PART III

SUMMARY AND RECOMMENDATIONS

A. SUMMARY

1. General Summary

The superficial nature of the Survey cannot be too strongly emphasized. Fundamental knowledge of the fisheries is almost non-existent. Such basic facts as the times of spawning, rates of growth, age at maturity, survival, food habits, and environmental factors, remain unknown. Basic information of this kind can be obtained only by trained fishery experts working over a period of years. A knowledge of these factors is the only sound basis for the establishment of permanent conservation measures, or for the exploitation of the fisheries themselves.

Administrative officers will find that aside from the few exceptions to be mentioned below, the natives are able to obtain the necessary sea food for their diet by the use of their traditional methods. As long as their present way of life remains relatively unchanged, it will be found that no purpose would be served in attempting to introduce different or supposedly more modern methods of fishing. The reefs and lagoons have a resident population of sea foods ample to provide the daily requirements throughout the year and it is not necessary to attempt to build up supplies for use in periods of shortage. To do so would require either the introduction of methods of salting, drying, and storage, or the installation of refrigeration equipment with attendant maintenance problems usually beyond the means or the capacity of the local people. In the field of water transportation, no means of private travel has been found more economical than the paddling or sailing canoe, and the introduction of small craft powered with outboard or inboard marine engines should be dependent on specific local needs.

Exceptions to the above general conditions are limited to localities having large military installations, or to places badly damaged by military operations. In the former category are Guam and Saipan, and in the latter Rota, the Palaus in the vicinity of Koror, Truk, and Ponape. The labor requirements of military establishments on Guam and Saipan have made fishing a commercial, rather than a subsistence, proposition. In the vicinity of Koror, destruction of native boats, canoes, houses, buildings, and other facilities was so nearly complete as to require several years for recovery. In the meantime they need considerable assistance in rehabilitation. At truk and Ponape the Japanese dynamited the lagoon and reef areas to obtain food, with the result that several years will be required for a return to a normal fish population. In the meantime, the native requests for assistance in obtaining fishery supplies and equipment should be filled as speedily as possible.

2. Information on Fishing Supplies

Fish hooks are designated in size from small to large by two series of numbers, the first from sixteen down to one, and the second beginning with 1-0 and progressing up to 12-0. The small size hook is therefore #16 and the largest size hook is #12-0. Six sizes will cover practically all of the needs of the native fishermen. These could be sizes 8, 5, 2, 2-0, 5-0, and 8-0. The most practical shape is that known as "O'Shaughnessy" and the hooks should be tinned. For trolling and for heavy line fishing, a hook similar to the Pfleuger "martu" in sizes of 8-0, 10-0, and 12-0 will be found suitable.

Three sizes of cotton twine, either tarred or untreated, should be provided. Tarred twine has the disadvantage of "burning" if stored in bales for more than a few months. For hand line fishing, the sizes should be #20, #40, and #60. This twine is put up in hanks of two to four pounds each. For making seines, cotton seine twine of sizes #9, #12, and #15 will be found suitable. For making throw nets, linen twine of sizes #20 and #25 will be satisfactory. Approximately two pounds of linen twine are required to make one net and the twine comes in half pound coils.

Stainless steel leader wire is ordinarily packaged in quarter-pound coils. These should be obtained in sizes 9, 11, 14, and 16.

For trolling it is necessary to have swivels of the so-called "barrel" type, which should be procured in sizes known as small, medium, and large. These must be of brass.

For making spears, steel rods in lengths of four feet or over, should be obtained, in sizes of 1/4 inch and 3/8 inch diameter.

3. Construction of Fishing Vessels for Native Use

In the Palaus, Saipan, Truk, and Ponape the natives are now very much dependent on reconditioned Japanese sampans for transportation and such offshore fishing, as they are able to do. Outside of these, they have only their own sailing and paddling outrigger canoes. With few exceptions, the motor vessels they obtained from the Japanese are in very bad condition, both as to hull and engines. Many are powered with Japanese one-cylinder semi-diesel engines; others with heavy duty gasoline engines, burning about 60 octane fuel. The majority of these vessels cannot be expected to last over another three years - many not over a year. Some means must be found for replacing these boats, ranging in length from 30 to 65 feet. They cannot be replaced with military vessels because of unsuitability, high cost of purchase, lack of maintenance facilities (including parts), and cost of operation and maintenance.

The natives need a type of vessel on the order of the Japanese sampan to be powered with a similar type engine, modified to operate on our 50 cetane diesel fuel.

B. RECOMMENDATIONS

Following are the recommendations for the administration of the fisheries of the former Japanese Mandated Islands:

1. Immediate

(1) Revalidate immediately the conservation measures adopted by the Japanese (1936 revision) for the protection of marine resources. The Japanese fisheries regulations were sound and should remain in force until further study shows a need for modification.

The natives are thoroughly familiar with the Japanese conservation measures, and it is recommended that they be put into effect again. These regulations will be found in Civil Affairs Hand Books for various areas and are summarized in Civil Affairs Guide OPNAV 50E-20, dated 15 August 1944, entitled "The Fishing Industry of the Japanese Mandated Islands". The use of poisons, explosives, and electricity in the taking of sea foods was expressly forbidden except by permission. In view of the many accidents which have occurred, especially from the use of Japanese hand grenades, the prohibition in regard to the use of explosives should be rigidly enforced. The use of poisons also should be strictly controlled, since they destroy large numbers of small fish. Temporary exceptions may be made in certain places, such as Koror in the Palaus, Truk, and Ponape, where unusual shortages of sea food warrant the use of poisons as an emergency measure.

a. Licenses. Under Japanese administration commercial fishing, as distinct from subsistence fishing, was subject to license and regulation. No opinion is expressed here in regard to fees for licenses, or fines for violation of regulations. The licensing system, however, provides a simple method of obtaining statistical information on the extent of the fisheries. Some restriction on the exploitation of marine resources is necessary if they are to be self-perpetuating.

b. Closed seasons. These should be continued in effect for trochus during the period July 1 to April 30, permitting the taking of them only during a two week period in either May or June; pearl oysters during the period August 1 to December 31; hawksbill turtles, Chelonia imbricata (from which tortoise shell is obtained) to be protected from June 1 to August 31 and from December 1 to January 31.

c. Size limits. Regardless of the open seasons, trochus shells should not be taken of a size less than three inches (8 centimeters) in diameter at the base. A rough measure is the width of four fingers. Hawksbill turtles and other sea turtles should not be taken if the maximum length of the shell is less than 24 inches (60 centimeters), and no sea turtles or their eggs should be taken when found on shore.

(2) Trochus, whether occurring naturally, or planted by the Japanese, should be designated as the property of the native peoples, and administered as a self-perpetuating resource. The fishery for this animal should be left entirely in native hands.

(3) Appoint a fisheries administrator whose chief functions should include the following:

a. Promulgate and enforce regulations for the protection of marine resources as outlined in paragraph 1 above.

b. Provide technical assistance and information as needed by natives for the establishment and/or continuation of fisheries enterprises. This includes training programs in fishing methods and processing techniques to place them on an equal basis with fishermen and processors of other nations.

c. Assist natives in locating or expanding export markets for fisheries products.

d. Plan and supervise investigations leading to: (1) a better understanding of the fisheries especially with respect to abundance, migrations, propagation etc., to insure intelligent protection and utilization; (2) improved methods of catching fish, and of handling and preparing fishery products for successful competition in the export market.

e. Collect and disseminate statistical information on the fisheries.

f. Issue licenses for authentication by the senior administrative officer.

g. Report annually to the governing agency on the activities of the office, the status of the fisheries, and what benefits, if any, have accrued to the native people as a result of the administration of the fisheries.

In accomplishing these functions, a staff will be necessary, including practical fishermen, technologists, biologists and statisticians for varying periods of time, according to the kind and importance of the project. Where possible, personnel should be obtained on detail from other agencies of Government.

(4) Take immediate steps toward re-establishment in native hands of the former Japanese commercial fisheries for bonito and tuna. This will serve the dual purpose of providing income to natives and contributing to the short protein food supply of the Orient.

Such a permanent, long-range program is predicated on one or another, possibly a combination, of the following methods:

a. Financial support of Government for purchase of fishing vessels, equipment and supplies; construction and maintenance of shore facilities; providing transportation both within and outside the area; obtaining managerial and technical personnel.

b. Authorized exploitation of the fisheries by private capital with proper safeguards for native interests.

2. Subsequent

Recommendations have been made above for satisfying the immediate needs of fisheries administration in Micronesia. But there is a longer view, with a more permanent set of values. The only real foundation for intelligent protection and use of a resource is knowledge of it, and this comes from research. The Japanese knew this and established their Marine Fisheries Experiment Station at Koror, Palaus, in 1932. The fruits of their investigations should be made public, but it certainly will be found that a very large amount of fundamental research remains to be done. It cannot be done by administrative officers or by trade program specialists of the U. S. Commercial Company. Such extensive facilities and trained personnel could be provided only by the appropriate research agency of the Government. For if the United States is to carry out its obligations, pure as well as applied fisheries research must be encompassed. As evidence of the fields in which investigations can prove valuable, there is appended a very brief outline for a fisheries research program of Micronesia.

OUTLINE
FOR AN INVESTIGATION OF THE FISHERIES OF MICRONESIA

I. Catalog of marine resources
   A. Animal
      1. Identification
         a. Invertebrates
            Shellfish, including bi-valves, uni-valves, crabs, shrimp, and lobster
            Sea-urchins, starfish, sea-cucumbers, sponges
         b. Vertebrates
            Fish, including eels, sharks, and rays
            Mammals: porpoises, whales

   B. Plants (Sea-weeds)
      1. Identification
      2. Where found
      3. Abundance
      4. Use
         a. Direct: food for people; commercial; agar
         b. Indirect: food for marine organisms; protection for young fish and shellfish

II. Biology of Marine Organisms
   A. Life Histories
      1. Time of spawning
      2. Rate of growth
      3. Age at maturity
      4. Food habits
      5. Migrations
      6. Longevity

   B. Ecology
      1. Natural environment
      2. Effect of environmental changes
      3. Relationship to other animals and plants

III. Oceanography
   A. Physical characteristics in Micronesia
      1. Prevailing winds, seasonal strength and direction
      2. Coastal rainfall and drainage systems
      3. Tides and currents, including wave action
      4. Conformation of reefs and lagoons
      5. Character of bottom
      6. Angle of slope from shore seaward
      7. Temperature and salinity fluctuations of sea water

IV. Subsistence Fishing
   A. Inshore
      1. Species
      2. Seasonal abundance
      3. Methods of capture
         a. Drop line
         b. Set line
         c. Trolling

d. Traps
e. Seines and gill-nets
f. Other

4. Processing
   a. Eaten raw, cooked, dried, smoked, etc.
5. Fishing equipment
   a. Present boats, supplies
   b. Requirements, improvements, costs

B. Offshore
Appropriate subheadings as above

V. Production for Income (Export)

A. Species
1. Abundance, potential production
2. Methods of capture
   a. Vessels, gear and personnel needed
3. Methods of Processing
   a. Shore facilities and personnel needed for salting, wet or dry; smoking; canning; other
4. By-products
   a. Oil
      Edible, vitamin A
      Industrial: paint, soap, etc.
   b. Meal, for fertilizer or stock-feed
   c. Hides, fins

B. Economic Factors
1. Cost of Production
2. Investment required
3. Competition in world markets
4. Demand in foreign and domestic economy

VI. Conservation of Resources

A. Regulations for
1. Protection of resources from over-fishing
2. Assuring maximum production

B. Fish Culture
1. Artificial propagation and transplanting

C. RECOMMENDATIONS FOR GUAM FISHERIES

1. Commercial and Sport Fishing

Because of the many difficulties in establishing an offshore fishery for bonito and tuna, and the scarcity of smaller fish along the inshore coast of Guam, it seems probable that the most promising extension of the fisheries would be to increase or encourage production by means of gill nets at night and especially in the Umatac area. As they are already experienced in the use of seines and gill nets, it would only be necessary to furnish several seines approximately 400 yards long and with a stretched mesh from 2 3/4 inches to 3 3/4 inches. Since this would be an experimental project, it should not be expected that the fishermen themselves would be able to purchase these seines, especially as one or more sizes might be found unsuitable for fishing in that area.

One aspect of fishing which is worthy of additional attention is the development of sport fishing. The recreational value of fishing is, of course, well understood and is being taken care of in part by the services themselves. However, there is now, and undoubtedly will continue to be, an increasing demand for fishing guides with small party boats to take out from two to four people. The abundance of marlin, sail fish, barracuda, wahoo, and various members of the tuna family, warrants the establishment of a small fleet of sport fishing vessels. Such a project has not only a recreational value, but will in time develop a number of fishing guides with sufficient knowledge of offshore fishing to contribute directly to the production of food fish. In general, party boats are hired on weekends and during the major portion of the week these fishermen would be able to produce fish for food.

2. Fishing Vessels

It is believed that any system of renting surplus vessels and small craft to native fishermen will prove unsatisfactory, whether it be for commercial fishing or for sport fishing. It has been found everywhere throughout the fishing industry that private ownership of fishing vessels tends to promote more efficient operation and to increase production. It is recommended that the administrative section in charge of surplus vessels explore the possibilities of putting some surplus craft into private ownership with qualified individuals.

3. Special Fisheries Regulations

In order to protect the future survival of the many species of fish found close inshore it is recommended that regulations be made for minimum size limits on fish taken in the traps and surround nets along shore. In the absence of information on the rate of growth and maturity of the various species taken at Guam, it is impossible to recommend minimum sizes for the separate species. In any case, it is believed that the requirements of conservation would be met by prohibiting the taking of small fish of any species under six inches in length. The difficulties of enforcing such a regulation are fully recognized, but it is thought that they will not be found to be greater than is the case in the United States. If it serves no other purpose, it may bring to the attention of the people the necessity for conserving their marine resources. The regulation would not apply to fish taken for live bait, or caught with throw-nets.

4. Japanese Fishing Hampered by Sharks

As nearly as could be determined, the two most abundant species of tunas are the ocean bonito or katsuo (Katsuwonus (Euthynnus) pelamis), weighing from 10 to 25 pounds, and the yellow fin tuna (Neothunnus macropterus), which weighs up to 60 pounds. Schools are almost always of uniform size and weight. During their occupation of Guam the Japanese did a limited amount of tuna fishing, but were bothered by an abundance of sharks which attacked and chewed off part of the hooked fish. It was the custom to send a diver down with a knife to kill the sharks. It was not possible to determine the abundance of sharks, but if they are very common a limited fishery might be established to get the shark livers for vitamin A. Because most of the sharks found here are sand sharks (Eulamia) of comparatively small size, being under seven feet in length, it is doubtful if the vitamin A content of the liver oil is high enough to warrant shipment to the United States, but it could be utilized as a supplement to the stock and poultry feeds of the Islands, or offered to the Japanese trade. The fins and hides could be marketed and the carcass either sold fresh, or put through a reduction plant to make stock feed or fertilizer.

PART IV

NATIVE NAMES RELATING TO THE FISHERIES

Albacore THUNNUS GERMO
Ahipalaha (Hawaiian) Not recognized (Jaluit) Jilo (Majuro) Aün or Toku (Truk)
Not recognized (Ailinglapalap) Not recognized (Kusaie)

Anchovy ANCHOVIELLA PURPUREA
Nehu (Hawaiian) Aol (Jaluit) Jepeor (Majuro) Lesabil (Ailinglapalap)
Aletses (Marianas) Much or Nou (Truk) Ikatik (Ponape) Shaguru (Palaus)

Angel fish CENTROPYGE SP.
Chukufan nimuk (Truk)

Any sting ray DASYATIS-AETOBATIS
Jomjo (Majuro)

Barracuda SPHYRAENA BARRACUDA
Kaku (Hawaiian) Metua (Majuro) Jure (Ailinglapalap) Alu (Marianas)
Sawraw (Ponape) Twolah (Kusaie) Yono (Kapingamarangi)

Big-eye, red PRIACANTHUS CRUENTATUS
Aweoweo (Hawaiian) Lol (Jaluit) Lol (Majuro) Lol (Ailinglapalap)
Asondon (Truk)

Big-eyed scad SELAR CRUMENOPHTHALMUS
Akule (Hawaiian) Akole (Majuro) Not recognized (Ailinglapalap)

Blue runner SCOMBEROIDES SANCTI-PETRI
Lai (Hawaiian) Not recognized (Majuro) Änwes (Truk)

Bone fish ALBULA VULPES
O'io (Hawaiian) Beleo (Majuro) Beleo (Ailinglapalap) Kënifat (Truk)
Not recognized (Kapingamarangi)

Bonito, little tunny EUTHYNNUS ALLETTERATUS
Kawakawa (Hawaiian) Loj (Jaluit) Loj (Majuro) Lejabil (Ailinglapalap)
Angarap (Truk) Not recognized (Kusaie) Tawatawa (Kapingamarangi)

Butterfly or Angel fish CHAETODON UNIMACULATUS
Yellow manini (Hawaiian) Jorur (Jaluit) Ripop (Majuro) Ribab (Ailinglapalap)
Tihitihi (Kapingamarangi)

Butterfly fish CHAETODON SETIFER
Kika Kapu (Hawaiian) Liarpwater (Ponape) Siti (Kapingamarangi)

Butterfly fish FORCIPIGER LONGIROSTRIS
Lauwiliwili (Hawaiian) Siti (Kapingamarangi)

Butterfly fish HENIOCHUS ACUMINATUS
Kihikihi loulu (Hawaiian) Tautahi (Kapingamarangi)

Butterfly fish HOLACANTHUS DIACANTHUS
Nukunimuenipach (Truk)

Cardinal fish AMIA FRENATA
Upapalu (Hawaiian) Not recognized (Jaluit) Ongong (Majuro)
Pan (Ailinglapalap) Tikupe (Kapingamarangi)

Crevalle CARANXMATE
Omaka (Hawaiian) Mano (Majuro) Mano (Ailinglapalap)

Crevalle, black CARANX SEXFASCIATUS
Ulua lauli (Hawaiian) Ikbwij (Jaluit) Langne (Majuro) Ikbwij (Ailinglapalap)
Ulua (Kapingamarangi)

Crevalle, blue CARANX STELLATUS
Omilu (Hawaiian) Drelbokrok (Majuro) Langne (Ailinglapalap) Pweas (Truk)
Tialega (Kapingamarangi)

Crevalle, silver BLEPHARIS CILIARIS
Ulua kihikihi (Hawaiian) Kupkup (Majuro) Molosetak(Ailinglapalap)
Chopchop (Kusaie) Ulua (Kapingamarangi) Orduedl (Palaus)

Crevalle, silver-young BLEPHARIS CILIARIS
Jolokmor (Jaluit) Ollangne (Majuro)

Crevalle, striped GNATHANODON SPECIOSUS
Paopao (Hawaiian) Lojinarinmun (Jaluit) Rewa (Majuro) Rewa (Ailinglapalap)
Sapwelepwel (Ponape) Selemang (Kapingamarangi)

Crevalle, white CARANGOIDES AJAX
Ulua (Hawaiian) Arong (Jaluit) Majeik (Majuro) Miseik (Ailinglapalap)
Ulua (Kapingamarangi)

Crevalle, yellow fin CARANX IGNOBILIS
Pauu'u (Hawaiian) Ikelonam (Majuro) Tettin Poür (Truk) Orung (Ponape)

Damsel fish ABUDEFDUF ABDOMINALIS
Mamo (Hawaiian) Baretilola (Jaluit) Paret (Majuro) Irel (Ailinglapalap)
Palae (Kapingamarangi)

Damsel fish ABUDEFDUF SORDIDUS
Kupipi (Hawaiian) Baret (Jaluit) Paret (Majuro) Irel (Ailinglapalap)
Paruk (Kusaie)

Dolphin CORYPHAENA HIPPURUS
Mahimahi (Hawaiian) Koko (Jaluit) Koko (Majuro) Koko (Ailinglapalap)
Sopoor (Truk) Not recognized (Ponape) Not recognized (Kusaie)
Mahimahi (Kapingamarangi)

Eel, white conger CONGER CINEREUS
Puhiuha (Hawaiian) Maojokur (Jaluit) Mojour (Majuro) Ton (Ailinglapalap)
Niseningening (Truk) Lapwethpwetepwet (Ponape) Pon (Kapingamarangi)
Puhi (Palaus)

Flounder PLATOPHRYS SP.
Pakii (Hawaiian) Bale (Jaluit) Bale and Barij (Majuro) Bale (Ailinglapalap)
Fichan (Truk) Lipar (Ponape) Pukawn (Kusaie) Piepie (Kapingamarangi)

Flying fish CYPSELURUS
Malolo (Hawaiian) Jojo (Jaluit) Jojo (Majuro) Jojo (Ailinglapalap)
Gaga (Marianas) Menger chocho (Truk) Mangar (Ponape) Mukol (Kusaie)
Tave (Kapingamarangi) Kok (Palaus)

Goat fish MULLOIDICHTHYS AURIFLAMMA
Wekeula (Hawaiian) Jo or sho (Eniwetok) Motal (Jaluit) Jo (Majuro)
Jo (Ailinglapalap) Tiau (Marianas) Futfut (Kusaie) Matuwaedau (Kapingamarangi)

Goat fish PSEUDUPENEUS MULTIFASCIATUS
Moano (Hawaiian) Not recognized (Jaluit) Matal (Majuro)
Not recognized (Ailinglapalap) Matukurao (Kapingamarangi)

Goat fish PSEUDUPENEUS PLEUROSTIGIMA
Malu (Hawaiian) Jerobwe (Jaluit) Joroppa (Majuro) Jorobe (Ailinglapalap)
Matukurao (Kapingamarangi)

Goat fish PSEUDUPENEUS PORPHYREUS
Kumu (Hawaiian) Jo (Jaluit) Jome (Majuro) Not recognized (Ailinglapalap)

Goat fish PSEUDUPENEUS SP.
Mwathal (Ponape)

Goat fish UPENEUS ARGE
Wekepueo (Hawaiian) Jolukmor (Majuro)

Goat fish UPENEUS TAENIATUS (CHRYSONEMUS)
Mwathal (Ponape)

Grouper, br. spotted SERRANUS SP.
Giro (Jaluit) Seiau (Truk) Kepwaip (Ponape) Kalishuk (Kusaie) Yalus (Palaus)

Hawk fish CIRRHITUS PINNULATUS
Po'opa'a (Hawaiian) Kiriej (Majuro) Mataramae (Kapingamarangi)

Hawk fish, black sided PARACIRRITES FORSTERI
Hilu piliko's (Hawaiian) Kiriej and japeno (Majuro) Maulung (Kapingamarangi)

Hawk fish, white lined PARACIRRITES ARCATUS
Piliko'a (Hawaiian) Beroilowor (Jaluit) Larikiranwor (Majuro)

Lizard fish SAURIDA GRACILIS
Ulae (Hawaiian) Jujukop (Majuro)

Mackerel DECAPTERUS SANCTAE - HELENAE
Opelu (Hawaiian) Not recognized (Majuro) Not recognized (Ailinglapalap)
Esinou manouchis (Truk)

Marlin TETRAPTURUS
A'u (Hawaiian) Lejikan (Majuro) Makoro (Jap.) (Marianas) Takinar (Truk)
Sakurah (Kapingamarangi)

Milk fish CHANOS CHANOS
Awa (Hawaiian) Baleo (Jaluit) Not recognized (Majuro)
Not recognized (Ailinglapalap) Ach (Truk) Matakarati (Kapingamarangi)

Moorish idol ZANCLUS CANESCENS
Nikaskas (Truk) Sensarok (Ponape) Tautahi (Kapingamarangi)

Moray, Brown LYCODONTIS FLAVOMARGINATA
Puhi (Hawaiian) Maj (Jaluit) Maj (Majuro) Maj (Ailinglapalap) Kasabagu (Palaus)
Not recognized (Ponape) Kokwan or Semus (Kusaie) Kiha (Kapingamarangi)

Moray eel LYCODONTIS THYRSOIDEA
Ikür (Truk)

Mountain Bass DULES SP.
Aholehole (Hawaiian) Ilmok (Majuro) Not recognized (Ailinglapalap)
Auwe (large) (Kusaie) Ef (small) (Kusaie) Owati (Kapingamarangi)

Mullet, false NEOMYXUS CHAPTALII
Uouoa (Hawaiian) Iul (Majuro) Sarau (Truk)

Mullet, Gray MUGIL CEPHALUS
Amaama (Hawaiian) Eol (Jaluit) Iul (Majuro) Iul (Ailinglapalap)
Aguas (Marianas) Nieuretin (tiny) (Truk) Purei (small) (Truk) Ikang (Truk)
Limwer (Ponape) Eeah (Kusaie) Kanai (Kapingamarangi)

Needle fish, Gar BELONE PLATYURA
Ahaaha (Hawaiian) Eddak (Jaluit) Tak (Majuro) Tak (Ailinglapalap)
Ave pek and Mauken (Truk) Tak (Ponape) Yok (Kusaie) Aku (Kapingamarangi)

Ocean bonito, skipjack KATSUWONUS PELAMIS
Aku (Hawaiian) Lajabwil (Jaluit) Lejabil (Majuro) Lejabil (Ailinglapalap)
Bonito (Marianas) Karangap (Ponape) Katsuo (Jap.) (Kusaie) Kadosan (Palaus)
Atu (Kapingamarangi)

Parrot fish CALLYODON FORMOSUS
Lauia (Hawaiian) Masarāweth (Ponape) Timau (Kapingamarangi)

Parrot fish CALLYODON FORSTERI
Panuhunuhu (Hawaiian) Pworos (Ponape)

Parrot fish CALLYODON PERSPICILLATUS
Uhu (Hawaiian) Mao (Jaluit) Merla (Majuro) Perak (Ailinglapalap)
Lagua (Marianas) Perakea (Kapingamarangi)

Parrot fish, blue CALLYODON JORDANI
Ru (Truk) Mau (Ponape) Masok and Folfol (Kusaie) Uho (Kapingamarangi)

Parrot fish, general
Ikonochi (Truk)

Porgy MONOTAXIS GRANDOCULIS
Mu (Hawaiian) Not recognized (Majuro) Not recognized (Ailinglapalap)
Mu (Kapingamarangi)

Puffer, Balloon fish TETRADON HISPIDUS
O'opuhue (Hawaiian) Wat (Jaluit) Luap (Majuro) Wat (Ailinglapalap)
Nipou (Truk) Wata (Ponape) Nemata (Kusaie) Sete and Tiwadi (Kapingamarangi)

Puffer, porcupine CHILOMYCTERUS SP. - DIODON SP.
O'opu okala (Hawaiian) Mojannur (Jaluit) Japonke (Majuro) Mejangir (Ailing-
lapalap) Sou nichukew (Truk) Soutu (Kapingamarangi) Derudn (Palaus)

Razor fish INISTIUS PAVO
Laenihi (Hawaiian) Roba (Jaluit) Tinelikop (Majuro) Raperape (Kapingamarangi)

Red snapper ETELIS MARSHI
Ulaula (Hawaiian) Winam (Truk) Suekoro (Kapingamarangi)

Rock skipper, zebra SALARIAS ZEBRA
Pao'o (Hawaiian) Kitok (Majuro) Jibbalang (Ailinglapalap)
Pakauroh (Kapingamarangi)

Rudder fish KYPHOSUS FUSCUS
Nenue (Hawaiian) Rana (Eniwetok) Bajrok (Jaluit) Bejeruk (Majuro)
Kabat (Ailinglapalap) Nimmueriod tinipu (Truk) Umula (Ponape)

Sail fish ISTIOPHORUS ORIENTALIS
A'u lepe (Hawaiian) Ujinlep (Jaluit) Ujinlep (Majuro) Ujileb (Ailinglapalap)
Sakurahanu (Kapingamarangi)

Sand fish (Wrasse) LEPIDAPLOIS BILUNULATUS
A'awa (Hawaiian) Pan (Majuro) Juajo (Ailinglapalap)

Scorpion fish SCORPAENOPSIS GIBBOSUS
Nohu (Hawaiian) Nu (Majuro) No (Ailinglapalap) Neu (Ponape)
Nohu (Kapingamarangi)

Shark, hammerhead SPHYRNA ZYGAENA
Manokibikihi (Hawaiian) Not recognized (Jaluit) Bakototo (Majuro)
Paakooijo (Kusaie) Matautarina (Kapingamarangi)

Shark, white CARCHARODON CARCHARIAS
Mano (Hawaiian) Bako (Jaluit) Bako (Majuro) Bako (Ailinglapalap)
Halu (Marianas) Poko P"ch"au (Truk) Pawkaw (Ponape) Paako (Kusaie)
Sokoulu (Kapingamarangi) Meluyes (Palaus)

Snapper APRION VIRESCENS
Uku (Hawaiian) Mola (Eniwetok) Not recognized (Jaluit) Ewae (a-y) (Majuro)
Laon (Ailinglapalap) A"an"ch and Auwo (Truk) Tutu (Kapingamarangi)

Snapper LETHRINUS RETICULATUS
Mafuti (Marianas)

Snapper, brown PRISTIPOMOIDES SP.
Opakapaka (Hawaiian) M"r"p (Truk)

Squirrel fish HOLOCENTRUS DIADEMA
Alaihi (Hawaiian) Kur (Jaluit) Kur (Majuro) Mun (Ailinglapalap)
Utei (Ponape) Mukas (Kusaie)

Squirrel fish HOLOCENTRUS FURCATUS
Malau (Kapingamarangi)

Squirrel fish HOLOTRACHYS LIMA
Mutu (Hawaiian) Showlah (Kusaie) Malau (Kapingamarangi)

Squirrel fish HOLOCENTRUS-SCYTHROPS
Alaihi or Uu (Hawaiian) Tanseu or Pankir (Ponape) Suekoro (Kapingamarangi)

Squirrel fish HOLOCENTRUS SPINIFER (LEO)
Alaihi or Uu (Hawaiian) Sara (Ponape) Ita (Kapingamarangi)

Squirrel fish HOLOCENTRUS XANTHERYTHRUS
Alaihi or Uu (Hawaiian) Satoro (Kapingamarangi)

Squirrel fish MYRIPRISTIS CHRYSERES
Olalmetah (Kusaie)

Squirrel fish, red MYRIPRISTIS MURDJAN
U'u (Hawaiian) Mun (Jaluit) Mun (Majuro) Munkiren (Ailinglapalap)
Mun (Ponape) Alolmetah (Kusaie) Marapun and Malau (Kapingamarangi)

Sting ray, spotted AETOBATUS NARINARI
Hihimanu (Hawaiian) Imin (Jaluit) Imen (Majuro) Imen (Ailinglapalap)
Nifaro Feianap (Truk) Ashesha (Kusaie) Hai (Kapingamarangi)

Surgeon fish HEPATUS ACHILLES
Pakuikui (Hawaiian) Efen (Truk) Teripa (Kapingamarangi)

Surgeon fish HEPATUS LEUCOPAREIUS
Maiko (Hawaiian) Iel (Jaluit) Mok (Majuro) Jemenmej (Ailinglapalap)

Surgeon fish HEPATUS LINEOLATUS
Kew (Kusaie)

Surgeon fish, black HEPATUS FULIGINOSUS
Walu or Pualu (Hawaiian) Pulan king (Ponape) Batbat (Kusaie)
Asangal (Palaus)

Surgeon fish, brown HEPATUS BARIENE
Pualu (Hawaiian) Begru (Jaluit) Pekru (Majuro) Kebat (Ailinglapalap)
Tiripa (Kapingamarangi)

Surgeon fish-tang ZEBRASOMA VELIFERUM
Kihikihi (Hawaiian) Piepwerik (Truk)

Surgeon fish, red CTENOCHAETUS STRIGOSUS
Kole (Hawaiian) Ael (Isle) (Majuro) Tebro (Ailinglapalap) Tomorok (Ponape)

Surgeon fish, striped HEPATUS TRIOSTEGUS
Manini (Hawaiian) Kuban (Eniwetok) Kuban (Jaluit) Kubang (Majuro)
Kubang (Ailinglapalap) Lete pwel (Ponape) Lashfol (Kusaie)
Manini (Kapingamarangi)

Surgeon-unicorn NASO LITURATUS (CALLICANTHUS)
Kala (Hawaiian) Pulankin (Ponape)

Sword fish XIPHIAS GLADIUS
A'u (Hawaiian) Lajkan (Jaluit) Lejiken (Majuro) Leserkam (Ailinglapalap)
Eco (Kusaie)

Ten Pounder ELOPS MACHNATA
Awa'aua (Hawaiian) Not recognized (Majuro) Beleo (Ailinglapalap)
Kuenifat (Truk) Not recognized (Kapingamarangi)

Thread fish POLYDACTYLUS SEXFILIS
Moi (Hawaiian) Atakuru (Eniwetok) Atkaru (Jaluit) Atkaru (Majuro)
Atkaru (Ailinglapalap)

Trigger fish BALISTAPUS ACULEATUS
Humuhumu nukunuku apua'a (Hawaiian) Pup (Ponape) Humuakeo (Kapingamarangi)
Psugun (Palaus)

Trigger fish BALISTES VIDUA
Humuhumu uli (Hawaiian) Humureng (Kapingamarangi)

Trigger fish, black MELICHTHYS BUNIVA
Humuhumu ele'ele (Hawaiian) Bub (Jaluit) Pup (Majuro) Bup (Ailinglapalap)
Liopwel (Ponape) Foof (Kusaie) Humuhumu humuarape kapek (Kapingamarangi)

Trigger fish, file fish BALISTAPUS RECTANGULUS
Humuhumu (Hawaiian) Imim (Jaluit) Imim (Majuro) Imim (Ailinglapalap)
Pupwilop (Ponape) Fowol (Kusaie) Humutara (Kapingamarangi)

Tuna, yellowfin NEOTHUNNUS MACROPTERUS
Ahi (Hawaiian) Bwebwe (Jaluit) Bwebwe (Majuro) Bwebwe (Ailinglapalap)
Tosan (Marianas) Sengir (Truk) Karangap (Ponape) Allwool (Kusaie)
Takuwah (Kapingamarangi)

Wahoo ACANTHOCYBIUM SOLANDRI
Ono (Hawaiian) Al (Jaluit) Al (Majuro) Al (Ailinglapalap) Ngän (Truk)
Sure (Ponape) Not recognized (Kusaie) Mada (Kapingamarangi) Ngangal (Palaus)

Wrasse ANAMPSES CUVIER
Opole (Hawaiian) Al'le (Jaluit) Allilitol (Majuro) Likob (Ailinglapalap)

Wrasse CHEILINUS UNDULATUS?
Not found (Hawaiian) Mau (Ponape)

Wrasse CHEILIO INERMIS
Kupoupou (Hawaiian) Kiol (Ponape) Tirade hoi (Kapingamarangi)

Wrasse CORIS BALLIEUI
Malamalama (Hawaiian) Tirade hoi (Kapingamarangi)

Wrasse CORIS GAIMARD
Hinalea akilolo (Hawaiian) Kopwili (Ponape) Ti'rape la'pehaupa (Kapingamarangi)

Wrasse CORIS VENUSTA
Tirade hoi (Kapingamarangi)

Wrasse EPIBULUS INSIDIATOR
Feisiu (Truk)

Wrasse GOMPHOSUS TRICOLOR
Hinalea iiwi (Hawaiian) Tikarihimoana (Kapingamarangi)

Wrasse THALASSOMA PURPUREUM?
Awela (Hawaiian) Mwommai (Ponape)

Wrasse THALASSOMA TRILOBATA
Awela (Hawaiian) Likop (Majuro) Lo (Ailinglapalap) Tuhukorolant (Kapingamarangi)

Wrasse VERRICULUS SANGUINEUS
Ti'rape la'pehaupa (Kapingamarangi)

Wrasse, green THALASSOMA UMBROSTYGMA
Hinalea (Hawaiian) Lo (Majuro) Taburbur (Ailinglapalap) At'uhun (Marianas)
Parati'a (Kapingamarangi)

Unicorn fish NASO UNICORNIS
Kala (Hawaiian), Enrok (Jaluit) Moneiou (Majuro) Engirok (Ailinglapalap)
Mecha puna or pon (Truk) Fulak (Kusaie) Hukume karu skau (Kapingamarangi)

NATIVE NAMES FOR SHELLFISH, TURTLES, SPONGES, MISCELLANEOUS

Any shell
Aililin (Marianas)

Any turtle
Wei (Ponape)

Black lip pearl oyster PINCTADA MARGARITIFERA
Ri (Jaluit) Puei (Truk) Pwai emai (Ponape) Tipaa (Kapingamarangi)
Hisoeh (Palaus)

Cat-eye TURBO SP.
Mejenjirul (Eniwetok) Pulan (Moon) (Marianas) Auwänoch (Truk)
Kikmasul (Ponape) Kowing (Kusaie) Aredi (Kapingamarangi) Sungaruk (Palaus)

Cockle ANADARA ANTIQUATA SCAPHA
Lipwoi (Ponape)

Cone shell CONUS LIVIDUS
Lithik (Ponape)

Cone shells CONUS MARMOREUS & SP.
Korokoro (Kapingamarangi)

Coral, mushroom FUNGIA SCUTARIA
Lapawath (Ponape)

Cowrie CYPRAEA MAURITIANA
Libukkwe (Jaluit) Nansilopw (Ponape)

Cowries CYPRAEA, PUSTULARIA SP.
Libuke (Eniwetok) Libbuke (Ailinglapalap) Pun (Truk) Pwili (Ponape
Pu (Kapingamarangi)

Crab, Kona RANINA SERRATA
Not recognized (Jaluit) Not recognized (Majuro) Not recognized (Ailinglapalap)
Not known (Ponape) Not recognized (Kapingamarangi)

Crab, Samoan SCYLLA SERRATA
Likoro (Jaluit) Likorkor (Majuro) Baru (Ailinglapalap) Alemang (Ponape)
Powah (Kusaie) Tupe (Kapingamarangi) Amang (Palaus)

General crab name
Baru (Majuro) Balati (Marianas)

Giant clam TRIDACNA CROCEA
Mejenwor (Jaluit)

Giant clam TRIDACNA ELONGATA
Sila (Ponape)

Giant clam TRIDACNA GIGAS
Mesenwer (Eniwetok) Rimuj (Jaluit) Pasu (Ponape)

Giant clam TRIDACNA SP.
Amuei (Truk) Pahi wah (not present) (Kapingamarangi)

Green turtle CHELONIA JAPONICA OR MYDAS
Kalap (Ponape)

Heart clam CARDIUM ELONGATUM
Tuoweh (Kapingamarangi)

Helmet shell CASSIS CORNUTA
Tipuerede (Kapingamarangi) Omúú (Palaus)

Mantis Shrimp PSEUDOSQUILLA CILIATA
Aloalo (Hawaiian) Rijing (Jaluit) Jor (Majuro) Rising (Ailinglapalap)
Insang (Ponape) Masusu (Kusaie) Aratume (Kapingamarangi)

Nautilus NAUTILUS POMPILIUS & SP.
Yatiri (Kapingamarangi)

Octopus, day POLYPUS MARMORATUS
He'e (squid) (Hawaiian) Ket (Eniwetok) Kwet (Jaluit) Kwet (Majuro)
Kwet (Ailinglapalap) Kis (Ponape) Kwait (Kusaie) Pilipili (Kapingamarangi)
Pugitang (Palaus)

Octopus, night POLYPUS ORNATA
Puloa (Squid) (Hawaiian) Jululinbong (Majuro) Jululinbong (Ailinglapalap)

Olive shells OLIVA SERICEA & SP.
Om (Eniwetok) Akiokoko (Kapingamarangi)

Pinna shell ATRINA VEXILLUM
Pwaiaka (Ponape)

Sand lobster PARIBACCUS ANTARCTICUS
Uraber (Jaluit) Jipukpuk (Majuro) Uraber (Ailinglapalap) Allpap (Kusaie)
Tapatapa (Kapingamarangi)

Sea cucumbers HOLOLHURIA
Jibenben (Ailinglapalap) Bislama (big) (Kusaie) Weh (small) (Kusaie)
Eled (Palaus)

Sea urchin ECHINOMETRA, CENTRECHINUS
Vona (Hawaiian) Rar (Truk) Aal (Kusaie)

Spider shell LAMBIS CHIRAGRA
Jitor (Eniwetok) Neang (Truk) Lang (Ponape) Waiyang (Kapingamarangi)

Spiny lobster PANULIRUS MARGINATUS
Oula (Hawaiian) Nid (Eniwetok) Wor (Jaluit) Wor (Majuro) Arabrukl (Palaus)
Wor (Ailinglapalap) Mahónggang (Marianas) Ungung (Kusaie) Uda (Kapingamarangi)

Sponge
Lim (Ponape)

Tortoise shell from CHELONIA IMBRICATA
Puochen (Truk) Sapake (Ponape)

Trochus TROCHUS NILOTICUS
Like jijot (Eniwetok) Ligarbolul (Jaluit) Tolompu (Marianas) Nikommot (Truk)
Sumum or Tianina (Ponape) Puh (Kapingamarangi) Smum or Ekoik (Palaus)

Trumpet shell CHARONIA TRITONIS
Sawi (Ponape) Fuul (Kusaie) Pumangoro (Kapingamarangi)

White crab PORTUNUS SANGUINOLENTUS
Ejake (Majuro)

Any fish
Ik (Eniwetok)

Derris Root DERRIS ELLIPTICA
Op (Kusaie)

Fish trap
Tiu (Kapingamarangi)

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