Fe pier. The islands to the N provide some shelter, and if it blows hard one can cross the channel to be in their lee. Close to the Santa Fe pier the bottom is rocky and the holding poor.

Don Islands

The Don Islands run Southwest from the Southern coast of Bantayan towards the NE coast of Negros. Except for Yao and Mambacayao, the two on the SW end, all are connected by a drying reef and are too open for anchoring in NE weather. The lee of Mambacayo looks pretty good for Northerly weather, but Yao reflects northerly swell along the s side of Mambacayo, making it rolly and uncomfortable.

Maca Reef (11º 03'N, 123º 27'E)

The bight on the SW side behind the sand cay is often used by fishing vessels for shelter in NE weather.

There is a square observation tower on concrete piles on the E side of the sand cay in 123º 27.2'N, 11º 03.4'E.

The area has been extensively blast fished and continues to be despite the presence of a fisheries official supposed to prevent it.

Ilacon I (11º 02'N, 123º 12'E)

Said to have an anchorage on the S side good for NE weather with a friendly village and resort.

Escalante Bay (10° 51'N, 123° 33'E)

Danao River (10° 50'N, 123° 34'E)

Chart 4463, 4428

A good typhoon refuge with a difficult entrance. Bar has 12 feet, deepening inside. Channel over bar is supposed to be 'narrow and tortuous'. If using during a typhoon, beware of flooding and refuse coming down the stream.

EAST NEGROS
For the W coast of Cebu see page 102.

Tanon Strait
Between Negros and Cebu, 90 nm long and tapering from 3 nm wide at the South end to 15 nm wide at the North. Currents are strong and complicated toward the South end, reaching 5-6 kts at spring tides and 2-3 at neaps. Generally, the tide floods North and ebbs South.

The wind tends to be canalized somewhat by the strait, N during the NE season and S during the SW season. The S portion of the strait is somewhat protected during the SW season. From July to September during the SW season the weather tends to be squally.

Salamanca River

Ticlin Anchorage (10º 32'N, 123º 28'N)

San Carlos City / Sipaway (Refugio) I (10º 29' N, 123º 25'E)
4466

Villehermosa
(13 nm N of Giuhulagngan)

Anchorage is possible on a sand flat 5-6 m deep, 2-300 m E of town.

About 1.4 nm N of town off the de la Vina sugar hacienda there is an anchorage protected by a detached reef parallel with the shore. [PCP 10-17 gives directions that seem garbled]

Giuhulagngan (10° 07'N, 123° 17'E)
The river is closed by a bar. Anchorage is possible off the town in 5-8m around 550 m off the beach.

La Libertad
The river is completely blocked by a reef.

Calagcalag Bay
Good shelter in both monsoons. The most secure anchorage is at the head of the inner cove 100 m from the causeway in about 6 m mud.

Directions: [Caution! Needs to be checked!]

Approach on 270°, keeping about 228 m South of the reef forming the N side of the anchorage until the rocky point covered with scraggly mangroves forming the N side of the inner section bears 021°. Stand N, keeping a careful lookout for the reefs on each side, until a prominent culvert in the causeway at the head of the bay bears 287°, when it should be in a range with a conspicuous notch in a cluster of bamboo on top of a hill several hundred feet high. Stand in on this range until about 100 m from the culvert and anchor in about 6-8 m, mud.

Bais Bay (09º 35'N, 123º 07'E)
4466

The bay is divided into N and S bays by Daco I and a reef. The N bay has a difficult entrance and several reefs inside.

The S part of the bay is an excellent typhoon refuge with a more straightforward entrance. It is generally fairly shoal. There is a dangerous reef, bare at low water, 550 m S from Arboles Point, the SW most point of Daco I. The rocks at the SW end of this reef are generally visible. There is a

channel between Arboles Pt and the reef that is about 70 m wide with a depth of 11 m, generally marked by stakes.

It is also possible to pass W of the W side of the reef, in a channel 300 m wide and 11 m deep. There is a rocky patch with 1.4 m at the West side of this channel.

The mayor is interested in attracting more yachts . Bias [is][used to be] an important sugar port. Theft has been a problem, so don't leave your boat unattended.

Dumaguete City (09° 19N, 123° 18'E)

4466

Anchorage off Dumaguete is poor: open, steep to and poor holding. At times during the NE season the seas are so bad that commercial vessels cannot go alongside the piers. Dumaguete is a pleasant town. It is the capital of Negros Oriental province, and the home of Siliman University, the oldest Protestant University in the Philippines. It is a secondary port of entry, with an immigration office. A fairly wide range of supplies is available. There is an airport with direct flights to Manila and ferries. Most yachts leave the boat in Port Bonbonon and travel to Dumaguete by bus and 'hubble hubble' motorcycle taxi.

SOUTH NEGROS

Siquijor I (09º 10'N, 123º 35'E)

4604

Lazi Bay (09º 08'N, 123º 38'E) looks bad on the chart but the NW end of the bay by a village and stream is nice in 9 m.

On the SE side there is a mining project that has built a breakwater not shown on the chart. Yachts are welcome.

Port Canoan (123º 36'N, 09º 15'E)

4466

Apo I (09° 05'N, 123° 16'E)

Sometimes locally spelled Apu. A very popular diving destination. There is a 20 ton mooring to protect the coral on the S side, but there is substantial competition for it from the tourist scuba diving operations. Completely open to the S.

The only fresh water on Apo is rainwater or brought in by bangka. There is a fairly constant S flowing current of some strength always present between Apo and the coast of Negros. Do not confuse with Apo Island in Mindoro Strait, next to Apo Reef (page 86).

Port Siyt (09º 04'N, 123º 09'E)

About 1.5 nm NE of Port Bonbanon, Siyt is similar in shape to Bombanon, but more open to the southwest and not as good during bad weather. There are fish pens and traps in the harbor, but probably there is room to anchor. It is said that the reefs at the entrance are usually visible, and the entrance easy.

Port Bonbanon (09° 03'N, 123° 07'E)

Chart 4432, 4466 (10,000, 1910)

A superb natural harbor, secure enough to sit out typhoons. Some yachts stay here more or less permanently. A good place to leave a boat for a while, but less interesting for staying aboard.

The entrance channel is narrow, and can be spotted from the outside by the cliffs on the right (NE) and a fair number of wooden fishing boats in various states of repair on the beach on the

left (SW) side. The chart is still reasonably accurate. Get within 30 m of the cliff on the right side to avoid the fringing reef on the left, and go wide around the right hand turn to avoid the sandbar. Be cautious of anchor lines extending out from the fishing boats on the beach The bay is mostly surrounded by mangroves, with a good sticky mud bottom in 3 - 10 m.

Bonbanon has almost no services. Semi-skilled local labor is available, and a number of yachts have successfully done bottom work by beaching at high tides or using a decrepit looking cradle. There are a couple of sari-sari stores that have slowly expanded into small bamboo bars and restaurants: Dorothy's, on the beach close to the entrance, and Ne-Ar-Ne Store, run by Nicky and Arlene on stilts in the mangroves at the NW edge of the bay. Ne-Ar-Ne monitors VHF 68. Ice is available in limited quantities. The closest market is Siaton, about 20-30 minutes away by 'hubble-hubble' motorcycle taxi on a mostly unsurfaced road (unless it's wet). The city of Dumaguete is a further hour or so away by bus or jeepney. Be cautious about returning too late from Dumaguete, as there may not be a hubble-hubble to bring you back to the harbor.

There is a very pleasant resort restaurant at the Antulan (SP?) Beach Resort, owned by Dumaguete businessman 'Boy' Li located under the lighthouse on Bonbanon Point. It can be reached by hubble hubble, dinghy, or a free bangka from close to the front of Dorothy's.

Rather remarkable loads are carried on the hubble hubbles: sacks of cement, jugs of fuel, sheets of plywood, and up to six passengers. On one motorcycle!

WEST NEGROS

Bacolod

Open, busy, no reason to go there by yacht. The capital of Negros Occidental province, and the commercial center for the sugar industry that dominates the province.

One-hundred and sixteen people died when the ferry MV Don Juan collided with the tanker MT Tacloban City off the coast of Bacolod City at around 10:30 p.m. April 22, 1980. The Don Juan sank within 20 minutes after collision. There were 896 survivors. No accurate passenger manifest for the Don Juan could be found.

Himamaylan (10º 06'N, 122º 51'E)

4431

Binigsian Point (09º 50'N, 122º 22'E)

4431.

lee good in the NE season.

Cartagera (09º 49'N, 122º 23'E)

4431 (100,000)

NE only.

Campomanes Bay (09º 42'N, 122º 24'E)

4431

Open to SW, very deep, but anchorage can easily be had at the far NE end in 10-20 m. In fair SW weather some shelter may be available inside the entrance on the SE side.

Nabulao Bay (09º 38'N, 122º 27'E)

Asia Bay (09º 32'N, 122º 30'E)

4431 (Plan)(10,000)

NE season. Many large fishing boats based here.

Cebu

DMA 92380 East Coast of Cebu [same as Phil 4427]
4465 Harbors in Cebu

Cebu is a long skinny island running roughly NNE-SSW. The island of Cebu is also the province of Cebu. Cebu City, the second largest city in the Philippines after Manila, is the capitol. Cebuano is the predominant language. Treated N to S, first the E side and then the W side.

For :
Bantayan see page 96
Malapascua and the rest of Visayan Sea see page 92
Masbate see page 89
Leyte see page 91
Negros see page 96
Bohol see page 102

EAST CEBU

Bogo Bay (11º 05'N, 124º 01'E)
Charts 4427, 4465 (30,000, 1907)
G says complex entrance with stone markers, fairly well protected. Stone light to right entering, followed by bamboo markers. Pier only has 6" of water alongside at low water.

Bangkas can cross Cebu from Bogo to San Remigan at high tides through the Daijagon Channel. Might be interesting to try in a dinghy.

Capitancillo Island (10° 59.5'N, 124° 06.2'E)
There is a reasonable anchorage off the South end in light NE weather.

Sogod Bay (10º 46'N, 124º 01'E)

Port Carmen (10º 35'N, 124º 02'E)
Charts 4427, 4465 (15,000, 1909)
Be sure to go far enough South on entering. If going into the N branch of the harbor, pass to the E of the large bangka with dip nets. The pier is primarily used to load cement. Yachts usually anchor in the 'gutter' to the right off the pier (entering). A stern anchor may be needed.

South of Port Carmen, in Dauis City, the Japanese partially completed three large graving docks with forced labor during WWII . One has been converted into a small marina and boat repair facility. Zeke, the American manager is an old Philippine hand. Some have only praise for the place, while some warn of sharp practices. Can be gritty and noisy from the adjacent shipyard. Depending on how recently it has been dredged, there may be shoal water in the entrance to the dock. Pinoy Boat Services Phone (63) 32 200 4125 email zerox@irepublic.com.ph

It is possible to use Port Carmen for typhoon shelter, depending on where you are in the port. Crowding can be a signifigant problem.

Liloan Bay (10° 24'N, 124° 00'E)
Good anchorage in 12 feet in the SW corner during the SW season. There is a market and a commercial slipway. It may be possible to get a yacht or two up the Liloan River at high tide to the road pier on the right side just before the bridge. Water and power can be organized. Don't confuse with the Liloan close to the Panaon Strait on page 92.

Cebu City (10° 18'N, 123° 54'E)
Cebu is the Philippines second largest city after Manila. Very bad reputation for theft from vessels anchored in the harbor, whether occupied or not. In the '80s there was a small cruising

community, now gone. Security, currents and the wash from ships always a problem. There are now two bridges between Cebu and Mactan. Both are supposed to have 27 m clearance.

It is possible to anchor in various places in the strait between Cebu and Mactan, but nearly every yacht has had problems with theft, including one that lost a spare anchor off the bow while the crew was asleep below. Finding a place to secure your dinghy is also problematic. In another instance a yachtsman hired a watchman for his dinghy and the watchman used the dinghy to rob the yacht as soon as the crew had gone to town.

It is possible to anchor off the Cebu Yacht Club and arrange at Anton's Restaurant to leave your dinghy. In 1999 the yacht club wanted to charge a cruising yachtsman 300 pesos a day for him to leave his dinghy there.

Cebu Yacht Club - Mactan I
A small marina surrounded by a stone breakwater just N of the new bridge from Cebu city. Seems mostly focused on the local powerboating scene, with lots of dry stored speedboats. Has a reputation of being very expensive. Floating docks, water and electric hook-ups, fuel dock and rather pathetic ships store. Rubber tired steel slipway supposed to be capable of about 70ft and 60 tons. Repairs of all sorts undertaken by local subcontractors, no information on quality.

Cebu Yacht Club, MEPZ, Lapulapu City, 6015 Cebu, Philippines
Tel (63-32) 340-3087, 340-2939 Fax (63-32) 340-3086
Cebu Yacht Club e-mail: cyc@cebu.pw.net.ph

Abelarde Compound (10°19.4N, 123°57.8'E)
A small basin between the bridges on the Mactan side. 2 m depth inside, 1 m in channel, so entry and exit must be made at high tide for most boats. Call Dennis at (63 32) 340 8493.

Tinaan Anch (10° 12'N, 123° 45'E)
4429

Carcar Bay (10° 05'N, 123° 39'E)
4465 (15,000, 1910)
said to be OK in SW weather.

Bangkay (09° 59'N, 123° 37'E)

Argao Pt. (09° 53'N, 123° 37'E)
4465 (25,000, 1910), 4429
For Bohol I see page 102. See page 104 for Cabilao I.

Balanigan (09° 47'N, 123° 20'E)
4430

Sumilon I (09° 25'N, 123° 23'E)
4430
Sumilon was a marine sanctuary managed by Siliman University of Dumaguete since 1974. It was famous for its marine life, and important as a breeding site for fishing in the surrounding waters until the municipality of Oslob, Cebu, of which it is a part, reopened it for fishing. Catches were good for a while, but then crashed to virtually nil. Since then the municipality has been lobbying to have it declared a National Marine Park.

There is a resort.

In SW weather he best anchorage is probably off the beach in the ENE.

Tanon Point (09° 26'N, 123° 20'E)
There is a beautiful beach right at the South tip of Cebu to anchor at in settled weather.

WEST CEBU
Treated North to South.

For Eastern Negros and the Tanon Strait see page(s) 97 and 97.

Daanbantayan I (11°15'N, 123°59'E)
In NE weather there is an anchorage in 6 m in the small bay formed by the breakwater. The town has a small market.

Hagnaya Bay (11º 07'N, 123º 56'E)
4465 (30,000, 1909)

Lambusan (11º 00'N, 123º 55'E)
4465 (30,000, 1909)
Not too bad a place for an overnight stop in the NE season, in 6-8 m, mud. The reefs can be very hard to see because of the silt from the Lambusan River. The best line of approach is a bit South of East to two prominent trees on the ridge.

The chart does not show the new highway bridge crossing the river approximately North of the best anchorage. There are many fish traps in the area.

Tiburian Bay (10° 44'N, 123° 48'E)
4465, 4426

Asturias / Rizal (10° 34'N, 123° 43'E)
4428

Balamban Bay (10° 30'N, 123° 42'E)
4465 (30,000, 1909), 4428
Shipbuilding area to S. A much better anchorage than it appears from the chart

Barili Bay (10° 06'N, 123° 29'E)

Copton Bay

Moalboal (09º 56'N, 123º 23'E)
No anchorage under 40m deep.

Badian Bay / Badian I

Dumanjug Bay (10° 04'N, 123° 26'E)
4427, 4465 (20,000, 1907)
Nice anchorage behind rock retaining wall. There is a CG station.

Bohol and Camotes Islands

The Mindanao sea South of Bohol often has whales.

Bohol is treated counterclockwise starting at the SW corner.

SOUTH BOHOL
The South coast of Bohol has relatively unprotected anchorages. There is a Westerly non tidal flow of 1-2 knots, on top of which the tide floods W and ebbs E.

There is fair anchorage in a little bay a few hundred m West of the town of Dimico, reasonably sheltered except to the SW, and open anchorage at Valencia (8-10 Fm, sand) and Garcia Hernandez (6-15 Fm).

Tagbilaran (09° 38'N, 123° 51'E)
4429A, 4429

Anchorage can be had in 4 m near pier in coral and sand. If this is too exposed in SW weather, the only alternative may be on the E side of the causeway connecting Panglao to Bohol. There is a good market.

Maribojoc Bay (09° 43'N, 123° 50'E)

Panglao I (09° 35'N 123° 47'E)
Panglao is connected to Bohol by a causeway and a bridge. There are a number of tourist developments and dive shops at Alona Beach, on the East part of the S coast of the island.

Balicasag I (09° 31'N, 123° 41'E)
There is good diving and the ruins of an old Spanish fort.

Loay (09° 36'N, 124° 00'E)
Difficult entrance, good inside

Pamilican I (09° 30'N, 123° 50'E)
Once known for the whaling done by its inhabitants. There are the ruins of an old fort on the N point. The reefs are badly damaged by blast fishing. Nice but difficult anchorage and unsafe in bad weather.

Jagna

Guindulan Bay and City

Mabini

[next bay N]

Lapinin I
There is an OK anchorage on the W side. The S side looks good but probably has too much swell most of the time.

Ubay

Jau I (10°10'N, 124°22'E)
Jau had a resort run by former yachtie Heinz Kunzeman that closed in 1999. Friendly people, a possible shallow typhoon hole for a 2 m draft yacht that can only be entered at + 1.6 m tides.

Jetafe (10° 10'N, 124° 10'E)
A reasonable provision stop, but not all that much there.

DANAJON BANK AND N BOHOL
Macar to Jetafe the charts may be inaccurate.

Danajon Bank is some 40 miles long and 5-15 miles wide, running roughly ENE to WSW off the N side of Bohol. The bank has many small islets and detached reefs. The water is silty, and navigation by eye is often impossible.

Mocaboc I (10°04'N, 123° 55'E)
Anchor in 6 m S of the island. There is a marked channel to Tubigon.

Tubigon (09° 57'N, 123° 58'E)

Pangangan I (09° 54'N, 123° 45'E)
F&T say anchorage between I and W coast Bohol in 09° 53'N, 123° 50'E. There is no passage through between the island and Bohol.

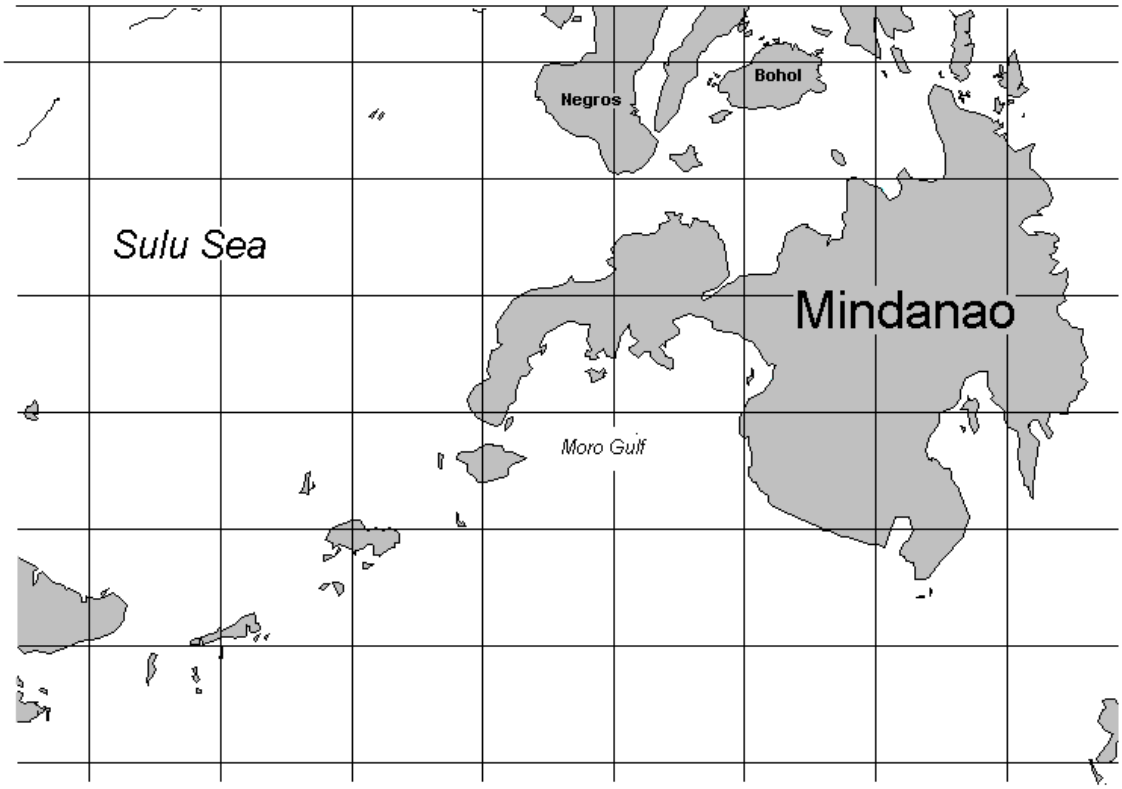
Calape Bay (09° 53'N. 123° 50'E)
S. of Lungboy Point, turn SE into Calape Bay - Not a lot of room, but quite possibly good enough to sit out a typhoon. Anchor in 15 m, fish traps on both sides.

Cabilao I (09° 53'S, 123° 44'E)
There is a mooring off a dive operation, Sea Explorers Dive Shop, which is sometimes used by visiting yachts. The shelter is poor in bad weather, with swell coming over the reef.

Camotes Islands
Good anchorage off Santiago in N weather.

Pacijan Isl. at Consuelo - open but beautiful

SOUTHEAST REGION - MINDANAO AND THE SULU ARCHIPELAGO



Some caution is necessary because of security problems related to insurgent activity and plain lawlessness in Mindanao and the Sulus. It would be a good idea to get some recent information about the situation before travelling, especially to the Sulus or Western Mindanao.

Mindanao North Coast and Islands to the NE

West to East.

CAMIGUIN I (09° 10'N, 124° 45'E)

People are generally charmed by Camiguin.

Anchor off Benon interesting, good swimming.

There is an anchorage on the S coast opposite Siguy in 25'.

Lanzones festival in the third week of October.

ALIGBAY I (08° 44'N, 123° 13'E)

Supposed to be good undeveloped diving site.

SILINO I (09° 52'N, 123° 25'E)

DIPOLOG

DAPITAN BAY

(if this is the right one, also known as Dakak Bay, there is a very expensive beach resort and excellent anchorage in the bay. Possibly typhoon grade.)

PORT TAGUILON

MURCIELUGOS BAY
4641

INAMUCAN BAY

OROQUETA

JIMENEZ

PORT OZAMIZ (08° 08'N, 123° 51'E)
4640
Typhoon Refuge

CAGAYAN DE ORO (08° 30'N, 124° 39'E)
4639.
Good shipyard. I don't know whether they will work on yachts.

MACAJALAR BAY

GINGOOG BAY

BUTUAN BAY & CITY

NASIPIT HARBOR (09° 00'N, 125° 20'E)
4647
Recommended as a typhoon shelter with an easy entrance because of leading lights. A secondary port of entry.

SURIGAO CITY (09° 47'N, 125° 30'E)
4426

Port of Entry

For discussion of the Surigao Strait, see page 92.

HINATUAN PASSAGE (09° 50'N, 125° 45'E)
The Hinatuan Passage branches off to the South of the Surigao Strait, and is the logical route for yachts travelling to or from points Southeast. There is reputed to be an inner passage, passable with local knowledge. Tidal currents in the Hinatuan Passage are very strong, reaching about 7 knots between Kabo I and Rasa I. A velocity of 11 knots has been reported about I mile off Rasa I. Generally a transit will be impossible without a fair tide. At Rasa I the time of HW slack usually about 40 minutes before before HW at Surigao, and LW slack is usually 50 minutes before LW at Surigao, but these times can vary by as much as 50 minutes in either direction.

Despite the caution in Pub. 162 that the Hinatuan Passage is 'not reccomended' for low powered and sailing vessels, yachts regularly use it after waiting for a favorable tide.

The current is said to not be as strong in Banug Strait.

HINATUAN I
bulk terminal and open pit mine on SE side.

DINAGAT I (10° 10'N, 125° 35' E)
The bays on the S side are nice. The SW has many limestone cliffs and towers like Phuket or the N Palawan area. Very pretty, described as 'magical' by some.

The N is ugly, but Looc Bay (10°20'N, 125°35'E) has reasonable anchorages on the lee side of Puyo I depending on the weather, and some supplies are available in the town of Coreto.

Gaas Inlet (10° 09'N, 125° 36'E)
4638
A long winding inlet that is a super typhoon hole, but it may be hard to get into as swell sometimes breaks right across the mouth (or does it just appear to?)

Port Gaboc (09°52'N, 125°41'E)
An inlet leading to Gaboc Channel, formed between the S end of Dinagat I and the E end of Nonoc I. Anchorage can be had in about 5 m at the North of the Port, and better shelter is available up the channel.
The islands off Melgar Bay are very beautiful.

SIARGO I (10°20'N, 125°35')
Siargo is famous for surfing on its East coast in the huge rollers that have traveled across the Pacific under the influence of the trade winds. The SW has many beautiful islets and beaches. Beware of crocodiles in the NW. There is a nudist colony at the S end.

Dapa Harbor (09° 45'N, 126° 03'E)
The major town on Siargo.(?) Reasonable anchorage in 9 m.

General Luna
A popular surfing and tourism spot.

Talaveras Island (09º 45'N, 125º 41'E)
There is said to be a good anchorage in sand at the head of the bay. Friendly people.

PORT SIBONGA, MIDDLE BUCAS (09° 41'N, 126° 00'E)
4638
Typhoon Refuge

BUCAS GRANDE ISLAND
Suhantan Bay (92310) - 'go in by banca - Wonderland' At the center of the W side there are some spectacular bays that can be entered by dinghy through a tunnel exposed at low water. The SW coast is beautiful.

DAHICAN BAY
4628
There is also a Dahican Bay on the E Luzon coast. See page 66.

Mindanao East Coast
Treated North to South.

The East coast of Mindanao is rarely visited by yachts. The few that stop are generally en route between Surigao Strait and points to the South and East.

During the entire year there is a strong southerly set between the coast and the edge of the Philippine trench, some 50 miles offshore.

CARRASCAL BAY

GENERAL ISLAND

MAGBAO COVE

CAGWAIT HARBOR

BITAOGAN BAY (08° 54'N, 126° 19.7'E)

BISLIG BAY (08° 15'N, 126° 23'E)
Phil 4664 Bislig Bay
Phil 4627
The bay is several miles wide and open to the ENE, but a breakwater by a large lumber, newsprint and plywood operation forms a good harbor. The charted marks are absent. Very few yachts call here. The best anchorage is off the first breakwater, by the company compound. A second breakwater further West in the bay is somewhat encumbered by fishponds. Be cautious of the many floating log impoundments. The Western end of the bay has many fish traps and impoundments.

CATARMAN ANCHORAGE (08° 00'N, 126° 26'E)
4627

Typhoon Shelter

DMA 92160 Yaco Point to Cape St. Agustin (Phil 4625)

CATEEL BAY(07°50'N, 126°27'E)
Between Bangai Point and Catarman Point. A large open roadstead. The villages of San Roque and Boston are in the NW part of the Bay. The village of Cateel is on the S shore of the bay.

On the night of 14-15 July, 1944, the American submarine USS *Nautilus* (SS-168) landed supplies and arms to Filipino guerillas off the village of San Roque.

MANAY(?)
there is reputed to be a harbor formed by a breakwater here.

BALETE BAY(06° 51'N, 126° 14'E)
4625
Typhoon Refuge

Nonoc I

The bay on the S is good shelter, possibly good enough for a typhoon.

Mindanao South Coast

Treated East to West. Rarely visited by yachts. There is generally a strong Westerly set at the East end, becoming tidal in the Basilan Strait. At the present (1999), anywhere West of General Santos City may be unduly risky to stop at. Basilan Strait is reasonably safe to pass through in daylight with a following tide.

DMA 92170 Sarangani Bay to Mayo Bay (South Coast of Mindanao) (Phil 4608)
DMA 92150 Davao Gulf [Malipano Anch.] (Phil 4624)
Phil 4605 Zamboanga Pen. [DMA 9220]
Phil 4606 Port Sibulan to Polloc Harbor
Phil 4607 Cotabato to Sarangani Bay [DMA 92180]

BA 415 Davao Gulf
4653 Harbors on the South Coast of Mindanao [Linco B., Port Lebak, Basiavang By, Tuna By, Kiamba, Kling, Makar, etc.]

Davao City

Davao Gulf
There have been four reported attacks on shipping by bancas firing rocket propelled grenades in this area in late 2000 and early 2001.

Malalag Bay

Basiauan Bay

Tubalun

Sarangani Islands
The Sarangani Is were a slave trading center as late as the 1840s. (along with Aceh, Marudu, Sulu)

General Santos City (06° 07'N, 125° 11'E)
Sarangani Bay has very steep sides, and anchoring is difficult. There are many unlit floating fish traps and FADS. General Santos is a Port of Entry with both customs and immigration. A fairly large city, most anything can be obtained. I wound up lying alongside Makar Wharf, the major commercial wharf. Fendering was a problem, as was security until I moved to alongside a Vietnamese freighter unloading rice. The whole thing was quite irregular, but the port authorities were friendly and helpful in the extreme.

Sarangani Bay and General Santos is the home of a large tuna fishing fleet that work a series of Payao in Moro Gulf. There are many fishing boat wharves in Sarangani Bay. With a little planning one of these might be a much better place for a yacht.

Malag Bay
4656

Masinloc Anchorage (06º 56'N, 122º 11'E)
Chart Phil 4645
Don't confuse with Port Masinloc and Masinloc Harbor, Luzon (Page 56)

Typhoon Refuge.

Port Banga (07º 31'N, 122º 26'E)
4651
Typhoon Refuge.

Port Sibulan (07º 29'N, 122º 54'E)
4642
Typhoon Refuge.

Dumanquilas Bay (07º 35'N, 123º 05'E)
4650
Typhoon Refuge.

Port Lebak (06º 33'N, 124º 03'E)
4653
Typhoon Refuge.

Polloc Harbor (07º 23'N, 124º 11'E)
4654

Typhoon Refuge.

Zamboanga City

Sulu Archipelago

The Sulu Archipelago is the chain of islands running from the Zamboanga Peninsula on the SW corner of Mindanao to the NE coast of Borneo. The archipelago is the SE boundary of the Sulu Sea. As of this writing (2000) the political situation in the Sulu Archipelago is too dangerous for yachting as a result of the continuing conflicts between the Manila government and Muslim separatist groups. A daylight passage through the Basilan Strait is probably not unduly risky.

(NE to SW)

For other islands in the Sulu Sea see page 123.

BASILAN STRAIT
Tidal currents can be in the range of 5 knots.

BASILAN I

Port Isabela (06° 42'N, 121° 58'E)
Typhoon Refuge

PILAS GROUP

TAPIANTAN GROUP

SAMAALES GROUP

JOLO GROUP

Dalryrimple Harbor (06° 00'N, 121° 19'E)
4541
Typhoon Refuge

PANGUTTAWAN GROUP

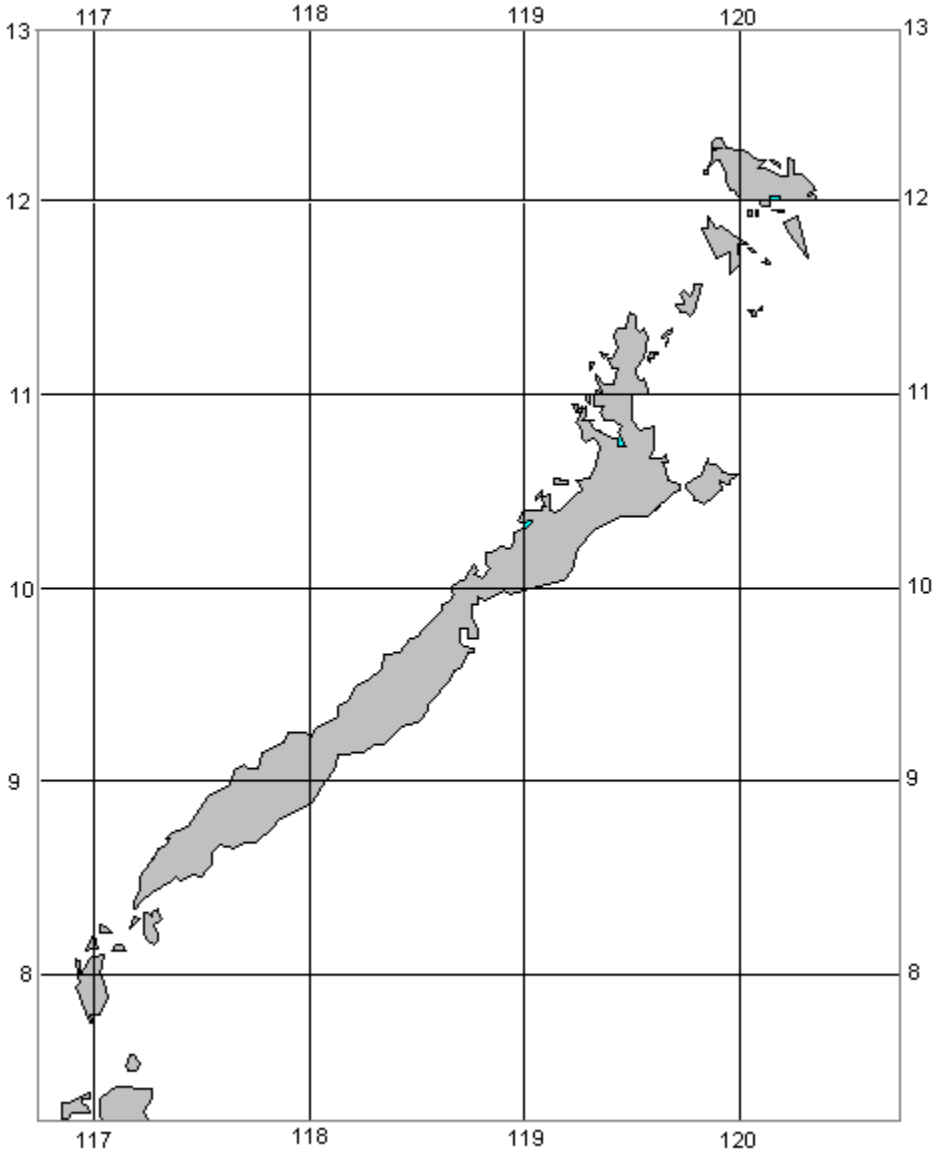
TAPUL GROUP

TAWITAWI GROUP

Port Bongao (05° 02'N, 119° 46'E)
4546
Typhoon Refuge

SIBUTU GROUP

SOUTHWEST REGION



PALAWAN, CALAMIAN GROUP, BALABAC STRAIT, DANGEROUS GROUND AND ISLANDS OF THE SULU SEA

[SW Region Chartlet]

Phil 4314 Northern Part of Busuanga
Phil 4315 Palawan to Cullion I, Inc'l Lincapan Strait
Phil 4316 Northwestern Palawan
Phil 4317 Shark Fin Bay to Fleches Pt.
Phil 4318 Boayan I To Bluff Point
Phil 4319 Green Island Bay and Vicinity [Pascoe Channel]

Phil 4321 Bold Point to Malanao I
Phil 4324 Southern Palawan
Phil 4326 North Balbac Strait and Vic.

This region has some of the nicest cruising in the Philippines. There are many superb harbors.

EL NIDO FIELD CAUTION

There is offshore oil and gas development off of the west coast of Palawan in what is called the El Nido Field. There are two prohibited areas declared off limits to all vessels. One is the quadrilateral bounded by:

11° 37'N, 118° 51'E,
11° 37' N, 119° 10'E,
10° 46'N, 118° 32'E,
10° 46'N, 119° 04'E
and the second is within five nm of the storage tanker permanently moored at 11° 49'N, 119° 07'E.

Calamain Group: Busuanga, Coron, and Culion Is.; Linapacan I

Phil 4350 Western Entrance to Coron Bay
Phil 4351 Coron Bay

Treated generally N to S.

For Apo Reef, See page 86

NANGA IS (12°21'N, 120° 16'E)

4314
Anchor in the bay on the W side of the islands in about 10m sand. Nice reef for snorkeling. No supplies.

TARA I (12°16'N, 120° 21'E)

4314
Anchor in around 12 m 300 m off stone pier in village on W side, or a bit further N between a tiny islet and Tara, close to the islet in about 15m in the neighborhood of several bommies with about 2m over them. Nice beaches. No supplies other than fish. [Nanga and Tara may be the ones that Jean Marc calls 'the islands of women' because all of the men have left to work abroad.]

BUSUANGA I

4314,
4335 Harbors on North Coast of Busuanga [Minuit, Port Caltom, Illtuck Bay, Minangas Bay,]

Minuit (12 °15'N, 120° 02'E)

4314, 4335
A reasonable anchorage in S weather; open to N. Very limited supplies are available.

Port Caltom (12° 11'N, 120° 06'E)

4314, 4335
The Maricaban Bay Marina Resort, set up by the owners of Club Paradise (Dimaquait I) has some moorings in the (SE?) end of the bay opposite the resort. Yachts are very welcome. Some supplies may be available. [It may also be possible to anchor in 11-20m W of the stone mole. PCP 15-3 has directions]. It looks like anchorage can also be had in a variety of places between Cabilauan I and Busuanga.

Dimaquiat I (Club Paradise) (12° 14'N, 120° 05'E)
There Club Paradise Resort on the S side that wishes to preserve the reef and prohibits anchoring in the area. Visiting yachts are directed to Maricaban, 4 miles SE.

Minagas Bay (12° 09'N 120°15'E)
Located on the NE of Busuanga, Minagas provides excellent shelter behind Napu Scud I. No facilities.

Port Luyucan (11° 59'N, 120° 06'E)
Between Apo and Busuanga Is, 11m, mud. Well protected, but muddy and not terribly aesthetic. Be cautious of shallows in center.

Port Borac (12° 01'N, 120° 19'E)
Chart 4351

Looks muddy, shallow and full of mangroves, but good shelter.

Illutuk Bay (12º 16'N, 119º 53')
Charts Phil 4314, 4335

A good anchorage in the small cove on the N of the bay in Calauit I, for yachts with drafts under 6 feet. Deeper drafts can stay out in the bay proper. Calauit I has a game park established in 1976 with a variety of African and Philippine species. The game park welcomes visitors, at a total fee (1999) of 500 pesos per person for a 1 ½ hour tour. If you have always wanted to hand feed a giraffe, this may be your big chance. The entrance is at the N end of the N cove.

Busuanga Old Town(12º 10'N, 119º 55'E)
A good anchorage and pleasant place to visit for a while. Some stay a month or more. There are several small European run resorts, good to hang out in and good European food. Good typhoon holes among the islands to the W.

Gutob Bay (12° 11'N, 119° 52'E)
4314
Several good typhoon holes to be found amongst the islands.

Port Uson (12° 00'N, 120° 15'E)
Many excellent anchorages.

No supplies to speak of.

Dipulao Cove (12° 03'N, 120° 10'E)
One of the best typhoon holes in the Philippines for a yacht , just N of Baquit I.

Coron Harbor (12° 00'N, 120°12'E)
A pleasant town. Many sorts of supplies available. Good holding in sand and mud, although a little exposed during bad weather. For bad weather there are many excellent anchorages in the area. Best to enter in daylight, as reefs abound. Daily flights to Manila, ferry 3 times a week. Email is available at Globe Telecom office, but long distance telephone charges make the rate 4 Pesos/min. ABC Dive, by the banca pier is run by a Swiss couple Heinz & Vera who have been at Coron for 10 years. The 'Sea Dive' resort on a pier at the West end of town has become sort of an unofficial yacht club. There is a well stocked market. Very cosmopolitan by provincial standards.

Popototan I (12° 00'N, 119° 51'E)
Bay on the S side has a sandy beach with reef backed by mangroves. A small resort, the Coral Bay Marina Resort, is very friendly. 14m mud over coral.

[Lajao and Lamud Passage (11° 59'N, 119° 56'E)
No access through passage. E winds whistle through . Fringing reef surrounding the lagoon. One large bommie with 4m in the center. 10 m mud. Many fish farms make moving at night impossible.]

CORON I

Siko (Elbow) Cove (11° 58'N, 120° 14'E)
4351

Bordering Coron Passage about midway on the NW side of the island are two very nice but tiny coves, off a very narrow entrance. The entrance bears 333° to the pier in Coron Harbor, and is marked by a white drop-off. The entrance is blocked by a small island, and is difficult to see. Once inside, either the right or left sides can be followed (gingerly) as it is only a few meters wide. Catamarans may not be able to get in. Maybe have a look with the dinghy first. Once secured with lines to the walls, there is a path leading SSW over a small rise to a beautiful fresh water lake. The scenery is spectacular with sheer walls, swift nests and crystal clear water.

Unfortunately the solitude of Siko Cove is beginning to be disturbed by tourists brought by bancas from Coron, but it is still reccomended.

Calis Pt Anchorage (11° 49'N, 120° 15'E)
It is possible to find a way over the coral and sand bar into the cove just N of Calis Point on the E side of the island. A very nice little anchorage.

BULALACAO I (11° 45'N, 120° 10'E)
A deep, well protected anchorage. The coral is very badly destroyed.

DITAYTAYAN I
Best approached from the W to avoid the reefs to the E. Beware of tidal currents. Ditaytayan is privately owned.

DUMARAN I

DALANGEM I

CULION I
There are many pearl farms among the islands immediately N of Culion I. The farms are heavily guarded against poachers, but it is possible to navigate among them.

Port Culion
The old Leper Colony is a must see. Nice people, highly recommended.

Tambon I

Tampel I

San Pedro

Dibanca Is

Guinlep Is

Halsey Harbor (11° 45'N, 119° 58'E)
Phil 4342 Halsey Harbor and Dicabaito Anch
4315
The South arm of Halsey Harbor is a particularly good typhoon shelter, and a nice place to anchor for a while.

Di Cabito Anch (11° 40'N, 119° 58'E)
4315, 4342

Good protection in most weather. Strong tidal streams, but a very beautiful spot.

LINAPACAN I (11° 25'N, 119° 32'E)
4315

Many nice anchorages depending on the wind. The most spectacular is Colayalaya Bay, on the West end of the island.

In the North Bay, anchorage can be had in any of the three coves in about 10 m mud. Be careful of the extensive fringing reefs. There is an old Spanish fort at [the old site of] San Nicholas.

In the NW bay, the village of Maroyogroyog (11° 28.2'N, 112° 46.5'E) is friendly but has a deep anchorage.

In SW weather a deep but safe anchorage can be had off the town of San Miguel. Enter from the NNE end of the bay, as the E and S entrances are very shallow.

Tidal streams can be up to 3kts.

CABULAUAN IS

Palawan West Coast

4346 Harbors of Palawan [El Nido, Ulugan Bay, Malanut and Nakoda Bays, Culasian Bay]
Some areas in the Southern portion of this area have never been fully surveyed. To the west is the Dangerous Ground (Kalayaan Group), for discussion of it see page 119. For the Palawan passage see page 118. For Cabuli I and the East coast of Palawan see page 121. If approaching from the North or West, see the **Caution** for the El Nido Oilfield restricted areas on page 112.

CALITAN I (11°25'N, 119°28'E)
Anchorage may be possible on the S side of the island in Northerly weather. The passage between Calitan and Libro Point is foul.

DIAPALA BAY (11° 25'N, 119° 28'E)
SSE of Calitan I. Said to be encumbered with shoals and drying rocks.

DIAPALA I (11° 23'N, 119° 28'E)

BASE BAY

LALUTAYA I (11°22'N 119°29'E)
Anchor on the W side of the island in NE weather.

BARATOAN BAY (11° 20'N, 119°27'E)
A reasonable anchorage in SW weather in the bay.

LOO BAY

CRAWFORD POINT (11°19'N, 119°25'E)
Perhaps the S side would be a reasonable anchorage in NE weather.

EL NIDO TOWN (11°11'N, 119°23'E)
Depending on the season one can anchor either N or south of Ipil Point. If you have a choice, the anchorage to the South is better as the reefs to the north make you anchor far out. Corongcorong Bay, to the South, is about a 10 minute walk from town. The town water can be poor. There is an airport.

CAVERNA I (11°17'N, 119°21'E)

CAUYAN I (11°16'N, 119°21'E)

CADLAO I (11°13'N, 119°22'E)

MITRE I (11°14' N, 119°22'E)

North Bay

Ubugan Bay

Pasadigan Cove

Panuayan Cove

Dilumacad Cove (11°12'N, 119°20'E)

MATINLOC AND MINILOC IS (11° 09'N, 119° 19'E)
Remarkable islands with cliffs, white sand beaches, etc. The 10 Knot resort is on the S of Miniloc, reported not to welcome visiting yachties, but the bay is an excellent anchorage. A second spot to anchor is NW of the two islets off the E point in 6 m sand with a line ashore. There is a 'magical' hole in the wall/lagoon. Hornbills, tiny beaches etc. Excellent area to explore by dinghy.

REINARD I (11° 09'N, 119° 15'E)
Anchorage in 20 m, mud to the W of the island and in 5 m to the N of the island off Coramay Village.

BACUIT BAY (11° 07'N, 119° 22'E)
Phil 4346
A nice place to mess around on beaches, scenic cliffs and so on. Several reasonable anchorages in moderate weather. An interesting dinghy trip is up the Bacuit River behind the town.

CATHEDRAL (PINSAIL) I (11° 05'N, 119°23'E)
A spectacular pinnacle island. In settled weather it is possible to anchor to the SE.

LAGEN I
has a flash resort.

MALPACAO ISLAND (11° 06'N, 119 ° 24'E)
There are two resorts with light moorings on the North and South sides of the island.
Marina Del Nido
Malpacao Island, El Nido, Northern Palawan, Philippines
Tel. No.: Manila: (632) 831 1487 fax: (632) 831 9816
Contact person: Lou Quijano
E-mail: marina@portalinc.com
I heard a rumor that the marina has closed. It is/was on the E side of the island.

PORT CAANTABA & DIBULAN (11° 00'N, 119° 20'E)
Phil Charts 4316, 4349
Muddy, surrounded by mangroves and likely infested by mosquitoes, but a reasonable typhoon hole.

MALAMPAYA SOUND (10° 55'N, 119° 15'E)
Phil 4349 Malampaya Sound and Approaches
4316
Malampaya Sound has some safe typhoon anchorages, and is famous in the Philippines for its rich and diverse marine life. Just S of the Worcester Strait entrance is Pirate Bay, a good typhoon shelter in 15 m, mud. Bolalao Bay, just outside the sound proper, can be a good anchorage, but is subject at times to gusty winds in the evening. Alligator Island is privately owned, but the owners welcome visiting yachts and have a few moorings on the South side. Some minimal supplies are available, and more extensive ones can be brought in on request.

The inner sound is fairly shoal, but the fishing and holding is reported to be excellent.

The village of Limancong (11° 05'N, 119° 18'E) near the Endeavor Strait entrance to the sound has most supplies. Ice can be obtained from the fish processing plant just N of town just opposite Anotao I.

Other nice anchorages are Pirates Hold, just off Vampire Point below Vampire Hill (bring garlic?), and on the E side of Tuluran I just S of Relinquish Head, 15m, mud.

In SW weather the area N of Endeavor Strait can be very rough.

INULUTOC BAY (10° 53'N, 119° 14'E)
Good in NE weather.

TANGHILAHAN BAY (10° 52'N 119° 13'E)
Entered between Inlulutoc Head and Cape Capoas. Looks like a reasonable anchorage in most weather, although Pub 162 says encumbered with reefs.

There are four coves between Enterprise Point and Cotteral Point: W of Fowler's Head, E of Fowler's Head, White I, and between Grave Point and Cotteral Point.

WHITE I (10°50'N, 119°15'E)
Anchorage can be had in 10°50.54'N, 119°14.40'E in 18 feet in the Easternmost of the two bays between Fowler's Head and White I.

"EMERGENCY COVE" (10°45'N, 119°17E)
Next to Emergency Point. Carl says nice anchorage in the first cove -- second cove is too shallow. [Possibly he meant the cove N of Enterprise Point?] In NE season only.

IMURAN BAY
BAY ISLANDS (10°41'N, 119°19'E)

BOAYAN I (10° 35'N, 119° 10'E)
A useful pair of anchorages for both the NE and SW seasons in Village Bay on the W end of the island or Petulant Bay on the E end opposite a safe passage to [the Palawan Passage to the W].

PORT BARTON (10° 25'N, 119° 10'E) (CHECK POS'N)
There are a variety of good anchorages in the bay and around for most weather but not typhoon grade. Town of Barton has minimal supplies, but things can be brought in a day or so. The 'underground river' is in St Paul Bay. As there can be surf, it is better to hire a bangka than to take your dinghy.

MAYDAY BAY
Pretty.

JIBOOM BAY (10° 22'N, 119° 00'E)
Open to SW, mud & sand bottom, not particularly pretty. No supplies to speak of in Caruray.

ULUGAN BAY (BUENAVISTA) (10° 05'N, 118° 12'E)
Phil Charts 4318, 4346

Oyster Inlet is a typhoon refuge but very deep. It used to be a Philippine Navy Base, but apparently is not any more. Supplies are available at a price. The North and South inlets of Watering Bay are all full of fish traps now. Easy Jeep access to Puerto Princessa on the E side of the island. Puerto Princessa is a port of entry.

MALANUT (09° 16'N, 118° 00'E) AND NAKODA (09° 17'N, 117° 57'E) BAYS

CULASIAN BAY

CAPE BULILUYAN (08°20'N, 117° 12'E)

PALAWAN PASSAGE (ABOUT 09°N, 117°E)
Formed by the Dangerous Ground to the West and the 200 m curve off Palawan to the east, Palawan Passage is the eastern north-south route in the southern part of the South China Sea. With modern electronics much of the danger of navigating the passage has been eliminated, but it is still wise to stay well off the coast of Palawan in the south, as it has not been adequately surveyed and there are many offlying reefs. The Dangerous Ground has not been adequately charted, and the charted dangers may not be in the correct positions. A few reefs on the East edge may make reasonable fair weather stops. The Dangerous Ground is an area of disputed sovereignty, and it may be wise to not venture too far into it.

The Palawan Passage is about 29 nm wide at its narrowest, NNW of Cape Buliluyan (08°20'N, 117° 12'E), and abeam of Royal Captain Shoal (09°01'N, 116°40'E)

[tides and currents]

If in the neighborhood of the North end of the Palawan Passage, see the **Caution** for the El Nido Oilfield restricted areas on page 112.

During the American landings at Leyte in October 1944, the Palawan Passage was the site of an engagement between the American submarines *Dace* (SS-247, CDR B. D. Claggett) and *Darter* (SS-227, CDR D. T. McClintock) and Vice Admiral T. Kurita's First Strike Force, known as the Battle

of the Palawan Passage. In the course of bringing his force to strike at the landings, VADM Kurita brought his command, consisting of the battleships *Yamato*, *Musashi*, *Nagato*, *Kongo*, and *Haruna*, ten heavy cruisers, two light cruisers and fifteen destroyers north through the passage. *Darter,* patrolling at the south end of the passage, detected Kurita's group on radar shortly after midnight on the morning of October 23. She shadowed Kurita through the night, sending several position reports. *Darter* and *Dace commenced* torpedo attacks just prior to dawn. The Japanese capital ships were in a double column making 18 knots, presumably to save fuel, and were not zigzagging. *Darter* opened the attack by hitting Kurita's flagship heavy cruiser *Atago* with four torpedoes in 09°24'N, 117°11'E. She sank in twenty minutes. Kurita was safely taken off by a destroyer and later transferred to *Yamato*, but about half of his staff died, part of the approximately 360 men lost on *Atago*. *Darter* then badly damaged the heavy cruiser *Takao* in 09°28'N, 117°20'E. As the Japanese turned away from *Darter*, they steamed into position for *Dace*, which hit heavy cruiser *Maya* with four torpedoes, sinking her in four minutes with few survivors.

Takao had gone dead in the water after *Darter's* attack. *Darter* tried a submerged attack on her in daylight, but was driven off by screening destroyers. A coordinated night surface attack was decided upon. *Darter* began an 'end around' surface attack at 2200 just as *Takao* got underway. Navigating on a 24-hour-old dead reckoning plot, at 0005 on October 24 *Darter* grounded on Bombay Shoal (09°29'N, 116°25'E) at 17 knots. She rode up to a draft of nine feet forward. Mean draft was about 17 feet. It was no surprise that it proved impossible to get off the reef.

After confidential materials were destroyed, the entire crew of *Darter* transferred to *Dace* before dawn. *Dace* fired her remaining torpedoes at the wreck, but the torpedoes hit the reef and exploded before they could reach their target. *Dace* did manage to hit *Darter* with 21 four-inch shells before being forced to submerge by Japanese aircraft, which obligingly bombed the wreck of *Darter*. *Dace* then made a very crowded passage to Darwin.

It is reported that the wreck of Darter was still on Bombay Reef in 1965.

Dangerous Ground and Spratly Is

This is the area on the West side of the Palawan Passage designated on the charts. For yachts, it may still be a good area to stay clear of. Of the 100 or so small islands and reefs that are called the Spratlys, Kalayyan Group, Nansha Islands or whatever, about 45 are claimed and occupied by China, Malaysia, the Philippines, Taiwan, and Vietnam. There have been sporadic episodes of fighting, warning shots, fishermen arrested and flurries of news reports and diplomatic posturing. All of the area is claimed by China, Taiwan, and Vietnam. Parts are claimed by Malaysia and the Philippines, and in 1984, Brunei established an exclusive fishing zone, which encompasses Louisa Reef, although it has not publicly claimed the island. The area has not been systematically surveyed, and it should be expected that uncharted dangers exist. Little information is available about currents. The Philippines refers to the area as the Kalayaan Group,, while the Chinese refer to the Nansha Islands and the 'South China Sea Issue'.

There is good fishing and there may be oil and gas in the disputed area. There have been a variety of bilateral negotiations among the countries involved aimed at reducing the possibility of armed conflicts and possibly working out some sort of joint resource development scheme.

There have been a variety of shipwrecks excavated in various parts of the Spratlies.

MISCHIEF REEF (PANAGANIBAN REEF) (09° 55'N, 115° 31'E)

The Chinese occupied Mischief initially in 1995, and in 1998 commenced building a facility that appeared to have been completed in early 1999. They claim it is a shelter for fishermen. It more closely resembles a fortified position, and includes several buildings, helipad, radar and

communication facilities. Chinese warships are regular callers. Some claim it has fired on yachts.

HALF MOON SHOAL (08° 53'N, 116° 17'E)
Possibly an anchoring stop while travelling in the Palawan Passage in light conditions. The entrance is on the SE corner and is reported to be some 0.1 NM wide and 12-13 m deep. NW into the pass, then turn N to anchor in the lagoon, which is said to be 27 m deep with a variety of coral heads. The shoal is awash at high tide , and is said to provide good shelter.

BOMBAY SHOAL (09°29'N, 116°25'E)
The lagoon is completely enclosed by reef. The wreck of *USS Darter* may still be visible on the NE side of the shoal, also known as Madagascar Rock.

INVESTIGATOR SHOAL(DALANG BUKID SHOAL) (08° 07'N, 114° 29'E)
Occupied by Malaysia together with Erica Reef in June 1999. The South China Sea Pilot says there appears to be a good entrance at the SE end of the shoal, which is an irregular semi-submerged atoll some 18 nm E-W.

ERICA REEF (08° 06'N, 114° 09'E)
Occupied by Malaysia together with Investigator Shoal in June 1999.

ROYAL CAPTAIN SHOAL (09°01'N, 116°40'E)

The W side of the narrowest part of the Palawan Passage. A narrow and steep to reef encloses a lagoon with depths of 27-31 inside. There is no known entrance. There are two stranded wrecks on the NW and SW sides of the shoal.

JOHNSON REEF
The most serious confrontation to take place in the Spratlys occurred here in 1988 when Chinese and Vietnamese naval forces had a short engagement in which two Vietnamese ships were sunk and some 70 persons killed. (need to check these facts.)

TENNENT REEF (08° 50'N, 114° 36'E)
Vietnam first occupied these in 1992. Expansion and construction of structures on these triggered protests from the Philippines and the ROC government on Oct.13, 1999.

Philippines claimed that Vietnamese troops fired on reconnaissance aircraft in October 1999 and are said to have fired on a Filipino fishing vessel.

CORNWALLIS SOUTH REEF AND ALISON REEF
Occupied by Vietnam in 1992.

YUYA SHOAL AND BOJI REEF
Malaysia has been reported to have built facilities on these reefs.

THITU ISLAND (PAGASA ISLAND) (11° 03' N, 114° 17' E)
Occupied by the Philippines since 1971. Has a 1300-m runway, lighthouse, and power plant. The Philippine tide tables contain tide predictions for PAGASA I. In 1997 an 18th century shipwreck was discovered to the northwest of the island. It is believed to be the wreck of the *Earl Temple*, a British ship which sank in June 1763. There were three survivors who spent several months on Thitu before sailing a raft with sails made of bird feathers to Vietnam. On arrival in Vietnam they were held prisoner for two years before being allowed to go to China. In all it took them four years to return to Britan.

ITU ABU (TAIPING ISLAND) (10° 23' N, 114° 21' E)
Occupied by Taiwan since 1956. This island is one of the larger land masses in the area. It has a marine garrison, helicopter pad, meteorological center, and power plant. A communications facility is reportedly under construction and an 1800 meter airstrip is has been under consideration.

SOUTHWEST CAY (11° 26' N, 114° 20' E) AND NORTHEAST CAY (11° 27' N, 114° 21' E)
One occupied by Vietnam and the other by the Philippines.

FIERY CROSS REEF(YONGSHU JIAO) (09° 40' N, 113° 02' E)
China began construction on this reef in early March 1988. Vietnam tried to disrupt construction, which resulted in fighting. The reef reportedly holds a large Chinese observation post along with a helicopter pad and pier.

SWALLOW REEF (TERUMBU LAYANG LAYANG)
Was occupied by Malaysia in 1983 and has a 600 m airstrip.

SPRATLY ISLAND (TRUONG SA DONG; NANWEI DAO) (08° 39' N, 111° 55' E)
Vietnam occupied this island in 1974 and has reportedly built a lighthouse, 600 m airstrip, harbor, power plant, and radio station.

SUBI REEF (10° 54' N, 114° 06' E)
This island reportedly has a Chinese garrison with blockhouse, supply platform, helicopter parking apron, and 100 Watt HTIW412 radio station.

COMMODORE REEF (8° 21' N, 115° 14' E)
Reportedly occupied by the Philippines

ALICIA ANNIE REEF (09° 22' N, 115° 27' E)
Dries at low tide to enclose a shallow lagoon. No known occupants. Near the site of a Philippine Navy confrontation with Chinese fisherman in March 1995. China and the Philippines claim this reef.

YUAN ANHA (08° 08' N, 114° 40'E)
No known occupants.

LOUISA REEF

Palawan East Coast

Phil 4333 Puerto Princessa [Port of Puerto Princessa]
4334 Anchorages on the East Coast of Palawan [Honda By, Malanao Anch, Panacan Anch]
The E and NE coasts of Palawan have dozens of good anchorages, depending on the season.

CABULI PT.
Excellent for S weather -- clear water, nice reef.

CABULI I
The E side is used in SW weather as an anchorage by many fishing boats and local traders.

ILOC I

BUGAMBG I

BATAS I (11°10' N, 119°35'E)

SHARK FIN BAY (11°07'N, 119°34'E)

MABINI

CALABUGDON I

MAYTIGUID I (11° 01'N, 119° 37'E)
Silanga Bay (11° 01'N, 119° 34'E) : Anchor in 10m mud at the head. Beware of the isolated rocky patch at the entrance, which is difficult to distinguish against the land. Muddy water, mangroves, many fruit bats at dusk.

SE Bay (Unnamed, to W of Negra Point(11° 00'N, 119°38'E)): Rocks and shoals in the center and right side of the entrance - enter mid way between the center and the left side point. Anchor between two fish traps in mud, 22 feet in 11° 09.3'N, 119° 37.5'E.

CASIAN I

DEBANGAN I

TAYTAY BAY
Difficult without local knowledge, possibly too shallow for all but shoal draft yachts. There is an old Spanish fort. Most basic supplies available. See PCP 16-5.

CALAUG

DUMARAN I
PCP 16-9

DALANGENEM IS
4708

Calandnagan I has the barrio of Tudela. Fair weather anchorage can be had off the NE side in 16-20 m , on the SW side in 7-9 m or in a bay between two hills on the SE side inn 22 feet, sand, in 10° 38.66'N, 120° 15.66'E, depending on the season.

Maduang and Anas Is are connected by a reef that bares at low water.

DUMARAN CHANNEL (10° 29'N, 119° 40'E)
There is a spot to anchor about 1.5 Nm NE of Capayas Village between the land to N and a drying reef to S in 10 m mud.

LALASUG

LANGCAN BAY

TULARIQUIN (10° 08'N, 119° 13'E)

N&S VERDE IS (10° 07'N, 119° 14'E)
Phil 4319 (Plan) (Pascoe Channel)
There is an anchorage between N Verde I and Palawan that is reputed to be a typhoon shelter, best entered in daylight. Enter the pass just N of the N point of N Verde I, and hug the point

closer than you would think necessary, just off the end of the fish traps. Anchor off the Palawan shore behind a reef spur.

It is also possible to enter between the islands and go S. This is also a likely typhoon shelter.

HONDA BAY (09° 55'N, 118° 45'E)
4321, 4334
Most of the Honda Bay area has been heavily logged. There are numerous fish traps throughout the bay, many shoals and the current can be strong. Anchorage can be had N of the Bacungan river spit in 6 m mud.

PUERTO PRINCESA (09° 44'N, 118° 44'E)
Chart 4321, 4343
Puerto Princesa is a port of entry and the capital of Palawan province. There is an airport and ferry service. Customs and immigration used to have a bad reputation, but several recent boats (1999) did not have bad experiences clearing in here from Malaysia. Typhoon shelter can be found in one of the bays.

INAGAUAN

ABORLAN

MALANAO I (09° 27'N, 118° 37E)
In SW weather one can anchor N of the W point of the island very close in 3 m, mud. There is a line of posts just inside the reef edge all along the NW shore. Many fishermen stop here to rest and repair nets -- excellent trading opportunities.

RASA I (09° 15'N, 118° 25'E)
[In Northerly weather?] A worthwhile stop in a picturesque anchorage half way between the village of Panacan and Casuarina Point in 6 m, silty mud. A fairly good range of supplies are available in Panacan village, but the water is brackish. It is possible to [take a trike?] to PP from here.

ISLAND BAY

SAN ANTONIO BAY

CORAL BAY

ARRECIEFE I

Islands of the Sulu Sea

This section covers the various islands and reefs in the Sulu Sea. For the Sulu Archipelago, forming the SE boundary of the Sulu Sea, see page 110. Apo reef is in the Mindoro Strait section, page 86

CUYO IS
Phil 4312 Cuyo Is
4336 Anchorages in Cuyo Is. [Cuyo, Tagauayan Is]
Treated N to S

Pamalican I (11° 21'N, 120° 44'E)
Owned by the Soriano Group (San Miguel) the very high class Amanpulo Resort (02) 831 5876, fax (02) 839 7964 (Manila). With airfield. In the area around the island fishing and anchoring are forbidden. Some moorings are available, but cost US$50 per night.

Quiniluban Group
Surrounded by reef bare at low water. Reasonable anchorage can be had in NE weather on the SW of the reef in 11 m.

Halog I

Pamilcan I

Manamoc I (11° 18'N, 120° 40'E)
The lagoon entrance on the SW side has ~3 feet of water at low tide.

Lean I, Imaruan I, Coco I
All steep to the W side with banks around 11-15 m deep extending 0.5-1.5 nm on the NE side, providing reasonable anchorages in SW weather.

Dit I, Gosong Rks, Maracano I

Agutaya I (11º 09'N, 120º 40'E)
Extensive reefs on the NE and SW sides. In the NE season, try off the SW side in 5 m.

Guinlabo Islet
Beach on NW side

Tagauayan I (10º 58'N, 121º 13'E)
4336

Tagauayan Bay, formed by Thumb Point and I, opens to the E. It is good shelter in SW weather, and fair shelter in NE weather on the N end of the bay W of Thumb Point. The water is usually clear and there is reputed to be good diving to the W. Anchorage can be had in 10°58.06'N, 121°13.35'E in 20-25 feet.

Cocoro I

Canipo I

Cuyo I (10° 51'N, 121° 02')
The town of Cuyo has a population ~30,000. It is clean and pleasant and boasts many old houses and a fortified church built in 1677. The principal products are dried fish, copra and cashews.

CAGAYAN IS (09º 35'N, 121º 14'E)
4356 (1974, 60,000 and plan of Cagayan Anchorage 1921, 10,000)
The main lagoon can easily be entered, and has very clear water. Best in the SW season or during the transitions. The village is very poor, subsisting mostly on fishing and seaweed cultivation and few supplies are available. Some say one of the nicest places in the Philippines.

TUBBATHA REEFS
A popular diving destination, and a marine park. 2 reefs separated by a deep channel some 5 nm wide. NE reef is oblong, enclosing a lagoon 2 by 5 nm, 7- 32 m mud, but no known entrances. Small launches can cross the reef at high tide. Outside is steep to, no known safe anchorages. 3 islets: N, center & S. S has a lighthouse that was not working in 2000. Many rocks and sand cays become visible at low tide. The SW reef is about 4.5 nm N-S with several rocks and sand cays visible at high water. There are some moorings put in by scuba diving operations -- use them!

Jesse Beasley Reef
18 m N of Tubbatha light

Maender or Bastera Reef
50 nm SW of Tubbatha

Bancoran I (07º 58'N, 118º 39'E)
4720
56 nm 008° from peak of Cagayan Sulu I. Steep to, surrounded by reef. Wreck from 1959 some 0.5 nm NE

Java Reef

San Miguel Is (07º 34'N, 118º 27')
Four islands about 40 nm North of Cagayan de Tawi Tawi, steep to with no safe anchorage known.

CAGAYAN DE TAWI TAWI ISLANDS (07º 00N, 118º 29'E)
Also sometimes called Cagayan Sulu. Said to be charted in an incorrect position.

TURTLE ISLANDS
These straddle the border between the Philippines and Malaysia and are jointly run as a nature reserve. I have been unreliably informed that yachts are prohibited.

Balabac I and Balabac Strait Area

In fair weather the Balabac strait area is reputed to have lots of fishing traffic, with the usual attendant problems. In 1991 two yachts believed they were shadowed by pirates, but they were not boarded. Many yachts that have transited the area recently (1999) have had no problems, but it might be desirable to ask around a little before assuming the area is perfectly safe. The current is partially monsoonal with a tidal component that floods East and ebbs West. The tidal stream is stronger in the N Balabac Strait, reaching 2.5 knots or so.

Balabac I

Calandorang Bay (08° 00'N, 117° 04'E)

It is possible to go up the river here. The town is almost too small to even have beer, virtually unprecedented in the Philippines.

BALABAC HARBOR (07° 49'N, 117° 04'E)
Typhoon Refuge.

RAMOS ANCH

CATAGUPAN BY

PORT GIEGO AND RAMOS I

CABOANG BAY (08° 01'N, 117° 04'E)
Phil 4309 Balbac Strait
Phil 4347 Harbors of Balbac and Ramos Is. [Ramos Anch, Catagupan by, Port Giego and Ramos I, Calandorang and Caboang Bys, Delawan Bay, Pasig Bay, Clarendon Bay]
A visible coral reef divides the bay. Anchorage may be had on the N side in 10 m, mud. Better in SW season, but OK in NE.

DALAWAN BAY (07º 54'N, 117º 05'E)
Good in SW monsoon. 15m, mud.

PASIG BAY

CLARENDON BAY (07° 48'N, 117° 01'E)

Phil 4309 Balbac Strait

Phil 4347 Harbors of Balbac and Ramos Is. [Ramos Anch, Catagupan by, Port Giego and Ramos I, Calandorang and Caboang Bys, Delawan Bay, Pasig Bay, Clarendon Bay]

Very pleasant bay open to SE. Very clear water. The reefs extend from the points on both sides of the bay, so give them a wide berth. Anchor in the center in about 8m, mud. There is a village on the N point, not visible from the anchorage mostly inhabited by friendly Muslims descended from immigrants from Sabah a few generations ago. The old Spanish lighthouse on Cape Melville may be worth a visit. It can be reached by one of the trails from the coral landing at the W end of the bay.

GAZETTEER

Banggi South Channel, Outer Shoal.	7 02.0'	117 00.0'	
Bangkay	09° 59'	123° 37'	101
Bani			67
Bani Point			56
Banoa Anch			64
Bansud, on Bonsod.Point	12 51.5'	121 29.4'	
Bantac Island	12 12.8'	120 23.4'	
Bantayan I	11° 12'	123° 45'	96
Bantayan Town	11 11.1'	123 43'	
Bantiano Point.	12 25.5'	122 00'	
-Bantolinao Point	10 20.1'	123 59'	
Banton I	12° 13'	122° 04'	78
Bantoncillio I	12°53'	122° 00'	78
Baquit I			113
Baras Beach Resort	10º 33'	122º 31'	95
Baratoan Bay	11° 20'	119° 27'	116
Barbacan Point.	10 19.0'	119 21.1'	
Barcelona.	12 52.1'	124 08.6'	
Barerra, Port	12° 31'	123° 23'	89
Barili Bay	10° 06'	123° 29'	102
Barotac Bay	11º 01'	122º 56'	94
Barotac Viejo			94
Barton, Port	09° 25'	119° 10'	118
Barugan Cove			64
Basco			64
Base Bay			116
Basiad Bay			66
Basiauan Bay			109
Basilan I			110
Basilan Strait			110
Basot Island, N. point.			
Bastera Reef			125
Bataan Marina			53
Batag Island, summit.	12 39.6'	125 03.5'	
Batan Harbor (E Luzon)	12° 12'	124° 03'	67
Batan I (E Luzon)			67
Batan I (Luzon Strait)	20 22.0'	121 58.0'	64
Batan Islands (Luzon St)			64
Batan, Port	11° 35'	122° 29'	82
Batangas Bay	13º 43'	121º 00'	73
Batangas Channel			73
Batas I	11°10'	119°35'	122
Batbatan I	11° 28'	121° 54'	83
Batorampon Point.	7 06.5'	121 53.8'	
Batu Tinagat, S. slope of Mount Putri.	4 13.5'	117 58.7'	
Bay Islands	10°41'	119°19'	118
Bayas I			93
Bayo Point	10° 27'	121° 55'	83
Bias			97
Bicobian, Port	17° 15'	122° 26'	65
Bigud			96
Billiran I	11º 35'	124º 30'	91
Billiran Strait	11º 27'	124º 29'	91
Binagon End of reef off Point.	12 35.0'	122 16.0'	
Binangay, Port			54
Binigsian Point	09º 50'	122º 22'	99
Binuagan Point			86
Bislig Bay	08° 15'	126° 23'	108
Bitaogan Bay	08° 53.6'	126° 19.7'	108
-Bitaugan.	06° 46.4'	126 04.6'	
Boac	13º 27'	121º 50'	77
Boayan I	10° 35'	119° 10'	118
Boco Engaña, Port			87
Bognao Inlet	12° 12'	121° 01'	85
Bogo Bay			100
Bogo Harbor, on reef at N. side of entrance.	11 05.2'	124 01.7'	
Bohol Island			102
Bohol, North			103
Bohol, South			102
Bolalao Bay			117
Bolbogon I			93
Bold Point.	10° 01.7'	119° 08.7'	
Bolinao Harbor	16° 24'	119° 54'	58
-Bolton Reef.	06° 37.7'	125° 24.5'	
Bombay Shoal	09°29'	116°25'	120
Bombon Point			79
Bonbanon, Port	09° 03'	123° 07'	98
Bondoc Point			
Bongabong	12° 44.9'	121° 29.3'	
Bongao, Port	05° 02'	119° 46'	110
Boquete Bay			73
Borac, Port	12° 01'	120° 19'	113
Boracay Island	11° 58'	121° 55'	81
Borongan.	11° 37.0'	125 26.0'	
Botolan.	15° 14.0'	120 00.7'	
Bouang Point			93
Buca Point.	5 57.4'	124 40.6'	
Bucas Grande Island			107
Bugambg I			122
Bugo.	8 31.0'	124 45.0'	
Bugol Point.	13 03.9'	121 31.6'	
Bugui Point.	12 36.1'	123 14.2'	
Bulacare Point	11º 31'	123º 09'	92
Bulalacao I	11° 45'	120° 10'	114
Bulan.	12 40.3'	123 52.4'	
Buliluyan, Cape	08° 20'	117° 12'	118
Bunga			92
-Buntay Point.	11 18.1'	123 43.7'	
Burdeos, E. coast of Polillo Island.	14 51.1'	121 58.8'	
Buri I	12° 12'	121° 02'	85
Burias I	13° 00'	123° 15'	86
Buruanga Point	11° 52'	121° 53'	82
Buruanga River			82
Busianga, Port	13° 07'	123° 02'	87
Busing, Port	13° 08'	122° 58'	87
Busuanga I			112
Butag Bay	12º 37'	123º 56'	89
Butauanan I and Bay			66
Butuan Bay			106
C			
Cabadbaran.	9 07.5'	125 31.3'	
Cabalete I			66
Cabalian Point.	12 06.1'	122 00.8'	
Cabangtalan.	17 51.3'	120 26.8'	
Cabaongan	16 00.4'	119 45.7'	
Cabarruyan Island			58
Cabayoc Point.	14 37.0'	120 22.0'	
Cabilao I	09° 53'	123° 44'	104
Cabilison Island.	11 53.3'	124 16.7'	
Cabilitan Bay	16° 05'	120° 06'	59

Cabitaogan			54
Caboang Bay	08° 01'	117° 04'	125
Cabra Island			
Cabugao Bay (E Luzon)			67
Cabugao Bay (W Luzon)	17º 50'	120º 26'	61
Cabulauan Is			115
Cabuli I			121
Cabuli Pt			121
Cabusao			
Cadiz, Hitalon River.	10 57.6'	123 19.2'	
Cadlao I	11°13'	119°22'	116
Caduruan Point.	11 48.3'	124 03.9'	
Cagayan de Oro			106
Cagayan de Tawi Tawi			125
Cagayan Is	09º 35'	121º 14'	124
Cagayan River			63
Cagayan Sulu			125
Cagbalete I			66
Cagmanaba Bay	13º 05'	123º 19'	86
Cagnipa Island.	10 30.5'	119 04.4'	
Cagraway I			67
Cagwait Harbor			108
Caiman Cove	15º 45'	119º 45'	56
Cajidiocan Point	12 21.8'	122 41.0'	
Calabazas Island.	11 04.5'	123 01.4'	
Calabugdon I			122
Calagan I	11° 30'	123° 12'	93
Calagcalag Bay			97
Calaghaan I			93
Calagnaan I	11° 30'	123° 12'	93
Calancan Bay	13º 32'	121º 59'	76
Calandnagan I			122
Calandorang Bay	08° 00'	117° 04'	125
Calantas Rock.	12 30.6'	124 04.7'	
Calapacuan			54
Calapan	13 26.0'	121 12.0'	75
Calape Bay	09° 53'	123° 50'	104
Calaton Cove	12º 11'	122º 03'	80
Calaton Point	12 10.9'	122 04.1'	81
Calaug			122
Calauit I			113
Calavite Pass			72
Calayan Island, S. point			
Calayan Landing			64
Calbahan I			81
Calbayog, W. end of town at mouth of river.	12 04.0'	124 35.0'	
Calicoan I	10° 57'	125° 47'	90
Caliocan Yacht Club			90
Calis Pt	11° 49'	120° 15'	114
Calitan I	11°25'	119°28'	115
Calolbon			
Caltom, Port	12 °11'	120° 06'	112
Caluag Bay			66
Calunangan.	10 52.4'	124 30.1'	
-Calungpang Point.	14 16.5'	120 37.7'	
Caluya Island.	11 54.7'	121 34.5'	
Calver Point.	9 21.5'	118 32.2'	
Camigan I			105
Camiguin	09º 10'	124º 45'	105
Camiguin I (Luzon St.)			64
Caminawit Point.	12 20.0'	121 05.2'	
Camino Is			66
Camotes Islands			104
Campaig Pt			80
Campomanes Bay	09º 42'	122º 24'	99
Camungyan Island.	10 09.3'	118 45.9'	
Canahauan I			91
Canalasan Cove.	5 49.6'	125 12.2'	
Cañas Bay	11º 03'	122º 56'	94
Candon, on beach.	17 12.1'	120 25.2'	
Canigao I	10° 15'	124° 45'	92
Canimo Island			
Canipo I			124
Canoan, Port	123º 36	09º 15'	98
Cantaaba, Port	11° 00'	119° 20'	116
Capalonga			66
Capalonga, on beach E. of town.	14 20.0'	122 31.0'	
Capayas Village			122
Cape Bojeador	18° 30'	120° 34'	61
Cape Bolinao.	16 18.4'	119 47.2'	
Cape Buliluyan	08° 20'	117° 12'	118
Cape Calavite.	13 26.0'	120 18.0'	
Cape Capoas			117
Cape Engano	18° 35'	122° 08'	64
Cape Melville.	7 49.2'	117 00.0'	
Cape San Augustin,'ear S. extremity.	6 16.2'	126 11.6'	
Cape Santiago, on S. end.			
Capitancillo Island.	10 59.5'	124 06.2'	100
Capiz Bay	11° 36'	122° 43'	82
Capiz, Port	11° 36'	122° 43'	82
Capones.	14 54.9'	120 00.5'	
Capul I			91
Capul Island.	12 28.9'	124 08.5'	
Capulaan Bay			75
Carabao I			81
Carcar Bay	10° 05'	123° 39'	101
Carlatan Lagoon.	16 39.0'	120 19.0'	
Carlota I			
Carmen Bay	12 37.0'	122 07.2'	80
Carmen Shoals Buoy, S. side of shoal.	11 02.0'	123 20.0'	
Carmen, Port			100
Carnasa Island.	11 30.9'	124 06.1'	
Carrascal Bay			108
Cartagera	09º 49'	122º 23'	99
Caruray			118
Casian I			122
Casiguran.	12 52.5'	124 00.5'	
Casigurian Bay	16° 14'	122° 06'	65
Castilla,'. side of Dolagnan River entrance.	12 56.8'	123 52.9'	
Casuarina Point			123
-Catagbacan.	9 51.7'	123 49.0'	
Catagupan by			125
Cataingan, Port	11° 57'	123° 35'	89
Catanauan			
Catanauan Bay	13º 35'	122º 18'	76
Catanduanes I			67
Catarman Anchorage	08º 00'	126º 26'	108
Catarman E coast of Samar.	12 31.0'	124 39.0'	
Catbalogan.	11º 46.8'	124 52.7'	

Hook Bay	14° 56'	121° 50'	65
Horn Reef.	4 15.9'	118 25.5'	
Hundred Islands	16° 12'	120° 02'	59
I			
Iba, Port	15º 20'	119º 58'	55
Ibitu (Binuagan) Point			86
Igang Bay	10º 31'	122º 31'	95
Igbon I			94
Igsoso Bay	13° 16'	120° 31'	85
Ilacon I	11º 02'	123º 12'	96
Ilanin Bay	14 46.0'	120 15.2'	54
Iligan, bank of river, at root of dock.	8 13.9'	124 13.9'	
Ilin I	12° 14'	121° 04'	84
Ilin Strait	12° 16'	121° 06'	84
Illutuk Bay	12º 16'	119º 53'	113
Iloc I			122
Ilog Anchorage	13º 29'	120º45'	73
Ilog Bay			87
Iloilo Harbor	10° 42'	122° 35'	89
Imaruan I			124
Imee, Port			64
Imuran Bay			118
-Inabanga.	10° 02.0'	124° 03.4'	
Inagauan			123
Inamucan Bay	8° 40.0'	123° 44.0'	106
Indan			66
Infanta, mouth of Agos River.	14° 46.4'	121° 39.4'	
Inlulutoc Head			117
Inulutoc Bay	10° 53'	119° 14'	113
Inulutoc Bay	10° 53'	119° 14'	117
Investigator Shoal	08º 07'	114º 29'	120
Ipil Point			116
Irada, Mount			65
Isabel Quiot, Dupon Bay.	10° 55.6'	124 25.9'	
Isabela, Port	06° 42'	121° 58'	110
Island Bay			123
Island Bay			
Itbayat I			64
Itu Abu Island	10° 23'	114° 21'	121
J			
Jagna	09° 39.0'	124° 22.0'	103
Jamalig Island, NW side.	14° 42.3'	122 °19.9'	
Jao I - see Jau I			
Jau I	10°10'	124°22'	103
Java Reef			125
JB Miller Bay	18° 12'	122° 17'	65
Jesse Beasley Reef			125
Jetafe	10° 09.3'	124 09.4'	103
Jiboom Bay	10° 22'	119° 00'	118
Jilontangan I	11°10'	123° 50'	96
Jimenez			106
Jintolo Channel	11° 48'	123° 05'	83
Jintotolo Island.	11 50.5'	123 07'	
Johanna Reef	3 24.7'	117 56.5'	
Johnson Reef			120
Jolo Group			110
Jolo Harbor	6 03.5'	120 59.9'	
Jonestown			78
Juraojurao I	10° 25'	121° 58'	84
K			
Kaima Bay	13º 42'	122º 45'	86
-Kalaklan Point.	14 49.5'	120 16.0'	
Kalanga Bay	13°16'	124°02'	67
Kalapadan Bay			67
Kalaw Bay			73
Kalayaan Group			119
Kalunaun.	4 55.0'	118 16.0'	
Karang Alert.	4 09.6'	118 15.9'	
Karang Banda.	3 49.7'	118 00.6'	
Kawayan, N. coast of Biliran Island.	11 40.9'	124 21.3'	
Kolambugan Range, front.	8 06.8'	123 53.2'	
Kutad Cove			69
L			
La Libertad			97
La Monja Island.			
Labcan Point, Batan Island.			
Lagara Cove	12° 17'	121° 23'	75
Lagen I			117
Lagnoy Gulf			67
Laguimanoc, Port	13° 50'	121° 48'	76
Laguna de Bay			
Lahuy I			67
Lajao			114
Lalasug			122
Lalutaga I	11° 20'	119° 27'	
Lalutaya	11°22'	119°29'	116
Laluya I			84
Lambusan	11º 00'	123º 55'	102
Lambusan River			102
Lamigan Point.	6 48.2'	126 20.1'	
Lamit Bay	13° 56'	123° 32'	66
Lamit I			66
Lampon, Port			66
Lamud Passage	11° 59'	119° 56'	114
Lanang Point.	7 07.4'	125 39.7'	
Langcan Bay			122
Langoy Island	10 29.7'	119 59.6'	
Laoag River			61
-Laoang Bay, Ipil Point.	12 35.5'	125 00.0'	
Lapinin I			103
Lapog Bay	17° 44'	120° 22'	61
-Lapu Lapu City.	10 18.8'	123 56.9'	
Lauan Cove	12º 12'	122º 03'	80
-Lauis Ledge, W. end of Mactan Island.	10 14.2'	123 53.4'	
Lazi, Siguijor Island.	9 08.0'	123 38.0'	
Lean I			124
Lebak Point.	6 33.2'	124 02.9'	
Lebak, Port	06º 33'	124º 03'	109
Legaspi City			67
Legaspi, Albay Gulf, N. of town.			
Lemery (Taal)			
Leonan Reef.	6 44.5'	117 37.4'	
Leyte			91
Libagaco I	12º 12'	121º 30'	84
Libro Point			115
Liloan Bay (Cebu)	10° 24'	124° 00'	100
Liloan Harbor	10° 10'	125° 07'	92
Limancong	11° 05'	119° 18'	117

Limasawa Island, N. end of island	9 57.7'	125 03.7'	
Linao Island	12 01.0'	125 33.1'	
Linao Point	18 22.3'	121 35.8'	
Linapacan I	11° 25'	119° 32'	115
Lingayen Gulf			58
Lipata Point	11° 28'	122° 03'	83
Lipayran I			
Lirung.	3 56.4'	126 41.8'	
Little Balateros Cove			73
Little Santa Cruz Island, summit.	6 53.1'	122 02.5'	
Lloyd Reef.	4 42.0'	118 16.0'	
Loay	09° 36'	124° 00'	103
-Loay, E. side of river entrance.	9 36.0'	124 00.0'	
Locoloco Point			
-Lokanin Point dolphin No. 1.	14 28.0'	120 36.0'	
Lolong Point			
Loo Bay			116
Looc Bay	12º 10'	123º 15'	89
Looc Bay (Dinagat I)	10°20'	125°35'	107
Looc Bay (Lubang I)	13° 43'	120° 16'	71
Looc Bay (Tablas I)	12° 15'	121° 58'	80
Looc Cove (Nasgubu)	14°09'	120°35'	70
Looc Reef, N. edge	12 14.8'	121 58.8'	80
Lopez Bay			66
-Loreto, Looc Bay.	10 21.7'	125 34.8'	
Louisa Reef			121
Luan I			55
Lubang Island	13° 48'	120° 10'	70
Lubani Rock.	6 54.0'	117 23.0'	
Lucap Bay	16° 12'	120° 02'	59
Lucap.	16 11.7'	120 00.1'	
Lucapon			
Lucena	13°49'	121°36'	75
Lugbung I			79
Lungboy Point			104
Lusuran Point	10º 29'	122º 29'	95
Luyucan, Port	11° 59'	120° 06'	113
Luzon East			65
Luzon North			61
-Luzon Point, head of pier.	14 32.0'	120 36.0'	
Luzon South			72
Luzon Strait			64
Luzon SW			69
Luzon West			51
M			
Maasin			91
Maasin, boat landing.	10 08.0'	124 50.0'	
Mabini (Bohol)			103
Mabini (E Palawan)			122
Mabini Light, west side of Gigantangan Island.	11 34.0'	124 16.0'	
Maboa	9 05.2'	126 11.9'	
Maca Reef	11º 03'	123º 27'	96
Macabalan Point.	8 30.3'	124 39.7'	
Macajalar Bay			106
Macalaya.	12 52.8'	123 46.3'	
Macalelon River, on N. side of entrance.			
Macaleon	13º 45'	122º 08'	76
Macar			103
Maconacon.	17 23.0'	122 14.3'	
Mactan I			101
Mading	12° 30'	122° 31'	81
Maduang I			122
Maender Reef			125
Maestri de Campo I	12° 56'	121° 43'	77
Magbao Cove			108
Magdiwang.	12 29.7'	122 29.5'	
-Mahaba Point.	12 55.8'	121 41.0'	
Mahato			65
Mainaga			
Mainga Cove			73
Makapan	3 00.1'	117 49.5'	
Makar Wharf			109
Makasser Bank	3 59.5'	117 56.6'	
Malabrigo Point			72
Malag Bay			109
Malajibomanoc Islet			
Malalag Bay	6 36.9'	125 25.6'	109
-Malalag River.	6 36.2'	125 23.9'	
Malamaui Island	6 44.7'	121 59.4'	
Malampaya Sound	10° 55'	119° 15	117
Malanao			67
Malanao I	09° 27'	118° 37'	123
Malangaban I			89
Malangas.	7 37.6'	123 02.5'	
Malanut Bay			118
Malanut Bay, Quezon	9 15.2'	117 59.7'	
Malapascua I	11 20.6'	124 06.4'	92
Malinao, ruins of old fort in front of town, front			
Malitbog, Sogod Bay, near root of wharf	10 09.7'	125 00.1'	
Malpacao Island	11° 06'	119 ° 24'	117
Maluvatuan I	13°52'	120° 23'	72
Mambacayao I			96
Mambajao, angle of pier, Camiguin Island	9 15.3'	124 43.0'	
Mamburao Bay	13º 12'	120º 26'	85
Manamoc I	11° 18'	120° 40'	124
Manay			108
Mangarin Bay	12° 21'	121° 03'	84
Mangsee Island	7 30.4'	117 18.4'	
Manicani I	10° 59'	125° 38'	90
Manigonigo Island	11 36.3'	123 10.6'	
Maniguin I	10° 36'	121° 41'	83
Maniguin Island	11 35.7'	121 41.9'	
Manila Bay			51
Manila Channel			73
Manila Yacht Basin	14° 34'	120° 58'	52
Manila Yacht Club	14° 34'	120° 58'	52
Maniuan I	13º 32'	122º 07'	77
Mantanani Islands, W. island of group.	6 43.0'	116 18.0'	
Manucan Islet.	9 39.0'	121 21.0'	
Mapanga.	7 02.9'	125 57.1'	
Maracano I			124
Maralison I	11° 25'	122° 01'	83
Marbella			52
Margosatubig, head of pier	7 34.6'	123 10.0'	
Maribojoc Bay	09° 43'	123° 50'	103

Palau Kawalusu	4 14.2'	125 19.3'	
Palau Nunukan Timur.	4 03.9'	117 45.0'	
Palauig Point	15 26.0'	119 54.0'	
Palawan Passage			118
Palawan, East			121
Palawan, West			115
Palawig.	18 28.2'	122 08.5'	
Palmas Island (Pulau Miangas)	5 33.7'	126 35.6'	
Palompon	11 03.2'	124 22.9'	92
Paluan Bay	13° 23'	120° 25'	85
Pamalican I	11°21'	120°44'	123
Pambuhan Harbor	11° 14'	125° 32'	90
Pamilican I	09° 36'	123° 50'	103
Pampanga Bay			
Pamutsin Cove			85
Pan de Azucar Island	11° 19'	123° 10'	93
Panacan			123
Panacan.	9 14.7'	118 24.4'	
Panacan.	7 09.4'	125 39.7'	
Panaganiban Reef	09º 55'	115º 31'	119
Panagatan I			96
Panaon I			92
Panaon Strait			92
Panay			82
Panay, East			92
Panay, North			82
Panay, South			83
Panay, West			83
Pandan (W. Luzon)			60
Pandan Bay (E Mindoro)	12° 17'	121° 23'	75
Pandan Bay (NW Panay)	11° 44'	122° 05'	83
Pandan I (E Luzon)			67
Pandan Island Resort			85
Pandan Islands			85
Pandan, on beach near town.	17 31.9'	120 22.2'	
Pangangan I	09° 54'	123° 45'	104
Panganiban.	14 18.7'	122 39.2'	
Panganiran Bay	13º 01'	123º 24'	86
Pangiatan Cay			84
Panglao I	09° 35'	123° 47'	103
Panguil Bay.	8 02.7'	123 47.2'	
Panguttawan Group			110
Panlatulan, Port	12° 52'	123° 42'	88
Panuayan Cove			116
Pao Bay	16° 08'	120° 06'	59
Papagas Bay	13º 50'	120º 40'	72
Papaya			69
Paracale.	14 17.3'	122 48.1'	
Paradise, Club	12° 14'	120° 05'	113
Parasan I			91
Pasadigan Cove			116
Pascao Anch	13º 29'	123º 02'	86
Pasig Bay			126
Pasig River	14 35	120 57	52
Passage Reef.	6 59.0'	117 17.0'	
Pata Point, on highest part.	18 37.3'	121 09.3'	
Patao Islet			96
Patnanongan Island.	14 45.2'	122 13.8'	
Pearl Bank.	5 49.9'	119 44.2'	
Pedada Bay	11º 04'	122º 58'	94
Pedada Point			94
Pegasus Reef.	5 47.0'	118 50.0'	
Pequella I			54
Perez			
Perla Reef			96
Pescador Island.	9 55.4'	123 20.6'	
-Peta, head of pier.	3 39.0'	125 34.0'	
Petulant Bay			118
Philippine Trench			108
Pilar Bay	11º 33'	123º 00'	83
-Pilar.	12 53.4'	123 39.7'	
Pilas Group			110
Pinahon Island	8 39.5'	123 30.5'	
Pinamalayan, on beach at town.	13 02.2'	121 29.6'	
Pinsail Rock	11° 05'	119°23'	116
Pirate Bay			117
Pirates Hold Cove			117
Pitogo	13º 47'	122º 05'	76
Pitogo Bay	13° 48'	123° 56'	67
Pitogo, Tayabas Bay.			
Plaridel.	8 36.7'	123 43.5'	
Platagata Bay			94
Pola Bay	13º 10'	121º 28'	75
Polillo Harbor	14° 43'	121° 56'	66
Polillo Is			65
Polillo Island, Hook Bay	14 55.8'	121 48.7'	
Polillo Strait			66
Polloc Harbour	07º 23'	124º 11'	109
Polo Point	8 35.5'	123 45.4'	
Popototan I	12° 00'	119° 51'	114
Poro Island.	10 38.0'	124 28.0'	
Port Aguirre	11° 49'	124° 42'	91
Port Alabat			66
Port Anajao	13°57'	124°21'	67
Port Balangcan	13° 32'	121° 52'	76
Port Banga	07º 31'	122º 26'	109
Port Barerra	12° 31'	123° 23'	89
Port Barton	09° 25'	119° 10'	118
Port Batan	11° 35'	122° 29'	82
Port Bicobian	17° 15'	122° 26'	65
Port Binangay			54
Port Boco Engaña			87
Port Bonbanon	09° 03'	123° 07'	98
Port Bongao	05° 02'	119° 46'	110
Port Borac	12° 01'	120° 19'	113
Port Busianga	13° 07'	123° 02'	87
Port Busing	13° 08'	122° 58'	87
Port Caantaba			117
Port Caltom	12 °11'	120° 06'	112
Port Canoan	09º 15'	123º 36	98
Port Cantaaba	11° 00'	119° 20'	116
Port Capiz	11° 36'	122° 43'	82
Port Carmen			100
Port Cataingan	11° 57'	123° 35'	89
Port Concepcion	12° 56'	121° 43'	77
Port Culion			114
Port Currimao			61
Port Dimalansan	17° 19'	122° 23'	65
Port Gaboc	09° 52'	125° 41'	107
Port Giego			125
Port Gubat	12 55.5'	124 07.5'	
Port Iba	15º 20'	119º 58'	55

Samar, East and South			90
Samar, North			90
San Agustin			80
San Andreas Islands	13º 34'	121º 51'	76
San Andres Pt			76
San Antonio Bay			123
San Bernadino Strait			89
San Bernardino Island	12 45.2'	124 17.0'	
San Carlos City			97
San Carlos, 46 meters N. of inner end of wharf	10 29.0'	123 25.0'	
San Dionisio			64
San Dionisio (Panay)			
San Esteban, Port	17° 21'	120° 26'	60
San Fernando	16° 37'	120° 18'	59
-San Fernando.	12 17.0'	122 37.6'	
San Ildefenso	17° 39'	120° 21'	61
San Isidro			92
San Jose	12° 21'	121° 03'	84
San Jose (Carabao I)			84
San Jose de Buena Vista	10° 44'	121°56'	83
San Jose, (Corangian).	12 32.0'	124 29.0'	
San Jose.	10 15.9'	125 10.6'	
San Juan Point.	11 00.0'	122 50.0'	
San Juanico Strait			89
San Miguel Bay			66
San Miguel I			67
San Miguel Is	07º 34'	118º 27'	125
San Miguel Island, about 61 meters from NW. extremity	12 43.1'	123 35.3'	
San Miguel, Port (Ticao)	12° 40	123° 35	87
San Nicolas Shoals.	14 26.3'	120 45.8'	
San Pascual	13 08.9'	122 59.0'	
San Pedrino Point	13º 51'	120º 43'	72
San Pedro			115
San Pedro Bay	11º 10'	125º 05'	91
San Pio Quinto, Port			64
San Ramon Bay	12° 17'	125° 23'	90
San Remigan			100
San Roque	11°45'	122°00'	
San Roque (Mindanao)	07°00'	126°22'	108
San Teodoro			75
San Vicente, Port	18° 31'	122° 08'	64
Sanbang, Lagonoy Gulf.			
Sanco Point.	8 14.7'	126 27.2'	
Sandakan Harbor, entrance to Trusan Duyong.	5 48.4'	118 09.1'	
-Sandilands Rock	6 52.0'	116 52.0'	
Sandy Cay	6 49.0'	117 36.0'	
Sangi.	10 24.0'	123 38.0'	
-Sangley Point AVIATION LIGHT	14 30.0'	120 55.0'	
Santa (W. Luzon)	17° 29'	120° 24'	60
Santa Ana Bay	10º 33'	122º 32'	95
Santa Cruz Harbor (Marinduque)	13° 30'	122° 04'	77
Santa Cruz Harbor (W. Luzon)	15° 46'	119° 52'	57
Santa Cruz I	13° 30'	122° 04'	76
Santa Fe			96
Santa Fe			81
Santa Maria.	7 45.6'	122 06.3'	
Santa Rita.	16 21.3'	120 20.4'	
Santiago			104
Santiago Cove	17° 17'	120° 25'	60
Santiago Island	16° 21'	119° 57'	58
Santo Nino	11 53.5'	124 27.9'	
Santo Nino Harbor	11° 56'	124° 27'	91
Santo Nino Island			91
Santo Tomas (Lingayen Gulf)	16° 15'	120° 22'	59
Santol Bay			66
Sapangar Bay	6 04.6'	116 06.8'	
Sapian Bay	11° 33	122º 36'	
Sarangani Bay			109
Sarangani Islands			109
Sayao Bay	13º 32'	121º 55'	76
Scarborough Shoal (or reef)	15º 08'	117º 45'	61
Selat Kinabatangan, W. side of entrance.	5 39.0'	118 36.0'	
Semirara Is			84
Semirara Island	12° 05'	121°10'	84
Semprona, N. entrance	4 31.2'	118 37.4'	
Shark Fin Bay	11° 07'	119° 34'	122
Sialat Point			
Siapar Island			58
Siargo I	10°20'	125°35'	107
Siasi Wharf, on Siasi Island	5 33.0'	120 49.0'	
Sibago Island, summit	6 45.0'	122 24.0'	
Sibolon I	12º 06'	121º 35'	84
Sibonga, Port	09° 41'	126° 00'	107
Sibulan, Port	07º 29'	122º 54'	109
Sibutu Group			110
Sibuyan I	12° 25'	122° 35'	81
Sicogon I			
-Siete Pecados.	10 46.0'	122 40.7'	
-Sigaboy Island.	6 37.7'	126 04.1'	
Sigcogon			93
Siko Cove	11° 57'	120° 13'	114
Sila Point	12 24.4'	125 20.1'	
Silanga Bay	11° 01'	119° 34'	122
Silangan Pass, on edge of reef NE. of Roma Point			
Silanguin, Port	14º 46'	120º 05'	55
Silaqui Island.	16 26.7'	119 55.4'	
Silino I	09º 52'	123º 25'	106
Siliong Bay	12° 11'	121° 04'	85
Silonay I	13º 27'	121º 13'	75
Simara I	12° 48	122° 04'	78
Sinangatan Bay	12º 33'	124º 01'	89
Sindangan.	8 09.6'	122 39.8'	
Sipaway			97
Sipindung Cay.	6 52.0'	117 33.0'	
Siquihor I			
Siquijor I	09º 10'	123º 35'	98
Sir J. Brooke Point	8 46.2'	117 50.2'	
Siramag Bay.			
Sirawai	7 35.2'	122 08.3'	
-Sisiman, on Gorda Point.	14 25.4'	120 31.1'	
Siyt, Port			98
Sky Rock.	6 54.0'	117 25.0'	
Slime Rock	6 23.0'	116 19.0'	
Sogod Bay	10º 46'	124º 01'	100
Sogod.	10 22.9'	124 58.8'	
Soguicay Bay	12° 22'	121° 24'	75

Sojoton Point	9 58.4'	122 27.4'	
Solvec Cove	17 27'	120° 26'	60
Sombrero I			93
Sombrero I			73
Sorsogon, W. end of Bagatao Island.	12 50.2'	123 47.5'	
Sorsorgon Bay	12° 55'	123° 55'	88
South Bais Bay Jetty E. head	9 33.0'	123 09.0'	
South Furious Shoals ‘‘SFV-A'	6 47.0'	116 14.0'	
Southeast Region			105
Spratly Island	08° 39'	111° 55’	121
St Paul Bay			118
Sual, Port	16° 04'	120° 06'	58
Subi Reef	10° 54’	114° 06’	121
Subic Bay	14° 50'	120° 14'	53
-Sueste Point	14 45.1'	120 11.3'	
Suhantan Bay			107
Sulu Archipelago			110
Sulu Sea, Islands of the			123
Suluan I	10° 45'	125° 57'	90
Sumilon I	09° 25'	123° 23'	101
Sungai Mattunggong	6 39.2'	116 48.6'	
Sungai Murudu.	6 37.1'	116 49.1'	
Surigao	9 47.1'	125 30.0'	
Surigao City	09º 47'	125º 30'	106
Surigao Strait			92
T			
Taal Lake			
Tabaco Bay, San Miguel I			67
Tabjin Bay	13° 42'	120° 14'	70
Tablas I			79
Tabu Point, entrance to Jimenez.	8 19.6'	123 51.7'	
Tabugoc Cove.			
Tacloban Bridge			90
Tacloban City	11º 15'	125º 00'	91
Tagabas Bay	13º 36'	122º 16'	76
Tagauayan Bay			124
Tagauayan I	10º 58'	121º 13'	124
Tagbauan Pt			71
Tagbilaran	09° 38'	123° 51'	103
Tagolo Point.	8 43.7'	123 22.7'	
Tagubanahan I			94
Tagudin NW. of town.	16 57.0'	120 26.0'	
Tahuna, Tg. Bunakeng	3 35.9'	125 29.1'	
Tailon Island	14 24.5'	122 40.0'	
Taiping Island	10° 23'	114° 21’	121
Talaveras Island	09º 45'	125º 41'	107
Tali Beach	14°05'	120°36'	70
-Talibon.	10 09.0'	124 19.6'	
Talikud Island.	6 54.6'	125 41.3'	
-Talisay.	9 45.9'	124 35.6'	
Tambac Bay	16° 14'	119° 57'	59
-Tambo Island.	10 11.5'	124 17.1'	
Tambon I			115
Tambove Roads			56
Tampel I			115
Tanawan Pt			72
Tandog I	10º 25'	122º 30'	95
Tandotao Point, on Cagayan Sulu Island.	6 58.1'	118 31.5'	
Tanghilahan Bay	10° 52'	119° 13'	117
Tanguingui Island	11 29.2'	123 43.6'	
Tanjong Labian	5 09.0'	119 13.0'	
-Tanjong Lipat	6 00.0'	116 05.0'	
Tanjong Membatu	4 57.0'	118 38.0'	
Tanjong Nabolan	6 22.0'	116 20.0'	
Tanjong Terang	5 25.3'	119 12.6'	
-Tanjung Mengacu	3 14.6'	117 37.4'	
Tanon Point	09° 26'	123° 20'	102
Tanon Strait			97
Tansog, Port			66
Tapiantan Group			110
Tapul Group			110
Tara I	12º 21'	120º 16'	112
TARAKAN			
Tarallo.			
Tarumpitao, Palawan	9 02.8'	117 39'	
Tatalan Islands, S. end	6 13.0'	121 50.0'	
Tawitawi Group			110
Tayabas River	13°49'	121°36'	75
Taytay Bay			122
Teluk Beo, Pulau Karake long, NE. of flagstaff.	4 14.0'	126 48.0'	
Tg Ahus E. of	3 46.3'	117 56.5'	
Tg Salonggaka.	4 02.7'	126 37.1'	
Tg. Ambora	4 32.7'	126 44.7'	
Tg. Batu.	3 14.5'	117 39.0'	
Tg. Palle	3 43.8'	126 49.4'	
Tg. Tibi	3 28.3'	117 40.2'	
Tg. Tungku	5 00.0'	118 52.0'	
Thitu Island	11° 03’	114° 17’	120
Thumb Point			124
Tibiao Point.	11 17.7'	122 01.6'	
Tiburian Bay	10° 44'	123° 48'	102
Ticao Island			87
Ticlan	11° 56'	121° 56'	82
Ticlin Anch			97
Tilic, Port	13° 49'	120° 12'	70
Tinaan Anch	10° 12'	123° 45'	101
Tinaca Point.	5 33.4'	125 19.8'	
Tinanogan Bay			88
-Tinau	12 37.0'	124 26.0'	
-Toade Manandoe	3 24.8'	125 31.7'	
Toledo.	10 23.0'	123 38.0'	
Tood Islets	10 15.6'	124 39.3'	
Tres Reyes Is	13º 14'	121º 50'	77
Triboa Bay			54
Tubalan Head.	6 29.9'	125 35.6'	
Tubalun			109
Tubbatha Reefs	8 44.0'	119 49.1'	124
Tubigan Point, San Jose de Buenavista	10 44.3'	121 56.1'	
Tubigon	09° 57'	123° 58'	104
Tubili Point	13 13.6'	120 31.5'	
Tudela			122
-Tugas Point.	10 09.0'	124 37.0'	
Tugbungan Point			78
Tugdan	12º 19'	122º 05'	80
Tugnung Point	11 21.0'	125 37.8'	
Tulang	10 36.0'	124 18.9'	
Tulariquin	10° 08'	119° 13'	122
Tuluran I			117
Tunaguin Islet			93
-Tunggo Point	12 54.2'	121 43.4'	

INDEX

[to come]

APPENDICES

APPENDIX A - DISTANCE CONVERSION

Meter	Feet	Fathoms
1	3.28	0.55
2	6.56	1.09
3	9.84	1.64
4	13.12	2.19
5	16.40	2.73
6	19.69	3.28
7	22.97	3.83
8	26.25	4.37
9	29.53	4.92
10	32.81	5.47
11	36.09	6.01
12	39.37	6.56
13	42.65	7.11
14	45.93	7.66
15	49.21	8.20
16	52.49	8.75
17	55.77	9.30
18	59.06	9.84
19	62.34	10.39
20	65.62	10.94
21	68.90	11.48
22	72.18	12.03
23	75.46	12.58
24	78.74	13.12
25	82.02	13.67
26	85.30	14.22
27	88.58	14.76
28	91.86	15.31
29	95.14	15.86
30	98.43	16.40
31	101.71	16.95
32	104.99	17.50
33	108.27	18.04
34	111.55	18.59
35	114.83	19.14
36	118.11	19.69
37	121.39	20.23
38	124.67	20.78
39	127.95	21.33
40	131.23	21.87
41	134.51	22.42
42	137.80	22.97
43	141.08	23.51
44	144.36	24.06
45	147.64	24.61
46	150.92	25.15
47	154.20	25.70
48	157.48	26.25
49	160.76	26.79

Feet	Fathom	Meter
1	0.17	0.30
2	0.33	0.61
3	0.50	0.91
4	0.67	1.22
5	0.83	1.52
6	1.00	1.83
7	1.17	2.13
8	1.33	2.44
9	1.50	2.74
10	1.67	3.05
11	1.83	3.35
12	2.00	3.66
13	2.17	3.96
14	2.33	4.27
15	2.50	4.57
16	2.67	4.88
17	2.83	5.18
18	3.00	5.49
19	3.17	5.79
20	3.33	6.10
21	3.50	6.40
22	3.67	6.71
23	3.83	7.01
24	4.00	7.32
25	4.17	7.62
26	4.33	7.92
27	4.50	8.23
28	4.67	8.53
29	4.83	8.84
30	5.00	9.14
31	5.17	9.45
32	5.33	9.75
33	5.50	10.06
34	5.67	10.36
35	5.83	10.67
36	6.00	10.97
37	6.17	11.28
38	6.33	11.58
39	6.50	11.89
40	6.67	12.19
41	6.83	12.50
42	7.00	12.80
43	7.17	13.11
44	7.33	13.41
45	7.50	13.72
46	7.67	14.02
47	7.83	14.33
48	8.00	14.63
49	8.17	14.94

Km	Nm
1	0.54
2	1.08
3	1.62
4	2.16
5	2.70
6	3.24
7	3.78
8	4.32
9	4.86
10	5.40
11	5.94
12	6.48
13	7.02
14	7.56
15	8.10
16	8.64
17	9.18
18	9.72
19	10.26
20	10.80
21	11.34
22	11.88
23	12.42
24	12.96
25	13.50
26	14.04
27	14.58
28	15.12
29	15.66
30	16.20
31	16.74
32	17.28
33	17.82
34	18.36
35	18.90
36	19.44
37	19.98
38	20.52
39	21.06
40	21.60
41	22.14
42	22.68
43	23.22
44	23.76
45	24.30
46	24.84
47	25.38
48	25.92
49	26.46

50 164.04 27.34	50 8.33 15.24	50 27.00

APPENDIX B - CONVERSION TABLE - SECONDS TO DECIMAL DEGREES

Seconds	Degrees	Seconds	Degrees
1	0.017	31	0.517
2	0.033	32	0.533
3	0.050	33	0.550
4	0.067	34	0.567
5	0.083	35	0.583
6	0.100	36	0.600
7	0.117	37	0.617
8	0.133	38	0.633
9	0.150	39	0.650
10	0.167	40	0.667
11	0.183	41	0.683
12	0.200	42	0.700
13	0.217	43	0.717
14	0.233	44	0.733
15	0.250	45	0.750
16	0.267	46	0.767
17	0.283	47	0.783
18	0.300	48	0.800
19	0.317	49	0.817
20	0.333	50	0.833
21	0.350	51	0.850
22	0.367	52	0.867
23	0.383	53	0.883
24	0.400	54	0.900
25	0.417	55	0.917
26	0.433	56	0.933
27	0.450	57	0.950
28	0.467	58	0.967
29	0.483	59	0.983
30	0.500		

APPENDIX C - NORTHWEST PACIFIC TYPHOON NAMES

I	II	III	IV	V
Damrey	Kong-rey	Nakri	Krovanh	Sarika
Longwang	Yutu	Fengshen	Dujuan	Haima
Kirogi	Toraji	Kalmaegi	Maemi	Meari
Kai-tak	Man-yi	Fung-wong	Choi-wan	Ma-on
Tembin	Usagi	Kammuri	Koppu	Tokage
Bolaven	Pabuk	Phanfone	Ketsana	Nock-ten
Chanchu	Wutip	Vongfong	Parma	Muifa
Jelawat	Sepat	Rusa	Melor	Merbok
Ewiniar	Fitow	Sinlaku	Nepartak	Nanmadol
Bilis	Danas	Hagupit	Lupit	Talas
Kaemi	Nari	Changmi	Sudal	Noru
Prapiroon	Vipa	Megkhla	Nida	Kularb
Maria	Francisco	Higos	Omais	Roke
Saomai	Lekima	Bavi	Conson	Sonca
Bopha	Krosa	Maysak	Chanthu	Nesat
Wukong	Haiyan	Haishen	Dianmu	Haitang
Sonamu	Podul	Pongsona	Mindulle	Nalgae
Shanshan	Lingling	Yanyan	Tingting	Banya
Yagi	Kajiki	Kujira	Kompasu	Washi
Xangsane	Faxai	Chan-hom	Namtheun	Matsa
Bebinca	Vamei	Linfa	Malou	Sanvu
Rumbia	Tapah	Nangka	Meranti	Mawar
Soulik	Mitag	Soudelor	Rananim	Guchol
Cimaron	Hagibis	Imbudo	Malakas	Talim
Chebi	Noguri	Koni	Megi	Nabi
Durian	Ramasoon	Hanuman	Chaba	Khanun
Utor	Chataan	Etau	Kodo	Vicente
Trami	Halong	Vamco	Songda	Saola

Appendix D -- JMH Broadcast Schedule

Effective 10 September 1998
Japan Meterological Agency, Tokyo
3822.5, 7305, 9970, 13597, 18220, 23522.9Khz

TOT UTC	Heading	OBS UTC	Content
0000	FSAS07	1200	72 Hour Surface Pressure, Precipitation Prognosis
0020	FSAS09	1200	96 Hour Surface Pressure, Precipitation Prognosis
0040	FSAS12	1200	120 Hour Surface Pressure, Precipitation Prognosis
0103			Test Chart
0110		0000	GMS Satellite Image
0130		Retransmission of 1019 (Sea Ice)	
0150	WTAS07	0000	Tropical Cyclone Forecast (if TC)
0210		Retransmission of 1111 (Current and Sea Temp)	
0229			Radio Propogation Prediction (20th and 21st of month)
0240	ASAS	0000	Surface Analysis
0300		Retransmission of 1130 (Sea Temp Anomaly)	
0320	ASAS	0000	Retransmission of 0240
0340	MANAM		Broadcast Schedule & Manual Amendments
0402	AUAS70	0000	700 HPA Height, Temp, Dew Point, Depression
0421	AWPN	0000	Wave Analysis (N Pacific)
0440	AWJP	0000	Wave Analysis (Japan)
0459	AUAS50	0000	500 HPA Height, Temp
0518	AUAS85	0000	850 HPA Height, Temp, Dew Point, Depression
0537	AUFE	0000	500 HPA Height, Vorticity
	AXFE78	0000	850 HPA Temperature and 700 HPA Vertical P-Velocity
0548	FSAS	0000	24 Hour Surface Prognosis
0607	FUFE502	0000	24 Hour 500 HPA Height, Vorticity Prognosis
	FSFE02	0000	24 Hour Surface Pressure and Precipitation Prognosis
0618	FXFE572	0000	24 Hour 500 HPA Temp and 700 HPA Dew Point, Depression Prognosis
	FXFE782	0000	24 Hour 850 HPA Temperature, Wind and 700 HPA Vertical P-Velocity Prognosis
0629	FUFE503	0000	36 Hour 500 HPA Height, Vorticity Prognosis
	FSFE03	0000	36 Hour Surface Pressure and Precipitation Prognosis
0640	FXFE573	0000	36 Hour 500 HPA Temp and 700 HPA Dew Point, Depression Prognosis
	FXFE783	0000	36 Hour 850 HPA Temperature, Wind and 700 HPA Vertical P-Velocity Prognosis
0651	FWPN	0000	24 Hour Wave Prognosis (N Pacific)
0710		0600	GMS Satellite Image
0730	FWJP	0000	24 Hour Wave Prognosis (Japan)
0750	WTAS07	0600	Tropical Cyclone Forecast (if TC)
0820	FSAS04	0000	48 Hour Surface Pressure and Precipitation Prognosis
0840	ASAS	0600	Surface Analysis
0900	FXAS504	0000	48 Hour 500 HPA Height, Vorticity Prognosis

0920	ASAS	0600	Retransmission of 0840
0940	FSAS07	0000	72 Hour Surface Pressure and Precipitation Prognosis
1000	FXAS507	0000	72 Hour 500 HPA Height, Vorticity Prognosis
1019	STPN	Sea Ice Condition (Seasonal, Tues and Fri)	
	FIOHO4/18	48 and 168 Hour Sea Ice Prognosis (Seasonal, Wed and Sat)	
1040	FSAS	0000	Retransmission of 0548 (24 Hr Surface Prognosis)
1111	COPQ1	10 Day Sea Surface Temperature (2nd, 12th, 22nd)	
	COPA	10 Day Sea Surface Temperature and Anomaly (4th, 14th, 24th)	
	SOPQ	Sea Surface Current	
	SOPN	Subsurface (100 m) Temperatures (7th, 17th, 27th)	
	FOPN1	10 Day Sea Surface Current and Temperature Prognosis (9th, 19th, 29th (but Feb 28 if no Feb 29))	
1132	COPA2	10 Day Sea Surface Temp Anomaly (2nd, 12th, 22nd)	
	FOPN2	10 Day Sea Surface Temp Anomaly Prognosis (9th, 19th, 29th (but Feb 28 if no Feb 29))	
1200	FUXT852	0000	24 Hour 850 HPA Stream Lines Prognosis
	FUXT854	0000	48 Hour 850 HPA Stream Lines Prognosis
1220	AUXT85	0000	850 HPA Stream Lines
	AUXT20	0000	200 HPA Stream Lines
1240	FUXT202	0000	24 Hour 200 HPA Stream Lines Prognosis
	FUXT204	0000	48 Hour 200 HPA Stream Lines Prognosis
1303			Test Chart
1319		1200	GMS Satellite Image
1350	WTAS07	1200	Tropical Cyclone Forecast (if TC)
1440	ASAS	1200	Surface Analysis
1520	ASAS	1200	Retransmission of 1440
1620	AUAS70	1200	700 HPA Height, Temp, Dew Point and Depression
1640	AUAS50	1200	500 HPA Height, Temp
1700	AUAS85	1200	850 HPA Height, Temp, Dew Point, Depression
1720	AWJP	1200	Wave Analysis (Japan)(if TC)
1738	AUFE50	1200	500 HPA Height, Vorticity
	AXFE78	1200	850 HPA Temperature and 700 HPA Vertical P-Velocity
1749	FUFE502	1200	24 Hour 500 HPA Height, Vorticity Prognosis
	FSFE02	1200	24 Hour Surface Pressure, Precipitation Prognosis
1800	FXFE572	1200	24 Hour 500 HPA Temp and 700 HPA Dew Point, Depression Prognosis
	FXFE782	1200	24 Hour 850 HPA Temperature, Wind and 700 HPA Vertical P-Velocity Prognosis
1811	FUFE503	1200	36 Hour 500 HPA Height, Vorticity Prognosis
	FSFE03	1200	36 Hour Surface Pressure and Precipitation Prognosis
1822	FXFE573	1200	36 Hour 500 HPA Temp and 700 HPA Dew Point, Depression Prognosis
	FXFE783	1200	36 Hour 850 HPA Temperature, Wind and 700 HPA Vertical P-Velocity Prognosis
1910		1800	GMS Satellite Image
1930	FSAS	1200	24 Hour Surface Pressure and Precipitation Prognosis
1950	WTAS07	1800	Tropical Cyclone Forecast (if TC)
2010	FWJP	1200	24 Hour Wave Prognosis (Japan)(if TC)

2040	ASAS	1800	Surface Analysis
2100	FSAS04	1200	48 Hour Surface Pressure and Precipitation Prognosis
2130	ASAS	1800	Retransmission of 2040
2140	FXAS504	1200	48 Hour 500 HPA Height, Vorticity Prognosis
2200	FXAS784	1200	48 Hour 850 HPA Temperature, Wind and 700 HPA Vertical P-Velocity Prognosis
2220	FXAS507	1200	72 Hour 500 HPA Height, Vorticity Prognosis
2240	FXAS787	1200	72 Hour 850 HPA Temperature, Wind and 700 HPA Vertical P-Velocity Prognosis
2300	FUXT852	1200	24 Hour 850 HPA Stream Lines Prognosis
	FUXT854	1200	48 Hour 850 HPA Stream Lines Prognosis
2320	AUXT85	1200	850 HPA Stream Lines
	AUXT20	1200	200 HPA Stream Lines
2340	FUXT202	1200	24 Hour 200 HPA Stream Lines Prognosis
	FUXT204	1200	48 Hour 200 HPA Stream Lines Prognosis

Appendix E - BMF Broadcast Schedule

Effective 1 January 1997
Central Weather Bureau R.O.C.
4616, 5250, 8140, 13900, 18560 Khz

TOT UTC	Heading	OBS UTC	Content
0050			Broadcast Schedule
0120		0000	GMS Satellite Image
0200*		0000	Typhoon Warning (English and Chinese)
0300		0000	Fishery Weather Forecast (Chinese)
0350	ASAS RCTP	0000	Surface Analysis (with plotted data)
0425	FSAS RCTP	0000	24 Hour Surface Prognosis
0450			Test Chart
0500*		0300	Typhoon Warning (English and Chinese)
0525	AUAS85 RCTP	0000	850 HPA analysis (with plotted data)
0540	AUAS70 RCTP	0000	700 HPA analysis (with plotted data)
0555	AUAS50 RCTP	0000	500 HPA analysis (with plotted data)
0610	AUAS30 RCTP	0000	300 HPA analysis (with plotted data)
0625	FSFE00 RCTP	0000	RFS Surface Pressure Analysis
	FUFE500 RCTP	0000	RFS 500 HPA Height Analysis
0640	FSFE01 RCTP	0000	RFS 12 Hour Surface Pressure Prognosis
	FUFE501 RCTP	0000	RFS 12 Hour 500 HPA Height Prognosis
0655	FSFE02 RCTP	0000	RFS 24 Hour Surface Pressure Prognosis
	FUFE502 RCTP	0000	RFS 24 Hour 500 HPA Height Prognosis
0708	FSFE03 RCTP	0000	RFS 36 Hour Surface Pressure Prognosis
	FUFE503 RCTP	0000	RFS 36 Hour 500 HPA Height Prognosis
0720		0600	GMS Satellite Image
0735	FSFE04 RCTP	0000	RFS 48 Hour Surface Pressure Prognosis
	FUFE504 RCTP	0000	RFS 48 Hour 500 HPA Height Prognosis
0745	FUWX850 RCTP	0000	GFS 850 HPA Equatorial Belt Wind Analysis
0800*		0600	Typhoon Warning (English and Chinese)
0825	FUWX852 RCTP	0000	GFS 12 Hour 850 HPA Equatorial Belt Wind Prognosis
0840	FUWX854 RCTP	0000	GFS 48 Hour 850 HPA Equatorial Belt Wind Prognosis
0900		0600	Fishery Weather Forecast (Chinese)
0935	AWPN RCTP	0000	Wave Analysis
0950	ASAS RCTP	0600	Surface Analysis (with plotted data)
1015	FWPN RCTP	0000	24 Hour Wave Prognosis
1030	FUWX200 RCTP	0000	GFS 200 HPA Equatorial Belt Wind Analysis
1045	FUWX202 RCTP	0000	GFS 24 Hour 200 HPA Equatorial Belt Wind Prognosis
1100*		0900	Typhoon Warning (English and Chinese)
1125	FUWX204 RCTP	0000	GFS 48 Hour 200 HPA Equatorial Belt Wind Prognosis
1320		1200	GMS Satellite Image
1400*		1200	Typhoon Warning (English and Chinese)
1500		1200	Fishery Weather Forecast (Chinese)
1550	ASAS RCTP	1200	Surface Analysis (with plotted data)
1700*		1500	Typhoon Warning (English and Chinese)
1725	AUAS85 RCTP	1200	850 HPA analysis (with plotted data)
1740	AUAS70 RCTP	1200	700 HPA analysis (with plotted data)
1755	AUAS50 RCTP	1200	500 HPA analysis (with plotted data)
1810	AUAS30 RCTP	1200	300 HPA analysis (with plotted data)
1825	FSFE00 RCTP	1200	RFS Surface Pressure Analysis

	FUFE500 RCTP	1200	RFS 500 HPA Height Analysis
1840	FSFE01 RCTP	1200	RFS 12 Hour Surface Pressure Prognosis
	FUFE501 RCTP	1200	RFS 12 Hour 500 HPA Height Prognosis
1855	FSFE02 RCTP	1200	RFS 24 Hour Surface Pressure Prognosis
	FUFE502 RCTP	1200	RFS 24 Hour 500 HPA Height Prognosis
1908	FSFE03 RCTP	1200	RFS 36 Hour Surface Pressure Prognosis
	FUFE503 RCTP	1200	RFS 36 Hour 500 HPA Height Prognosis
1920		1800	GMS Satellite Image
1925	FSFE04 RCTP	1200	RFS 48 Hour Surface Pressure Prognosis
	FUFE504 RCTP	1200	RFS 48 Hour 500 HPA Height Prognosis
1945	FUWX850 RCTP	1200	GFS 850 HPA Equatorial Belt Wind Analysis
2000*		1800	Typhoon Warning (English and Chinese)
2100		1800	Fishery Weather Forecast (Chinese)
2135	FSAS07 RCTP	1200	GFS 72 Hour Surface Pressure Prognosis
2150	ASAS RCTP	1800	Surface Analysis (with plotted data)
2210	FUAS507 RCTP	1200	GFS 72 Hour 500 HPA Height Prognosis
2230	FUWX200 RCTP	1200	GFS 200 HPA Equatorial Belt Wind Analysis
2245	FUWX202 RCTP	1200	GFS 24 Hour 200 HPA Equatorial Belt Wind Prognosis
2300*		2100	Typhoon Warning (English and Chinese)
2325	FUWX204 RCTP	1200	GFS 48 Hour 200 HPA Equatorial Belt Wind Prognosis
2340	FSAS09 RCTP	1200	GFS 96 Hour Surface Pressure Prognosis
2355	FUAS509	1200	GFS 96 Hour 500 HPA Height Prognosis
0010	FUWX857 RCTP	1200	GFS 72 Hour 850 HPA Equatorial Belt Wind Prognosis
0025	FUWX207 RCTP	1200	GFS 72 Hour 200 HPA Equatorial Belt Wind Prognosis

* Broadcast only if there is a typhoon warning.

Appendix F - AXI Broadcast Schedule

AUSTRALIAN BUREAU OF METEOROLOGY

EFFECTIVE DATE 24 SEPTEMBER 1996

5755, 7535 Khz (0900-2300), 10555 Khz (24 Hr), 15615, 18060 Khz (2300-0900)

TOT UTC	OBS UTC	Content
0015		AXI/AXM Schedule (2 parts)
0045		Information Notice
0100		IPS Reccomendations AXI
0200	0000	24 Hour Surface Prognosis (Australia)
0215	1800	Regional Signifigant Weather Prognosis (RSW)
0230		Current Warnings Summary
0245	0000	Surface Analysis (Australia)
0300	0000	500 hPA Analysis (Australia)
0330	1800	Darwin Tropics Signifigant Wx Prognosis
0715	0000	Regional Signifigant Weather Prognosis (RSW)
0815		Current Warnings Summary
0845	0600	Surface Analysis (Australia)
1000	0000	Darwin Tropics Signifigant Wx Prognosis
1215		AXI/AXM Schedule (2 parts)
1300	0600	Regional Signifigant Weather Prognosis (RSW)
1430	1200	Surface Analysis (Australia)
1445		Current Warnings Summary
1515	1200	24 Hour Surface Prognosis (Australia)
1530	0600	Darwin Tropics Signifigant Wx Prognosis
1900	1200	Regional Signifigant Weather Prognosis (RSW)
2015	1800	Surface Analysis (Australia)
2045		Current Warnings Summary
2200	1200	Darwin Tropics Signifigant Wx Prognosis

APPENDIX G - LINKS

I. WEATHER LINKS FOR NW PACIFIC / SE ASIA

A. Official Agencies

Singapore Met Service http://intranet.mssinet.gov.sg/marine/

PAGASA (Philippines) http://pagasa.dyndns.org/

Serviços Meteorológicos e Geofísicos, Macau http://smg.gov.mo/english/

China Meteorological Administration http://www.cma.gov.cn/ Following the instruction of the former Premier Zhou Enlai, "We should try our best to develop our own meteorological satellites, and also use data from foreign satellites" http://www.cma.gov.cn/fy2/chnsmc.htm is the affiliated website of the Chinese National Satellite Meteorological Center with more detailed information than most people will ever need about the result of Premier Zhou's instruction. Images are at http://nsmc.cma.gov.cn/engindex.htm. There must be some weather products here somewhere, but the labels are in Chinese.

Taiwan Meteorological Service
http://www.cwb.gov.tw/V2.0/frames_html/cwb1e.hmtl

Hong Kong Observatory http://www.info.gov.hk/hko/ English Page: http://www.info.gov.hk/hko/contente_new.htm

Naval Pacific Meteorology and Oceanography Center, Yokosuka, Japan (US) http://www.yoko.npmoc.navy.mil/ (front page) The West Pacific weather products are at http://207.133.112.37/html/wpac.htm.

B. Typhoon Warnings and Tracking

Typhoon 2000 http://www.geocities.com/taifun00/ or an alternate site at www.borg.ncf.edu.ph/typhoon2000

An excellent Philippine-based typhoon information site with links to most recent charts and satellite images from the major forecasting agencies, historical data, real time observations in Naga City, in the Bikol region of southern Luzon, .

Joint Typhoon Warning Center http://www.npmoc.navy.mil/jtwc.html Alternate Sites at Yokosuka, Japan http://207.133.112.37/jtwcweb/jtwc.html and San Diego http://www.npmoc-sd.navy.mil/npmoc-ph/jtwc.html The U. S. Department of Defense agency responsible for issuing tropical cyclone warnings for the Pacific and Indian Oceans. JTWC was at Guam from 1959 until it moved to Pearl Harbor, Hawaii in January, 1999.

Historical Tropical Storm Tracks http://www.solar.ifa.hawaii.edu/Tropical/ Thomas R. Metcalf has put together a site with current (unofficial) information as well as historical data for about the last five years. The summaries of forecast accuracy are instructive. The Unisis Weather Hurricane-Tropical Data site is better organized and more comprehensive http://weather.unisys.com/hurricane/index.hmtl.

C. Other Weather Sites

Tropical prediction Center, National Hurricane Center (US) links
http://www.dde.liverpool.k12.ny.us/Whacked/WebWhacker%201.0/Hurricanes/tpclink.htm

l Despite having last been updated in 1997, this is an excellent and very comprehensive list of weather links

Hong Kong Weather Underground http://www.underground.org.hk/wxsite.html A cool site with forecast and observation data geared to the areas North of the Philippines, and some good general material.

GMS-5 Satellite http://yyy.tksc.nasda.go.jp/Home/Earth_Obs/e/gms_e.html The page at the National Space Development Agency of Japan describing the satellite that takes all those cool and useful pictures, among other things. You can see its raw hourly images in visible and infrared at http://www.goes.noaa.gov/HTML/FRAMED/f_gms.html. The US Navy's version is easier to use as it has lat/lon lines.

24 Hour weather Prediction for Puerto Galera, Philippines
http://weather.yahoo.com/forecast/Puerto_Galera_PH_c.html Dumbed down, with no wind prediction.

PHILIPPINES

Modern Philippines

Yahoo Full Coverage-Philippines http://dailynews.yahoo.com/fc/World/Philippines/

Yahoo Full Coverage-S. Philippine
http://dailynews.yahoo.com/fc/World/Southern_Philippine_Conflict

Philippine Political Update

Philippine Center for Investigative Journalism

http://www.apmforum.com.columns/orientseas.htm Expat American business consultant Clarence Henderson's site. A well written series of short articles on business, economy and culture of the Philippines. Recommended.

Erap Scandals http://eraption.iwarp.com/ had been a reccomended site dealing with the scandals and malapropisims of former President Joseph 'Erap' Estrada.

OFFICIAL SITES

Welcome to USAID-Philippines' Official Site

US Embassy in Manila

The Department of Foreign Affairs (philippine)

Philippine House of Representatives (11th Congress)

POLITICAL

The Wit and Wisdom of Imelda Marcos

http--members.nbci.com-natdemfront-

informational

Amnesty International Report 2000 - Philippines

Asia Society Publications - Philippines at the crossroads (1996)

Philippines Social development

Welcome To Yamashita Gold!

Equitable PCI Bank

Equitable PCI Bank Branch Directory

Welcome to ONEOCEAN.ORG

BG1255es (02-22-99) Rebuilding the U.S.-Phillipine Alliance -- Heritage

Philippines Links Welcome to PhilRights Online

Home Page - Placer Dome in the Philippines

MILITARY AND FOREIGN AFFAIRS

VISITING FORCES AGREEMENT

The Philippine Navy - Official site

Philippine Air Force Home Page

World Navies Today Philippines

GENERAL SOURCES ON THE PHILIPPINES

Philippines Culture, history and travel

A Philippine Leaf

StudyWeb History & Social StudiesCultureAsiaPhilippines

The startpage at European Philippine Services

Austrian-Philippine Homepage (much good historical materials)

Library of Congress / Federal Research Division / Country Studies / Area Handbook Series / Philippines

EIU -- EIU's Latest Philippines Acting up

FEBTC: Philippine Economic Review

The startpage at European Philippine Services

Philippine American Literary House

Philippine Daily Inquirer Interactive - September 12, 2000

PHILIPPINE MARINE AND SAILING

The 109th Philippine Coast Guard Auxiliary Squadron Website

HMS BLIDÖ

cruisephilippines.com

Port Bonbonon

ASIA - SAIL PHILIPPINES

MAPS

Map of the Philippines with provinces.

Map of Philippines provinces (better)

LAW

1987 CONSTITUTION OF THE REPUBLIC OF THE PHILIPPINES - CHAN ROBLES VIRTUAL LAW LIBRARY

SITE MAP - CHAN ROBLES VIRTUAL LAW LIBRARY

Welcome to Pinoylaw.com. Your online Philippine law information and free legal advice.

Baker & McKenzie - Intellectual Property Guide - Philippines

LANGUAGE

TAGALOG MAIN Page

Hiligaynon on the Web

Metamorphosis of Filipino

Filipino English can be hard to understand at first

ERNIE TURLA'S CLASSIC KAPAMPANGAN DICTIONARY - InfoSpace

Ibanag Language (Cagayan, Philippines) (Brief Poetry samples)

Ilocano (Ilokano) Language - rubino

Breakdown of Philippine Languages : http://www.sil.org/ethnologue/countries/Phil.html

Basic Cebuano http://www.netwalk.com/~shoni/ceb.html

Kapampangan Homepage:http://207.176.47.192/index1.htm

A Comparison of Austronesian Languages including Indonesian, Javanese, Balinese, Sundanese, Madurese, Sawu, Toraja, Acehnese, Tetun , Tagalog, Hiligaynon, Maori, Fijian, Hawaiian, Malagasy and Rapanui
http://www.geocities.com/Tokyo/8908/firemount/austroframes.html

Central Philippine Languages Bisaya, Cebuano, Hiligaynon, Waray, Tagalog

CLUB GIRL SCENE

A gentlemans guide to the nightlife of the Philippines

Asian Club Girls - INFO LINKS, asian girls, bar girls, go-go dancers, strippers, filipinas, philippines, thailand, barfine, pro

Philippines Intimacy-Sex Research Report

MINDANAO AND SULU

Accord Mindanao

The Freeman Mindanao Online

MB - The Mindanao Sphinx - Blas F. Ople (03-05-2000)

The present Homepage (Moroland Online) is maintained and managed by the Bangsamoro Islamic Youth Welfare Society which was established in 1998 by a group of young Moro intellectuals, professionals and students in the Bangsamoro homeland who, most of them, had finished their studies in Islamic universities abroad. The group is consist of members with different academic background such as Political Science, Economics, Sociology, Psychology, Islamic Thought, Information Technology, etc. http://members.muslimsites.com/morolandsite/

Morolland http://suhayb.tripod.com/ph2.htm

ERRI Philippines; Country Study, Hotspot Report

Jolo, Philippines

Filipino Muslims

History

Literacy in Pre-Hispanic Philippines The Gods Must Be Horny - Early Philippino Sex Practices Alibata The Spanish Treasure Fleets

http://metalab.unc.edu/hyperwar/USN/USN-Chron/USN-Chron-1945.html Official USN chronologies of WWII

http://www.airgroup4.com/book/indx/index20.htm Torpedo four book with much on TF 38 operations

http://www.webcom.com/wak/lestweforget/#Table of Contents Memoir of soldier in Philippine liberation campaign

www.corregidor.cjb.net or http://www.jatoga.net.au/~witman/index.html Good looking site on Corregidor

http://www.warships1.com/W-Order_of_Battle/OOB_WWII_Pacific.htm Warships Mag's WWII Pacific Order of Battle Page.

http://www.fortunecity.com/meltingpot/oxford/285/pacific.htm A good looking WWII links page

http://www.geocities.com/Pentagon/Bunker/6613/ A Pinoy site about Manila during the war

http://metalab.unc.edu/hyperwar/USA/USA-P-PI.html Morton, Louis, The US Army in WWII -

The Fall of the Philippines

The Wit and Wisdom of Imelda Marcos

http--members.nbci.com-natdemfront-

History of Subic Bay Naval Base

Spratly Is

Chinese Ministry of Foreign Affairs 'The Issue of South China Sea'http://www.fmprc.gov.cn/english/dhtml/readsubclass.asp?classno=161 Spratlies ttp://spratlys.homepage.com/photo.htm China Invades Spratly Islands Links South China Sea Virtual Library

REFERENCES

Pilots and Cruising Notes

Davies, Stephen and Morgan, Elaine, Cruising Guide to Southeast Asia Volume One: The South China Sea, Philippines, Gulf of Thailand to Singapore, Imray, 1998 ISBN 0852882963. A poor job. One of two volumes that tries to cover all of SE Asia, plus Papua New Guinea, and the first half of each volume is mostly a general discussion of cruising in the tropics. The regional sections have a lot of material that appears to have been paraphrased from the Admiralty Pilot, or based on looking at a chart. Little appears to be based on having been in the Philippines or talking with people who have.

DMA Pub 162, Sailing Directions (Enroute) Phillipine Islands 4th ed, 1996

Pickard, Leslie S. Phillipine Waters Cruising Guide Second 'printing', March 1987. (Xeroxed Cruising Notes circulated to Manila Yacht Club Members)

Phillippine Coast Pilot, 6th Edition, 1995. National Mapping and Resource Information Authority, Manila.

Thompson, Jeff & Frieda, Cruising Notes On the Philippines, Seven Seas Cruising Association, March 1995.

Seamanship and Weather

Bowditch, The American Practical Navigator, Pub. No. 9, DMAHTC. 1995. The classic reference.

Hydrographer of the Navy, The Mariner's Handbook, 6th ed., HMSO, 1989 and supplement, 1996.

Knight, Arthur Melvin, Knight's Modern Seamanship, 18th ed., ed. John V. Noel, Jr., Capt USN (Ret.), Van Nostrand Reinhold, New York 1989.

Kotch, William J RADM USN (Ret) and Henderson, Richard, Heavy Weather Guide, 2nd ed.,Naval Institute Press, Annapolis MD, 1984 ISBN 0-87021-263-X.

Kotch, William J RADM USN (Ret) Weather for the Mariner, 3rd ed., Naval Institute Press, Annapolis MD, 1983 ISBN 0-87021-756-9.

Meterological Office, Meteorology For Mariners, Met. O. 895, 3rd edition, London, HMSO 1978. ISBN 011 400311 4.

Tropical Cyclone Forecasters Reference Guide [Internet address to come]

Natural History

Aprieto, Virginia L., Philippine Tuna Fisheries: Yellowfin & Skipjack. University of the Philippines, Quezon City, 1995 ISBN 971-542-056-7

Castro, Peter and Huber, Michael Marine Biology, 2nd ed, Wm. C. Brown, publishers 1997 ISBN 0-697-34360-5

Nemenzo, Francis, Guide to Philippine Flora & Fauna, Volume V: Corals, Natural Resources Management Center, Ministry of natural Resources and University of the Philippines 1987 ISBN 971-1026-23-6

Tan, Jose Ma. Lorenzo, A Field Guide to Whales and Dolphins in the Philippines, Bookmark, Makati, 1995. ISBN 971-569-155-2

White, Alan, Philippine Coral Reefs: a Natural History Guide, New Day, Quezon City, 1987. ISBN 971-10-0338-4.

Williamson, Fenner, Burnett & Rifkin, eds., Venomous and Poisonous Marine Animals: a Medical and Biological Handbook, University of New South Wales& Surf Life Saving Queensland, 1996. ISBN 086840 279 6.

History and Culture

Hopkirk, Peter Setting the East Ablaze: on Secret Service in Bolshevik Asia, Oxford, 1984, ISBN 0 19 285166 7

Lachica, Eduardo Huk: Philippine Agrarian Society in Revolt, Solidaridad, Manila, 1970

Landsdale, Major General Edward Geary, In The Midst Of Wars (New York, NY: Harper and Row, 1972).

NPA Website http://www.geocities.com/bahuba69/npa3.hmtl

Onoda, Hiroo, No Surrender: My Thirty Year War (Waga Rubantō No Sanjūnen Senso), Naval Institute Press. Originally published : Tokyo, New York, Kodanisha International, 1974. ISBN 1 55750 663.

Patanñe, Eufomio P., The Philippines in the 6th to 16th Centuries, LSA Press, Quezon City, 1996. ISBN 971-91666-0-6

Reid, Ben Philippine Left: Political Crisis and Social Change, Journal of Contemporary Asia Publishers, Manila, 2000. ISBN 971-8639-10-1

Saulo, Alfredo B. Communism in the Philippines: an Introduction, Ateneo de Manila University Press, 1990 ISBN 971 113-098

Tully, Anthony P., Ship of Nine Lives: The Long Struggle of Cruiser Kumano, http:

Thompson, Mark The Anti-Marcos Struggle, New Day, Quezon City, 1996 ISBN 971 10 0992-7

Patterns of Global Terrorism, 1999. United States Department of State, April 2000. Available on the WWW at the DUDLEY KNOX LIBRARY of the Naval Postgraduate School, Monterey :http://web.nps.navy.mil/~library/Welcome.html

Wolff, Leon, Little Brown Brother - How the United States Purchased and Pacified the Philippines, 1960. Paperback: Oxford, Singapore, 1991. ISBN 0 19 588986 X.

Other

Concise Oxford English Dictionary, 9th edition.

Diving

Jackson, Jack The Dive Sites of the Phillipines 1995, New Holland. ISBN 1 85368 516 X

ABOUT THE AUTHOR

The Author began sailing on the North Atlantic Ocean as a child in the New England region of the United States. He has been cruising full time on his Freya 39 sloop *Bronwen* since around

1993. To date he has logged over [] sea miles in her, about [] of which were single handed, principally in the Pacific Ocean and Southeast Asia. This is his first book.

Publications

Fragrant Harbor

1903 Java Commercial Centre, 128 Java Road, North Point, Hong Kong. Tel (852) 2566 8120 Fax (852) 2807 3162.

Sail

84 State Street, Boston, MA 02109-2202. Tel 1617 720 8600 fax 617 723 0911

Asian Boating

Lat 38

Cruising World

Latitudes and Attitudes

Box 668 Redondo Beach, CA 90277 USA. Tel (1 310) 798 3445 Fax (1 310) 798 3448. www.latsandatts.net email editor@latsand atts.net

Ocean Navigator

CHARTS

Phil	4708	Phillipines, Southeastern Part	809,000	10°	45'	N	05°	10'	N	127°	04'	E	121°	10'	E	1st, Mar 58, rev11/85
Phil	4707	Phillipines, Southwestern Part	808,000	11°	40'	N	05°	20'	N	122°	10'	E	116°	34'	E	1st, Dec 60, Rev 84
Phil	4706	Phillipines, Central Part	798,000	15°	00'	N	10°	12'	N	126°	20'	E	119°	00'	E	1st, Rev 6/22/87
Phil	4705	Manila Bay to Taiwan	776,000	21°	46'	N	14°	20'	N	123°	40'	E	118°	48'	E	11-Apr-1966
DMA	92170	Sarangani Bay to Mayo Bay (South Coast of Mindanao) (Phil 4608)	200,000	07°	05'	N	06°	05'	N	126°	28'	E	125°	00'	E	2nd Mar 19, 1977
Phil	4204	Balintang Channel - Luzon Strait	200,000	20°	32'	N	19°	12'	N	122°	46'	E	120°	48'	E	28-Jan-1980
Phil	4218	Ragay Gulf to Tayabas Bay	200,000	14°	00'	N	12°	35'	N	122°	24'	E	121°	20'	E	11-Jan-1976
Phil	4228	Cape Engano to Dingalan Bay	200,000	18°	40'	N	16°	52'	N	123°	05'	E	121°	52'	E	13-Feb-1978
Phil	4229	Babuyan Is	200,000	20°	00'	N	18°	12'	N	122°	25'	E	121°	03'	E	24-Jun-1974
Phil	4305	Mindoro and Vicinity	200,000	13°	40'	N	11°	45'	N	121°	45'	E	120°	15'	E	2nd, Dec 92
Phil	4309	Balbac Strait	200,000	08°	22'	N	06°	30'	N	117°	59'	E	116°	36'	E	3-Feb-1986
Phil	4405	Visayan Sea	200,000	11°	55'	N	10°	40'	N	124°	25'	E	122°	34'	E	14-Jul-1975
Phil	4605	Zamboanga Pen. [DMA 9220]	200,000	08°	40'	N	06°	50'	N	121°	40'	E	123°	10'	E	2nd, May 78
Phil	4606	Port Sibulan to Polloc Harbor	200,000	08°	02'	N	06°	49'	N	124°	25'	E	122°	45'	E	1st, Aug 56, rev 5/76
Phil	4607	Cotabato to Sarangani Bay [DMA 92180]	200,000	07°	20'	N	05°	30'	N	125°	10'	E	123°	48'	E	2nd, Nov 86
BA	415	Davao Gulf	125,000	07°	23'	N	07°	40'	N	125°	40'	E	125°	22'	E	7-Apr-1978
Phil	4210	Dasol Bay to Capones Is [Sta Cruz Hbr, Iba Anch]	125,000	16°	01'	N	14°	53'	N	120°	15'	E	119°	34'	E	6-Jan-1975
Phil	4211	Approaches to Manila Bay	125,000	15°	15'	N	14°	02'	N	120°	39'	E	120°	47'	E	1st, 1/60, Rev. 11/80
Phil	4214	Verde I Passage	125,000	14°	15'	N	13°	24'	N	121°	26'	E	120°	23'	E	2nd, Dec 91
Phil	4255	Manila Bay and Approaches [Marirelo]	125,000	14°	56'	N	14°	03'	N	121°	00'	E	119°	57'	E	2nd, Jan 75, rev 6/85
DMA	92150	Davao Gulf [Malipano Anch.] (Phil 4624)	110,000	07°	23'	N	06°	18'	N	126°	06'	E	125°	22'	E	3rd, Dec 9, 1989
DMA	92160	Yaco Point to Cape St. Agustin (Phil 4625)	110,000	07°	05'	N	06°	00'	N	126°	44'	E	126°	00'	E	3rd, Nov 18, 1989
DMA	92350	Iloilo and Guimaras Straits[Same as Phil 4416]	100,000	11°	05'	N	10°	11'	N	123°	02'	E	122°	02'	E	9-Jun-1975
DMA	92380	East Coast of Cebu [same as Phil 4427]	100,000	11°	06'	N	10°	12'	N	124°	28'	E	123°	50'	E	3-Mar-1986
Phil	4205	Batan Is	100,000	21°	10'	N	20°	15'	N	122°	16'	E	121°	35'	E	9-Jan-1984
Phil	4206	Pata Pt to Cape Bojeador	100,000	19°	12'	N	18°	25'	N	121°	18'	E	120°	22'	E	1-Jan-1975
Phil	4207	Cape Bojeador to Vigan	100,000	18°	31'	N	17°	30'	N	120°	44'	E	17°	30'	E	8-Aug-1980
Phil	4208	Vigan to San Fernando	100,000	17°	36'	N	16°	36'	N	120°	39'	E	119°	55'	E	7-Apr-1975
Phil	4209	Lingayan Gulf	100,000	16°	40'	N	15°	59'	N	120°	38'	E	119°	40'	E	6-Oct-1980
Phil	4219	Passages between Luzon and Masbate and Sorsogon Bay	100,000	13°	03'	N	12°	11'	N	124°	08'	E	123°	21'	E	2-Jun-1980
Phil	4220	San Bernadino Strait and Samar I	100,000	13°	04'	N	12°	09'	N	124°	40'	E	124°	00'	E	9-Mar-1987
Phil	4221	Albay Gulf and Part of Lagonoy Gulf	100,000	13°	38'	N	13°	00'	N	124°	26'	E	123°	31'	E	23-Feb-1976
Phil	4222	Lagonoy Gulf to Lamit Bay and Cataduanes I	100,000	14°	00'	N	13°	28'	N	124°	29'	E	123°	29'	E	4-Aug-1987
Phil	4312	Cuyo Is	100,000	11°	30'	N	10°	35'	N	121°	20'	E	120°	35'	E	2nd, 2/75, Rev. 9/87
Phil	4314	Northern Part of Busuanga	100,000	12°	42'	N	12°	01'	N	120°	28'	E	119°	30'	E	16-Jul-1979
Phil	4315	Palawan to Cullion I, Inc'l Lincapan Strait	100,000	11°	53'	N	11°	10'	N	120°	22'	E	119°	26'	E	1st, Mar 62, rev 6/92
Phil	4316	Northwestern Palawan	100,000	11°	30'	N	10°	30'	N	119°	32'	E	118°	50'	E	24-Mar-1980
Phil	4317	Shark Fin Bay to Fleches Pt.	100,000	11°	14'	N	10°	15'	N	120°	08'	E	119°	26'	E	1st, Mar 58, Rev 1980
Phil	4318	Boayan I To Bluff Point	100,000	10°	38'	N	09°	53'	N	09°	18'	E	118°	18'	E	3-Dec-1984
Phil	4319	Green Island Bay and Vicinity [Pascoe Channel]	100,000	10°	28'	N	09°	47'	N	119°	50'	E	118°	55'	E	14-Aug-1978
Phil	4321	Bold Point to Malanao OI	100,000	10°	05'	N	09°	24'	N	119°	31'	E	118°	32'	E	8-Feb-1982
Phil	4324	Southern Palawan	100,000	09°	00'	N	08°	18'	N	117°	41'	E	116°	43'	E	7-Feb-1972
Phil	4326	North Balbac Strait and Vic.	100,000	08°	26'	N	07°	43'	N	117°	42'	E	116°	45'	E	23-Feb-1976
Phil	4410	Tablas I and Vicinity	100,000	12°	44'	N	11°	53'	N	122°	22'	E	121°	44'	E	1st, Nov 61, rev 6/76
Phil	4411	Sibuyan and Romblon Is	100,000	12°	44'	N	11°	52'	N	122°	52'	E	122°	13'	E	16-Jul-1962
Phil	4412	Western Masbate	100,000	12°	43'	N	11°	50'	N	123°	31'	E	122°	50'	E	26-Jul-1976
Phil	4413	Northern Panay, Sigat Point to Bulacaue Point [Port Batan, Capiz Bay]	100,000	11°	55'	N	11°	15'	N	123°	11'	E	122°	25'	E	11-Oct-1982

Phil	4414	Northwestern Panay	100,000	11°	57'	N	11°	14'	N	122°	35'	E	121°	40'	E	1st, Jan 60 rev 9/87
Phil	4415	Southwestern Panay [San Jose de Buenavista]	100,000	11°	15'	N	10°	21'	N	122°	29'	E	121°	49'	E	1st, Mar 58, rev. 6/92
Phil	4417	Northeastern Panay and Adjacent Is	100,000	11°	50'	N	11°	54'	N	123°	56'	E	123°	55'	E	12-Apr-1976
Phil	4418	Southeastern Masbate	100,000	12°	15'	N	11°	35'	N	123°	30'	E	124°	25'	E	14-Feb-1977
Phil	4420	Calbayog to Tacloban	100,000	12°	11'	N	11°	15'	N	125°	02'	E	124°	23'	E	12-Nov-1979
Phil	4429	Western Bohol [Port Tagbilaran]	100,000	10°	22'	N	09°	23'	N	124°	16'	E	123°	36'	E	13-Jul-1987
Phil	4511	Basilan Strait	100,000	07°	07'	N	06°	24'	N	122°	28'	E	121°	32'	E	1st, 7/61 rev 8/75
Phil	4275	Polillo Is	80,000	15°	06'	N	14°	32'	N	122°	33'	E	121°	47'	E	25-Sep-1978
Phil	4272	Unisan to Malanay and Northern Part of Marinduque	70,000	13°	55'	N	13°	29'	N	122°	25'	E	121°	49'	E	19-Feb-1962
Phil	4338	Lubang Is [Golo Pass]	60,000	13°	57'	N	13°	35'	N	120°	29'	E	119°	58'	E	1st, 10/59, rev 1/76
Phil	4356	Cagayan Is [Cagayan Anch.]	60,000	10°	02'	N	09°	31'	N	121°	28'	E	121°	01'	E	1st, Feb 60, Rev 7/79
DMA	92153	Approaches to Davao [Port of Davao] (Phil 4657?)	50,000	07°	19'	N	06°	50'	N	125°	45'	E	125°	25'	E	3rd, Feb 17 1990
Phil	4349	Malampaya Sound and Approaches	50,000	11°	09'	N	10°	43'	N	119°	28'	E	119°	10'	E	2nd, Dec 1991
Phil	4350	Western Entrance to Coron Bay	50,000	12°	12'	N	11°	52'	N	120°	07'	E	119°	40'	E	1st, Sep 68, rev 3/80
Phil	4351	Coron Bay	50,000	12°	04'	N	11°	42'	N	120°	26'	E	119°	58'	E	2nd, Nov 1994
Phil	4448	Iloilo Strait and Harbor [Iloilo River, Santa Ana Bay]	50,000	10°	50'	N	10°	34'	N	122°	48'	E	122°	26'	E	29-Jun-1981
Phil	4654	Mindanao River Delta and Polloc Hbr	50,000	07°	29'	N	07°	07'	N	125°	27'	E	124°	00'	E	1st, July 1917, rev 82
Phil	4256A	Batangas Bay and Vicinity	50,000	13°	50'	N	13°	33'	N	121°	05'	E	120°	48'	E	1st, July 83
Phil	4237	Tabaco Bay, Coal Harbor and Legaspi Port	40,000	13°	29'	N	13°	07'	N	123°	58'	E	123°	41'	E	8-Aug-1983
Phil	4267	Lucena Anch, Pangbilao Bay and Port Laguimanoc	40,000	14°	01'	N	13°	49'	N	121°	52'	E	121°	33'	E	5-Apr-1976
Phil	4340	Mangarin and Pandarochan Bay	40,000	12°	22'	N	12°	08'	N	121°	13'	E	120°	58'	E	1st, June 39, rev 5/76
Phil	4440	Biri Channel and VIcinity	40,000	12°	43'	N	12°	30'	N	124°	34'	E	124°	17'	E	31-May-1976
BA	3913	Cebu Harbor and Approaches [Cebu Hbr]	35,000	10°	26'	N	10°	13'	N	124°	03'	E	123°	50'	E	5-Oct-1984
Phil	4243	Manila Bay -- Manila to Cavite	30,000	14°	38'	N	14°	26'	N	121°	02'	E	120°	51'	E	1st, 1/61, Rev 11/80
Phil	4258	Matnog Bay and Ticlin Strait, Port Gubat	30,000													24-Nov-1975
Phil	4271	Lamit and Sirisiran Bays	30,000	14°	04'	N	13°	52'	N	123°	43'	E	123°	27'	E	16-Jan-1984
Phil	4645	Zamboanga City and Vicinity	30,000	06°	59'	N	06°	50'	N	122°	12'	E	121°	58'	E	1st, Mar 58 rev. 5/73
Phil	4260	Aparri Anchorage and Part of Cagayan River	25,000	18°	25'	N	18°	12'	N	121°	42'	E	121°	35'	E	3-Feb-1984
Phil	4266	Ports Masinloc and Matalvi and Palauig Bay	25,000	15°	36'	N	15°	25'	N	120°	02'	E	119°	51'	E	16-Sep-1968
Phil	4238	Bolinao Hbr and Approaches	20,000	16°	28'	N	16°	19'	N	120°	11'	E	119°	52'	E	4-Mar-1985
Phil	4259	Rapu-Rapu Strait	20,000	13°	19'	N	13°	10'	N	124°	10'	E	124°	00'	E	24-Oct-1983
Phil	4333	Puerto Princessa Port of Puerto Princessa]	20,000	09°	48'	N	08°	40'	N	118°	51'	E	118°	38'	E	6-Dec-1993
Phil	4342	Halsey Harbor and Dicabaito Anch	20,000	11°	49'	N	11°	42'	N	120°	02'	E	119°	53'	E	27-Feb-1978
Phil	4355	Harbors on Dumaran I [Dumaran Bay]	20,000	10°	35'	N	10°	26'	N	120°	02'	E	119°	51'	E	1st,Mar 20, rev 6/80
Phil	4239	Port Sual to Comes I	15,000	16°	09'	N	16°	02'	N	120°	09'	E	120°	04'	E	8-Feb-1982
Phil	4246	San Fernando Harbor	15,000	16°	40'	N	16°	35'	N	120°	20'	E	120°	15'	E	4-Nov-1985
Phil	4256	Batangas	15,000	13°	47'	N	13°	40'	N	121°	05'	E	121°	00'	E	2nd Oct 73
Phil	4344	Port Galera and Varadero Bay	10,000	13°	33'	N	13°	29'	N	121°	00'	E	120°	55'	E	7-Jun-1980
Phil	4236A	Fairways and Anch. -- Manila Hbr	10,000	14°	39'	N	14°	33'	N	120°	59'	E	120°	55'	E	1st, Feb 82, Rev 5/82
BA	943	Molucca Sea to Manila Bay	1,550,000	14°	50'	N	00°	40'	N	128°	20'	E	119°	30'	E	12-Jul-1946
Phil	4257	Anch. in vicinity of Verde Is Passage [Nasgubu & Hamilton Cove, Port Tilik, Port Maricaban, Calapan, Taal Lemery, Balayan]														1st, Jan 56, Rev 1/81
Phil	4268	Harbors from Alabat to Pitogo Bay [Port Alabat, Sangirin Bay, Tabgon Anch, Canimo Pass and Mercedes, Pitogo Bay]														19-Jun-1972
Phil	4269	Harbors of Catanduanes [Cabugao Bay, Bagamanoc and Anajao, Cobo Bay, Port Manamrag, Pandan Bay, Gigmoto Bay, Kalapadan Bay]														27-Mar-1978
Phil	4276	Harbors on the Northeast Coast of Luzon [Port Imee, Engano Cove, Port San Vincente]														11-Jan-1984
Phil	4277	Harbors on the East Coast of Luzon [Baler Anch, Dibut Bay, Dingalan Bay, Umiray RIver, Basiad Bay, Port lampon, Hook Bay, Polillo Harbor, Mauban Anch, Port Apat]														29-May-1978
Phil	4279	Harbors in Babuyan Is [Banoa Anch, Calayan Landing and Cibang Cove, San Dionisio, Barugan Cove, Port San Pio Quinto, Musa Bay]														25-Jun-1979
Phil	4280	Harbors in Batan Is [Mayan ldg, Basco, Mahato, Balugan By, Uyugan, Sabtang, Sabtang Channel]														20-Sep-1976

Phil	4283	Harbors on the West Coast of Luzon [Nagabungan Bay, Dirique Inlet, Darigayos Inlet, Santiago Cove, San Esteban and Nalvo Bay, Solvec Cove, San Ildefenso Harbor, Salomague Harbor and Lapog Bay]	12-Jan-1981
Phil	4334	Anchorages on the East Coast of Palawan [Honda By, Malanao Anch, Panacan Anch]	1-Jun-1981
Phil	4335	Harbors on North Coast of Busuanga [Minuit, Port Caltom, Illtuck Bay, Minangas Bay,]	1st, Mar 62, rev 7/78
Phil	4336	Anchorages in Cuyo Is. [Cuyo, Tagauayan Is]	1st, Mar 62, rev 1971
Phil	4337	Anch. West and South of Mindoro [Sabalayan, Semirara, Apo Reef]	1st, March 75
Phil	4339	Anch. SE Mindoro and Tablas I [Loga Bay, Lagara Cove, Buruncapt Pt.]	1st, May 71, rev 6/81
Phil	4346	Harbors of Palawan [El Nido, Ulugan By, Malanut and Nakoda Bays, Culasian Bay]	21-Nov-1983
Phil	4347	Harbors of Balbac and Ramos Is. [Ramos Anch, Catagupan by, Port Giego and Ramos I, Calandorang and Caboang Bys, Delawan Bay, Pasig Bay, Clarendon Bay]	17-Nov-1975
Phil	4453	Harbors of Romblon, Marinduque and Maestra de Campo Is [Romblon Harbor, Port Balanacan, Santa Cruz Harbor and Masagasal Bay, Torrijos Bay, Port Conception	21-Jul-1975
Phil	4454	Harbors on Burias and Ticao Is and Ragay Gulf [Port Pusgo, Pasacao Anch, Port Busin, Port Busainga, Port Boca Engano, Port San Miguel, Port San Jacinto, Taclogan Bay]	29-Mar-1976
Phil	4455	Harbors on the Coast of Masbate [Port Barrera, Masbate Hbr, Port Cataingan, Nin Bay]	31-May-1976
Phil	4456	Harbors of Samar and Leyte [Jibatan R, Santo Nino Harbor, Parasan Harbor, Biliran Strait, Port Pomplon]	8-Sep-1975
Phil	4465	Harbors in Cebu	8-Sep-1975
Phil	4653	Harbors on the South Coast of Mindanao [Linco B., Port Lebak, Basiavang By, Tuna By, Kiamba, Kling, Makar, etc.]	1st, 7/56, rev 5/76