The purpose of this guide is to provide a general source of information on areas of the Pacific coast that are more frequently fished and the species of fish that are commonly taken. The guide covers the marine and estuarine waters along the coast of California, Oregon, Washington, Alaska, Hawaii, American Samoa, and Guam. It is arranged in five sections according to similarities in their fisheries. Each section contains a series of coastline fishing charts that outline offshore, bay, and shoreline fishing grounds and give locations of marine sport fishing facilities such as sport fishing boats, boat launching sites, fishing piers, skiff rentals, and jetty fishing sites. Included in the guide are forty charts of fishing areas and glossary of 237 of the most common marine game fishes. (Author/BB)
Anglers' Guide

TO THE UNITED STATES PACIFIC COAST
Anglers' Guide
to the
United States Pacific Coast

MARINE FISH, FISHING GROUNDS & FACILITIES

by
JAMES L. SQUIRE, JR. AND SUSAN E. SMITH
The National Marine Fisheries Service (NMFS) does not approve, recommend or endorse any proprietary product or proprietary material mentioned in this publication. No reference shall be made to NMFS, or to this publication furnished by NMFS, in any advertising or sales promotion which would indicate or imply that NMFS approves, recommends or endorses any proprietary product or proprietary material mentioned herein, or which has as its purpose an intent to cause directly or indirectly the advertised product to be used or purchased because of this NMFS publication.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>I Southern California</td>
<td>5</td>
</tr>
<tr>
<td>II Northern California</td>
<td>23</td>
</tr>
<tr>
<td>III Oregon &amp; Washington</td>
<td>45</td>
</tr>
<tr>
<td>IV Alaska</td>
<td>75</td>
</tr>
<tr>
<td>V Pacific Islands</td>
<td>85</td>
</tr>
<tr>
<td>Marine Game Fishes of the U.S. West Coast</td>
<td>101</td>
</tr>
<tr>
<td>Marine Game Fishes of the Pacific Islands</td>
<td>118</td>
</tr>
<tr>
<td>Glossary of Terms</td>
<td>130</td>
</tr>
<tr>
<td>Index to Common Names of Fishes</td>
<td>132</td>
</tr>
<tr>
<td>Acknowledgments</td>
<td>137</td>
</tr>
<tr>
<td>References</td>
<td>138</td>
</tr>
</tbody>
</table>
Figure 1.—Coastal areas covered by Anglers’ Guide showing the five geographical sections.
Introduction

While there are millions of individual fish in the ocean and bays, the obvious problem facing the marine sport angler is how and where and when to catch them. Anglers who have a "local knowledge" of the seasons and locations of good fishing areas usually are the more successful ones, but must realize that pinpointing the exact location, season, and time for catching a certain species of fish is impossible. This is due to seasonal variation in the geographical distribution and quantity of stocks of fish available, which, in turn, is a result of changes in the total marine environment (temperature, salinity, food, etc.), and the biological success of each species in the competition for survival. Even so, certain species usually are taken in generally well defined fishing areas; some may be taken only during a certain seasonal period while others may be present throughout the year.

The purpose of this Guide is to provide a general source of information on those areas that are more frequently fished and the species of fish that are commonly taken.

The geographical scope of this Guide covers the marine and estuarine waters along the coasts of California, Oregon, Washington, Alaska, Hawaii, American Samoa, and Guam. These have been arranged in five sections according to similarities in their fisheries (Figure 1):

Section I—Southern California
Section II—Northern California
Section III—Oregon and Washington
Section IV—Alaska
Section V—Pacific Islands

Each of the five sections contains a series of coastline fishing charts that outline offshore, bay, and shoreline fishing grounds and give locations of marine sport fishing facilities (all are subject to change from year to year) such as sport fishing boats (party or charter), boat launching sites, fishing piers, skiff rentals, and jetty fishing sites. These facilities are designated by numbers on the chart which correspond to a table on the opposite page. Also accompanying each chart is a general description of the chart area, and notes that supplement the chart information concerning some of the common game fishes and their availability to the angler.

It is important to realize that marine game fishing is the only segment
of the U.S. fisheries that has grown rapidly during the past 15 years. In 1960 the first national marine angling survey was made. It reported an estimated 1.4 million marine anglers along the west coast from the Mexican border to Alaska catching over 79 million fish. By 1965 the number of marine anglers had grown to almost 2 million (1,977,100) and the catch to over 87 million fish. The 1970 survey showed over 2 million (2,205,000) west coast marine anglers who caught over 61 million fish. Thus, during the past decade, the number of west coast anglers has increased 64%; however, the number of fish caught, as reflected in the 1970 survey has not kept pace with the increased angling pressure. This increase in angling pressure is to be found throughout the central and eastern Pacific, with a 34% increase in southern California, which has 40% of all marine angling along the west coast. A 47% increase was found from central California northward into Alaska, an area which accounts for 60% of all west coast fishing.

Effective long-range planning for marine game-fish conservation programs and associated research activities must be based on a thorough knowledge of the scope and magnitude of the recreational-fishery resources; seasonal distribution of fish; the operating sport fishery and its fishing locations; the location, type, and number of fishing facilities available; and information on the values that anglers attach to the various facets of the sport. The task of obtaining such knowledge is a formidable one. We hope that this Guide, in bringing together many fragments of information into a single source book, will prove useful to agencies involved in this task, and at the same time provide the public with a convenient means of utilizing the existing recreational fishing facilities and learning more about the available opportunities for marine game fishing.

**TYPES OF FISHING**

Pacific marine game fishing is centered near the coastal population centers. An abundance of desirable game fish is usually available along all coasts in the ocean, bays, and brackish-water areas, depending on the place and season of the year. Over 300 species are commonly taken by marine anglers who fish the west coast and Pacific Islands; in addition, they incidentally catch many other species.

The sport angler has five types of fishing—pier fishing, rock or jetty fishing, surf or bank fishing, private boat fishing, and sport boat (party or charter boat) fishing. The type of marine environment fished usually dictates what species are most likely to be caught. The marine angler must take this into consideration by use of suitable equipment and careful selection of bait or lure to achieve the greatest chance for success.

A diversity of fishing gear is used by the Pacific angler, with conventional hook and line being the most common method of fishing in all areas. In addition, "A"-frame beach seines are used for smelt; poke-poles for fishing blenny eels, cabezon, and octopus in rocky areas; and traps for fish, crab, and shrimp. Nets for sandy-shore and reef species are commonly used in the tropical Pacific. Bare hands are used for grunion in southern California.

Other catching methods for marine life are hunting and spearing of fish by divers; "picking" abalones along the shore at low tide; and gathering of rock scallops, abalones, lobsters, crabs, and sea urchins by
divers. There is also fishing for rock and Dungeness crabs with hoop nets, and digging clams along the shore and in bays. Fishing for shellfish and other invertebrates, however, is not considered in any detail in this Anglers' Guide, which focuses mainly on true fishes.

**CHOOSING A FISHING AREA**

If you are unfamiliar with an area, there are a few basic criteria that should be used in selecting a place to try your luck. Knowledge of hydrographic conditions (tidal flow, bottom types, and depths) is most important whether you are fishing in the open ocean, nearshore, surf zone, tidal inlets, bays, or in the intertidal portion of a river. On the open ocean, sea state is another important factor in fishing. Many pelagic species that frequent the surface are usually found at greater depths when the surface is rough. Weather is a particularly important factor, especially in the ocean. Where weather is more favorable for offshore fishing, we usually find a greater number of offshore anglers.

In fishing offshore for salmon, albacore, yellowfin and bluefin tunas, dolphinfish, swordfish, and marlin, water color and temperature are important factors. Changes in these factors are good indicators of changes in water mass, and it is in the vicinity of these changes that concentrations of the larger predators are often found. Along edges of changes in water temperature and color sometimes can be found higher concentrations of forage animals—plankton and small fish. These smaller animals attract the larger predator fish, making an area with a temperature or color discontinuity a favorable place to explore. Locations near schools of forage fish often have good fishing potential. These frequently are found by observing seabirds swooping down on forage fish driven to the surface by larger predator fish. Sometimes yellowfin tuna and marlin are found around schools of porpoise, and trolling nearby may be productive. Tidal rips in bays and estuaries are other likely spots for fish. Movement of the different water masses is evidenced usually by surface rips and many times by color changes.

Along shore, water depth frequently can be determined by color, the darker blue color indicating a deeper area. These deep spots or holes, drop-offs, and open channels are all good spots for surf or shore anglers to investigate. In fishing the surf, wave action is most important in evaluating a good fishing spot; as a wave proceeds toward the shore, it will usually crest and break over a shallow spot, either the sand beach itself or an offshore bar. If the wave breaks some distance from shore over a submerged sandbar and the water becomes smooth again before slightly breaking on the beach, this indicates a depression or hole on the inside of the bar—a likely spot for surf fishes. If rocky outcroppings are observed immediately offshore along a sandy beach, casting to a point close to the rock can be productive since larger fish tend to congregate around such locations. The same is true for offshore reefs, kelp beds, or wrecks. These habitats provide shelter or protection as well as a ready food supply for game fishes, which eat the abundant small organisms attached to the solid substrate and the baitfish frequently found nearby.

Rocky shores, usually are productive fishing areas; however, many are reluctant to fish these places because of the possibility of losing
their terminal gear of sinkers and hooks. Careful selection of a fishing spot off a rocky point or over sharp drop offs to deep water which may have a smooth bottom could produce results. Although a cautious approach should be taken in testing such an area, after discovering good fishing in a rocky location you may have found your own exclusive fishing spot.

Fishing results in bays are highly variable. Usually the best spots are near the entrances, in or adjacent to the main tidal channels. Fishing in the entrance from a boat can be productive either by trolling (usually against the tide), casting with the tide, or drift fishing with the tide. Tidal fluctuations in bays markedly affect fishing in the nearshore area or over the tidal flats. Water current velocities and patterns created by tidal flow in turn affect the movement and availability of food material for all bay fishes. Many shallow areas are evident, and some are exposed at extreme many tides. When the tide is high these areas are covered, and predator fish can move over the tidal flats to feed on small invertebrates that live on the bottom. On an ebbing or outgoing tide, good places for fishing are usually found in channels or about the mouths of tidal sloughs that drain the tide flats, or at any narrow channel or creek mouth at the point it empties into a bay.

In bays as well as in the ocean, logical spots for fishing in your area may be found on the marine nautical charts issued by the National Ocean Survey. These navigational charts show channels and depressions and sometimes show rough or rocky-reef areas. A good marine angler can determine areas that may have good fishing potential by consulting these charts, and if you plan to fish from your own boat, knowledge of the bottom topography is essential for normal navigation.

Another easy method of gaining knowledge of the better fishing sites is to follow those sport anglers who know where to fish. Good fishing areas attract fishing boats and concentrations of anglers. The activities of commercial sport fishing boats are among the most reliable indicators of good fishing spots. Professional sport fishing boat skippers keep in constant contact by radio with other boats concerning fishing conditions, and they are the experts in the offshore fishing business. For this reason a great deal of knowledge about fishing techniques for different species and fishing locations can be obtained by fishing from a commercial sport fishing boat. Records indicate that in most cases catches are above average for these boats, and their equipment will get you to the fishing grounds and back with speed and safety. Once the fishing grounds are reached, all necessary bait (live bait in many cases), tackle, and instruction on equipment and techniques are available to you.

Finally, for more specific knowledge about fishing in a particular area, one of the most logical places is the local bait and tackle store or sporting goods supplier. Local fish and game wardens usually are most helpful, and of any group of individuals, they are probably most aware of seasonal fishing opportunities. Above all, before fishing any area always be sure to consult your State fish and game department for local regulations concerning current laws on type of fishing gear allowed, seasons, and size and bag limits.

JAMES L. SQUIRE, JR.
NMFS, Southwest Fisheries Center, La Jolla Laboratory, La Jolla, Calif.

SUSAN E. SMITH
NMFS, Southwest Fisheries Center, Tiburon Laboratory, Tiburon, Calif.
The southern California coast from Point Conception southwest to Mexico has a distinct geographic and oceanographic character compared to coastal areas to the north and south. It is sometimes called the southern California "Bight," referring to the inward curve of the coastline in a near east-west direction for over 100 miles south of Point Conception. Within this "Bight" is a generally counterclockwise current flow or gyre centered in the Gulf of Catalina, an ocean area southwest of Catalina Island. About the center of the current gyre, sea surface temperatures tend to be higher than temperatures found to the north or south of the Gulf of Catalina. During midsummer, surface temperatures may reach 70°F or more near the center of the gyre and high surface temperatures are then common from southern California south off the coast of Baja California, Mexico.

During this warming period, subtropical species such as striped marlin, swordfish, Pacific bonito, and yellowtail (Seriola dorsalis) migrate into the Gulf of Catalina. On rare occasions, during abnormally warm years, tropical species such as yellowfin tuna, dolphinfish, and sailfish also are known to migrate north into southern California waters.

Weather off southern California is generally mild and thus conducive to marine sport fishing. Swell heights are low and winds are generally light and from the west. However, outside the offshore islands from San Clemente to San Miguel, during the summer one encounters large swells and high seas caused by prevailing strong northwesterly winds. During winter and early spring the southern extensions of storm fronts, having their centers farther north, sometimes enter the area bringing rain and wind. Rainfall is low along the coast, averaging but 10 to 15 inches per year, and wind speeds during winter and spring storms rarely exceed 30 knots in the nearshore areas. In summer a persistent low stratus cloud layer exists offshore, resulting from warmer moist air flowing from the south and southeast. In late summer the remains of tropical storms sometimes reach the southern California latitudes, though these are rare. One of the more pleasant seasons for fishing is from late fall through early winter, when the air is clear, seas calm, and the persistent summer stratus rarely present.

Catch records indicate that southern California is the center of marine game fishing in the eastern Pacific Ocean, especially when one considers its geographical size and the number of marine anglers in the area. Excellent facilities are available for fishing in bays, along shore, from piers, and over the offshore grounds from modern sport fishing boats. Year-round fishing is possible for many southern California species listed in this guide.
I.

Within the San Diego region (Chart 1) the major offshore sport fishing grounds are about Mexico's Coronado Islands and near the Point Loma and La Jolla kelp beds. Some of the finest marine angling facilities for fishing in local and distant waters are to be found in San Diego Harbor and Mission Bay. San Diego is the principal port for long-range fishing trips to off the coast of Baja California. It is also one of the major ports for albacore sport fishing from July through October. With most fishing within 40 to 100 miles west and south-west of San Diego. Occasionally, trips by modern well-equipped sport fishing boats are made to San Clemente Island (see Chart 8) for yellowtail and kelp bass and to offshore banks for rockfishes.

Variations in the offshore bottom topography have a pronounced influence on where different species are caught. The coastal shelf off San Diego is widest from Point Loma south to the Coronado Islands, averaging about 20 fathoms in depth. Here the bottom is sand, sand shell, and mud sand, over which sand bass, white seabass, California halibut, and sizable quantities of forage fish such as the northern anchovy are frequently taken. Although the bottom is generally sandy from the Coronado Islands north, nearshore rocky reefs are to be found off Imperial Beach, Point Loma, and La Jolla.

Off Point Loma the shelf is about 3 miles wide and becomes narrower off La Jolla and to the north; offshore the bottom depth descends to about 600 fathoms. The edge of the shelf is generally sandy near the Coronado Islands north, nearshore rocky reefs are to be found off Imperial Beach, Point Loma, and La Jolla. Excellent fishing areas for rockfishes also can be found along the shelf edge.

Several submarine canyons cut into the nearshore shelf; the two most prominent are the Coronado Canyon and the La Jolla Canyon. These canyons provide good habitats along their upper edges for rockfishes, sheephead, kelp bass, and broomtail grouper.

The Coronado Islands are the property of Mexico, and a Mexican fishing license must be obtained before fishing about any of the three islands. When fishing from a commercial sport fishing boat, the foreign fishing-fee is usually included in the cost of the trip. These islands constitute the most productive area in southern California for fishing yellowtail, which are taken there during late spring through summer. The north end of the North Coronado Island is excellent for yellowtail fishing, and anglers usually experience a good morning bite. The "Middle Ground," between North Coronado and Middle Coronado, is also good for yellowtail, and for white seabass in spring. Other game fishes taken by anglers around the Coronado Islands are: Pacific bonito, Pacific yellowtail, rockfishes (olive, kelp, and grass), lingcod, ocean whitefish, sculpins, and kelp bass. Pacific bonito are caught April through October (summer best), and Pacific yellowtail, rockfishes (kelp, olive, grass, and vermilion), lingcod, ocean whitefish, sculpins, and kelp bass.

North of the Coronado Islands are: Pacific barracuda, Pacific bonito, rockfishes (olive, kelp, and grass), lingcod, ocean whitefish, sculpins, and kelp bass. Pacific barracuda are taken April through October (summer best), and Pacific bonito are caught April through October (summer best), and Pacific yellowtail, rockfishes (kelp, olive, grass, and vermilion), lingcod, ocean whitefish, sculpins, and kelp bass. Pacific bonito are caught April through October (summer best), and Pacific barracuda are taken April through October (summer best), and Pacific yellowtail, rockfishes (kelp, olive, grass, and vermilion), lingcod, ocean whitefish, sculpins, and kelp bass.

The Point Loma kelp beds and deepwater immediately northwest of the Point are good fishing spots for the species shown on the chart. Nearshore, rockfishes (olive, grass, vermilion, and kelp) are commonly taken near the kelp beds; offshore in deeper water, baccocino, chilipepper, gopher, cherry, and greenstriped rockfishes are caught.

Fishing the La Jolla kelp bed has become increasingly popular in recent years. Statistics indicate there are more anglers, catching greater numbers of fish, from this area than from any other location, along the California coast. Off Point Loma, in addition to the species listed on the chart, California halibut sometimes are taken on the flats to the north and south of the La Jolla Submarine Canyon.

North of La Jolla begins a near-continuous kelp bed that extends northward along the coast. There is limited amount of fishing off the kelp beds at Del Mar and in adjacent areas to the north and south for kelp bass and rockfishes (kelp, olive, grass, and vermilion), yellowtail and Pacific bonito sometimes are taken in and about these kelp beds.

Several public piers, located in bays or along the open coast, allow the marine anglers to catch resident shore fishes and sometimes migratory species such as Pacific bonito and Pacific barracuda. The south coast has two public fishing piers. The Ocean Beach public fishing pier is a good place for surfchapers, Pacific bonito, Pacific mackerel, white seabass, sharks (sand, brown smoothhound, and leopard), queenfish, jacksmelt, California halibut, and sculpins. To the south, the Imperial Beach fishing pier just north of the Mexican border has, at times, good fishing for tile and rubberlip surfchapers in winter and spring, and walleye and shiner surfchapers all year. Sharks, rays, white croaker, Pacific sanddab, Pacific bonito, jacksmelt, Pacific barracuda, white seabass (small), cabazon, sculpin, and "rock" crabs are also taken from this pier.

San Diego Bay has some fishing about the municipal piers for sculpins, jacksmelt, pile surfperch, topsmelt, sharks, and rays. The major public sport fishing pier in San Diego Bay is on Shelter Island, near the entrance to the bay. Off the pier and along the rocky shore nearby, anglers catch surfperch (shiner, black, rubberlip,
SI BIPED MARI IN AND SWORDFISH AT RADAR BUOY ABOUT 12 MILES OFF LA JOLLA.

SPORTFISHING TIPS TO SANTA CRUZ KELP, BARRACUDA, BONITO, KELP BASS, YELLOWTAIL, SHEEPHEAD, WHITE CROAKER, GIANT SEA BASS, WHITE SEABASS, LINGCOD, HALI, MOON, ROCKFISH, HALIBUT TAIL'S BULLFIN TUNA.

INTERNATIONAL MARITIME BOUNDARY

STRIPED MARLIN CAUGHT WSH OF THIS LINE, RLY TC NOVEMBER 1 (AKA, LIT BES) CENTER CATCH DISTRIBUTION FROM SAN DIEGO ABOUT 15 MILES OFFSHORE.

NOT TO BE USED FOR NAVIGATION
See NOS Nautical Charts
and pile), jacksmelt, topsmelt, sand bass, sculpin, sharks, rays, Pacific bonito, and California halibut. Anglers fish for the same array of shore species from the south side of Shelter Island and 1 mile east off Harbor Island.

Mission Bay offers excellent pier, shore, or small-boat fishing. Bay fishermen frequently catch yellowfin and spotfin croakers, small Pacific bonito and Pacific barracuda, California halibut, shiner and rubberlip surfperches, jacksmelt, spotsnout sand bass, sharks, and rays.

The open coast offers surf fishing along both rocky and sandy shores: the species of fish caught depends upon which of these two shoreline types is being fished. Some of the better shore fishing areas are near Del Mar and Torrey Pines, and from Coronado to Imperial Beach.

The major sandy-shore fishes are the surfperches, croakers, corbina, and grunion. The barred surfperch is common and comprises about 70% of the shore angler's surfperch catch. It is taken throughout the year. December through March is considered best. Others such as shiner, white, rainbow, rubberlip, and silver surfperches are available all year. The walleye surfperch also is taken most of the year over sandy bottom, as well as around pier pilings and jetties.

Catches of California corbina are taken off the sandy shore all year, but are greatest during July through September. Spotfin croaker are taken all year, but summer fishing is best, especially along beaches extending north from Imperial Beach. Yellowfin croaker are caught on some sandy shores during the summer run, but these locations will vary according to movements of the fish. The white croaker or kingfish is taken off most sandy beaches.

Grunion is one of the favorite fishes of the open-coast sandy beach. This small silvery fish enters the surf zone to spawn during periods of high tides in late spring and summer from March to September (grunion may not be taken 31 March through 1 June). They may be captured by hand in such popular fishing areas as La Jolla, Pacific Beach, Mission Beach, Ocean Beach, along the Coronado Island (Silver Strand), and Imperial Beach. The best time to search for grunion is the second, third, and fourth nights after a full moon and for a 3-hour period after a high tide.

Along rocky portions of the coast at La Jolla, Bird Rock, and Sunset Cliffs and about Point Loma, the species commonly taken are opaleye (best in spring), halfmoon, surfperches (black, shiner, walleye, and pile), rockfishes (kelp, grass, and brown), kelp bass, and occasionally sargo and cabezon. Opaleye, halfmoon, and rockfishes are available to the rocky shore for all year.

2 Solana Beach to Dana Point

This fishing area (Chart 2), geographically between the population centers of San Diego and Los Angeles, is a growing one for marine sport fishing operations. New facilities such as the extensive small-boat harbor recently developed at Dana Point (Dana Harbor), and the excellent small-boat basin at Oceanside now make many coastal fishing areas accessible to the small-boat angler. About 15 miles of coastline from Oceanside north to near San Mateo Point is the property of the U.S. Marine Corps and is part of the Camp Pendleton complex. Until recently access to this area was very limited; however, in the north a portion of the coast now has been designated a State park (San Onofre Bluffs State Beach) and greater access to the shore is being given the public.

The coastal shelf is very narrow off this section of coast, extending only 2 to 3 miles offshore before reaching a depth of 50 fathoms or more. Sand and gray sand predominate the bottom nearshore, with some rocky areas such as those found north of Oceanside (San Clemente Island and 209 Bank) on the south side of San Mateo Point northward. This hard bottom stratum allows for development of kelp, which in turn provides an attractive environment for kelp bass and the brown types of rockfishes. Offshore in deeper water the bottom type is gray and green mud and the coastal shelf descends to a depth of 300 to 400 fathoms within 8 to 10 miles offshore. Along the edge of the shelf, in deep water, are several places where rockfishes may be taken.

**OFFSHORE FISHING**

Sport fishing boats are available at the port of Dana Harbor and at Oceanside. These boats fish the coastal kelp beds and offshore in deep water for rockfishes and other species. During albacore season they run offshore to 60 Mile Bank (60 miles south-west of Point Loma), to the 43 Fathom Bank (35 miles west of Point Loma), and sometimes beyond. San Clemente Island. The 209 Bank, about 35 miles west of the mainland, is one of the better fishing areas for striped marlin and swordfish, and albacore occasionally are taken here during July or August.

Immediately offshore from Solana Beach north to off Carlsbad and from Oceanside to San Mateo Point to San Clemente are substantial kelp beds. Although the kelp beds in this area are not as extensive as those off Point Loma to the south, or off the Santa Barbara coast farther north, they do provide a suitable habitat for kelp bass, sand bass and rockfishes (kelp, grass, olive, and vermilion) and also attract coastal migrants such as Pacific barracuda and Pacific bonito. Yellowtail and white seabass are sometimes taken near the kelp beds, jack and Pacific mackerels (July to September), opaleye, white croaker, and kelp rockfish. Nearshore rocky reefs provide a habitat suitable for many species such as opaleye, grass, and kelp rockfishes, halibon, cabezon, and black surfperch.

Rockfishing is often productive along the edge of the narrow coastal shelf, in water 30 to 100 fathoms deep over rocky, sharp-sloping areas. Anglers fish off Carlsbad to Oceanside and north to Dana Point for bocaccio, chilipepper, canary, and yellowtail species of rockfishes.

Bluefin tuna and striped marlin are taken occasionally off the San
To 14-mile Bank (Lasuen Seamount) for Rockfish, Bocaccio, Vermilion, Chilipepper, and about the bank and to the southwest for striped marlin, swordfish, and occasionally Albacore.

Strips in these areas occasionally Bluefin Tuna and Striped Marlin taken north half of chart area offshore.

Near Warm Water Outfall for Corbina, Leopard Shark, and Gray Smoothhound Shark.

Not to be used for navigation. See NOS Nautical Charts.
The shore from San Mateo Point to San Clemente has only a few isolated areas where rocky-shore species can be taken.

**Areas where rocky-shore species can be taken**

San Clemente has only a few isolated summer runs of California halibut (spring and summer best), sculpin, sargo, jacksmelt, white croaker (kingfish), queenfish, occasionally small white seabass, Pacific bonito, and Pacific barracuda (in summer). Kelp and sand bass, and barred and walleye surfperches. In addition, there is shore fishing from the jetty systems at Dana Harbor and Oceanside.

The extensive sandy-shore beaches from Solana Beach to San Clemente are productive areas for the surf angler. Some of the better, or at least more popular, surf fishing areas are found near San Mateo Point where corbina are taken from July through September. Farther south, there is excellent spotfin croaker and barred surfperch fishing along San Onofre Bluffs State Beach near the northern boundary of Camp Pendleton (a permit is required for fishing on U.S. Marine Corps property). Fishing is good 3 miles south of Carlsbad, particularly about the entrance to the cooling-water inlet of the steam-electric generating plant where, because of a constant inflow of water from the ocean, the small bay has a high concentration of California halibut, corbina, and yellowfin croaker. Other good shore fishing spots are north of Leucadia and near San Elijo Lagoon, just north of Solana Beach. Surfperches frequently taken along the sandy shores are the barred (winter, spring best), walleye, shiner, calico (December to March best), and silver species. Other fishes taken by the surf angler are the white and yellowfin croaker, and California halibut. Grunion runs are known to occur on these beaches in late spring and early summer.

The shore from San Mateo Point to San Clemente has only a few isolated areas where rocky-shore species can be taken.
from Laguna Beach, although not commonly in recent years.

Farther offshore to the west is Los Suenos Seamount, widely known as "14 Mile Bank" or "58 Fathom Spot." This is an excellent bottom fishing area for rockfishes (bocaccio, vermilion, and chilipepper), and in summer, striped marlin are caught nearshore and within the Newport Harbor entrance. Occasions only a short distance south of Newport, striped marlin are taken by anglers along with an occasional small mackerel or Pacific barracuda. Pacific bonito, black, walleye, shiner, calico, and silver) croakers (spotfin, white, and yellowfin), California halibut, and corbina. Grunion are also caught during their periodic spawning runs.

Nearshore and Shoreline Fishing.

The greater Los Angeles Harbor-San Pedro Bay area, being readily accessible to large numbers of people, is a popular place for fishing from shore and small boats. Good locations for catching bay fishes can be found within the harbor itself, along the extensive jetties, or about piers that are on open channels in the outer bays where jacksmelt, surfperches, skates, sharks, rays, sargo, and turbots are taken by anglers along with an occasional small mackerel or Pacific bonito. Numerous fishing piers (public and commercial) and open bulkhead areas provide many thousands of recreational fishing hours each month for only the cost of bait and tackle. In addition, to the many commercial piers and marina floats available for fishing in Los Angeles Harbor, there are piers built specifically for fishing at Cabrillo Beach (near Point Fermin), Belmont Shore, Seal Beach, Huntington Beach, Newport Beach (two piers), and south of Laguna Beach at Aliso Beach. From these piers, anglers catch California trout, kingfish (white croaker), sharks, rays, jacksmelt, queenfish, surfperches (barred, black, walleye, pile, and shiner), and Pacific and jack mackerels.

Surf fishing takes place along rocky shores from Point Fermin to Point Vicente. Southwest from Newport Bay to Dana Point there is fishing from the man-made jetties at Los Alamitos Bay and Newport Bay for opaleye grass and kelp rockfishes, halfmoon, cabezon, and black perch. The San Pedro breakwater from Cabrillo Beach to the San Pedro Channel entrance is accessible from shore; rest of the breakwater to the west can be reached by boat. Here there is good fishing for opaleye, halfmoon, kelp bass, and rockfishes (brown types). Sandy-shore fishing is available from Newport Beach to Long Beach. One of the more popular places for surf fishing is Bolsa Chica State Beach. Species most commonly taken off sandy beaches are surfperches (barred, walleye, shiner, calico, and silver), croakers (spotfin, white, and yellowfin), California halibut, and corbina. Grunion are also caught during their periodic spawning runs.

Point Vicente to Solomar

The coast from Point Vicente to Solomar (Chart 4) borders one of the most populated areas along the west coast and is intensively fished, particularly from Redondo Beach to Santa Monica. Sandy shore, rocky shore, piers and jetty fishing, and excellent facilities for boat fishing are found from Point Vicente to Solomar.

The coastline is rocky from near Point Vicente to Malaga Cove, south of Redondo Beach. Northward from Malaga Cove to northwest of Santa Monica is an extensive stretch of sandy beach. From Santa Monica, the coast swings westward and the coastal shelf begins to get rocky once again, with occasional offshore reefs. The first substantial nearshore concentrations of kelp, which are common here from Point Conception, are found just west of Malibu Point near Point Dume, and again west of Zuma Beach.

The offshore coastal shelf is very narrow from Point Fermin to Point Vicente, and these waters are frequented many times by schools of baitfish such as anchovy and jack and Pacific mackerels. Depths of 200 fathoms or more are found 2 to 3 miles offshore. The bottom then descends to its greatest depth in the San Pedro Channel—over 400 fathoms. Bottom types, aside from rocky areas, are generally green sand; in deeper water, green mud dominates. Along the edge of the shelf are rocky areas that attract sizable concentrations of red rockfishes.

Santa Monica Bay is relatively shallow (less than 50 fathoms deep) and cut by two prominent submarine canyons. The Redondo and Santa Monica canyons. Rocky areas are found near the edges of these canyons as well as along the edge of the coastal shelf, and these places usually provide some of the better rockfishing. A number of shallow reefs are offshore, in lower Santa Monica Bay between Point Vicente and Redondo Beach. The coastal shelf is about 3 miles wide from Santa Monica to near
Point Dume and is about 2 miles wide to the west beyond Point Dume. Again, the bottom types are usually sand nearshore, grading to mud and sand farther offshore and green mud at the greater depths.

**Offshore Fishing.**

Excellent facilities for sport fishing are located at the small-boat harbors of Redondo Beach, Marina del Rey, Santa Monica, and to the west at Malibu and Paradise Cove. Sport fishing boats operate locally or travel from these ports to distant waters to fish around Catalina, Santa Barbara, and San Nicolas islands. Special offshore trips for albacore are made during the summer. The boats fish southwest of Redondo Beach along the south edge in particular) where there is good deepwater fishing for rockfishes (vermilion, canary. bocaccio. gopher. and chilipepper). Rockfishing is also productive off Point Dume where vermilion. olive. and bocaccio species enter the catch. Along the kelp beds west of Zuma Beach. olive. grass. and kelp rockfishes are taken frequently, along with occasional bonito and yellowtail during summer.

**Pier and Shore Fishing.**

Rocky-shore fishing is popular from Point Vicente to near Malaga Cove. just south of Redondo Beach. Several species of surfperches commonly are taken here along with olive. grass. and kelp rockfishes. Opaleye fishing is excellent along this rocky stretch of coast.

Rocky-shore species caught in the area west of Santa Monica are the opaleye. surfperches (black and shiner). rockfishes (grass. kelp. and olive), halfmoon. cabezon. sargo. and occasionally kelp bass.

From Redondo Beach north to Manhattan Beach are several public fishing piers. These piers. are popular for fishing California halibut (spring and summer best). jacksmelt. and shovel nose guitarfish. In some years fishing is good. for corbina. surfperch. croaker. and yellowfin croaker. particularly along the sandy shore from Playa del Rey to Venice and from Manhattan Beach to Redondo Beach. Greenling are sometimes gathered along Malibu. Santa Monica. Venice. and Hermosa beaches during periods of evening high tides in the spring and summer. Zuma Beach's sandy shores offer good fishing for barred surfperch with occasional catches of corbina and croakers.

![Map of Southern California showing offshore fishing areas.](image)

The principal sport fishing ports in the Ventura area (Chart 5) are Port Hueneme, Channel Islands Harbor, and Ventura Harbor. These are the principal ports closest to the population center of Los Angeles having sport fishing boats that specialize in fishing about the Santa Barbara Channel Islands and offshore south of the islands for albacore during the summer fishing season. [See Chart 7 for Channel Islands fishing.] On isolated occasions, catches of Coho salmon are made in late winter and early spring by party boats fishing southeast of Point Mugu and south and west of Ventura. The catches during this time are not large, but represent the southern extension of salmon sport fishing.

About 11 miles offshore from Port Hueneme and the Channel Islands Harbor is Anacapa Island, one of the more important islands for marine sport fishing. The island is the easternmost extension of the chain of Santa Barbara Channel Islands and is less than one-half mile wide in most places, rising to an elevation of 900 feet above sea level. This is excellent fishing around Anacapa for kelp bass and black sea bass, as well as for bocaccio and canary rockfishes. Occasional catches of Pacific barracuda and yellowtail are made here in summer. Broadbill swordfish and striped marlin are taken south of Anacapa Island during summer and early fall. The only broadbill tournament fishing on the west coast takes place near the island.

The coastal shelf east of Port Hueneme is very narrow: from Point Mugu eastward it is no more than 1 mile wide. Immediately west of Point Mugu, the Mugu Submarine Canyon cuts through the coastal shelf, and water depths plunge to 250 to 300 fathoms. The coastal shelf widens slightly between Point Mugu and Port Hueneme before being interrupted by another submarine canyon, Hueneme Canyon. Northwest of Hueneme the shelf becomes several miles wide, an area commonly known as the Ventura Flats. The shelf narrows slightly west of Ventura. and the more offshore rocky reefs provide good rockfishing. The bottom types range from rock to sand and shells in the southeast to mud, sand, and shells in the Mugu-Hueneme area. Sand and mud predominate on the Ventura Flats. which has good fishing for flatfish such as California halibut. In deeper water the typical mud and green mud bottom predominates. The offshore bottom becomes shallower west of Hueneme Canyon and adjacent to Ventura Flats, the depth— at mid-Santa Barbara Channel is only about 130 fathoms. Immediately offshore of the area from Solromar to Point Mugu, anglers fish along the edge of the kelp beds for rockfishes (grass. olive. and kelp) and occasionally bonito. About 4 miles

![Location map of Southern California showing offshore fishing areas.](image)
offshore of Solomont there is a shallow area approximately 45 fathoms deep. This is a good fishing spot for chilepepper rockfish and sometimes yellowtail and Pacific barracuda. Limited catches of coho salmon are made occasionally in the early spring.

PIER AND SHORE FISHING.

The coast is rocky from Leo Carrillo State Beach (bottom of chart) to Point Mugu. The shore borders the coast highway and is readily accessible to the fishing public. This rocky coast offers good fishing for opal eye, kelp bass, surfperches, and rockfishes (grass, kelp, and olive). From about Point Mugu to near Point Port Hueneme, access is restricted since it is part of the Point Mugu Naval Air Station and Pacific Missile Range. The sandy shore starts at Point Mugu and extends up along the coast all the way to Ventura, from Ventura west to Rincon Point, sandy beaches are interspersed with rocky points of land. Along the sandy beaches extending from Point Mugu northward, the following species are taken from shore: walleye and barred surfperches (excellent fishing area for barred January to March best), California halibut (spring and summer best), jackmelt, sharks (several species), corbina, spotfin croaker, yellowfin croaker, and occasionally kelp bass.

Anglers fish about the jetties and docks at Port Hueneme and from the sport fishing pier (actually a fishing float) in the Channel Islands Harbor. About the Port Hueneme jetties, anglers will likely find opal eye, surfperches (black and shiner), rockfishes (grass, kelp, and olive), halfmoon, and cabezon. Some of the fishes caught from the public fishing float-at Channel Islands Harbor are: walleye and barred surfperches, staghorn sculpin, California halibut (spring and summer), lingcod (winter), kelp bass, several species of sharks and rays, and occasionally croakers.

6. Santa Barbara Area

This coastline (Chart 6), which encompasses the major southern California sport fishing port of Santa Barbara, is oriented in an east-west direction. This is the only sizable coastal segment of the U.S. Pacific coast to have this orientation rather than the south side of the Strait of Juan de Fuca in Washington. The area is distinguished by the most extensive and best-developed kelp beds along the California coast. Lush kelp beds are present throughout the region, but are best developed from about Goleta Point to Point Conception.

At the west end of this area is one of the most notable of coastal geographical features, Point Conception. This is often called the "Cape of Good Hope of the West Coast" because of the wide variation in winds and weather found about the point. Many times the waters south and east of Point Conception may be relatively smooth and have low wind speeds over them. Immediately north and west of the point and offshore only a short distance, however, the seas may be rough and the wind near gale force. The coastline south of Point Conception is protected by a coastal mountain range that parallels the shore and provides an ameliorating influence on the prevailing northwest winds, which are most intense from spring to early fall.

Point Conception is often described as an ecological dividing point for marine life. South of the Point is the subtropical zone; north of it is the temperate zone. Many coastal pelagic fishes, such as Pacific barracuda and yellowtail, that are common to the waters off southern California and Baja California, Mexico, are taken only rarely north of Point Conception. Conversely, some pelagic northern marine and anadromous species, such as coho salmon, are taken only in small numbers southeast of Point Conception in late winter and early spring.

The shoreline from Carpinteria to Point Conception and Point Arguello is predominantly a sandy one. Broken occasionally by a few prominent points with shallow reefs close to shore. Along most of the coast, the shore is backed by cliffs 50 to 150 feet high.

Offshore the coastal shelf is quite broad when compared to the coastal areas to the south. The shelf is about 5 miles wide south of Santa Barbara, narrowing westward to about 2 to 3 miles wide off Point Conception. The depths in the center of the Santa Barbara Channel range from about 200 fathoms off Santa Barbara to 250 fathoms south of Point Conception.

OFFSHORE FISHING

From Santa Barbara, sport fishing boats travel to grounds along the coast to the west and east and offshore to the Santa Barbara Channel Islands. (See Chart 7.)

A number of reefs along the coast are excellent fishing spots, as are the extensive kelp beds. West of Santa Barbara, near and amid the kelp, are resident populations of kelp bass, rockfishes (olive, grass, and vermillion), sheephead, and cabezon. During summer, anglers also catch Pacific barracuda and an occasional yellowtail or white seabass. Pacific barracuda generally work up the coast toward Point Conception from September to November and down the coast from January to April. Pacific bonito sometimes show along the coast in summer and fall.

Good drift-fishing locations for California halibut and kelp bass are found off the Goleta Beach Pier: other good halibut grounds are just east of

...
CHART 6

- Shorefishing Areas
- Fishing Facilities
- Sportboat Operation
- Oil Rig
- Kelp
- Reef
- Depth, in Fathoms

NOT TO BE USED FOR NAVIGATION
See NOS Nautical Charts
Point Conception, where fishing is best in spring and summer. This area also yields occasional summer catches of bonito and yellowtail.

Pier and Shore Fishing

Pier fishing is available at Santa Barbara (Sterns Wharf) and at the Goleta Beach and Gaviota public piers. The Goleta Beach pier is noted for sizable catches of surfperches. Walleye surfperch are abundant, and barred surfperch fishing is excellent in winter and spring. Best California halibut fishing is in spring and early summer, and tomcod, spotfin croaker, sand shark, and jacksmelt enter the pier angler's catch mostly during July, August, and September.

At the Santa Barbara pier, anglers also catch a variety of surfperches, rubberlip, and barred surfperches, sharks. California halibut (in spring and summer), lingcod (winter), kelp bass, rockfishes, and occasionally croakers.

The beaches west of Capitan to north of Point Conception are especially good for surf fishing. Sandy-shore species include the barred surfperch (January through March), walleye and rubberlip surfperches, spotfin croaker (usually a brief summer run in this area), and California halibut (late spring and summer). Rocky-shore anglers often encounter cabezon, black surfperch, and olive, kelp, and grass rockfishes.

Immediately north of Point Conception at Jalama, anglers cast into the surf for barred, silver, and walleye surfperches, and kelp greenling. Farther north, from Point Arguello north to Point Sal (not shown on chart), the coastal area is usually closed to civilian use due to Navy and Air Force missile-launching facilities, with the exception of a small beach at the town of Surf. Here there is good surf fishing for barred, silver, calico, walleye surfperches and California halibut.

7.8 Southern California Islands

All the southern California islands (Charts 7 and 8) are important to marine game fishing and probably will become increasingly important in future years. These islands are San Clemente, Santa Catalina, Santa Barbara, San Nicolas, Anacapa (covered separately, Chart 5), Santa Cruz, Santa Rosa, and San Miguel. All are in the general area southeast of Point Conception near the southwest edge of the area commonly known as the southern California Bight, which extends from Point Conception to offshore San Diego. The edge of the continental shelf is west of the offshore islands and about 25 miles west of Point Conception, extending southeast in a general northwest-southeast direction and passing about 120 miles offshore from San Diego. Between the edge of the continental shelf and the southern California coast is a series of deep basins, some reaching a depth of 1,000 fathoms or more.

The current flow within the southern California Bight and in the vicinity of the islands is generally counterclockwise. Sea surface temperatures during the summer are usually warmest at the center of a current gyre that occurs near the center of the Gulf of California—an area bordered by Catalina Island on the north, San Clemente Island on the southwest, and the mainland coast near Oceanside on the east. This warm-water zone is one of the better fishing areas for striped, marlin and swordfish. Other high surface temperatures are sometimes noted in summer south of Santa Cruz and Anacapa islands again, these warm-water areas represent good locations at times for the highly prized swordfish and marlin.

Santa Barbara Channel Islands

Many of the good fishing areas about the Santa Barbara Channel Islands are noted on Chart 7. Chart 5 provides information on Anacapa Island. easternmost and smallest of the four Santa Barbara Channel Islands. Sport fishing boats visit all these islands from Port Hueneme, Channel Islands Harbor, Ventura Harbor, and Santa Barbara. During summer, albacore boats occasionally travel farther offshore near the edge of the continental shelf, southwest of Santa Rosa and San Miguel islands and below San Nicolas Island.

The climate about the Santa Barbara Channel Islands is usually influenced by northwest winds from spring through summer, though the wind intensity is moderated slightly owing to their distance south and east of Point Conception. Fog and low stratus clouds are common about the westernmost islands during late spring and summer.

The westernmost island, San Miguel, is 7 miles long, 3 miles wide, and rises to a height of 831 feet. The island coastline is predominately rocky with many shoal areas along the west and north sides. Sandy beaches are scattered about the island: the beach at the west end contains one of the largest seal and sea lion rookeries in southern California. About the island are several good places for fishing lingcod and rockfishes.

San Miguel Island is privately owned and has a rocky shore along the northwest and southwest sides; however, the eastern end has a number of sandy beaches. Good fishing for species noted on the chart, and for rockfishes and lingcod, can be found nearshore about the northern and western ends of the island.

The western islands (Santa Rosa and San Miguel) have not been fished as extensively as the islands closer to
the ports in the Ventura and Santa Barbara areas. The distance that sport fishing boats are required to travel is an important factor. Additionally, wind, weather, and sea conditions about these islands are usually more severe than at the islands to the east.

Santa Cruz is the largest of the Channel Islands and is privately owned; it and Anacapa Island have the most sport fishing pressure. Rock fishing is good all about the island; fishing is usually best on the southeast side, which is protected from the westerly winds. Sometimes this lee side of the island has excellent fishing for yellowtail and bonito. Bluefin tuna have been taken off the southwest end commercially during the summer, so this area has a potential for a sport fish catch of this species.

**SAN NICOLAS ISLAND**

San Nicolas (Chart 7) is 25 miles southwest of Santa Barbara Island. The nearest point on the mainland is Point Vicente. 55 miles to the northwest. The island is owned by the U.S. Navy and the surrounding water is a naval restricted area; so consult Notices to Mariners before fishing about the island.

The island is 3/4 miles long, and the highest point is 907 feet above sea level. A sizable shoal area extends around it; principally on the southwest and north sides. The bottom types are scattered rocky areas on the north and west ends, with shallow areas of sand and white and green shells. The shore is rocky, except for isolated sandy beaches, and the east end has the greatest predominance of sand.

Fishing is good about the entire island, but only a small amount of fishing effort is expended in the area.

Sport fishing boats from Port Hueneme and Channel Islands Harbor frequent the Los Angeles area and fishing here. No one section is noted for being particularly better than the others. This island will probably see increased fishing in the future.

**SANTA BARBARA ISLAND**

The small island of Santa Barbara (Chart 7) is 20 miles west of the "west end" of Catalina Island. It is about 1 mile long and 1/2 mile wide, and rises abruptly to a peak of 635 feet above sea level. The shore is rocky, and kelp areas are common about the entire island; the heaviest kelp growth is along the north side.

Fishing boats from the Los Angeles area and from Port Hueneme and Channel Islands Harbor frequent Santa Barbara Island. Anglers fish all about the island, and no one area is noted for having better fishing than another. Albacore are sometimes taken about 5 miles southeast of the island. To the south about 6 miles is Osborne Bank, a good fishing area for rockfishes, lingcod, and occasionally bluefin tuna and albacore.

**SANTA CATALINA ISLAND**

Because of its proximity to metropolitan Los Angeles, Santa Catalina Island (Chart 8) has been fished intensively by marine game anglers for a great number of years. Santa Catalina Island is privately owned and is one of the largest of the eight southern California islands. Although the island points in a north-south direction, common terminology results in the northwest end being called the "west end" and the southeast end, near Avalon, being called the "east end." The island is about 6 miles wide and 18 miles long. The northwest third is constricted, and the northeast point is called the "isthmus." Here the island is only about one-third of a mile wide with Limekiln Cove on the northeast side and Catalina Harbor on the southwest side. The island rises to an altitude of about 2,000 feet; much of it is over 1,000 feet high.

The coastline about Catalina is rocky in most places, and patches of kelp frequently are found nearshore. Small kelp areas occur near the west end and near the entrance to Catalina Harbor. Some patchy areas occur south of the isthmus toward the east end. The south side (southwest) has good fishing for a number of species (see chart), and white seabass are frequently caught while nightfishing. Kelp bass are fished inshore, and the sandy coves offer good fishing for California halibut and ocean whitefish.

Excellent billfishing for striped marlin and broadbill swordfish can be found off the east end during the summer. Bluefin tuna are sometimes taken south and west of the island. Between Santa Catalina and San Clemente islands. The "228-fathom spot" is 5 miles northeast of Avalon Harbor, and is good during late summer for marlin and swordfish. The "58-fathom spot" (also known as "14-mile bank") and Lasaun Seamount, about midway between Avalon Harbor and Dana Point, is 3.5 miles to the northeast of the mainland. It is good for striped marlin, swordfish, and albacore (July through September). This bank also provides good fishing for rockfishes. Southwest of the 58-fathom spot, between Catalina and San Clemente islands, is another good fishing area for striped marlin and swordfish.

**SAN CLEMENTE ISLAND**

The large island of San Clemente (Chart 8) is about 70 miles west of the mainland off Oceanside and about 45 miles south of Long Beach. The entire island is the property of the U.S. Navy and there are no civilian marinas or public access. Portions of the surrounding waters are restricted because of naval operations.

The island is about 18 miles long and from 2 1/4 to 3 1/2 miles wide; its highest elevation is about 1,900 feet. The coastal shelf is narrow, particularly on the northeast side. The shore is rocky, and the bottom types nearshore are a mixture of rock, mud, and sand. This type of substrate allows kelp to attach, and kelp patches are common with the most prominent growths at the north end. Kelp also is found along the west side with concentrations around Chiná Point and just west of Pyramid Head at the southern end. Caution must be exercised in fishing the south end of the island since it is frequently used for naval target practice. Information on scheduled military activities and restricted zones is published in the local Notice to Mariners. Along the northeast side, to about 20 fathoms in depth, there is kelp. The kelp growth is close to shore owing to the sharp slope of the bottom.

Sport fishing boats from the Los Angeles area frequent the island, and most of the fishing is at about the north end and along the east side. Species taken are listed on the chart. Three well-known grounds are "Slide Area," "Purse Seine Rock," and "Fish Hook" - all on the east side. Good fishing is also found along the southwest side, although it is more exposed to the northwest winds and rough seas. Bluefin tuna sometimes are found along the southwest side, and albacore are frequently caught south and southwest of the island during the summer.
Fishing around entire island north and east side has the most fishing effort. Species taken: Kelp Bass, Yellowtail, Barracuda, Rockfish, Sheephead, Bonito.

Southwest coast: Good for Kelp Bass inshore, Bluefin Tuna taken offshore.

South side: Barracuda, Bonito, Kelp Bass, Sand Bass, Yellowtail, White Seabass, Sand dab.

Southwest Bank: Sheephead, Rockfish, Sculpin, Barracuda, Bluefin Tuna, Ocean Whitefish, Yellowtail.


"228 Fathom Spot": Marlin and Swordfish.

Striped Marlin, Swordfish (sometimes Albacore, Bonito and Bluefin Tuna).

South side: Barracuda, Bonito, Kelp Bass, Sand Bass, Yellowtail, White Seabass, Rockfish (Brown types), Halfmoon, Halibut, and occasionally Bluefin Tuna.
From Point Conception north, the coastline is rugged and relatively unprotected from the force of the sea and prevailing northwest winds. These winds deflect surface waters offshore, creating vertical currents that bring up cold, nutrient-rich bottom water from the depths in a process called "upwelling." In northern California, major upwelling begins in spring, and the inverted bottom water is often 3° to 10°F colder than the sun-warmed surface water it replaces. This is why the seawater north of Point Conception is relatively cold in summer compared to other areas in the same latitude and why summer and winter sea temperatures vary only a few degrees.

The weather along this coast is fairly uniform with early morning and evening fogs, cool weather during summer, and rainy winters. The air temperature has no great peaks or dips during the course of the year.

Anglers who fish the northern California coast should be aware that sea and weather conditions can change rapidly, and some areas can be extremely dangerous at times. Check locally before fishing unfamiliar territory and take a tide book with you. When choosing a shore-fishing spot, first observe the waves along shore and while fishing always glance up periodically to check sea conditions. The tide has a way of coming in with unexpected rapidity, and one can become stranded very easily. Never fish alone along unprotected rocky stretches of the open coast; and when you plan a boating trip, always leave word about your destination and when you expect to return. Reports are received each year of people swept from rocks and small boats overturned by unexpected waves of great size, or swept out to sea by strong currents. Experienced anglers, even those who fish the same area year after year, abide by these rules. They have learned to respect the inconsistent nature of the sea along this rugged expanse of open coast.
and at the Port San Luis Pier. jacksmelt, surfperches (calico, walleye, silver, shiner, and barred), sculpin, white, croaker, and young bocaccio, usually form most of the catch; sometimes queenfish and an occasional white seabass are landed. Barracuda are often taken from the Pismo Pier in September and October.

At the south end of Pismo Beach State Park, surf anglers cast for barred, calico, and silver surfperches and jacksmelt. Farther north along the rocky coastline between Shell Beach and Avila, anglers fish from shore for kelp greenling, lingcod, and cabezon. At low tide, poke-pole anglers at Shell Beach search rocky crevices for monkeyface eels, cabezon, and greenlings.

**Morro Bay Area**

Morro Bay, the picturesque fishing fleet set against the backdrop of a 575-foot-high Morro Rock, is a town that draws many visitors during the summer and fall. Party boats operate year-round, weather permitting. The catch of the Morro Bay party boat fleet is similar to that of Avila boats, with albacore contributing to the sport catch during the fall. Many sport boats fish exclusively for this species when it runs off the coast, and best fishing is usually in September, and early October—some years the run may last well into December. Albacore are known to come as close as 6 miles from shore, but fishing usually takes place from 10 to 20 miles but.

Small-craft fishermen fish the waters in and outside of Morro Bay Harbor, but currents around the harbor entrance and unpredictable weather make it advisable to check with the harbor master at the Municipal Pier for information on tides, currents, channel areas, etc., if you plan to venture outside the harbor. Inside Morro Bay, skiff anglers catch starry flounder, California halibut, jacksmelt, leopard and brown smoothhound sharks, rays, and walleye, black, and shiner surfperches. Outside in the ocean, the small-boat catch is similar to the nearshore party boat catch—bluefin, silver, and copper rockfishes, cabezon, and lingcod.

There is pier, dock, and bank fishing along the shores of Morro Bay for starry flounder, jacksmelt, and surfperches (shiner, walleye, and black). Some of the rocky coves along the causeway leading out to Morro Rock are especially good for surfperches (striped, walleye, black, and barred), as well as starry flounder. Cabezon, yellowtail, jacksmelt, and, occasionally, lingcod. The power-plant outfall on the north side of Morro Rock is another productive place to fish for surfperches, and infrequently a striped bass wanders in, attracted by the warm discharge water. Fishing from the jetty at the harbor mouth is discouraged because of unpredictable seas at the harbor entrance.

Ocean-going fishing for barred surffurch takes place along the sandy spit that separates the bay from the sea. This is also a popular clamming area. Access is by road approaching from the south (four-wheel-drive vehicles only) or by boat. A "Clam Taxi" based at the foot of Fourth Street shuttles passengers across the bay to the spit when weather permits.

**Areas to the North**

North of Morro Bay the shoreline is characterized by sandy beaches interrupted by rock and boulder-strewn shores, affording excellent fishing. Calico, silver, and barred surfperches are taken along sandy shores, and from rocky stretches there is bait casting for cabezon, striped, surfperch, grass rockfish, and kelp greenling, and poke-poling for eels.

At the Cayucos Pier, jacksmelt, white croaker, queenfish, staghorn sculpin, and young bocaccio are the usual fare. Starry flounder, surfperches (walleye, shiner, silver, barred, and spotfin), and some occasional swell shark are also caught. North of the pier there is rocky-shore fishing for kelp greenling, calico and silver surfperches, and cabezon. Cayucos Beach has grunion runs during spring and summer, and is the northernmost beach in California with grunion runs.

**Point Sal to Point Piedras Blancas**

The section of coast described in Chart 9 is the first major marine game fishing area north of Point Conception. The coastline alternates between broad sandy beaches and rocky headlands and is backed by low rolling hills. Shore anglers cast from sandy beaches for surfperch and bait cast and poke-pole along rocky shores. Steelhead run up creeks November through February during years of heavy rainfall. Offshore bottomfishing is good year-round, and calico, salmon, and bonito are available seasonally. In some years, white seabass also add to the sport catch. In addition to angling, abalone picking and clamming are very popular in this region, which has one of the heaviest concentrations of pismo clams along the California coast.
Route 1 swings inland through farm country and there is no access to shore until you reach the Cambria-San Simeon area.

At San Simeon, anglers fish from the pier for starry flounder, California halibut, skates, and surfperches (barred, calico, and silver), and occasionally catch a salmon or a steelhead. There is shore fishing around the mouths of streams for barred and calico surfperches and lingcod; at times, these streams are good for steelhead during years of heavy rainfall.

Party boats operate from the San Simeon pier during summer, fishing mostly for bottom species, although trips are made for chinook salmon when a good run develops. This section of the coast has no skiff launching facilities, but small boats are sometimes launched over the beaches in calm weather. Most skiff fishing takes place from May to September.

Along the rocky stretch of coastline from San Simeon Point north to Point Piedras Blancas, shore fishing is excellent for surfperches (calico, barred, silver, and striped), kelp greenling, grass rockfish, and cabezon. Most shore areas are open to the public.

North of Point Piedras Blancas the topography becomes precipitous as Route 1 winds its way toward the towering cliffs of the Big Sur coast. There is little access to shore along this majestic route for over 60 miles until one reaches Point Lobos and the Carmel-Monterey Bay area (Chart 10).

Monterey Bay Area

Along this scenic stretch of California coast (Chart 10) rainy days alternate with days of crisp sunshine during winter, while spring brings blustery weather as prevailing northwesterly winds intensify. During summer, fog cools most of the coast, while autumn days are often warm and sunny as the onshore winds decrease, bringing little fog to the area. The weather along the northern shore of Monterey Bay differs somewhat, particularly around Santa Cruz, which is protected from the prevailing winds by the curve of the land. This area is almost fog-free during summer.

Monterey Bay is an important recreational fishing area, and an impressive number and variety of marine game fish are taken here. Most sport fishing from party boats is for bottomfish (particularly rockfishes) although albacore, bonito, and chinook salmon are also landed in season. In some years salmon are abundant in the bay in spring and good fishing may last till late summer. In general, the major marine sport fishes caught from boats and from shore are rockfishes, chinook salmon, California halibut, Pacific sanddab, surfperches, lingcod, kelp greenling, white croaker, and albacore.

As one approaches the Monterey Bay area from the south, there is little access to shore along this rugged section of the coast as State Highway 1 makes a gradual descent out of the mountainous Big Sur country and then passes through rolling coastal hills before dropping down to sea level about a mile south of Carmel. Where the shoreline can be reached there is excellent rocky-shore fishing for lingcod, kelp greenling, cabezon, striped surfperch, and rockfishes (kelp, blue, grass, and olive).

Shore fishermen can reach the beaches of the Monterey Peninsula from the south by way of 17-Mile Drive (toll road), which has a south entrance at Carmel, or by approaching from the northeast through the town of Monterey. Along scenic 17-Mile Drive, shore fishing is allowed at Fanshell Beach, just north of Cypress Point, in Pacific Grove at Asilomar State Beach.
and between Point Pinos and Lover's Point. Some of the more common species taken by shore anglers at these locations are striped surf perch, kelp greenling, cabezon, and blue rockfish. Sometimes steelhead are caught around the mouth of the Carmel River in fall after heavy rains, but fishing, even at its best, is considered spotty.

The town of Monterey has two public piers, but most fishing takes place from Municipal Pier #2 at the eastern end of the harbor. Here the catch is young bocaccio, blue rockfish, surf perch (sharptail, pilchard, and shiner), jacksmelt, white croaker, and, some years, jack mackerel in summer.

Broad sandy beaches rim the coast from the Monterey Peninsula north along the inner curve of the bay all the way to Seacliff State Beach. Most beaches offer excellent fishing for a variety of sandy-shore fishes. Striped bass sometimes are taken by surf casters during the summer along beaches from Monterey north to the Salinas River. (Check locally about fishing the Fort Ord area—beachfront restrictions change from day to day.)

All beaches north of the Salinas River offer excellent surf fishing for sand sole, jacksmelt, and surf perch (sharptail, calico silver, and walleye). There also is surf netting for night smelt in summer along beaches adjacent to Moss Landing.

At the entrance to Moss Landing harbor, anglers fish from the jetty for surf perch (rubberlip, black, pile, white, and walleye), starry flounder, and occasionally California halibut and striped bass. There also is fishing from shore inside Elkhorn Slough for some of the surf perch above plus sharks, rays, sand sole, and starry flounder.

The northern end of Seacliff State Beach, near Apts, has a fishing pier (actually a cement ship) from which anglers catch Pacific sand dab, surf perch (shiner, walleye, barred, and striped), white croaker, jacksmelt, small bocaccio, jack mackerel (during some summers), and an occasional California halibut, starry flounder, lingcod, salmon, and steelhead.

Rocky outcroppings and low bluffs begin to interrupt sandy beaches north of Apts, and rocky-shore fishes start to appear in the angler's catch, finally replacing sandy-shore fishes in importance as one proceeds westward.

At the Capitola pier, which is mostly over sandy bottom, the usual fare is white croaker, jacksmelt, small bocaccio, walleye and shiner surf perch, cabezon, staghorn sculpin, and an occasional barred surf perch.

To the west at the Santa Cruz pier, anglers catch both rocky and sandy shore fishes such as surf perch (white, shiner, walleye, and a few barred), lingcod, cabezon, young bocaccio, kelp rockfish, topsmelt, jacksmelt, staghorn sculpin, skates, Pacific sand dab, sand sole, starry flounder, and white croaker. There is now an artificial tire reef under this pier. Rocks fish, are taken from Santa Cruz Small-Craft Harbor jetties, and in some years coho salmon and steelhead are taken around the mouth of the San Lorenzo River.

From Natural Bridges State Beach north to Ano Nuevo Point the shoreline changes rather abruptly to a predominately rocky coastline, and fog and blustery northwest winds once again sweep the coast. This rocky shoreline offers excellent shore fishing for kelp greenling, cabezon, grass rockfish, and surf perch (calico, walleye, rainbow, striped, and silver). Where the rocky shoreline is broken occasionally by short stretches of sandy beach, netters work the surf from Scott Creek northward for surf and night smelt from March to October.

**PARTY BOAT FISHING**

Commercial sport fishing boats operate year-round out of Monterey and Santa Cruz and intermittently out of Capitola and Moss Landing.

The fleet based at Monterey, which fishes mainly for rockfishes, has expanded its range over the past 10 years. Boats now travel as far south as Point Sur (a major fishing ground), whereas most fishing previously took place north of Castle Rock. Blue, yellowtail, and olive rockfishes dominate the party boat landings although an assortment of other rockfish species also contribute to the catch. Those taken in the shallower nearshore areas along the kelp are blue, olive, black, copper, starry, and rosy rockfishes. In deeper water spots in Monterey Bay and off Point Sur the...
yellowtail, blue, widow, bocaccio, and greenspotted rockfishes predominate. Monterey party boat anglers also take lingcod, Pacific sanddab, Pacific bonito (in summer, September best), sablefish, and albacore (late summer). In most years, albacore schools appear about 10 to 15 miles offshore, usually in water about 61° to 64°F.

Along the north shore of Monterey Bay, Santa Cruz and Capitola party boats fish over the rocky reefs from Point Santa Cruz north to Año Nuevo Point for rockfishes, lingcod, and cabezon. The Año Nuevo grounds are exceptionally good for lingcod and blue and black rockfishes. Other rockfishes entering the party boat catch along this northern section of the coast include copper, olive, brown, yellowtail, widow, greenspotted, bocaccio, and chilipepper—the last five in deepwater areas. Party boats also go after chinook salmon during the season when good runs develop (best catches usually in May and June). Along the north shore, the party boats catch other fish, such as bonito, sablefish, petrale sole, rock sole, Pacific sanddab, and kelp greenling.

**SKIFF FISHING:**

Most of the Monterey Bay area skiff catch is made up of several species of rockfishes, Pacific sanddab, chinook salmon, and lingcod. Most small-boat fishing takes place inside Monterey Bay, although on calm days Monterey skiff anglers occasionally venture out around the peninsula between Point Pinos and Cypress Point to fish for lingcod and some of the nearshore rockfishes, or try their luck in Carmel Bay.

Inside Carmel Bay, skiffs work along the edge of the kelp for lingcod and rockfishes; sometimes, in summer, jack mackerel and bonito make a showing in the bay. Occasionally, salmon are taken when a good run develops. Skiff anglers making the trip around the Monterey Peninsula to Carmel Bay are warned that the return trip can be extremely rough, if not impossible, on all but the calmest days.

In Monterey Bay, from early to late summer, skiff anglers troll for chinook salmon in areas shown on the chart. Pacific sanddabs are plentiful over sandy bottom, and California halibut are taken trolling just beyond the surf line during summer and fall. The area south of the Salinas River is closed by the military when Fort Ord target ranges are in use, so check locally before fishing this section of the bay. Warning flags are flown from the Coast Guard breakwater in Monterey when this area is restricted.

Skiff anglers out of Moss Landing on Elkhorn Slough fish both the tidewater section of the slough and outside in Monterey Bay. The area around the entrance is particularly good for Pacific sanddab, sablefish, white croaker, and occasionally California halibut. Salmon trolling is very popular with Moss Landing skiff anglers, who actively fish in the bay for chinook salmon during the season (June and July considered best). Surfperches are particularly abundant inside the slough, the most common species being rubberlip, black, pile, white, and walleye, Jacksmelt, sand sole, staghorn sculpin, starry flounder, and sharks and rays also are common in the estuary. A shark derby is held in Moss Landing each year.

To the north and west, skiff anglers who fish off Capitola bring in a mixed catch of blue rockfish, white croaker, Pacific sanddab, jacksmelt, and California halibut. Boats also work the area off the Seacliff pier and to the south for California halibut, starry flounder, white croaker, petrale sole, and sablefish. To the west, Santa Cruz small-boat anglers fish mainly the reef and kelp areas for rockfishes (blue, grass, and brown), lingcod, and cabezon, or troll along the sandy beaches to the east for halibut in summer. During the salmon season boats work the area between Sunset Beach and Davenport.
II. Approaches to San Francisco Bay

Chart 11 covers the ocean approaches to the major port city of San Francisco—fishing inside San Francisco Bay is covered separately. (See Chart 12.)

The climate along this coast is cool and temperate with little seasonal variation in air temperature. During summer, San Francisco's famous fog funnels in through the Golden Gate mornings and evenings, drawn inland by the warming of the Central Valley.

Most offshore recreational fishing is for chinook salmon from spring through fall, although bottomfish tend to dominate the sport catch in areas south of San Pedro Point where salmon runs occur less predictably. In most years, migrating albacore are taken around the Farallon Islands in fall.

Pigeon Point to Half Moon Bay

The main angling activities from Pigeon Point to Bean Hollow State Park (once Arroyo de los Frijoles and Pebble State beaches) are rock fishing and pole-poling from shore. From Bean Hollow State Park north to Pillar Point the shore is alternately sandy beach and rocky outcroppings. Along this coast, striped bass begin to enter the shore anglers' catch during summer and early fall; some of the better locations are Pescadero State Beach, San Gregorio State Beach, Marina, Beach, and Half Moon Bay State Beaches. These are also good areas for surfperches (calico, silver, and occasionally redtail) and for netting surf and night smelts (March to October).

Pillar Point Harbor on Half Moon Bay is the major recreational fishing area along this section of coast, and many boats based at the harbor fish over nearshore and offshore reefs for lingcod, cabezon, and rockfishes (blue, copper, olive, and yellowtail). Occasional bottomfish trips are made to the Farallon Islands, and albacore are sometimes taken west of the Farallons from August to October.

Small-boat anglers actively fish for salmon when the fish make a showing nearshore, or fish on the bottom around the entrance to the harbor and north along Pillar Point for rockfishes (blue, black, canary, copper, and olive), lingcod, cabezon, and white croaker.

Inside Pillar Point Harbor, anglers fish from the Princeton Pier for Pacific sanddab, white croaker, surfperches (silver, walleye, and shiner), jacksmelt, topsmelt, brown smoothhound shark, staghorn sculpin, and rockfishes (brown, small bocaccio, and kelp). Anglers also fish from the east and west jetties that partially enclose the harbor. At the west jetties the catch consists mainly of striped surfperch, kelp greenling, cabezon, and occasional rockfishes. From the east jetty, they catch sandy bottom species such as white croaker, barracuda flounder, sand sole, and rubberlip surfperch.

PILLAR POINT NORTH TO THE GOLDEN GATE

North of Pillar Point the coast becomes rocky once again until you reach Montara State Beach—a narrow, coarse-sand beach backed by sandstone bluffs. Here surf casters take surfperches (silver, redtail, and calico) and catch striped bass during the summer and fall.

North of the State Park, Highway 1 is above steep sandstone cliffs and access to shore is difficult, if not dangerous, especially around the Devil's Slide area. Many hikers have lost their lives on this unstable cliff, and the hazardous warning signs should be heeded.

At Point San Pedro, on Shelter Cove, skiffs can be rented and launched when weather permits. The area off the Point is especially good for rockfishes (black, blue, and canary), lingcod, and white croaker. During good salmon years, chinook are landed off the Point in spring and summer; striped bass are taken from boats and from shore during late summer and fall.

The coast north of Point San Pedro has no party-boat operations, skiff rentals, or launching facilities; all these facilities are in San Francisco Bay (Chart 12). However, a public fishing pier has been constructed recently at Pacifica. From Pacifica north to the Golden Gate the coast is mostly sandy beach, and it is along these beaches that the heaviest runs of striped bass occur in the surf.

The Gulf of the Farallons is fished primarily by San Francisco Bay party boats and occasionally from Half Moon Bay. This area produces the most consistent ocean sport fishing for salmon in the State. Most fishing is for chinook salmon, although some coho also are landed. The season extends from mid-February through mid-November (check State regulations), and there are two major chinook runs—one in the spring and one in the fall. During the height of the spring run, from about March to June, most fishing occurs offshore between Duxbury Reef and the Farallon Islands, while from July to October the fish are taken closer to shore. The most productive area for large fall-run chinook extends from the San Francisco light buoy, or "light bucket," former site of the San Francisco lightship, to the Marin County beaches and north to Duxbury Reef, where fishing is 'best from July through September. The Golden Gate area, especially around Mile Rock and the south tower of the bridge, is also a good fishing spot in midsummer and fall for striped bass and occasionally salmon.

When salmon are not running, boats may fish for rockfishes (yellowtail, bocaccio, copper, blue, and vermillion) and lingcod around the Farallon Islands, and occasionally travel as far west as Cordell Bank, about 20 miles west of Point Reyes.

The map shows some of the more popular fishing spots, although this entire coast is good for striped bass when they are running. One of the most heavily fished places is Bakers Beach near the Golden Gate Bridge. These ocean beaches are also good bait-casting areas for redtail surfperch during winter and spring, and, at times, for jacksmelt and other surfperches (silver, calico, and walleye).

The Gulf of the Farallons is fished primarily by San Francisco Bay party boats and occasionally from Half Moon Bay. This area produces the most consistent ocean sport fishing for salmon in the State. Most fishing is for chinook salmon, although some coho also are landed. The season extends from mid-February through mid-November (check State regulations), and there are two major chinook runs—one in the spring and one in the fall. During the height of the spring run, from about March to June, most fishing occurs offshore between Duxbury Reef and the Farallon Islands, while from July to October the fish are taken closer to shore. The most productive area for large fall-run chinook extends from the San Francisco light buoy, or "light bucket," former site of the San Francisco lightship, to the Marin County beaches and north to Duxbury Reef, where fishing is 'best from July through September. The Golden Gate area, especially around Mile Rock and the south tower of the bridge, is also a good fishing spot in midsummer and fall for striped bass and occasionally salmon.

When salmon are not running, boats may fish for rockfishes (yellowtail, bocaccio, copper, blue, and vermillion), and lingcod around the Farallon Islands, and occasionally travel as far west as Cordell Bank, about 20 miles west of Point Reyes.
CHART 11

---

**Shorefishing Areas**

**Bottomfishing Areas**

**Fishing Facilities**
- **Sportboat Operation**
- **Kelp**

**Depth in Fathoms**

---

**NOT TO BE USED FOR NAVIGATION**

See NOS Nautical Charts
There is some skiff fishing for chinook salmon off Muir and Stinson beaches in late summer, but weather and sea conditions often restrict small-boat fishing in the ocean. Fourfathom Bank (also called Potato Patch Shoal) can get particularly rough on windy days, but in calm weather this sandy shoal area is a good fishing spot for California halibut and striped bass. California halibut are also taken around Seal Rocks and to the south (July and August best).

**SHORE FISHING NORTH OF THE GOLDEN GATE**

Only a limited amount of shore fishing takes place along the rugged rocky coast from the Golden Gate Bridge north to Stinson Beach. Access is difficult in most places, and much of the beachfront land is privately owned. Striped bass occasionally are caught from shore in summer and fall along isolated sandy coves near the Golden Gate Bridge, Fort Barry, Fort Cronkite, and at Muir Beach. From Muir Beach to Stinson Beach, where rocky shores can be reached, anglers fish for blue rockfish, lingcod, cabezon, kelp greenling, and surfperches, or pole-pole for monkeyface eels at low tide. This stretch of coastline can be dangerous during rough weather; it is advisable to fish here only on calm days and always keep an eye out for changing sea conditions.

At Stinson Beach State Park, rocky shores abruptly give way to a long and wide expanse of sandy beach where surf anglers cast for surfperches (redtail, silver, and walleye).

There is no fishing in Bolinas Lagoon. The State Health Department has quarantined this shallow tidal embayment for an indefinite period because of its heavily polluted waters. Occasionally, striped bass are taken at the entrance of the lagoon, but fishing is generally spotty. Most of the rocky semiepipied reef area at Duxbury Point has been designated a Marine Reserve; however, shore fishing is allowed.

To the north along the sandy shores of the Point Reyes Peninsula, there is bait casting for redtail, calico, walleye; and silver surfperches.

**12 San Francisco Bay**

San Francisco Bay (Chart 12), California’s largest estuary, technically is divided into three connecting bays—San Francisco Bay proper, San Pablo Bay, and Suisun Bay. These bays receive large volumes of freshwater runoff from the extensive Sacramento and San Joaquin River systems that drain California’s Central Valley and have their source in the Sierra Nevada. In general, most of the San Francisco Bay system is very shallow—the average depth is 20 feet—and there are extensive mudflats in San Pablo Bay and south San Francisco Bay.

The two most sought-after game fishes in the San Francisco Bay area are the striped bass and chinook salmon. Most salmon fishing takes place in the ocean outside the Golden Gate (see Chart 11), while San Francisco Bay is practically the unrivaled domain of the striped bass angler. Other fishes such as sturgeon, starry flounder, surfperches, jacksmelt, topsmelt, white croaker, rockfishes, sharks, and rays also offer a great deal of sport to Bay Area anglers.

The angler certainly will not find this area lacking in recreational fishing facilities. Piers, skiff rental
concessions, and launching facilities are scattered around the bay's perimeter, and over 100 party boats operate out of Bay Area ports. There are sizable sport fishing fleets near Fisherman's Wharf in San Francisco, along the Sausalito waterfront, and at the Berkeley and Emeryville marinas. Many of these boats fish out in the ocean for chinook and coho salmon; some make rockfish trips to the Farallon Islands; and most also fish for striped bass when good runs develop.

In the northern reaches of the bay, party boats operating out of San Pablo Bay and Carquinez Strait ports fish exclusively for striped bass, sturgeon, and starry flounder. Charters usually can be arranged at harbors from which boats operate, although in San Francisco, trips are usually arranged through bait and tackle shops because of parking and other logistics problems in the city.

**Striped Bass**

Striped bass spawn from about April to mid-June in fresh waters of the Sacramento and San Joaquin rivers. After spawning, the fish move back down into the saltwater bays; some venture out into the ocean. They spend most of the summer and fall in saltwater before returning once again to brackish-water and freshwater sloughs and rivers. Although best fishing times vary with area, in general, the fishing season extends from March to December, with best fishing from mid-August to November. October has been the best striped bass fishing month consistently since 1969.

In San Pablo Bay, Carquinez Strait, and Suisun Bay, striped bass are caught year-round with best fishing usually in October and November, with a lesser run of fish in June, July, and August. Most spring and summer fish are caught trolling in the late afternoon. Fall-run, fish are caught still fishing or drifting, primarily with live bait such as stegehorn sculpin (known locally as "bullheads").

In the Napa River and nearby brackish-water sloughs along the northern shore of San Pablo Bay, striped bass are caught throughout the year although weather sometimes restricts fishing during the winter months. Best times are considered to be September, October, and November, peaking usually in late October. Fish are taken by bait fishing and trolling from boats: bait casting from shore.

Within San Francisco Bay proper, in such areas as the Golden Gate Bridge (south tower), Raccoon Strait (over Raccoon Shoal), Berkeley flats, and off Alcatraz and Treasure islands, fishing usually starts in June and extends through October into November. Most fish are caught after mid-August, with peak catches in October. A popular fishing method is drifting with live bait (anchovies or shiner surfperch) in areas where an abrupt change in depth occurs and when the current is running swiftest.

Anglers also troll for stripers, and some will even get out their plug casting gear when a surface-feeding school is located. From Angel Island north to The Brothers, good striped bass fishing can usually be had in September, October, and November by drifting live bait and trolling as fish migrate through on their way back to the Sacramento-San Joaquin Delta.

**Sturgeon**

Sturgeon fishing has become very popular in the Bay Area over the years, especially in San Pablo Bay, Carquinez Strait, and Suisun Bay. A small but growing sturgeon fishery is also developing in south San Francisco Bay off Oyster Point (San Bruno Shoals) south to the entrance of Alviso Slough. Both green and white sturgeons are taken; the white sturgeon is the most prized.
Although sturgeons are caught throughout the year in the upper bays, best fishing is usually in the fall and winter when the biggest fish are taken. In San Pablo Bay, they appear to move in over the flats in early fall, and fishing usually lasts from November to May, with best catches from about January to March. The flats along the north side of the bay from the Mare Island jetty ("Rockwall") to China Camp are especially productive at high tide during the winter. Other good spots in San Pablo Bay are the "pump house" and around the odd-numbered buoys that mark the north side of the main channel which cuts through the middle of the bay. Smaller fish taken are in summer, larger ones in winter.

In Suisun Bay, fishing usually starts in spring around April and lasts until October or November, about the time of the first rains. In summer, most Suisun sturgeon are sublegal size (less than 40 inches long) with about 1 "keeper" out of every 10 caught. Larger fish are taken in the fall. The "mothball fleet" and the channel buoys along the edges of sand bars near the entrance to the bay are good areas to fish.

In south San Francisco Bay from San Bruno Shoals south to Alviso Slough, the season extends from about November to March. Early season fishing is usually best in the northerly areas; late season fishing is usually best in the more southerly areas along the edge of the channel.

Sometimes during the Pacific herring runs, which occur anytime between December and March, sturgeons are taken from boats and shore in the central part of the bay in such areas as Richardson Bay and along the Sausalito waterfront.

Other Bay Sport Fishes

Although most salmon are taken outside the Golden Gate, migrating chinook salmon sometimes are caught deep trolling with whole anchovies in the area from the Golden Gate to Raccoon Strait and off the Tiburon Peninsula north to the Richmond Bridge during late summer. The area off the eastern side of the Tiburon Peninsula (called "California City" by anglers) is heavily fished when the salmon are running.

Sharks, skates, and rays are plentiful throughout the bay; some of the more common types are leopard, brown smoothhound and sevengill sharks, spiny dogfish, bat ray, and big skate. These are especially numerous in south San Francisco Bay all year. Most fishing, however, takes place in summer and fall.

Starry flounder are abundant, especially over the flats in San Pablo and Suisun bays and in the Napa River and adjacent sloughs. Many are taken in these areas, and throughout the bay system, by shore and skiff anglers (winter and spring best).

An assortment of surfperches also are taken in San Francisco Bay mostly from piers and from shore. Spring is considered the best season. Some of the more common species are shiner, white, rubberlip, black, pile, striped, and rainbow surfperches.

Other fish prevalent in the pier and shore catch include white croaker ("kingfish"), staghorn sculpin ("bullhead"), jacksmelt, tompet, English sole, sand sole, small lingcod, and brown and black rockfishes. In addition, Pacific herring are taken with dip nets during their spawning runs in winter (December to March). In some years the herring run will last for weeks; in other years the fish will show up sporadically. The appearance of great numbers of gulls and other seabirds usually heralds the event. At this time there is also a small recreational fishery for herring eggs-on-kelp which some consider a delicacy. The most popular shore areas to dip net and collect herring eggs-on-kelp are along the Sausalito and Tiburon waterfronts.
Point Reyes to Fort Ross

Along this rural and often wind-swept part of the coast (Chart 13), party boats operate year-round. Weather permitting, out of Bodega Harbor and Dillon Beach. Most offshore fishing is for bottomfish—particularly rockfishes or "rock cod." Some boats also fish for chum salmon when the fish are running. In general, salmon appear less predictably here than off San Francisco and areas to the north.

The range of the party boat fleet extends south to off Point Reyes and north to Fort Ross. Areas most frequented by the fleet are Tomales Point, the 27-fathom reefs off the western shore of Point Reyes Peninsula, and areas north along the coast from Bodega Head to Fort Ross. Occasionally, special trips are made to Cordell Bank, about 23 miles south-west of the Bodega Harbor entrance. Most of the party boat catch is made up of rockfishes (yellowtail, blue yelloweye or turkey-red, chilipepper, bocaccio, canary, black, and copper). Other rock-bottom fishes such as cabezon and lingcod also are caught along with an occasional chinook. Lingcod appear to be more plentiful in the northern areas off Fort Ross than in areas to the south, and flatfish are sometimes taken incidentally as boats drift over from rocky to sand bottom.

North of Tomales Point and in Tomales Bay the salmon season is open all year but fishing for chum salmon is often erratic even at the peak of the season (July, August, and September). Coho make a modest showing around October and November.

**Shore Fishing**

Selected areas of this coast offer many different types of shore fishing, including casting along sandy beaches for redtail and other kinds of surfperches, pier and dock fishing in bays and harbors, stream and river fishing for salmon and steelhead, poke-poking and bait casting along rocky shores, and netting smelts around river and creek mouths. Spring and early summer are best for surfperches. Steelhead fishing is best in fall and winter following heavy rains. Coho salmon appear in the fall from September to November. Surf and night smelts are netted March through October, and most rocky-shore fishes are taken year-round.

The sandy beaches along the Point Reyes Peninsula provide good surf fishing for redtail, calico, and walleye surfperches. Most of the peninsula is within the boundaries of the Point Reyes National Seashore, and though much of the land is still under the private ownership of ranchers, some beaches are open to the public and it is expected that even more shore areas will be open in the future.

Along the Tomales Bay shore, pier and dock fishing is available at some of the small-boat harbors and wharves. Jacksmelt and surfperches (pile, walleye, shiner, and black) are the most common pier-caught species. At the very southern end of the bay, coho salmon are taken near the entrance of Papermill Creek (October to November), and winter steelhead fishing is often productive in deep pools just inside the creek mouth.

On the eastern shore, near the entrance to Tomales Bay, redtail and rubberlip surfperches are taken by shore casting along beaches north of Sand Point, and fishing is excellent for rockfish and greenlings where the sandy beach gives way to a predominantly rocky coastline north of Dillon Beach. This is also a good place for poke-poking monkeyface eels and other crevice-seeking fish. Anglers usually reach this shore area by hiking north from Dillon Beach, since most of the land adjacent to this rocky stretch of coast is privately owned.

The next opportunity for shore
fishing as you approach Bodega Bay from the south is found at Doran Beach Park. Most fishing takes place around the east jetty at the mouth of the harbor where the usual fare is shiner and silver surfperches, jacksmelt, starry flounder, rockfishes, and greenlings. Anglers also fish from the west jetty on the other side of the harbor entrance for the same species.

In the town of Bodega Bay the public is allowed to fish from the local wharf where the main species taken are jacksmelt, young bocaccio, and surfperches (shiner, rubberlip, and black). There is some fishing along the breakwater on the western shore of Bodega Harbor for shiner and rubberlip surfperches and black rockfish. Bodega Harbor for shiner and rubberlip surfperches and black rockfish. Bodega Harbor for shiner and rubberlip surfperches and black rockfish. Bodega Harbor for shiner and rubberlip surfperches and black rockfish.

On beaches along the Sonoma coast, anglers catch surfperches, lingcod, rockfishes, and flounder. This stretch of coast also is good for netting surf and night smelts around the mouth of coastal streams. Steelhead and a few salmon sometimes are taken from these streams.

In the Russian River, migrating steelhead are caught just inside the mouth of the river from the south bank, and in selected areas upriver. Striped bass and sturgeon occasionally are landed from boats in the estuary and from the beach adjacent to the river mouth. Surfperches and flounders are taken in the tidal lagoon section, and runs of chinook have occurred in the river during late summer and early fall in the last few years.

North of Jenner the coast becomes steep and rugged, and most of the land is privately owned. At Fort Ross State Park and areas to the north where the shore can be reached, anglers cast for rockfishes, greenlings, cabezon, surfperches, and occasionally lingcod. This rocky coastline is also very popular with skin divers and shore pickers who hunt for red abalone.

From Fort Ross to Cape Mendocino (Chart 14) the shoreline is predominantly rocky backed by high grassy bluffs. These rugged headlands are sharply indented with numerous gulches, and public access to shore occurs infrequently because of the steep terrain and the many privately owned areas adjacent to the coast. Most shore fishing occurs at coves and beaches where coastal streams and rivers empty into the sea. Winters are wet and chilly, and in summer the coast is usually fogbound. Fall is the sunniest and most pleasant time of year.

Most ocean sport fishing takes place out of the town of Fort Bragg to a lesser extent at Albion, Point Arena, and Shelter Cove. Bottomfishing along this rocky coast is excellent, and salmon trolling is very popular. Where the shore can be reached, rock anglers seek lingcod, cabezon, and small rockfishes, and where rocky shores are interrupted by stretches of sandy beach, surf casters fish for redtail surfperch during spring and summer (April and May are considered best). Surf netters work the breakers for surf and night smelts around the mouths of streams; best catches of night smelt are made from February to April, and for surf (day) smelt, from April through August. Steelhead run in rivers between early December and end of February, with fishing usually at its peak around New Year's day.

Fort Ross to Point Arena.

The first access to shore north of Fort Ross is at Salt Point State Park, which has a small bluff-protected cove where skiffs can be launched over the beach in calm weather. Fishing is not allowed inside this cove (Gerstle Cove), but when weather and sea are favorable anglers venture out around the rocky points on either side of the cove in search of lingcod, blue rockfish, kelp greenling, and cabezon.

From Salt Point to Gualala, all land is part of a private development of houses and rental units, although there is public access to a tiny stretch of rock- and driftwood-strewn beach at the northern end of the development.

The Gualala River has excellent runs of winter steelhead, and the tidewater section is a popular fishing area. Access is by way of a dirt road at the north end of the Highway 1 bridge that leads out to the gravel bar near the mouth. Small boats can be launched here (no ramp), and the pools near the south bank are considered the most productive.

At Anchor Bay, owners of the property allow anglers access for a fee, and skiffs can be launched over the beach on the north side of the cove in calm weather. Here, skiff anglers catch such rocky-shore species as kelp greenling, blue and black rockfishes, lingcod, and cabezon. Because of the steep terrain, access to the shore is limited north of Anchor Bay to the Point Arena area.

Point Arena

The main fishing activities at Point Arena are pier and skiff fishing at Arena Cove. The cove would be a more important fishing port if it were not for its vulnerability to southerly and westerly winds. Skiffs are available for rent at the pier, which also has a boat hoist. Skiff anglers fish over the reef areas for bottomfish, and during July and August there is a limited amount
of trolling for salmon out to about 15 fathoms. The small pier at Arena Cove is over rocky bottom, and attracts such rock-­shore species as striped and walleye surfperches, kelp greenling, black rockfish, lingcod, and occasionally cabezon.

To the north at Manchester State Beach, smelts are netted in the surf along sandy stretches and good rock fishing spots can be found at the north end. About a mile north of the State beach boundary at Alder Creek, fishing is good for surf smelt, redtail surfperch, and migrating salmon and steelhead around the creek mouth.

**FORT BRAGG AND ALBION**

Sport fishing boats operate out of Noyo Harbor, in Fort Bragg, and in some years out of Albion when weather permits. Most fishing is during the summer. The rocky reefs along this coast are extremely productive for lingcod, cabezon, kelp greenling, and rockfishes. Blue, black, yellowtail, and olive rockfishes as well as some red varieties such as copper, canary, yelloweye (turkey-red), vermillion, and chilipepper are taken. Reef areas around rocky points adjacent to the Noyo and Albion rivers' mouths are excellent spots for lingcod and red rockfish.

Offshore, anglers troll for chinook and coho salmon from May to October in water 10 to 60 fathoms deep. At the height of the season in July and August, coho move inshore to feed over reef areas, and during October and November, they congregate around river and creek mouths such as the Ten Mile River, Noyo River, Albion River, Caspar Creek, and the Navarro River. During this time, skiff fishing reaches its peak around the Noyo River mouth. Most ocean skiff fishing is good shelter from northwesterly winds, but like Arena Cove, it is exposed to the full force of southerly and westerly winds. Skiffs can be rented during the summer and launched from the beach with a special truck boat. But and tackle are available. Though Shelter Cove is isolated and has no dock or wharf facilities, skiff fishing here is excellent - particularly for bottomfish such as lingcod, cabezon, greenlings, and rockfishes (blue, black, copper, yelloweye, and vermillion) abound over the rocky reefs, and in July and August, skiffs and small boats go for coho and chinook salmon. Pacific halibut are sometimes caught by skiffs, and redtail and other surfperches are taken by surf casters on the beach.

**Shelter Cove**

Shelter Cove affords reasonably good shelter from northwesterly winds, but, like Arena Cove, it is exposed to the full force of southerly and westerly winds. Skiffs can be rented during the summer and launched from the beach with a special truck boat. But and tackle are available. Though Shelter Cove is isolated and has no dock or wharf facilities, skiff fishing here is excellent - particularly for bottomfish such as lingcod, cabezon, greenlings, and rockfishes (blue, black, copper, yelloweye, and vermillion) abound over the rocky reefs, and in July and August, skiffs and small boats go for coho and chinook salmon. Pacific halibut are sometimes caught by skiffs, and redtail and other surfperches are taken by surf casters on the beach.

North of Cape Mendocino, dark sand beaches begin to interrupt rocky headlands more frequently, and large rivers, famous for their migrating salmon and sea-run trout, empty into the sea. The terrain is less steep near the ocean than areas to the south, but the coastline still maintains a rugged beauty of its own. Along this coast (Chart 15) the magnificent coastal redwood trees thrive in the cool and...
very damp climate so typical of the
Pacific Northwest.

Salmon is by far the most im-
portant game fish in this region, and
both chinook and coho salmon are
taken during summer and fall. Rock-
fishes and other bottomfishes also
enter the sport catch, especially in the
north, but this type of fishing usually
runs a distant second to salmon fis-
ing.

Redtail surfperch are abundant
and are available, year-round along
sandy beaches and in tidewater, with
spring and early summer bringing the
best catches. Surf smelt are netted
from March through September, and
night smelt run from February through
mid-May. Along the occasional rocky
stretches, black and grass rockfishes,
and kelp and rock greenlings are taken
by rock anglers. In most places there
is year-round fishing in tidewater for
starry flounder and surfperches, with
spring bringing the best catches. Eulachon, or candlefish, are dip netted
in the Klamath, Smith, and Mad rivers
and in Redwood Creek in April and
May. Winter steelhead run in most
rivers October through March, with
peak fishing in December and January.
Summer steelhead run in the Klamath
and Eel rivers from July through
September, and sea-run cutthroat trout
occur in the more northerly rivers, fall
trough spring. Mud flats and beaches
along this stretch of coast are famous
for their paper, Washington, littleneck,
soft shell, and razor clams. Crabbing
for Dungeness crab also is popular
along this coast during winter and
spring, especially at Crescent City,
Humboldt Bay, and in the Eel River,
Lagoon.

CAP MENDOCINO TO HUMBOLDT BAY

The first coastal fishing area
north of Cape Mendocino that is
reasonably accessible is at Centerville
Beach and around the mouth of the Eel
River. In the Eel River lagoon, most
fishing is from skiffs, although there is
shore fishing also. Steelhead, are
captured in summer and fall with larger
fish landed late in the season. During
most years chinook salmon enter the
lagoon in August and run through
October. Coho salmon begin to appear
later, around November. Starry
flounder and surfperches also are
taken in the lagoon. South of the Eel
River there is surf netting for surf
(day) smelt and casting for redtail
surf perch along the sandy beach at
Centerville County Park.

North of Eel River U.S. 101 turns
toward the coast as it approaches the
town of Eureka, a center of fishing
vity during the salmon season. A
ple party boat and skiff fishery
operates out of Humboldt Bay, and
boats fish almost exclusively for
chinook and coho. Standard fishing
methods are trolling and drifting
("mooching") bait close to the bottom.
Fishing takes place from May to
October with chinook being the first to
show. July and August are considered
the best fishing months as significant
numbers of coho begin to be caught.
Salmon move in close to the beaches
and around the jetties at the harbor
entrance as the season progresses.
During this time skew ventures out into
the ocean to join the party boat fleet
and the entrance channel soon
becomes a favorite spot for chinook
fishing. Small-boat, fishermen are
warned not to negotiate the harbor
entrance on an outgoing tide—large
breakers forming in the entrance and
make this a highly dangerous area.

Inside Humboldt Bay there is
tidewater fishing from skiffs for
jacks, sharks, rays, and surf
perches (mostly redtail, wall eye, silver,
and shiner). Sharks are plentiful in
Arcata Bay. While leopard shark fishing
is excellent in Eel River Slough during
summer. Sturgeons sometimes are
found along the Klamath and Eel rivers
from July through September, and sea-run cutthroat trout
occur in the more northerly rivers, fall
trough spring. Mud flats and beaches
along this stretch of coast are famous
for their paper, Washington, littleneck,
soft shell, and razor clams. Crabbing
for Dungeness crab also is popular
along this coast during winter and
spring, especially at Crescent City,
Humboldt Bay, and in the Eel River,
Lagoon.

MAD RIVER NORTH TO THE
TRINIDAD HEAD AREA

At Mad River, most fishing is in
the lagoon section for coho and winter-
run steelhead (January to March),
although a few chinook are landed.
Along beaches adjacent to the river
mouth and north to Little River State
Beach, there is good shore casting for
redtail surf perch and netting for surf
and night smelt. Steelhead run in
Little River in winter. Sea-run cut-
throat trout appear in spring, and
salmon occasionally run up the river in
fall.

About a mile north of Little River
at the southern end of Luffenholtz
Beach (a sandy beach bordered by
rock outcroppings), access to shore
is difficult in places, but there is goodocky-shore fishing for rockfishes,
cabezon, and kelp greenling, and
catches are excellent, smelt netting and surf casting for redtail surf perch along the sandy-
shore section.

Trinidad Harbor offers ocean
cap salmon fishing and bottomfishing in
summer, and pier and rocky-shore
fishing year-round. The salmon catch
is mostly coho, and best fishing is in
July and August. Blue and black rock-
fishes, lingcod, kelp greenling, and
cabezon are caught in the salmon
fishing areas and inshore over rocky
reefs. There is pier fishing in the
harbor for jacksmelt, surfperches
day (wall eye, striped), kelp
greenling, and cabezon.

To the north, rockfishes,
greenlings, and surfperches are taken
from rocky beaches at Trinidad State
Beach and Patricks Point State Park.

48
NORTH OF PATRICKS POINT TO THE KLAMATH RIVER

North of Patricks Point the Klamath becomes lined with sand dunes, and beaches have excellent runs of surf and night smelts and redtail surfperch. The large brackish-water lagoons along this section of the coast have sporadic year-round fishing for cutthroat trout and small steelhead. Big Lagoon and Stone Lagoon sometimes break open to the sea during high water, at which time salmon and steelhead move in. North of Dry Lagoon State Park, beaches backed by evergreen-crowned bluffs have good runs of surf and night smelts and redtail surfperch— particularly the Gold Bluffs area (reached by way of Fern Canyon Road).

The Klamath River is famous for its excellent runs of chinook salmon and steelhead. The tidewater section of the river is heavily fished by skiff and shore anglers—there is no skirt fishing in the ocean. Chinook start running in mid-July or August and continue through October. Although most fish are landed from skiffs which jam the lower river during the height of the season (August to September), many also are taken by anglers casting from shore around the river mouth. Coho enter the catch in mid- to late September and the run may last until December. Steelhead begin their run in July and continue to run through November or later, depending on river conditions. Other fish caught in tidewater include redtail surfperch, starry flounder, white and green sturgeon, and eulachon. Along beaches adjacent to the Klamath River mouth, surf netters strain the breakers for surf and night smelts, and bait casters fish for redtail surfperch and starry flounder.

North of the Klamath, near the south border of Del Norte Coast Redwoods State Park, netters, rock anglers, and surf casters fish from shore around the mouth of Wilson Creek. Within the creek, chinook and coho salmon, summer steelhead, and sea-run cutthroat are taken.

CRESCEXT CITY

The harbor at Crescent City is well protected from sea and wind by extensive seawalls which flank its perimeter and by the Point St. George headland. The fishing fleet is based at Crescent City Boat Basin between the east seawall and the public fishing pier, an area known as Citizen's Dock. Party boat and skiff anglers fish for salmon and bottomfish, weather permitting. Salmon trolling (mainly for chinook) usually begins in June and continues through September, with best catches made in July and August. Lingcod, cabezon, kelp greenling, rockfishes, and Pacific halibut also are taken in the salmon areas, but best bottomfishing is found usually farther inshore close to rocky reefs along the 10-fathom curve. Shore anglers take blue, china, vermilion, and bocaccio.

Shore anglers take blue and black rockfishes, lingcod, and kelp and rock greenlings from the west breakwater and along rocky shores north to Point St. George. There is pier fishing at Citizen's Dock for starry flounder, kelp greenling, surfperches (striped and redtail), and jacksmelt. Occasionally, large schools of surf smelt appear around the dock and are taken by snagging. Herring are taken during late winter and early spring. Pier anglers also trap Dungeness crab in ring nets during winter and spring. Both surf and night smelts are netted along beaches south of the harbor and north of Point St. George, with surf smelt predominating along northern beaches.

THE SMITH RIVER

The Smith River mouth and the tidewater lagoon section have considerable skirt fishing during the salmon season. Chinook is the most sought after, and fish weighing 25 to 30 pounds are not uncommon. The season usually extends from September through December, late September and October are peak fishing times in tidewater. Some coho also are taken; most are landed in October and November. Sea-run cutthroat trout are caught from shore and skiffs from September through May, with peak fishing in March and April. A few winter steelhead are caught in the lagoon from December through March, and eulachon are dip netted during their run in spring. Starry flounder, surfperches (mostly redtail), and cabezon are caught year-round in tidewater, and redtail surfperch and surf and night smelts are taken along the beach south of the river mouth. North along the coast, anglers fish the rocky shores of Pelican State Beach for black rockfish and other rocky-shore fishes, and for night smelt along sandy stretches.
OREGON AND WASHINGTON

From the California-Oregon border to south of Coos Bay the coastline is rugged with few extensive sandy beaches and Coos Bay north, the coastline is generally wide, sandy beaches interspersed with rugged headlands. This type of coastline extends to north of Grays Harbor, Wash. Farther north, the coast off northwest Washington from about Cape Elizabeth is again a rocky one, with small, sandy beaches between the rocky headlands. Beginning at the Strait of Juan de Fuca and continuing eastward throughout the greater Puget Sound area is one of the most picturesque coastlines and interesting fishing areas along the Pacific coast.

The rugged water and sea-state conditions so common to the northern California coast continue northward to off Cape Flattery, the northwesternmost point of Washington.

Cape Blanco, Oreg., marks the northern boundary of the major coastal “upwelling” area of nearshore cool water that extends along the coast south to Point Conception, Calif. Though some coastal upwelling is evident along the coast north of Cape Blanco, it is minor when compared to the magnitude of that occurring to the south of Cape Blanco during late spring, summer, and early fall. The coastal waters of central Oregon to offshore central Washington are a major part of the year under the influence of the eastern portion of the North Pacific eastward-flowing current, or North Pacific Drift. The current has a moderating influence on coastal temperatures in this area, and during the summer sea surface temperatures are several degrees warmer off northern Oregon to central Washington than those found both to the south toward California and the north toward British Columbia.

Many of the same species are common to the coastal waters of Oregon, Washington, and southeastern and south central Alaska; salmon species are of primary interest to the marine game fish angler in the northwest. When concentrations of albacore migrate close to the coasts of Oregon and Washington during the summer, a sport albacore troll and live-bait fishery develops. This is one of the few pelagic marine game species, aside from salmon (which are anadromous), that are taken offshore on the high seas.

Though the major species of interest in the greater Puget Sound area, as on the open coast, are chinook and coho salmon and, to a lesser degree, halibut, excellent fishing for sea-run cutthroat and Dolly Varden-trout, as well as many species of bottomfish such as flatfishes, rockfishes, cabezon, lingcod, and greenlings, make this inside waterway area a most productive one for the marine angler.
16. California-Oregon Border to Cape Blanco

From just north of the California border to above Cape Blanco (Chart 16) is one of the more rugged, yet accessible sections of the Pacific coast. The shoreline is for the most part rocky with high eroded cliffs standing above the beach and the high-water line. Many submerged and exposed rocky reefs, extending from the shoreline out to about 10 to 15 fathoms, turn much of the coast into a hazardous area for the inexperienced angler. When safely fished, however, these areas will prove to be productive ones for many species of fish and shellfish.

Near the California-Oregon border the offshore bottom topography slopes gently westward from shore and the 50-fathom depth contour is about 3 nautical miles offshore. The nearshore bottom is generally rock and sand; outside the 10-fathom depth contour the bottom is composed of brown, black or gray sand.

Three fishing ports-Chetco Bay at Brookings, with one of the best small-boat harbors along the southern Oregon coast, the famous Rogue River estuary at Gold Beach, and the small fishing port of Port Orford—provide good locations for bay, nearshore, and offshore marine sport fishing along this rugged section of coast.

Just north of the California-Oregon border is the Winchuck River, a small coastal river that has a chinook salmon run and is fished near the mouth in late fall. Mostly in November and December. Steelhead are taken from the lower Winchuck River throughout the winter, starting after the first early winter rains.

Chetco Bay at Brookings is increasing in popularity as a small-boat harbor and has excellent facilities for the many thousands of anglers who fish offshore and in the Chetco River and estuary each year. A substantial breakwater provides for easy access to the ocean, except during severe southerly storms. A suitable charter boat fleet is available for fishing the nearby coastal reefs for bottomfishes prior to June and for salmon during the rest of the year. These boats occasionally go offshore for albacore if the fish are reported to be available within cruising distance.

Most salmon landed at Chetco Bay are chum: the best fishing begins in July and lasts through August and September. A good chinook run occurs offshore in early fall. Offshore rocky reefs are good for rockfishes and lingcod. Within the Chetco River, anglers take cutthroat trout and winter steelhead. A good run of chinook occurs from late September to early October. A few coho enter the river late September through December. The jetties at the bay entrance are good locations for pole-poking among the rocks for monkeyface eels and fishing for rockfishes, sometimes greenlings, and surfperches.

Anglers fish near the jetties along the beach in the lower bay for surf perch, and there is a limited tidewater fishery for starry flounder (May to August), black rockfish, lingcod, greenlings, surfperches (redtail and silver), and cabezon. Immediately west of the breakwater, below the town of Brookings, is a sheltered rocky-bottom area good for fishing surfperches, rockfishes, and greenlings.

Northwest of the bay entrance, gravel pockets along the beaches are reported to be good for digging littleneck clams. From the Chetco River north to just south of the Rogue River entrance are good shores for picking abalone during extreme low tides. Generally, abalone can be found along the southern Oregon coast from Brookings to Port Orford and to south of Coos Bay. They are available off rocky shores and on offshore submerged reefs.

About 15 miles south of the Rogue River entrance is the Pistol River. In the lower tidewater section, anglers take chinook and a few coho salmon from October through the first of December. Steelhead runs are common from December through February, and sea-run cutthroat trout are caught frequently in June.

The beach near the mouth of Myers Creek, south of Cape Sebastian, is a good area for digging razor clams, as is the shore along the small coastal bay immediately south of Cape Sebastian.

The Rogue River is the major river system in southern Oregon and flows into the Pacific Ocean at Gold Beach. This river produces a variety of fishing and excellent facilities for the angler can be found on both sides of the lower river at Wedderburn and Gold Beach. The bar at the Rogue River entrance can be dangerous, as most coastal bars are despite considerable improvement of the jetties in recent years. However, once outside the entrance, the angler may fish for salmon and a variety of other ocean fish. A submerged reef is near the shore south of the Rogue River mouth, and the well-known Rogue River Reef is northwest of the entrance. Good bottomfishing is found near these reefs and exposed rocks, which are also a good source of red abalone.

In the lower tidewater section of the Rogue River the major fishery is for salmon: trolling for summer-run chinook is best during August. There is also a fall run of chinook from September to November. Steelhead are present in summer (August to September), and coho from October to December. Other marine species available in the lower Rogue River tidewater are surfperches (redtail, silver, white, and walleye), smelts, lingcod, greenlings, and starry flounder. Many of these marine species are more common during mid- and late summer when the freshwater flow of the river is decreased, allowing a greater influx of salt water into the estuary.

North of the Rogue River entrance is a sandy beach reported to be good for digging razor clams. Fishing is good for rockfishes, lingcod, and greenlings along the rocky shoreline from Otter Point north.

North along the coast is Port Orford, a small harbor providing anchorage and a dock area partially protected by a breakwater. Sport fishing facilities and a launching ramp for small boats are available. Offshore from Port Orford feeding chinook and coho are taken throughout the summer.
[June to September] Since there is no major river system emptying into the ocean at Port Orford, fishing off this area must rely on the feeding of salmon along the coast. Periods of productive salmon fishing are more variable here than off fishing ports near the mouths of river systems with spawning runs of salmon. However, good bottomfishing can be found about the jetty and off the beach. Both north and south of the port are good shorefishing spots for redtail, silver, and other species of surfperches and greenlings. Starry flounder frequently are taken nearshore over smooth bottom.

Along the coast between Port Orford and Cape Blanco is the Elk River, a good winter steelhead stream with best catches being made during December and January. Chinook fishing is usually best during October and November: the Elk River has a large run of hatchery chinook. A few coho are taken during October.

North of Cape Blanco, the westernmost point of the 48 contiguous States, is the Sixes River. This river is a good-sized coastal stream, having a fine winter steelhead run with best fishing above tidewater during December and January. Adult chinook and a few coho enter the lower estuary in the fall. October and November are usually the best fishing months for these species. Razor clams occasionally are dug just south of the mouth of the Sixes River at extreme minus tides.

Fishing is good for starry flounder and surfperches inside the Coos Bay entrance. These fish can be caught from a public pier alongside the Charleston Bridge.

Coos Bay has excellent facilities for the angler wishing to use charter boats or his own trailer boat. These are available at Charleston Boat Basin on the south side of the Coos Bay entrance. The lower bay is a good area for fishing starry flounder, rockfishes (off Fossil Point), and surfperches (white, pile, silver, redtail, and walleye). Striped bass are fished in the lower bay near North Bend and Empire during the summer. Clamming and crabbing also are popular in the bay.

Chinook enter Coos Bay in the fall and fishing is good for upper Coos River in October and November. Chinook are caught in November, and steelhead from November to January. Striped bass are taken in some of the sloughs entering the bay; in the upper river during winter, and within the bay itself in late spring and summer. Some of the best fishing for striped bass and shad is available in the upper tidewater in the Millicoma and Coos rivers, where fishing is usually good from March through May.

North of Coos Bay entrance reattril surfperch are taken along the sandy shore.
CHART 17

- Sharefishing Areas
- Bottomfishing Areas
- Fishing Facilities
- Sportboat Operation
- Depth in Fathoms

NOT TO BE USED FOR NAVIGATION
See NOS Nautical Charts
A considerable amount of offshore and tidewater fishing takes place along this section of the coast (Chart 18).

About 20 miles north of Coos Bay is Salmon Harbor, on Winchester Bay. It is one of the fastest developing marine sport fishing ports on the Pacific coast. An extensive jetty system provides access from the Winchester Bay-Umpqua River system to the open ocean during most of the year. Excellent facilities for the marine angler are available at Salmon Harbor. More boat basin facilities are being built all near the Umpqua River jetties. This place ranks as one of the best for salmon fishing along the Pacific coast.

Only a short distance north along the coast from the Umpqua River entrance is the Siuslaw River, another important coastal sport fishing area on the south central Oregon coast.

The bottom topography off this section of the coast is relatively smooth, deepening from shore to a depth of 50 fathoms about 4 miles off the Umpqua River and about 6 miles to the west of the Siuslaw River. Bottom types are generally gray-sand in the inshore area, green mud and gray sand offshore. About 27 miles due west of the Siuslaw River entrance is Heceta Bank, one of the well-known fishing spots off the south central Oregon coast.

Coho and chinook salmon are taken outside the Umpqua River bar from June to early October, up to the time when the fall run up the river begins. Coho are usually found farther offshore than chinook and enter the fishery earlier in the year, while chinook appear later and nearer the river entrance. More than 90% of the catch is Coho. A good fishing for chinook most of the season is in the Umpqua River bar area. Both north and south, a distance of 2 to 3 miles from the entrance, are reefs having several desirable species of bottomfishes. The catches consist primarily of rockfishes (quillback, bocaccio, vermilion, canary, black, and chinook).

Along the outside of the Umpqua River jetties during the summer, anglers on the jetty or nearby in small boats catch occasional salmon; however, the major fishes taken in this area are rockfishes, lingcod, and surfperches. On the inside of the jetties anglers take rockfishes, starry flounder, greenlings, tomcod, and surfperches (redtail, valleyle, white, silver, and pile). Much the same complex of species taken off the Coos Bay jetties also is caught off the Umpqua River jetties. A good place for fishing the entrance channel is from the old U.S. Coast Guard pier on the south side of the channel.

In Salmon Harbor, herring (February to October) and anchovy (June to October) are jiggled from the docks. Clamming is very popular in the Umpqua River, and there is some crabbing in the lower river, in Winchester Bay, and from the docks in Salmon Harbor. Usually a small run of chinook enters Winchester Bay during April and May; however, the principal run of chinook in the bay is in the fall, during September and October.

The lower Umpqua River has a striped bass fishery, and this is a good alternative to salmon fishing when conditions on the Umpqua River bar are unfavorable in the summer for offshore salmon fishing. Anglers fish from the bank along the lower river for striped bass, starry flounder, and for coho and chinook salmon during their September and October migration toward the upper river. Sturgeon (white and green) are often caught in the Umpqua River tidal area from the Big Bend up to about 1 mile above the town of Reedsport. Farther up, the river has both a summer (July and August) and winter (November through January) steelhead fishery, and sea-run cutthroat trout are taken in this area in late fall. Spring chinook fishing is popular upriver at city of Scottsburg and Mill Creek.

Twenty-four miles north of the Umpqua River is the Siuslaw River, where improvements in the entrance jetty system make it possible to fish outside in the ocean during most of the summer. However, bar conditions at the Siuslaw River entrance frequently become unfavorable for small boats, so local advice should be obtained on small-boat navigation over the bar.

Offshore of the Siuslaw River, coho and chinook fishing is reported to be good from June through September, with May to August best. There is fishing off the north jetty for lingcod, redtail and striped surfperches, black and copper rockfishes, cabezon, starry flounder, and greenlings. Inside the river in the lower bay and tidewater sections, fishing for chinook and coho is good during the fall runs in September through November. Surfperches also are caught in this area (white, striped, pile, valleyle, and silver), and there are crabbing and digging for gapers and softshell clams above the Highway 101 bridge.

From the town of Florence to the river mouth, fishing is good for surfperches and starry flounder. From about Siboco east upriver, the major fishery is for sea-run cutthroats; fishing usually begins in July and lasts through the summer. Anglers in this upriver area fish for coho and chinook, starting in late September and continuing into November. Also, there is a shad fishery near the head of tidewater in spring.

About 8 miles north of the Siuslaw River is the prominent coastal landmark, Heceta Head. Along the shore of Heceta Head are several good rocky-shore fishing areas for black rockfish, redtail surfperch, lingcod, greenlings, and cabezon. Starry flounder and sand sole are taken on sandy bottom which intersperses rocky areas.
GOOD AREA FOR COHO SALMON, OCCASIONALLY CHINOOK AND LINGCOD

CHINOOK SALMON

STURGEON

FALL CHINOOK

STRIPED BASS

STARKY FLounder

GAGEZON

REEF ROCKFISH

LINGCOD

SOMETHING EXCELLENT AREA FOR SALMON

CHART 18

Shorefishing Areas

Bottomfishing Areas

Fishing Facilities

Sportfishing Operation

Depth in Fathoms

NOT TO BE USED FOR NAVIGATION

See NOS Nautical Charts
November: December and January are good months for catching this species. The first sizable river north of Heceta Head is the Alsea River, emptying into the Pacific Ocean near the town of Waldport. The channel entrance to the Alsea River is not protected by a jetty system and conditions over the entrance bar are much too hazardous for boats. One of the favorite sites for the shore angler is about North Point, where coho and chinook are landed during late summer and fall. The tidal freshwater fishery for chinook extends from August to October; the fishery for coho from August to November. There is considerable fishing from inside the bar along shore and from small boats from upper tidewater to below the highway bridge. Fishing areas for salmon change from the lower bay to the upper bay and then into upper tidewater as the fish migrate to fresh water. Cutthroat trout are taken by trolling in upper tidewater from July to October (August peak). Within the bay, starry flounder are taken during summer, and surfperches (walleye, striped, white, and silver) are common in the catch from spring through fall. Softshell clams are dug in the shallow areas, and crabs are caught in the bay during summer.

Approximately 5 miles north of the Alsea River is Seal Rock, a good shorefishing area for surfperches (redtail, silver, and striped) and greenlings.

The next major marine fishing port to the north of Seal Rock is Yaquina Bay. Because of its importance as a recreational fishing area it has been covered separately. (See Chart 20.)

North of Yaquina Bay from Gull Rock to Depoe Bay (see inset), shore fishing is excellent for greenlings, cabezon, lingcod, black rockfish, and for redtail and striped surfperches. Depoe Bay is one of the most scenic small-boat ports along the Pacific coast. The bay is very small and connected to the ocean by a short and narrow rock-lined channel bordered on both sides by rough, rocky shore and breaking waves. The bay itself has little fishing. Charter boat facilities are available at Depoe Bay for offshore salmon fishing during summer and early fall. and occasional trips are made offshore for albacore during July and August if the tuna are within operating distance. Off this area, bottomfishing is good for species of rockfishes, flounders, and lingcod. Coho are fished from June through October, with late July and early August best. Of the salmon caught offshore in this area, 90% are coho.

To the north at the Siletz River, shore fishing is good near the entrance for several species of surfperches, rockfishes, and greenlings. The Siletz River has a fairly large entrance to the Pacific Ocean, but the bar is often too dangerous for boats. Inside Siletz Bay, fishing is heavy throughout the lower bay channel for chinook from August through October, and for coho from August to November. Surfperches (pile, white, silver, striped, and walleye) also are taken within the bay, as well as starry flounder, which are fished on the tideflats and in the channel (best fishing January to May). The bay has some crabbing and sea-run cutthroat are caught in tidewater from July to October.

Farther north, the Salmon River empties into the Pacific Ocean just below Cascade Head at the small community of Three Rocks. During calm water, small boats sometimes fish offshore for salmon close to Cascade Head. Around the river entrance, bottomfishing is good for cabezon, black and copper rockfishes, lingcod, and greenlings. In tidewater, starry flounder are taken in summer, sea-run cutthroat from July through September, and coho and chinook from August through October.

One of the more noted fishing places along the Oregon coast is the Nestucca Bay-Pacific City area. Charter operations near Pacific City use surf dories to fish in the ocean off Cape Kiwanda and Haystack Rock for salmon (June through the summer) and bottomfish. Of the salmon caught in this area, 80% are coho. The dories are available for daily charter. This is...
CHART 19

Shorefishing Areas
   Bottomfishing Areas
   Sportboat Operation
   Fishing Facilities

Depth in Fathoms

NOT TO BE USED FOR NAVIGATION
See NOS Nautical Charts
the only place along the Pacific coast with such a facility available to the public. Only on rare occasions, when near-flat calms prevail, do small boats venture out of the mouth of Nestucca Bay. The entrance bar is very dangerous, and caution is mandatory. In the bay, fishing is excellent for starry flounder, and in the tidewater section of the Nestucca River, chinook and coho are taken from June to November. Fall runs of chinook provide the best fishing from September through October; coho are fished in October. Steelhead are taken in upper tidewater from November to March, and sea-run cutthroats are fished from June through August. The tidewater section of the Little Nestucca River has much the same species composition and timing for runs of salmon as the Nestucca River.

At Sand Lake, 3 miles north of Pacific City, anglers sometimes take starry flounder in the entrance channel during late spring and summer.

At Cape Lookout, one of the more rugged prominent points along the Oregon coast, anglers catch bottomfish along the south side. On occasions, coho are taken close to the shore of the cape. Access to the shore around the cape is difficult; however, shore fishing is reported to be good in this area for surfperches, lingcod, and greenlings.

Yaquina Bay (Chart 20) offers the marine angler a variety of fishing. Development of an extensive jetty system allows access to offshore fishing most of the time, and excellent shore and fishing facilities are available. The offshore area is intensively fished during the summer for salmon, and 90% of the catch is coho. In addition to rockfishes and lingcod, halibut are taken occasionally around reef areas, and many times are taken while salmon trolling. During midsummer, some albacore trips are made from Newport to offshore fishing areas.

From the Yaquina Bay bridge west along the jetty, salmon frequently are taken from boats (June to October). About the Yaquina Bay bridge pilings is a good area for herring and anchovy jigging, especially high tide.

The south side of the south jetty is popular for chinook salmon fishing in the summer. Both jetties are recognized as good fishing places for starry flounder, cabezon, lingcod, black and copper rockfishes, sand sole, greenlings, and surfperches (red-tail, striped, and walleye). Fishing is productive for surfperches and bottomfish as well as salmon. Surfperches and flounders are taken along the north and south shorelines of the bay, from shore and from docks; the most plentiful period is from March through October. A particularly good area for surfperches and starry flounder is south of Yaquina Bay at the bend in the Yaquina River. Up to 90% of the local catch of these two species comes from this part of the bay. Green sturgeon are caught in the upper bay, and chinook and coho salmon are taken in upper tidewater from September to November. Anglers take sea-run cutthroat trout in the upper bay from midsummer through October. Jacksmelt are jigged off docks from January to July, and topsmelt are taken from January to March. Crabs are netted throughout the year from the docks.

Yaquina Bay is rated as one of the more popular clamming areas along the Oregon coast. Clams are dug on the tide flats east of the Newport docks and along the south side of the Yaquina River. Cockles, gapers, and softshell clams are the major species in these areas.

The first prominent point of land north of Newport is Yaquina Head. There is good fishing for shore species in this area: February to March usually offers the best fishing for redtail and striped surfperches. Greenlings, lingcod, cabezon, black rockfish, and an occasional salmon also are taken around Yaquina Head.
Along the coast from Cape Lookout to Cannon Beach (Chart 21), long sandy beaches are common, with occasional prominent rocky points extending west of the coastline—such as Cape Meares and Cape Falcon. Offshore the sea bottom gradually slopes to the west with the 50-fathom curve about 5 miles offshore in the southern half, extending in a northwest direction to about 9 miles offshore in the northern half. The bottom is of sand and shells with some gravel areas. Some rocky areas are close to shore, such as Three Arch Rocks south of Cape Meares. Pyramid Rocks off Cape Meares. Twin Rocks north of Tillamook Bay entrance. Falcon Rocks off Cape Falcon. Castle Rocks just to the north of Cape Lookout, and Haystack Rock off Cannon Beach. These rocky areas are all good for bottomfish; however, they should be approached by small boats only on calm days.

The entrance to Netarts Bay is 6 miles north of Cape Lookout. This bay has some feeder or immature salmon, and both chinook and coho are taken frequently in the lower channel during the summer. Netarts Bay has no spawning runs of salmon as no major river empties into it. Starry flounder, greenlings, and several species of surfperches are taken throughout the summer; however, the bay is more noted for its excellent crabb ing and clamming. Crabb ing is good in the lower channel: and gaper, cockle, softshell, littleneck, and a few razor clams are available at low tide on the bay flats that form a sizable portion of the bay's area. The inexperienced boater is cautioned to ask the advice of local anglers before attempting to cross the bar.

Tillamook Bay is one of the largest bays along the Oregon coast, and into it flow the Tillamook, Wilson, Miami, and Trask rivers. The bay has two sizable towns, both with excellent fishing facilities. They are Bay City, half way along the shore on the east side, and Garibaldi, near the bay entrance. In addition to several bottom species listed on the chart, redtail surfperch and black rockfish can be taken from the jetty and in the channel near the jetty. The main channel has good spots for crabb ing and fishing for starry flounder and surfperches (walleye, white, silver, striped, and pile). Tillamook Bay entrance has a sizable jetty; however, bar conditions are not generally favorable for small boats. Charter and larger private boats fish offshore for coho and chinook and rockfishes (black, canary, copper, and quillback).

Inside Tillamook Bay, fishing for feeder chinook in the lower channel near the entrance is best from April through May, and again in the fall. Best fishing for coho is from mid-September to November. The best spots for clamming are on the west side of the bay. Razor clams are sometimes found in this area, but most of the take is other species such as gapers, littleneck, cockles, softshell, and butter clams. Herring are common in the bay and are fished from spring through fall. Crabb ing is best in the main channel during the winter.

The Nehalem Bay jetty complex is about 5 miles north of Tillamook Bay. Small boats are able to venture across the Nehalem Bar to fish for coho and chinook salmon only in calm weather during the summer and fall. There is a limited amount of jetty fishing during low water for surfperches (walleye, white, silver, striped, and pile) and greenlings. Herring, are jigged in February. Salmon are taken in the lower bay in early fall and in the tidewater areas near the town of Nehalem in late fall. Sea-run cutthroat trout are taken in tidewater, with July to September best. A good spot to fish for starry flounder is in the upper bay, and crabs may be taken in the lower bay channel.

North of the Nehalem River entrance is Cape Falcon, which provides good fishing for several species of rockfishes. Immediately north of Cape Falcon are good clamming beaches such as Short Sand, Arch Cape, and Cannon Beach.
The Columbia River entrance (Chart, 22), offshore to the lightship and east in the estuary toward Astoria, is one of the most heavily fished areas in the northwest. Offshore of the Columbia River trolling is good for chinook and coho salmon from mid-June to early September, one of the more popular trolling spots for coho salmon from mid-June to early September, and early in the summer, moving close to shore. Chinook are caught farther offshore near the surface and chinook tend to run deeper. As a general rule, coho and chinook are caught farther offshore early in the summer, moving close to the river mouth later in the year, and the sport and commercial troll fishery follows this movement.

For salmon from late June to September. Other areas that enter the catch include starry flounder, redtail surfperch, black rockfish, greenlings, and Pacific tomcod. Along the south shore, east of the south jetty, is a good fishing area for tomcod, starry flounder, and redtail surfperch. Starry flounder may also be caught immediately north of the south jetty to north of Point Adams. and this area also has a productive crab fishery. The north side of the Columbia River entrance, at Fort Canby State Park, is another good crabbing area, and the jetty just west of Sand Island is a good fishing spot for redtail surfperch, greenlings, lingcod, black rockfish, and salmon. The north jetty at the river entrance is a popular place to fish, but dangerous—you should check locally before fishing from it.

Complete facilities for fishing in the Columbia River estuary and offshore may be found along the south shore at Hammond, Warrenton, and Astoria. and on the north shore at Ilwaco and Chinook.

Generally, the lower Columbia River has a good spring, summer, and fall run of chinook—the fall run is the largest and considered best. Coho are taken in the river in August and September, in the lower tributaries. September and October. The lower Columbia River has numerous tributaries, such as the Lewis and Clark and Klaskanine rivers, which offer fishing opportunities for shad (June) and steelhead (November to March). Another tributary, the Young River, also has a shad run in June and July. In Cathlamet Bay, east of Tongue Point, summer shad fishing is popular, with July usually bringing the best catches. Chinook and steelhead are fished during summer and fall. Cutthroats also are taken in the Young and Lewis rivers, west of Astoria. White sturgeon are taken frequently through the winter through spring (November to April).
24. Willapa Bay to Ocean City

Easy access from the Seattle metropolitan area makes this productive stretch of coast (Chart 23) an active recreational fishing area. The port of Westport, on Grays Harbor, is the most popular location for ocean salmon fishing north of the Columbia River—it could easily be called the coastal sport fishing capital of the west coast. Coming into prominence since World War II with development of an adequate jetty system and a small-boat harbor, it has assumed the leadership in coastal salmon fishing.

The coast from north of Cape Disappointment to north of Ocean City is broad sandy beach interrupted only by the entrances to Willapa Bay and Grays Harbor. The shallow shelf between the shore and the 50-fathom curve is wide, about 12 miles in the south off Ocean Park, and about 16 miles off Grays Harbor. The bottom in this area is sand and sand and shells, grading to mud bottom in deeper water. One of the better offshore bottomfishing areas—Williams Reef—northwest of Grays Harbor entrance—has a water depth of about 21 fathoms.

Along the ocean beach from Ocean Park north to the Willapa Bay entrance, the sandy shore is excellent for surf fishing, with redtail surfperch the species most frequently taken. This is also a good stretch of coast for digging razor clams.

One of the major salmon fishing areas for coho and chinook during summer and fall is from near the Willapa Bay entrance east to off Tokeland. Green, and some white sturgeon are available in Willapa Bay during the summer; in winter the white sturgeon migrate upstream. On the east side of Willapa Bay near Needle Point is the Nemah River. Anglers fish along the banks of the lower Nemah River for chinook and coho from August to November. Nearby, the Palix River is reported to have good tidewater fishing for coho and chinook in late summer and fall. The Palix tidewater area east of Goose Point is a good fishing spot for sea-run cutthroat trout during the summer and in late fall. Winter steelhead are fished in upper tidewater. Along shore to the east and west of Bruceport, anglers catch sea-run cuttbroats. Northeast of Humptulips entrance the North River, coho, chinook, and jack salmon (second-year male spawners) are fished from August to November, and sea-run cutthroat and pink during July to October.

To the north, along the outer coast from Cape Shoalwater to the entrance of Grays Harbor, broad sand beaches offer excellent razor clam digging and productive surf fishing for redtail and striped surfperch. Some shore areas also reported to be good for crabbing.

The Westport-Grays Harbor complex is noted for its excellent facilities for recreational fishing. Many charter boats are available and facilities for the small-boat angler are excellent. As in other ports along the northern California, Oregon, and Washington coast, the bay entrance can be a dangerous one for the small-boat angler if he fails to heed the advice of anglers with experience in local waters. Offshore from Westport, chinook and coho salmon are the major objectives of sport anglers as in most areas from San Francisco north. About 65% of the salmon catch off Grays Harbor is coho, which are found offshore in the spring and closer to shore near the entrance to Grays Harbor in summer and fall. Chinook dominate the catch early in the season (April to June) and are, on average, large. They are found offshore in the spring and nearer shore from early July through fall, although usually available to some degree offshore throughout the season. Coho dominate the catch later in the season (June to October). Pink salmon occasionally are taken offshore, especially during odd-numbered years.

In addition to salmon fishing, a number of charter boats from Westport make trips far offshore for albacore during periods of good fishing in July to August, or September. Bottomfish also are taken offshore, many times incident to fishing for salmon. Pacific halibut are taken during spring and summer along the 30-fathom curve west of Williams Reef, northeast of the bar. At Williams Reef and other rocky areas the major species of rockfishes caught are the black, yellowtail, vermilion, and yelloweye (rusphewd).

Nearshore, the major small-boat fishing area for salmon is south and southwest of the entrance. On the jetty, anglers take redtail surfperch, black rockfish, cabezon, lingcod, and starry flounder. Coho and chinook are popularly fished from October to April. Green and white sturgeon are sometimes taken in Grays Harbor; greens are caught in the harbor during the summer. and whites are taken in the outer river channel at the east end of the harbor in winter.

Several streams emptying into Grays Harbor provide excellent fishing for salmon and anadromous trout. The Humptulips River has a fall run of coho and chinook along the outer river channel at the east end of the river. The major tributary to Grays Harbor, the Chehalis River (east of the chart area) has anadromous cutthroat, steelhead, white sturgeon and chinook and coho, as well as a few shad.

The stretch of coast north of the bay entrance has several major small-boat harbors and good fishing for salmon and anadromous trout. The entrance, the Sandy River, Wilson Creek, and Humptulips River are the major tributaries to Grays Harbor. The Sandy River has a fall run of coho and chinook along the outer river channel at the east end of the river.
COHO AND CHINOOK SALMON IN SUMMER, ALSO PACIFIC COD, STARRY FLOUNDER, SABLEFISH, HAKE, SAND SOLE, AND JACK-MACKEREL.
Grays Harbor jetty near the resort area of Ocean Shores is good for surfperch fishing, and the entire sandy beach from the harbor entrance to above Cape Elizabeth is excellent for razor clamming and some crabbing.

North of the coastal area shown on Chart 23, at Moclips (about 17 miles north of Ocean Shores), is the southern border, of the Quinault Indian Reservation. Fishing and clamming are restricted along the reservation shore.

North of the Quinault Indian Reservation, to east of Destruction Island and south of the Hoh River, are good surf fishing and clamming areas with easy access from the coast highway. Runs of good surf and night smelts are common to this area; night smelt runs are from May to September. The coast from this area north to La Push is rocky and nearly inaccessible for shore fishing.

North of the coastal area shown above Cape Elizabeth is excellent for beach fishing from the harbor entrance to the north toward Cape Flattery where the 50-fathom curve is close to shore, passing just to the west of Tatoosh Island and Duntze and Duncan rocks. From Cape Flattery eastward along the Strait of Juan de Fuca to Slip Point near Clallam Bay the 50-fathom curve is about 1½ miles offshore. The bottom nearshore is sand grading to green mud and sand in the deeper water of the Strait of Juan de Fuca.

The Quillayute River, about 36 miles south of Cape Flattery, is the small Indian village of La Push. This is the only small-boat harbor along the northwest Washington coast from Grays Harbor to Neah Bay. The entrance is passable for the small-boat angler most of the summer and is the only place in the area where offshore fishing is possible with some degree of safety. Though requiring a longer journey from the center of northwest population, La Push is increasing in popularity for ocean anglers.

Much of the fishing off La Push is for feeding stocks of coho and chinook salmon. The offshore catch is predominantly coho, and July to September is the best fishing time for this species of fish. chinook salmon are taken offshore during the same period. The Quillayute River has anadromous cutthroat trout in summer and fall, and a run of chinook. Chinook concentrate nearshore along the coast and around the river mouth during the fall. In late fall and winter the river also has steelhead. In addition to offshore bottomfishing, shore fishing is good off the sandy beaches for rockfish, surf perch and off rocky areas for greenlings, black rockfish, and sometimes lingcod. Anglers fish from the jetty at the entrance to the river and from the beach just south of the mouth.

From north of La Push to near Cape Alava there is little ocean and shore recreational fishing because of its remoteness from any small-boat harbor and lack of shore access roads. Off Cape Alava and to the north is the start of coastal offshore fishing areas for coho and chinook salmon fished by boats from Neah Bay. Fishing in this area begins in May. In addition to coho and chinook, pinks are taken frequently in late summer and early fall during odd years. North of Cape Alava is the Ozette River, which is reported to have good fishing for sea-run cutthroat trout. Between Waatch Point and Portage Head, including Mukkaw Bay, sandy-shore fishing is good for redtail surfperch. Off rocky areas, fishing is reported to be good for rockfishes, greenlings, and lingcod.

Cape Flattery is a popular fishing area for charter boats out of Neah Bay and for the small-boat angler during calm weather. South of the cape and nearshore is a good area for rockfishing. Offshore are well known areas for catching adult and juvenile chinook, adult and juvenile or feeder, coho, and pinks (odd years only). Charter boats from Neah Bay sometimes make trips for Swiftsure Bank, northwest of Cape Flattery, for coho and chinook. Off Cape Flattery and Tatoosh Island are good areas for rockfishing (china, copper, quillback, yelloweye (turkey-red), black, blue, and yellowtail). Around the north side of Cape Flattery, the species fished are similar to those found south of the cape; however, there is considerably more small-boat fishing as the seas are smoother than off the cape, and the port of Neah Bay is nearby. Salmon anglers from small boats fishing offshore from Neah Bay to the cape begins in May. Feeder coho are taken from late spring into summer, and adult coho, chinook, and pink salmon are fished in late summer and early fall (odd-numbered years for pink). Feeder chinook are taken in the area all year. From Waddah Island west to Cape Flattery are a number of good fishing spots—each with its own local name. The area northeast of Waddah Island west to Kotluk Point has good salmon fishing for small-boat anglers, as well as good bottomfishing for rockfishes, kelp greenlings, and lingcod.

The Strait of Juan de Fuca is oriented in a west by northwest area and extensive submerged reefs. The major islands along this section of rocky coast from south to north are Destruction Island, Alexander Island (about 12 miles below La Push), James Island off La Push, and Ozette and Tatoosh islands off Cape Flattery.

The coastal shelf off La Push has a gradual slope, with the 50-fathom curve being 10 to 12 miles offshore. However, the slope becomes sharper to the north toward Cape Flattery, where the 50-fathom curve is close to shore, passing just to the west of Tatoosh Island and Duntze and Duncan rocks. From Cape Flattery eastward along the Strait of Juan de Fuca to Slip Point near Clallam Bay the 50-fathom curve is about 1½ miles offshore. The bottom nearshore is sand grading to green mud and sand in the deeper water of the Strait of Juan de Fuca.

The coastal shelf off La Push has a gradual slope, with the 50-fathom curve being 10 to 12 miles offshore. However, the slope becomes sharper to the north toward Cape Flattery, where the 50-fathom curve is close to shore, passing just to the west of Tatoosh Island and Duntze and Duncan rocks. From Cape Flattery eastward along the Strait of Juan de Fuca to Slip Point near Clallam Bay the 50-fathom curve is about 1½ miles offshore. The bottom nearshore is sand grading to green mud and sand in the deeper water of the Strait of Juan de Fuca. However, the slope becomes sharper to the north toward Cape Flattery, where the 50-fathom curve is close to shore, passing just to the west of Tatoosh Island and Duntze and Duncan rocks. From Cape Flattery eastward along the Strait of Juan de Fuca to Slip Point near Clallam Bay the 50-fathom curve is about 1½ miles offshore. The bottom nearshore is sand grading to green mud and sand in the deeper water of the Strait of Juan de Fuca.
direction and provides an extension of the coastal ocean environment into at least the first portion of the strait. Sea conditions are suitable most of the year for small-boat operations. The absence of ocean swells as one proceeds into the strait and lack of rough water such as found nearshore along open ocean coast make for pleasant boating.

The Sekiu River, about 13 miles east of Neah Bay, is reported to have fishing in the lower sections for sea-run cutthroat trout in the spring and fall. Steelhead run into the river during the winter. The nearby Hoko and Clallam rivers have much the same species and seasonal distribution as the Sekiu River. From Kydaka Point east is an excellent small-boat area for chinook. The nearshore areas off Sekiu Point and Slip Point are some of the more accessible and popular locations for salmon fishing and excellent facilities are available for the small-boat angler. Nearshore along this area of the Strait of Juan de Fuca can be found good fishing areas for lingcod, greenlings, and species of rockfish such as black, china, copper, and quillback.

Most small boats fish for salmon off Pillar Point and to the west, and from Low Point east to Angeles Point. Feeder and adult chinook are taken in the spring and summer; adult coho and pinks in early fall. The main fishing areas are either nearshore for feeder chinook or offshore for coho (August through September) and pink (August).

Several streams empty into the Strait of Juan de Fuca along this section of the coast. The Pysht River, Deep Creek, West Twin River, and Lyre River all have winter steelhead runs and sea-run cutthroat trout in varying amounts. In addition to salmon fishing, rockfishes are found good fishing areas for ling cod. Anglers fish for feeder chinook during the summer, and for adult chinook during the fall from Agate and Crescent bays east to off Angeles Point. Pinks are usually taken in this area during late summer of odd-numbered years.

**PORT ANGELES TO PORT DISCOVERY**

The city of Port Angeles is the principal center of commerce on Washington's Olympic Peninsula. Marine sport fishing intensity increases from the Point Angeles area eastward, and fishing areas become more numerous because of the many islands, channels, and bays and their accessibility to the metropolitan areas bordering the northern side of the Strait.

North of the town of Port Angeles is the narrow peninsula or "spit" known as Edz Hook, one of the more popular and easily accessible fishing locations in the area. Port Angeles has excellent facilities for the marine angler and a variety of salmon and bottomfishing is found nearby. Feeder chinook are present all year and are fished on the inside of the "hook" off the U.S. Coast Guard Air Station at the east end of the Hook, along the outer edge of the Hook, near the head, off the head, and near the west end. Adult coho and pinks are taken here and offshore during summer and fall. Adult chinook are caught in summer.

East of Port Angeles, off Green Point, fishing is excellent for halibut and ling cod as well as salmon. Chinook are taken all year (feeders in winter and spring, and adults in summer).

Crescent Bay has good facilities for the marine angler and is accessible to the salmon fishing areas along the west side of the Strait. Good bottomfishing grounds for halibut, rockfishes, greenlings, flounder, and Pacific (true) cod. Anglers fish for feeder chinook during the summer, and for adult chinook during the fall from Agate and Crescent bays east to off Angeles Point. Pinks are usually taken in this area during late summer of odd-numbered years.

25 Pillar Point to Discovery Bay

**PILLAR POINT TO ANGELES POINT**

The south coast of the Strait of Juan de Fuca from Pillar Point to Angeles Point (Chart 25) has a limited number of facilities for the marine angler. The coast has a sharp shoreline, and the bottom tends to be rocky nearshore. Water depths range from 90 to 120 fathoms offshore, in the central portion of the chart area, to 90 fathoms off Angeles Point.

and coho and pinks are available August to October. East of Port Angeles, two small streams are fished for anadromous trout. Morse Creek has winter steelhead and sea-run cutthroats, and the stream emptying into the Strait of Juan de Fuca at Green Point is reported to have fishing for sea-run cutthroats and a few steelhead.

Around Dungeness Spit, feeder chinook are taken all year, and adult chinook frequent the area in the summer. Pinks, coho, and chinook are caught farther offshore during July through September, and coho are fished on the head in August to October. Crabbing is reported to be good in Dungeness Bay. The Dungeness River has a run of steelhead in the winter, and some are reported to be caught during the summer. Sea-run cutthroat and Dolly Varden trout also are taken in the Dungeness River.

Immediately north of the entrance to Sequim Bay, and south into the northern half of the bay, fishing is good for feeder chinook during the winter. Coho salmon are taken in fall; the most popular area is near Hardwick Point. Sea-run cutthroat trout are taken frequently nearshore around the edge of Sequim Bay.

To the north are several offshore banks—Dallas Bank, Eastern Bank, Partridge Bank, and Hein Bank—all good areas for bottomfishing. Some are noted as being good for salmon—the southwestern side of Partridge Bank as well known for coho chinook, and pink salmon fishing during summer. Bottomfishes taken on or near the...
"banks" include rockfishes, lingcod, Pacific halibut, and kelp greenling. Over smooth bottom nearby, occasional catches are made of starry flounder, English sole, Pacific sandabs, sablefish, striped and pile surfperches, and Pacific cod.

Discovery Bay is one of the better fishing areas for feeder chinook during the winter, and adult coho sometimes are taken here during the fall. Salmon fishing is popular around the bay entrance off Diamond Point and Cape George. Additional areas are fished on the west side north of Gardiner, and nearshore in the lower half of the bay. Sea-run cutthroat trout frequently are taken close to shore throughout most of Discovery Bay; the most productive places are south of Diamond Point and Beckett Point.

26 Whidbey Island to Blaine

Of all the sections along the U.S. west coast, a description of marine fishing in this area (Chart 26), which includes the San Juan Islands and islands and bays along the northwest Washington mainland, is the most complex because numerous islands, channels, and bays provide a wide range of habitats for marine fish, resulting in many excellent locations for marine game fishing.

From along the Whidbey Island's west shore, east of Smith Island to about 4 miles north of Deception Pass, is a well-known fishing area for feeder chinook (all year) and for adult chinook during the early fall preceding the spawning migration of this salmon species to the Skagit and Fraser rivers. Coho are taken frequently in area from April to September with fishing during June to September. Pinks are taken August and September during odd-numbered years.

Along the south and southeast side of Lopez Island are areas for catching immature or feeder chinook (all year), and one of the more popular places for fishing is off Iceberg Point. Lopez Pass is noted for large feeder chinook in February. Proceeding northwest, popular salmon fishing spots are in Griffin Bay off Friday Harbor and at the northwest end of San Juan Island. These are good areas for catching immature chinook in summer and large chinook from December to February. Bottomfishing is excellent throughout the San Juan Islands. Rockfish species commonly caught are the black, copper, canary, quillback, and yelloweye (rasphead). Lingcod and greenlings are also abundant.

Orcas Island, the northernmost large island of the San Juans off good salmon fishing along the east end of the island at Lawrence Point. This is one of the more popular places for fishing chinook, coho, and pinks throughout the summer and early fall. The northwest edge of Cypress Island, which is southeast of Orcas Island, is a good area for feeder chinook, adult coho, and pinks in the summer. Pacific cod sometimes are taken near the southern end of Cypress Island.

North of the San Juan Islands, off Point Roberts, there is spring and summer fishing for feeder and adult chinook, coho, and pinks.

East of the San Juan Islands, off the northwest shore of Lummi Island in the vicinity of Village Point, anglers fish for spring and summer chinook. Also, in Hale Passage between Lummi Island and the mainland, there is winter angling for chinook.

The Nooksack River, which empties into Bellingham Bay, has coho and chinook runs with fishing in the lower part reported best in summer and fall. Steelhead run in the Nooksack during winter. Squalicum Creek also empties into the bay north of Bellingham, and it is reported to be a good fishing area for sea-run cutthroat trout, and sometimes steelhead. Offshore, in the deepwater sections of Bellingham Bay, there is excellent bottomfishing for Pacific cod. Nearshore from the south end of Bellingham to north of Edison, sea-run cutthroats are taken close to shore, and in the inlet about 4 miles south of Bellingham, winter fishing is excellent for feeder chinook. Off the mouth of the Samish River chinook and coho fishing is good in the fall. Sea-run cutthroats are fished close to the mouth of the river in summer and also in nearby Edison Slough. The Samish River also has a winter run of steelhead.

South of Guemes Island, in the Guemes Channel from Hat Island to March Point, feeder chinook are taken
during the winter. Smelts run along shore southwest of March Point.

The Deception Pass Channel connects the upper end of Skagit Bay with the Strait of Juan de Fuca. This is a popular area for fishing chinook and coho from early July through August. Some of the more adventurous souls fish from the shores of Deception Pass for rockfishes, greenlings, and lingcod. Southeast of the pass, around Hope Island, there is fair fishing in the spring and summer for large maturing chinook. The Swinomish Channel has angling nearshore* for sea-run cutthroat and Dolly Varden trout, and jigging for surf smelt. To the south, sea-run cutthroat and Dolly Varden trout are taken along the shore of Skagit Bay between the north and south forks of the Skagit River. The Skagit River is noted for spring and summer runs of chinook, and in the lower reaches sea-run cutthroat and Dolly Varden trout are taken during the summer. During winter the river has a large steelhead run; some summer-run steelhead also are available.

Island from Whidbey Island. On the east side of Camano Island is Port Susan, and to the south of Port Susan is Possession Sound and the north section of Puget Sound. On the west side of Admiralty Inlet is Port Townsend and the entrance to the Hood Canal.

The depth of water in the main channels in the northern half of this area is 50 fathoms or greater, deepening up to 100 fathoms near the entrance to Puget Sound in the south. The entrance to Admiralty Inlet from the Strait of Juan de Fuca is one of the more shallow channels in the greater Puget Sound area, being only 20 to 30 fathoms deep. The channels have for the most part a mud bottom, although some sand and rocky bottom may be found.

Although salmon is the major objective of fishermen in Puget Sound and Strait of Juan de Fuca, excellent catches can be made of bottomfish—Pacific cod, sablefish, rockfishes, rock sole, English sole, Pacific sanddab, starry flounder, lingcod, kelp greenling, and halibut. Ten of the 53 species* of rockfishes are commonly caught in this area, with copper and quillback rockfishes dominant in the catch. There is increasing interest in all these species to supplement the marine angler's catch when salmon are not available.

Near the entrance to Admiralty Inlet, off Point Wilson, fishing is good for feeder chinook during summer and for pinks* and coho from August to October. Port Townsend is a good location for catching feeder chinook during the winter season. An artificial reef is reportedly planned for an area just east of Point Wilson. Along the shore from west of Point Wilson to the south end of Port Townsend and around the shores of the bay bordering the west side of Marrowstone Island, fishing is good for sea-run cutthroat trout during summer. Off Admiralty Head (Fort Casey State Park) anglers drift fish for chinook in the winter, and for coho and pinks during their summer and fall migrations through Admiralty Inlet. Fishing grounds off Marrowstone Point, Lippin Point, and in Oak Bay are all good for feeding chinook during the winter. Sea-run cutthroat also are fished along the west shore of Oak Bay; off the shores of Port Ludlow they are fished during the summer. Throughout all bays in this area, good bottomfishing is reported for starry flounder and rock sole.

Along the west shore of Whidbey Island, off Lagoon Point and Bush Point, there is fishing in late summer and fall for coho and pinks, and at times some steelhead are taken from the beach at Bush Point. At the north end of Mutiny Bay, immature chinook are frequently caught during late

27. Skagit Bay to the Hood Canal

The inside passages of the area north and west of Puget Sound (Chart 27), in addition to being picturesque, are noted for their wide variety of fishing, some being in the transition zone between the Strait of Juan de Fuca and Puget Sound. This chart includes the westernmost area of the Strait of Juan de Fuca from near Admiralty Inlet to Port Susan and Skagit Bay and includes many of the more important fishing grounds in Puget Sound.

Saratoga Passage extends south of Skagit Bay and separates Camano Island from Whidbey Island. On the east side of Camano Island is Port Susan, and to the south of Port Susan is Possession Sound and the north section of Puget Sound. On the west side of Admiralty Inlet is Port Townsend and the entrance to the Hood Canal.

The depth of water in the main channels in the northern half of this area is 50 fathoms or greater, deepening up to 100 fathoms near the entrance to Puget Sound in the south. The entrance to Admiralty Inlet from the Strait of Juan de Fuca is one of the more shallow channels in the greater Puget Sound area, being only 20 to 30 fathoms deep. The channels have for the most part a mud bottom, although some sand and rocky bottom may be found.

Although salmon is the major objective of fishermen in Puget Sound and Strait of Juan de Fuca, excellent catches can be made of bottomfish—Pacific cod, sablefish, rockfishes, rock sole, English sole, Pacific sanddab, starry flounder, lingcod, kelp greenling, and halibut. Ten of the 53 species* of rockfishes are commonly caught in this area, with copper and quillback rockfishes dominant in the catch. There is increasing interest in all these species to supplement the marine angler's catch when salmon are not available.

Near the entrance to Admiralty Inlet, off Point Wilson, fishing is good for feeder chinook during summer and for pinks* and coho from August to October. Port Townsend is a good location for catching feeder chinook during the winter season. An artificial reef is reportedly planned for an area just east of Point Wilson. Along the shore from west of Point Wilson to the south end of Port Townsend and around the shores of the bay bordering the west side of Marrowstone Island, fishing is good for sea-run cutthroat trout during summer. Off Admiralty Head (Fort Casey State Park) anglers drift fish for chinook in the winter, and for coho and pinks during their summer and fall migrations through Admiralty Inlet. Fishing grounds off Marrowstone Point, Lippin Point, and in Oak Bay are all good for feeding chinook during the winter. Sea-run cutthroat also are fished along the west shore of Oak Bay; off the shores of Port Ludlow they are fished during the summer. Throughout all bays in this area, good bottomfishing is reported for starry flounder and rock sole.

Along the west shore of Whidbey Island, off Lagoon Point and Bush Point, there is fishing in late summer and fall for coho and pinks, and at times some steelhead are taken from the beach at Bush Point. At the north end of Mutiny Bay, immature chinook are frequently caught during late...
The Snohomish River has a steelhead run during spring and summer, and adult pinks are sometimes caught during August and September of odd-numbered years. South across the channel from Double Bluff is a popular salmon fishing area off Skunk Bay. Feeder chinook are taken here all year from Foulweather Bluff to Point No Point, and coho are fished from spring through the fall. Pinks are sometimes caught in odd-numbered years in August and September.

One of the most popular places for salmon fishing is off Possession Point at the southern tip of Whidbey Island—a feeding area for chinook and coho in spring and summer. Northeast of Possession Point along the shore is an excellent rockfish angling area, as is a local spot nearshore off Edmonds southeast of Possession Point. Off Edmonds, feeder chinook and some coho are fished during the winter. From Edwards Point north to Mukilteo, sea-run cutthroats frequently are taken by trolling close to shore.

In the Snohomish River tidewater near Everett, sea-run cutthroat fishing is popular during the summer and fall. The Snohomish River has a steelhead run during the winter, and adult coho run during the fall, and pink run in the fall during odd years.

Priest Point is another good site for adult chinook fishing during late spring, and from Priest Point north along the east shore of Port Susan and down the west shore there sometimes is good fishing for sea-run cutthroats during spring and summer. Sea-run Dolly Varden also occur alongshore in this area. Kayak Point is a good fishing spot for immature chinook in winter and spring, and off Hat Slough at the mouth of the Stillaguamish River is a good fishing place for sea-run Dolly Varden during spring.

At the south end of Camano Island, between Camano Head and Gendey Island, anglers bottomfish for black and canary rockfishes.

Along the southeast shore of Whidbey Island and off East Point and in Holmes Harbor off Dines Point, immature chinook are taken in the winter and spring. In the southern portion of Holmes Harbor, feeder chinook appear in the early spring, apparently attracted into the harbor by a late winter and early spring running sea-run cutthroats also are taken in Holmes Harbor in spring.

At the northwest corner of Camano Island, is a good fishing place for sea-run cutthroats. From Omake Point nearshore to off Demarc Point, the west shore of Camano Island, is a good fishing place for chinook and coho from early spring to fall (February to October), and adult chinook sometimes are taken from June through August. Coho also are taken in this area from June to October, and sometimes pinks are caught in August and September during odd-numbered years.

Point Polinell, at the north end, of the Saratoga Passage, is a good year-round location for chinook as well as for bottomfish, with black rockfish. One of the major species taken. Southwest of Point Polinell, nearshore fishing is excellent for sea-run Dolly Varden near Flowers Bluff and in Penn Cove. Farther south along the east shore of Whidbey Island, sea-run cutthroats occasionally are taken during summer.

The waters of central Puget Sound and northern Hood Canal (Chart 28) are heavily fished, largely because of their accessibility to the Seattle metropolitan area.

Hood Canal extends from north of Port Gamble south to a point northeast of the town Union—a way distance of about 55 nautical miles. The canal has channel depths from about 25 to over 90 fathoms and becomes shallower at the south end from Union eastward toward the end of the canal. The canal has sand and mud bottom except for occasional rocky areas off the prominent points. Dabob Bay, is the only major bay, extending from the Hood Canal.

In the north half of the Hood Canal, is in the southern portion of Puget Sound. 
there are numerous fishing spots for sea-run cutthroat trout. The fish occur nearshore and are not common in the deeper waters. Off Hazel Point on the Toandos Peninsula fishing is good for feeder chinook and coho salmon in spring and early summer. Adult coho are taken in isolated spots from Bangor to Misery Point from September to December, and adult pinks are sometimes taken in this area during odd-numbered years. In Dabob Bay, feeder chinook frequently are taken along the west shore from Quilcene Bay south to Jackson Cove, from winter to early spring. (March and April best).

The Misery Point, Oak Head, and Hazel Point grounds are good for immaturity of feeding chinook during spring and summer and coho from May through fall.

The deeper areas of the Hood Canal from Misery Point south to off Dewatto offer good bottomfishing for lingcod and rockfishes. Near Dewatto, nearshore fishing is excellent for sea-run cutthroats during summer, and offshore fishing is good for coho during October and November. Chinook are taken all year off Eldon near the Hamma Hamma River.

The Puget Sound channel depth ranges from about 100 to 130 fathoms for the area shown on this chart. Leading from the sound are numerous inlets that represent major marine game fishing areas—Port Madison, Port Orchard, Agate Passage. Rich Passage. Sinclair Inlet. Shilshole Bay, and Elliott Bay are but a few of these important fishing areas.

Along the east side of Puget Sound near Seattle, the area from off Meadow Point to West Point has good fishing for adult chinook in August and September. A good rockfishing area for copper and black rockfishes is offshore from the marina north of Ballard. Farther north, from Richmond Beach to West Point, immature chinook are fished during winter and spring. Elliott Bay is an excellent area for catching immature chinook (October to February) and for adult chinook and coho in late summer and fall. A tributary to Elliott Bay, the Duwamish River, has good fall chinook, coho, and winter steelhead runs.

In the greater Seattle area some of the more important shore and nearshore fishing locations are listed below, where some of the opportunities for species other than salmon are of considerable importance. Species most commonly taken by shore and bottom anglers are rockfishes (black, copper, and quillback), pile and striped surfperches, Pacific sanddab, starry flounder, rock sole, English sole, greenlings, sablefish, and Pacific cod. Local areas for fishing are as follows:

1. Richmond Beach (King County Park W. 190th St.)—Beach fishing for flatfish all year. Good fishing is reported for greenlings and lingcod in winter and early spring.
2. Golden Gardens Seattle City Park and Meadow Point—Anglers fish for flatfish and lingcod and take an occasional chinook and coho nearshore in late summer and early fall.
3. Below Ballard (Chittenden Locks)—Steelhead are caught in winter (limited). sockeye in June and July. and an occasional coho in fall and winter.
5. Alki Beach—Shore fishing (all year) for several species of bottomfish. Occasional catches are made of chinook and coho.
6. Seahurst (King County) Park—Shore fishing for a variety of bottomfish.
7. Vashon Island (King County)—Shore fishing for bottomfish.

Offshore on the west side of Puget Sound. areas off President Point. Point Jefferson, and Point Monroe, and to the south are good fishing areas for adult chinook from December to May—immature chinook are taken all year. Also, from February through March, fishing is good for immature chinook in Agate Passage.

About the western side and lower half of Bainbridge Island, there are several good grounds for fishing immature chinook in the winter season. Black and copper rockfishes are taken from Port Blakely and Blake Island, and the east shore of Blake Island is noted for sea-run cutthroat trout. Chinook are fished off Point Vashon during winter and spring.
for rockfishes. At the south end of Vashon Island in the lower reaches of Puget Sound and off Quartermaster Harbor, anglers fish for immature chinook during the early winter. Off Poverty Bay (Redondo), immature chinook are fished during winter and spring, and some adult coho and pinks are taken during the summer and fall.

The Point Defiance area, close to the city of Tacoma, is one of the more popular all year fishing locations for coho and chinook. Fishing is best during late spring, early summer. Commencement Bay is also a popular place for fishing adult coho in the fall and chinook in late summer and fall. Pink salmon are occasionally taken in the bay. Immature chinook are present all year. The Pumpkin River, which empties into Commencement Bay, is reported to have a good run of winter steelhead.

From south of Point Defiance to near Fox Island is a good fishing area for rockfish and lingcod. As in the northern part of Puget Sound, rockfishes are prevalent (black, copper, quillback, canary, and yellowtail), as well as white and striped surf perch. About the southeast end of Fox Island, both immature and adult chinook are taken-immature fish are caught in the winter and spring; and adults in late summer. From Dalco Passage into The Narrows, immature chinook are said to be taken all year and coho from late spring through summer. South of Port Fosdick is a good fishing place for Pacific cod during winter and spring.

The eastern shore of Henderson Bay is a winter fishing area for immature chinook: off Green Point they reportedly are taken all year. Local anglers say the best fishing area for winter chinook is from near Rosedale north. In late summer, maturing chinook often are found along the northwest shore of Henderson Bay. South of McNeil Island is a good fishing area for immature chinook in winter and spring, also off Devils Head and around Johnson Point. Resided coho are caught in late spring and summer in these two areas as well as in Henderson Bay.

Off the south tip of Anderson Island, chinook are taken year-round. Best fishing, however, is in the winter and spring, when the largest fish are caught in spring. The Nisqually River also has winter steelhead and sea-run cutthroat.

In the lower reaches of Puget Sound, immature chinook are present in many areas in spring and early summer. Some adult chinook are taken in Budd Inlet during the late summer. In this southern area, in addition to the anadromous species of salmon and cutthroat trout, large numbers of surf perch (particularly pile and striped) are taken about docks, pilings, or other obstructions, and surf smelt are known to appear in some of the inlets.

29. Southern Hood Canal and Lower Puget Sound

Numerous channels cut the topography of the southern portion of Puget Sound (Chart 29). This area not only has excellent salmon fishing, but is one of the primary areas for fishing sea-run cutthroat trout.

SOUTHERN HOOD CANAL

The southern portion of the Hood Canal has much of the same species composition in the fishery as that found north in the canal. For information on the north portion of the Hood Canal see Chart 28.

In the southern portion of the canal, immature chinook and coho salmon are frequently taken off the Lilliwaup River, in late spring and summer. Farther south off Hoodport is a good location for fishing adult chinook and coho from August to November. Influencing the distribution of salmon in this area are the hatcheries located at Hoodport and on the Skokomish River (George Adams Hatchery). Off Hoodport, Ayres Point, Sisters Point, and Union, fishing is good for immature chinook and coho during winter and spring; and sometimes for adult coho in October and November. Sea-run cutthroat reported are taken all year in this area. The Skokomish River has a steelhead run in the winter; some also are taken in summer. Occasional catches of cutthroat are made in the tidal area and about the river mouth.

SOUTHERN PUGET SOUND

Along the east shore of Vashon Island, below Point Bâele, anglers take immature chinook in winter and spring. This area also has good fishing for rockfishes. At the south end of Vashon Island in the lower reaches of Puget Sound and off Quartermaster Harbor, anglers fish for immature chinook during the early winter. Off Poverty Bay (Redondo), immature chinook are fished during winter and spring, and some adult coho and pinks are taken during the summer and fall.

The Point Defiance area, close to the city of Tacoma, is one of the more popular all year fishing locations for coho and chinook. Fishing is best during late summer. Commencement Bay is also a popular place for fishing adult coho in the fall and chinook in late summer and fall. Pink salmon are occasionally taken in the bay. Immature chinook are present all year. The Pumpkin River, which empties into Commencement Bay, is reported to have a good run of winter steelhead.

From south of Point Defiance to near Fox Island is a good fishing area for rockfish and lingcod. As in the northern part of Puget Sound, rockfishes are prevalent (black, copper, quillback, canary, and yellowtail), as well as white and striped surf perch. About the southeast end of Fox Island, both immature and adult chinook are taken-immature fish are caught in the winter and spring; and adults in late summer. From Dalco Passage into The Narrows, immature chinook are said to be taken all year and coho from late spring through summer. South of Port Fosdick is a good fishing place for Pacific cod during winter and spring.

The eastern shore of Henderson Bay is a winter fishing area for immature chinook: off Green Point they reportedly are taken all year. Local anglers say the best fishing area for winter chinook is from near Rosedale north. In late summer, maturing chinook often are found along the northwest shore of Henderson Bay. South of McNeil Island is a good fishing area for immature chinook in winter and spring, also off Devils Head and around Johnson Point. Resided coho are caught in late spring and summer in these two areas as well as in Henderson Bay.

Off the south tip of Anderson Island, chinook are taken year-round. Best fishing, however, is in the winter and spring, when the largest fish are caught in spring. The Nisqually River also has winter steelhead and sea-run cutthroat.

In the lower reaches of Puget Sound, immature chinook are present in many areas in spring and early summer. Some adult chinook are taken in Budd Inlet during the late summer. In this southern area, in addition to the anadromous species of salmon and cutthroat trout, large numbers of surf perch (particularly pile and striped) are taken about docks, pilings, or other obstructions, and surf smelt are known to appear in some of the inlets.
The name Alaska comes from the Aleut word, meaning, "The Great Land." The 49th State truly deserves its name for it is as big as England, France, Spain, and Italy combined and stretches over an even greater distance. It is a land rich in natural resources—fish, shellfish, game, oil, minerals, and timber—and has some of the most beautifully rugged territory in North America.

Fishing has always been Alaska's biggest industry, with salmon the mainstay of that industry. All five species of Pacific salmon are found in Alaskan waters. The three that are of prime interest to anglers are the chinook (king), coho (silver), and the pink. The sea-run trouts and char, close relatives of the salmon, are also popular game species and plentiful in and around Alaska's coastal streams. Bottomfishes are abundant and include halibut, flounder, rockfishes, lingcod, and greenlings.

The fishing grounds plotted on the following charts tend to reflect the intensity of the fishing effort rather than the availability of fish. Sport fishing is probably as good or even better in unshaded areas, but these places are less accessible than those near population centers and, therefore, are fished less frequently.

Most recreational fishing in salt water takes place in the waters of the southeastern Alaska Panhandle from the Dixon Entrance north to Yakutat and in the south central or Gulf Coast region, including Prince William Sound, Kenai Peninsula, Cook Inlet, and Kodiak Island. Saltwater angling in the remaining coastal areas to the west and to the north is primarily subsistence fishing, and relatively inaccessible to most recreational anglers.
Southeastern Alaska

The southeastern section of Alaska (Charts 30 and 31), sometimes called the Alaska Panhandle, consists of a narrow stretch of mainland and a labyrinth of numerous islands, fjords, and deep waterways which form the Inside Passage. The mountainous and heavily forested islands shelter these waterways from the Pacific Ocean. The panhandle has a temperate, rainy climate with warm winters and cool summers. The temperature seldom drops to zero Fahrenheit, and the annual rainfall varies from 25 to 155 inches.

Much of the land is part of the Tongass National Forest, the largest and, to some people, the most beautiful of our country’s national forests. Many glaciers are still carving, grinding, and forming the land. Large rivers have their sources in these glaciers and are laden with silt, but tributaries are cleared and have abundant populations of game fish. Coastal streams are short and fairly swift, flowing through deep, narrow, and densely wooded valleys.

Cities and towns, isolated by the maze of waterways, depend heavily on water and air transportation. Road systems tend to be related to the development of each particular town rather than forming an interconnected series of roadways. Alaska’s “marine highway” the State Ferry system, has terminal facilities at Ketchikan, Wrangell, Petersburg, Sitka, Hoonah, Juneau, Haines, and Skagway.

Salmon Fishing

Excellent salmon fishing can be found close to many harbors and moorages. Best fishing spots are usually around prominent points of land and where tidal currents are swift and strong. Air and charter boat services are available at many of the larger cities for anglers who wish to fish in the more remote areas. Boats used in salmon fishing range from small skiffs to large cruisers and yachts. You should consult tide tables and inquire locally about the waters you plan to fish, because currents can be tricky in some channels and extreme fluctuations between high and low tides can leave you stranded.

In a number of bays in southeastern Alaska, large chinook start running in April and May and sometimes earlier in the Ketchikan area. They continue to run through June and July, then fishing tends to taper off in August as the mature fish leave for spawning grounds. In many areas immature chinook or “feeders” are available year-round and weather, rather than the absence of salmon, restricts fishing activity.

Coho salmon appear in southeastern Alaska later in the year in August, September, and October. In certain areas such as around Ketchikan and Sitka there are earlier runs in July, and cohos occasionally show up as early as June in the Juneau area. Fish caught in September and October are larger, but fewer in number. Pinks usually begin their run in June, and the run lasts until September and sometimes later in certain areas. Pinks ordinarily are not found far from shore and do not run up streams for great distances. The fishing is usually best in July and August during years of major abundance.

Some chums are caught around the time of the coho runs, but these fish are not considered as desirable as other species of salmon. Anglers seldom take sockeye or red salmon in salt water in southeastern Alaska. Salmon derbies are celebrated annually at Ketchikan, Juneau, Sitka, Craig, Thorne Bay, Coffman Cove, and Whale Pass.

Bottomfishing

Bottomfishes such as Pacific halibut, rockfishes, lingcod, starry flounder, sablefish, flounders, and greenlings are plentiful in the waters of the Inside Passage. Although these fish are considered by some to be less glamorous than salmon and sea-run trout, an increasing number of anglers are recognizing their worth as fine game and table fish. Pacific halibut are common and
For those anglers who either by circumstance or choice would rather fish from shore than venture out in a boat, Dolly Varden, sea-run cutthroat, and steelhead trout are within casting reach at the mouths of many coastal streams and rock beaches. Dolly Varden is by far the most abundant and in southeastern Alaska this species is taken from May through October. Cutthroats also begin running in May and fishing usually lasts through August, tapering off in September. Steelhead run in many coastal streams in the spring and fall. In the southern Alaska Panhandle (Chart 31) shore anglers fish along the Mitkof Island road system south of Petersburg, Blind Slough, which runs adjacent to the highway. It can be fished by walking a short distance off the road. Fishing effort is most concentrated in the intertidal area for coho during the runs in August and September. Dolly Varden and cutthroats are taken throughout the year with best fishing during September. Access to Wrangell Narrows, shore as well as skiff fishing is good at Petersburg Creek for steelhead, cutthroats, Dolly Varden, and salmon. Access to this area is by boat from Petersburg. A popular trout fishing spot is at the head of tidewater, which is heavily fished during the spring and summer and again in the late fall. The intertidal area extending 2 miles upstream is the favored location for pinks, chums, and coho.

In the northern Alaska Panhandle (Chart 31) shore fishing is very popular around the Juneau-Douglas area. Most fishing is for Dolly Varden, although some cutthroats, steelhead, pinks, coho, and chinook also are taken. Most shore fishing occurs from spring through September. Popular spots are around the mouths of such streams as the Fish, Salmon, Peterson, and Quillback (rasphead or red snapper) creeks as well as beaches near the Eagle River.

Farther north near Yakutat, the Situk River, Italio River, and Lost River offer some of the best trout and salmon fishing in the State. The Situk River, reachable from Yakutat by air or road, has excellent fishing for large steelhead. The Situk River's reputation as a trophy steelhead stream seems to be largely due to the presence of repeat spawners. The older female fish evidently have a high survival rate after initial spawning, and thus are able to return again in appreciable numbers the following year.

For those anglers who either by circumstance or choice would rather fish from shore than venture out in a boat, Dolly Varden, sea-run cutthroat, and steelhead trout are within casting reach at the mouths of many coastal streams and rock beaches. Dolly Varden is by far the most abundant and in southeastern Alaska this species is taken from May through October. Cutthroats also begin running in May and fishing usually lasts through August, tapering off in September. Steelhead run in many coastal streams in the spring and fall. In the southern Alaska Panhandle (Chart 31) shore anglers fish along the Mitkof Island road system south of Petersburg, Blind Slough, which runs adjacent to the highway. It can be fished by walking a short distance off the road. Fishing effort is most concentrated in the intertidal area for coho during the runs in August and September. Dolly Varden and cutthroats are taken throughout the year with best fishing during September. Access to Wrangell Narrows, shore as well as skiff fishing is good at Petersburg Creek for steelhead, cutthroats, Dolly Varden, and salmon. Access to this area is by boat from Petersburg. A popular trout fishing spot is at the head of tidewater, which is heavily fished during the spring and summer and again in the late fall. The intertidal area extending 2 miles upstream is the favored location for pinks, chums, and coho.

In the northern Alaska Panhandle (Chart 31) shore fishing is very popular around the Juneau-Douglas area. Most fishing is for Dolly Varden, although some cutthroats, steelhead, pinks, coho, and chinook also are taken. Most shore fishing occurs from spring through September. Popular spots are around the mouths of such streams as the Fish, Salmon, Peterson, and Quillback (rasphead or red snapper) creeks as well as beaches near the Eagle River.

Farther north near Yakutat, the Situk River, Italio River, and Lost River offer some of the best trout and salmon fishing in the State. The Situk River, reachable from Yakutat by air or road, has excellent fishing for large steelhead. The Situk River's reputation as a trophy steelhead stream seems to be largely due to the presence of repeat spawners. The older female fish evidently have a high survival rate after initial spawning, and thus are able to return again in appreciable numbers the following year.
Fishing Areas

Fishing Facilities

Sportboat Operation

NOT TO BE USED FOR NAVIGATION
See NOS Nautical Charts

FALL & WINTER FISHING FOR:
- CHINOOK SALMON
- COHO SALMON
- HALIBUT
- DOLLY VARDEN
- CUTTHROAT TROUT

FOR:
- OLYMPIC SALMON
- SALMON
- CHINOOK SALMON
- TROUT (SEA-RUN)
- CUTTHROAT TROUT
- DOLLY VARDEN

JUNE AREA
- COHO SALMON
- CHINOOK SALMON
- PINK SALMON
- Sockeye SALMON
- DOLLY VARDEN
- LINGCod
- HALIBUT

JUNE Area
- SALMON
- CHINOOK SALMON
- TROUT (SEA-RUN)
- CUTTHROAT TROUT
- DOLLY VARDEN
32 Cordova to Cook Inlet

The region fruiting the Gulf of Alaska includes Prince William Sound Kenai Peninsula, and Cook Inlet (Chart 32). The coast is flanked by the Alaska Range which has some of the highest mountains in North America. These mountains block off much of the cold northerly winds, and thus, along with the influence of ocean breezes contributes to the Gulf's rains and often stormy climate. It is Alaska's most populous region and has the State's first producing oil wells. The area is known for farming, fishing, mining.

Some of the finest fishing grounds are within relatively, easy access of coastal towns, together by a thousand miles of highway. Salmon derbies are held at Seward and Valdez. And a halibut derby is celebrated at Homer.

Prince William Sound

In Prince William Sound most saltwater fishing is centered around the towns of Cordova, Valdez, and Port Wells. The major fishing effort is for coho, which occur from mid-July through mid-September. Valdez and Cordova have some winter fishing for chinook and pinks are taken by trolling in salt water in July and in streams during July and August. Chums, although present in the sound and its drainages, are not fished much because they do not appear to bite readily in salt water.

Bottomfish such as halibut, rockfishes, and lingcod are available year-round in most saltwater bays. Some common species of rockfishes taken in Prince William Sound are the dusky, black, and copper.

Cordova on the eastern shore of the Sound was once a copper mining town and is now a fishing center. Ferry service provides connections to Valdez and the State highway system. Cordova offers nearby winter fishing for chinook during January, February, and March. Coho fishing is excellent, and often lasts into October—perhaps sometimes take coho from the downtown piers.

Further north at the town of Valdez, the Alaska highway system connects the Gulf coast to the Yukon country. This city was virtually rebuilt after the 1964 earthquake and tidal wave. Fishing for chinook is between February and late May, and coho are taken here in August and September. Considerable interest is growing in halibut fishing in the Valdez Arm area and there is a small but developing cod fishery off the Valdez City Dock.

Across Prince William Sound fishing is good for coho at Port Wells. A small-boat harbor has just been completed at Whittier, and it is expected that a sport fishing will develop rapidly here. The town is within relatively easy access from Anchorage and points north and east, with connections by ferry to Valdez and via railroad to Portage on the Anchorage-Seward Highway.

THE KENAI PENINSULA AND COOK INLET

Seward, on Resurrection Bay, is the main port of the Kenai Peninsula and south terminus of the Alaska Railroad. Most fishing is for coho. Although pinks and some chinook also are caught, Resurrection Bay has been closed to commercial fishing for coho since 1965. A coho fishing derby is held each year in August and is very popular with local and visiting sport anglers. Coho start running in the bay about mid-July and the run usually lasts till September with best fishing in August. Shore fishing is popular in the Seward area. Particularly around Lowell Point where Dolly Varden, pinks, and some coho are caught by casting from the beach.

There is good bottomfishing for rockfishes and lingcod over rocky areas at the entrance to Resurrection Bay. Black, yelloweye (red snapper), yellowtail, and tiger rockfishes are some of the species landed around Rugged and Cheval Islands. Most bottomfishing occurs from mid-May through mid-July.
PACIFIC ISLANDS

The following pages describe marine game fishing around the tropical islands of Hawaii, American Samoa, and Guam. The Hawaiian Islands rise out of the central Pacific Ocean near the margin of the tropics, while American Samoa lies below the equator approximately 2,600 miles south of Honolulu; Guam, the largest and westernmost territory of the United States, is located in the western Pacific Ocean less than 1,700 miles south of Tokyo, Japan. Although widely separated geographically, these islands all fall within the boundaries of a large region characterized by a distinct marine fauna—a region that extends from East Africa across the Indian Ocean into the central Pacific Ocean. Thus many similar or identical species occur in Hawaii, American Samoa, and Guam.

All of these islands are volcanic in origin with the sea bottom plunging fairly rapidly away from shore, and in many locations excellent deep-sea fishing opportunities are available within a relatively short distance from port. Some of the billfish and tuna grounds have produced record-sized fish and earned a worldwide reputation in big-game fishing circles. But although the glamour and excitement of deep-sea fishing draws many to the offshore grounds, much of the fishing conducted about the islands is for the great variety of smaller tropical fishes found over inshore reefs and along rocky and sandy shores. The most sought-after fishes are not necessarily the largest or the ones with the best fighting ability—many islanders judge the value of a fish by its taste and by the traditional values attached to catching it and preparing it for the table.

Visitors should always first check locally about the area they plan to fish unless accompanied by a professional skipper or guide. If you intend to fish from shore, ask about surf conditions, accessibility, and restricted areas. Double check the edibility of your catch, particularly in American Samoa and Guam, where a few species are reported to be poisonous. Those known or suspected to be poisonous are discussed in the accompanying text and in the section on Marine Game Fishes of the Pacific Islands.
until mid-July when coho fishing begins.

Around the tip of the Kenai Peninsula is the town of Homer. On Kachemak Bay Homer is blessed with a mild climate with winter temperatures seldom falling below zero Fahrenheit, and ocean breezes keep summer temperatures from going much above 70°F. Recreational use of Kachemak Bay, previously, was relative low because of poor road connections with Anchorage and neighboring communities, but since completion of the Sterling Highway and construction of a new small boat harbor an increasing number of sport anglers are coming to Homer to fish for halibut, king, pinks, Dolly Varden, flounder, rock and salmon. Homer Spit offers good shore fishing, and there is short fishing for coho around Mud Bay on Kachemak Bay.

Most sport fishing on the Cook Inlet side of the Kenai Peninsula coast is in rivers and streams that empty into the inlet. To help rebuild chinook salmon stocks, which were decimated by the fisheries' sport and commercial fishing for chinook, was prohibited in Cook Inlet and drainages in 1964 and 1966. The Alaska Department of Fish and Game allowed a regulated sport harvest from certain streams and rivers, including the Kenai River Anchor River, Ninilchik River, and Deep Creek Fishing, for chinook usually starts in late May and continues until mid-June in lower Peninsula streams. Chinook are then followed by Dolly Varden, which are available in mid-July. In August and through September, coho and steelhead enter the streams of the lower Peninsula steelhead run continues to run until October. Pink salmon are then available in considerable numbers from Peninsula streams during years of major runs. Best times for pinks and coho are in July and August.

A saltwater fishery (from boats) recently developed in Cook Inlet south of Deep Creek is expanding rapidly. Two rivers and halibut are taken from Chiniak Bay and Anton Larson Bay. Rockfish (rock bass) fishing is especially productive along the north shore of Monashka Bay during summer. July brings excellent fishing for pinks in Chiniak Bay, and from August to October coho are abundant in Chiniak, Pasagshak, and Monashka bays.

There is little sport fishing in marine waters west of Kodiak. Most recreational fishing is in freshwater streams and inlets. On the Alaska Peninsula there is some fishing for salmon, trout, and halibut at Cold Bay—a windswept, treeless outpost and hub of air operations for the Aleutians. Government and airline employees and their families make up most of the population at Cold Bay. Farther west on the Aleutian Chain, military personnel fish for salmon, Dolly Varden, and halibut at Adak Naval Base.

Northward on the Bering Sea there is some fishing for salmon. There is some saltwater angling from shore around the mouth of the Nome River and from boats in Safety Lagoon.

33. Kodiak Island and Points West

Kodiak Island (Chart 33), site of the first Russian settlement in Alaska, offers excellent saltwater fishing for salmon, halibut, sea-run trout. Dolly Varden and rockfishes. The northern part of the island is forested, the southern portion is relatively treeless with grassy slopes typical of the volcanic and barren terrain of the Alaska Peninsula country. Most marine game fishing on Kodiak takes place on the northeastern tip of the island close to the city of Kodiak, which has launching facilities. Tackle stores, breakwater fishing, and some dock fishing. Charter planes are available for those who want to fish in the more remote areas such as Afognak Island to the north.

From late May to August, shore anglers catch Dolly Varden and around the mouths of the Buskin and Pasagshak rivers. In June, sockeye are abundant in the mouths of these two rivers and halibut at Adak Naval Base.
The following pages describe marine game fishing around the tropical islands of Hawaii, American Samoa, and Guam. The Hawaiian Islands rise out of the central Pacific Ocean near the margin of the tropics, while American Samoa lies below the equator approximately 2,600 miles south of Honolulu; Guam, the largest and westernmost territory of the United States, is located in the western Pacific Ocean less than 1,700 miles south of Tokyo, Japan. Although widely separated geographically, these islands all fall within the boundaries of a large region characterized by a distinct marine fauna—a region that extends from East Africa across the Indian Ocean into the central Pacific Ocean. Thus many similar or identical species occur in Hawaii, American Samoa, and Guam.

All of these islands are volcanic in origin with the sea bottom plunging fairly rapidly away from shore. and in many locations excellent deep-sea fishing opportunities are available within a relatively short distance from port. Some of the billfish and tuna grounds have produced record-sized fish and earned a worldwide reputation in big-game fishing circles. But although the glamour and excitement of deep-sea fishing draws many to the offshore grounds, much of the fishing conducted about the islands is for the great variety of smaller tropical fishes found over inshore reefs and along rocky and sandy shores. The most sought-after fishes are not necessarily the largest or the ones with the best fighting ability—many islanders judge the value of a fish by its taste and by the traditional values attached to catching it and preparing it for the table.

Visitors should always first check locally about the area they plan to fish unless accompanied by a professional skipper or guide. If you intend to fish from shore, ask about surf conditions, accessibility, and restricted areas. Double check the edibility of your catch, particularly in American Samoa and Guam, where a few species are reported to be poisonous. Those known or suspected to be poisonous are discussed in the accompanying text and in the section on Marine Game Fishes of the Pacific Islands.
HAWAIIAN ISLANDS

The beautiful islands of our 50th State, Hawaii, are situated in the north Central Pacific Ocean over 2,000 miles southwest of mainland North America. The Hawaiian archipelago comprises eight major islands and a number of rocky islets and small coral islands. The larger islands are actually the high peaks of an undersea chain of volcanic mountains and rise steeply and majestically out of the deep clear-blue waters of the Pacific. Geologically, the islands were formed west to east; the youngest island being the island of Hawaii, which still has active volcanoes. The oldest are the tiny coral sand islands at the westernmost tip of the chain.

The climate is largely influenced by the northeast trade winds that travel over the cool, westward flowing North Equatorial Current, and then are affected by the high elevations and contours of the islands. As a result, the islands have a relatively cool, wet windward side and a warm, dry leeward side, and there is wide variation in temperature, wind, and rainfall according to locality. In general, temperatures range from 56°F to 90°F. The warmest months are July and August, and September when temperatures may reach 80°F to 90°F. Occasionally a southerly or “Kona” wind brings mugginess to the islands and rain to the leeward coasts.

The population is unevenly distributed; 62% of the people live on Oahu, and three-quarters of these in the city of Honolulu, Hawaii. The largest island with six and a half times the land area of Oahu, has only 8% of the population.

The islands of Hawaii offer a variety of excellent year-round deep-sea, inshore, and fine fishing. Hawaii's blue marlin and tuna grounds are world famous, and the professional skippers and crews that fish these waters are among the most experienced blue-water anglers in the world. Charter boats provide full equipment and operate year-round on a nonscheduled basis. Advance reservations should be made with individual boat operators or with charter services. International Game Fish Association’s scales and weighmasters are available on all the main islands.

34 Hawaii Big Game Fishing

Hawaii's blue marlin and tuna grounds are world famous, and the professional skippers and crews that fish these waters are among the most experienced blue-water anglers in the world. Charter boats provide full equipment and operate year-round on a nonscheduled basis. Advance reservations should be made with individual boat operators or with charter services. International Game Fish Association's scales and weighmasters are available on all the main islands.

The major trolling grounds for Hawaii's sport fishing fleet are shown on Chart 34. Most fishing is done off the calmer leeward coasts of the islands. The windward coastal waters and the channel areas between the islands are just as productive for big game fish, but the seas in these blustery areas are often rough and tend to discourage most anglers. Fishes that are taken by trolling include blue, black, and striped marlins (all called "au" by the islanders), "ahi (yellowfin tuna), aku (skipjack tuna), "ahi-mahihi (dolphin), ono (wahoo), hawakawa, little tuna, and kanu (rainbow runner or Hawaiian salmon). Most trolling occurs in water 1,000 fathoms or less; although off the Kona coast of Hawaii, boats may fish over water up to 2,000 fathoms or more in search of marlin and tuna.

There are two basic types of fishing strategies—area fishing and ledge fishing. Anglers who fish the area work over a known productive fishing ground such as Penguin Bank or the Chicken Farm, watching for flocks of seabirds that feed on the baitfishes that marlin and large tuna chase to the surface. Ledge fishing involves trolling along submarine shelf areas where marlin and tuna and other smaller fish are known to concentrate and feed. Aside from being excellent marlin and tuna areas, these precipitous ledges also produce impressive numbers of ono and Kahala (amberjack), as well as the large deepwater snappers which are caught handlining on the bottom.
35 Oahu

Oahu (Chart 35) is the political and commercial center of the Island State where the bustling, capital city of Honolulu is located. It is here that most of Hawaii's people live and work.

The island is formed by two rugged parallel volcanic mountain ranges separated by a wide valley, carpeted with sugarcane and pineapple. Many shore recreation spots and scenic views are within easy access along highways that circle and cross the island.

Offshore Fishing

Honolulu's Kewalo Basin, only a 5-minute drive from the Waikiki hotel district, has fine fleets of deep-sea cruisers. Charter boats fish close-in and offshore for many different types of game fish—marlin, 'ahi, mahimahi, kahakawa, ono, and sometimes the deepwater snappers—depending on what is running. Marlin have been caught within a mile of the harbor. Honolulu boats often fish from Penguin Bank to the coast of the island or work from the western or leeward shore along Barbers Point to Kaena Point off the Waianae coast. Penguin Bank is noted for large schools of small tuna and mahimahi as well as marlin and ono. The Waianae coast offers the comfort of fishing in the calm lee of the island and a promise of exceptionally large marlin and yellowfin tuna ('ahu) Charter boats out of Pokai Bay Boat Harbor also fish this area. On the windward coast, charters are available at Heeia Boat Harbor in Kaneohe Bay, and when weather permits, there is good marlin fishing along the 100-fathom drop off between Makapuu Point and Mokapu Point.

Nearshore and Shoreline Fishing

Fishing from shore is probably the popular way to fish throughout the Pacific Islands. Getting to shore is relatively easy in most places, and the cost of this type of recreation is nominal. A variety of methods are used—pole and line, netting, spearfishing, and torching. Only a few places in Hawaii rent fishing tackle, but all of the islands have sporting goods stores where inexpensive gear can be purchased.

Heavy butt-casting gear is used mainly for ulua, an island term for large-sized jacks. These fish are highly prized by shore anglers and some are reported to reach 5 feet long. Ulua are found around rocky headlands and points, usually in turbulent water. Some of the best fishing spots for ulua on Oahu are Koko Head, Bamboo Ridge (north of Hanapua Bay and to the south of the Blow Hole), Diamond Head, Makapuu Point, and Kaena Point. This type of fishing can be dangerous for the beginner because of the rugged nature of the terrain in most ulua fishing areas. Access to some of the better fishing spots is sometimes difficult, and the surf can be treacherous—reports of anglers being swept from the rocks by waves are not uncommon.

Young jacks, called "papio," are favorites for light tackle quarry for pier and shoreline anglers. Papio are now generally considered the island's most abundant from August to November. Another member of the jack family, the akule, is also a popular light tackle fish. Most pole fishing is for young akule or "hahalalu," often pronounced simply "halalalu." which are caught in bays and harbors, such as Pokai Bay, and Haleiwa Harbor. In Honolulu Harbor by pier fishing under lights. Hahalalu are caught mostly at night, as are a variety of other inshore fishes.

Some fishes that are active at night—wekes, akuleholo, and 'ama'ama—are caught by "torch fishing." On calm dark nights when the tide is low, persons armed with spears or hand nets wade out over the reef carrying lights to locate marine animals. Years ago, torches were made from dried coconut leaves, but now gasoline and battery-powered lights are used. Lobsters and "squid" (octopus) are also taken torch fishing.

The "hiklau" is another traditional island fishing method. It involves a group of people. A large surround net is used to encircle the fish, usually in protected waters. Once the net is set in place everyone pulls on the two end ropes. forcing the fish into the net as it is drawn into shallow water. Usually all kinds of fishes are caught with the hiklau net, and custom dictates that anyone who wets his foot during netting be given a portion of the catch.

Some of the popular shore fishing and torching areas are shown on the map. In Honolulu Harbor there is pier fishing for 'ama'ama, halu, and maomao. The shallow reef around Honolulu Airport is a favorite location for netting 'ama'ama; spinning for papio and 'oio; and, on calm nights, torching for weke. Parts of Waikiki Beach are good for torch fishing, especially for "squid" (octopus). There is also fishing from shore for akuleholo, papio, 'ama'ama, and awa along the Ala Wai Canal that cuts through the Waikiki Beach district. Along Waimanalo Beach, 'oio and weke are caught from shore, and moari are taken near the mouth of creeks emptying into Waimanalo Bay.

Farther north, Kaneohe Bay has netting for surgeonfish (manini and kala), 'ama'ama, akule, awaawa, and awa. Kaneohe Bay is also one of the better areas for octopus or "squid," and underwater spearfishing for kumu, manini, palao, and weke-ulua. 'Omaka are abundant seasonally, and 'awoweo on occasions enter the bay in great numbers. All along the north-eastern coast there is shore casting over reef-and-sand bottom for papio and weke; over sand bottom, for mi and 'oio; and cast netting and gill netting inside of the reef for surgeonfish, 'ama'ama, and akule.

In Haleiwa Bay, Hahalalu school in great numbers in the summer, and many are taken by pole fishing from shore. Hahalalu and 'opelu are taken in the surf along the coast north of Waianae; 'oio and ulua are caught off the shores around Nanakuli; moai and
Fishing with lures for 'omaka, nehu, and palani; and 'ama'ama: harbor fish for 'omaka in Pearl Harbor. Mokapu Peninsula, and boats bottom, ulua are taken in the area north of Kewalo Basin. 'Omaka, menpachi, papio, and weke-ulua are caught from boats in Kaneohe Bay. Large 'aWeoWeo, menpachi, papio, and weke-ramps, except Kewalo Basin, 'Omaka, dedicated on the map have launching sites.

There is a considerable amount of small-boat fishing in "reef-protected areas and in bays and harbors around the island. All facility locations indicated on the map have launching ramps, except Kewalo Basin. 'Omaka, 'aweoweo, menpachi, papio, and weke-ulua are caught from boats in Kaneohe Bay. Large 'aWeoWeo, menpachi, papio, and weke-ramps, except Kewalo Basin, 'Omaka, dedicated on the map have launching sites.

The island of Hawaii (Chart 36), often referred to as the "Big Island," contains two-thirds the land area of the entire island chain. It consists of five volcanic mountains about 20 miles apart and linked together by saddles. 3,000 to 7,000 feet high, formed by overlying lava flows. Along the northeast coast, the island takes the full brunt of the northeast trades and is exposed to heavy rains. The rest of the island is rather dry and arid owing to the sponglike porosity of the rocks and lack of rain on the leeward side. All around the island, water depth plunges dramatically and rapidly away from shore.

Offshore and Nearshore Fishing

Most offshore game fishing occurs on the calmer leeward or Kona coast during spring, summer, and fall. In winter, especially during January, there is little fishing activity because of rough seas, but fishing usually picks up again in February. Blue marlin can be caught all year, but are most abundant from June through October. Striped marlin appear to be more abundant during times when blue marlin are least abundant (during winter and early spring), and are not caught by sports anglers in as many numbers as the blues. Best time for ahi is November through April. Ahi are taken all year, but best catches are made in the summer. Ono are most abundant from April through August.

The Kona coast is famed for its smooth, clear water and ideal fishing conditions. It is also famous for the Hawaiian International Billfish Tournament, which is staged every summer at Kailua-Kona. Anglers from all over the world come to fish the waters of the Kona Coast, where several marlin over 1,000 pounds have been landed in recent years. The most popular grounds fished by the charter fleet are off Keahole Point—less than an hour's run from Kailua-Kona. Boats also fish along the entire leeward coast as far south as Keana Point in search of marlin and tuna.

Farther inshore, 'ahi and ono are taken in good numbers by trolling over the deep 100-fathom ledge. This drop-off area also is good for handling onaga and kahala. From about 40 to 100 fathoms there, handling and netting for aku, opelu, 'opakapaka, and some of the goatfishes or weke—weke-ulua and moana. Nearest out to about 50 fathoms deep, menpachi, manim, and moana are taken. The Kawaihae (Kohala) coast on the northwest side of the island is especially good for one and 'ahi as well as other smaller game fishes. However, waters tend to get a little rough in the afternoon, when the wind usually picks up in this area of the coast. Boats based at Kawaihae often make the run down to the grounds off Keahole Point for marlin and tuna. When weather permits, overnight trips are made from the Kona area, down to South Point for 'ahi, ono, and 'opakapaka.

The windward coast has limited offshore fishing by private boats based out of Hilo for marlin, 'ahi, ono, mahimahi, and kawalea. These grounds are fished only by experienced anglers familiar with the area—the extremely heavy swells and rough seas are not for the novice angler and boat handler. Aku, opelu, and 'ua'ue are taken farther inshore, and within the protection of Hilo Bay fishing is excellent for moli and other small game fishes.

Short Term Fishing

Although access is difficult, if not impossible, along much of Hawaii's coastline, there are still many places where one can fish from shore. An assortment of fishes are taken: among them the most sought after appear to be large ulua and their younger offspring "pupu," the convict tang or manini; and young akule or hahala. Hawaii's rugged coastline is particularly suited for ulua fishing. One of the best areas for ulua is at South Point, where black ulua are most abundant in the winter. And white ulua are caught year-round, dominating the catch in summer. Other good areas are Upolu Point, Konaekua Point just north of Kealkukau Bay and the area south of the Bay. And all along the windward coast south of Hilo.

The small but tasty manini is a very popular shore fish on the island of Hawaii. They are caught all around the island mostly by cast netters. Papio are abundant and are caught pole fishing along the coast and in bays and harbors. Hahala are also taken pole fishing in bays and harbors, particularly at Hilo. Kawaihae, Honokohau, Kailua, and Keahole.

Some of the more popular shore-fishing areas are indicated on the map. Along the leeward coast, 'ama'ama...
and mani are taken from shore between Kawaihau and Puuok. There is limited access by a lava field south of Puuok, but Honokohau Harbor and the coast south to Kailua offers some shore fishing. South of Kailua-Kona there is intermittent access to shore along the highway—some areas are privately fished. From about Keauhou south to Kona, fishing is reported to be excellent, but access is difficult—only by way of a dirt trail about one-half mile south of Keauhou Bay. In most of Kealakekua Bay, fishing is restricted, but to the south there is shore fishing for ulua, menpachi, and papio (about a 5-minute walk to the beach). A limited amount of shore fishing occurs near Hoopua and Miloli.

The windward or Hilo coast of the island has shore fishing along Hilo Bay, for both Kilauea and Hawaii. South of Hilo, shore fishing for ulua, menpachi, and papio is limited access by the lava fields and the reef are restricted by the U.S. Armed Forces.

**Offshore Fishing**

Sport fishing boats are available for charter off Maui at the old whaling port of Lahaina, close to the Kanaapali Beach resort area. Most deep-sea fishing takes place in the triangle formed by the islands of Maui, Lanai, and Kahooolawe. Fishing around Molokai and Lanai can be arranged through Maui charter services. At the time of this writing, charters were also available on an intermittent basis out of the port of Kaunakakai on Molokai, but this should be checked with the charter services.

Boats out of Lahaina troll for mahimahi, kawakawa, ono, and blue marlin, or bottomfish for deepwater snappers and weke-ula. Most fishing is done in the protected lee of the islands, but during calm weather some boats venture out in the channel areas to bottomfish over the productive submarine ledges of the Paliplo Channel, the 100-fathom ledge where Aua and Kealakekua channels meet, and around the island of Kahooolawe. It is best to check with the Hawaii Division of Fish and Game about fishing around Kahooolawe; sometimes it is restricted during naval operations. The area to the west of Lanai and Molokai is fished by privately owned vessels and the charter fleet out of Oahu.

**Inshore and Shoreline Fishing**

Beaches, rocky points, and reefs along the coastlines of these islands offer excellent opportunity for spin fishing, surf casting, net fishing, and spearing. On Maui, skiffs can be rented at Lahaina for nearshore fishing along the Lahaina coast from Lipapa Point to Maalaea Bay along Highway 30.

37 Maui, Molokai, Lanai, Kahooolawe

This island group (Chart 37) was probably once a single island, but now is separated by channels 6 to 9 miles wide and up to 100 fathoms deep. The Island of Maui is called "The Valley Isle" from the lowlying valley or isthmus that links the two volcanic mountains that form east and west of it. It is the largest island of the group and the second largest island in the Hawaiian chain. The windward or eastern side is a succession of gorges rich in lush vegetation, cascading waterfalls, and black sand beaches. The leeward or western side of the island is characterized by golden sand beaches, secluded coves, and very clear waters.

The island of Molokai also is formed by two volcanic mountains. Its windward side is very scenic with precipitous cliffs, rising steeply 500 to 4,000 feet from the ocean and indented by magnificent valleys. The leeward side is a patchwork of ancient fish ponds fringed with coral reef.

The islands of Lanai and Kahooolawe are both single mountains. Lanai, owned by the Dole Pineapple Company, is primarily a pineapple plantation. Kahooolawe is uninhabited and sometimes used as a target area by the U.S. Armed Forces.

Perhaps Maui's most popular shore fish is the 'o'o (bonefish), which grows to a substantial size in Hawaiian waters. 'O'o and awa are taken from shore and skiffs along the Laima coast south to Maula and along the shore of Maalaea Bay and to the south. Large ulua also are taken along the Lahaina coast at the Lahaina Pier, Maui. At the southwestern tip of the island at Lahaina, akule also are taken in Hana Bay. South of Hana Bay, there is occasional shore fishing in winter for moa, aholole, and manami. At the southwestern tip of the island at La Perouse Bay, akule, menpachi, and a wide assortment of reef fish are taken from shore.

On Lanai, most shore fishing takes place on the northeastern side of the island, which is edged with luxurious coral reef. Kaumalapau Harbor has pier fishing and fishing for awa just outside of the harbor entrance. On the island of Molokai, shore and skiff fishing for ulua is exceptional all along the leeward coast inshore of 20 fathoms. From Kauaihau to Kalanai, there is fishing from shore for 'o'o, awa, and aha. The western shore offers ulua, moa, and 'o'o fishing.
The island of Kauai (Chart 38), about 63 miles west-northwest of Oahu, is the oldest, most weathered, and most verdant of the larger islands. This beautiful “Garden Isle” abounds in rivers and cascading waterfalls. The island consists mainly of a single mountain, Waialeale (5,800 feet), with marginal lowlands except on the northwest. The chief scenic attractions are Wai'aleale—the “Grand Canyon of the Pacific”, the spacious Hanalei Valley where rice and taro are cultivated on native-built terraces; and the Na Pali coast on the northwest with its 4,000-foot high precipices.

Niihau, a small island southwest of Kauai, is privately owned and operated as a cattle-ranch. Kaula Island is uninhabited, and access is sometimes restricted by the military.

OFFSHORE AND NEARSHORE FISHING

Kauai has some of the finest year-round deep-sea fishing in Hawaiian waters and boasts some world-record-size ’ahi, ’o’io, and kamanu. Charters are available out of Nawiliwili Harbor, Hanalei, and Port Allen. At Hanalei you have a choice of either deep-sea or inshore bonefishing excursions.

Ledge fishing (trolling and bottomfishing) is excellent around these islands. The submarine ledges are productive bottomfishing areas for ’opakapaka, ulu, and kahala, which are taken in water about 100 fathoms deep. Ono and small ’ahi (usually under 100 pounds) are plentiful year-round from about 25 to 100 fathoms. The peak of ono fishing is September, October, and November, when huge schools of akule, upon which ono feed, move into the area. This is also the peak time for small ’ahi. Both ono and ’ahi are taken by trolling.

Anglers troll for marlin and large ’ahi (over 100 pounds) in deeper waters from about 100 to 1,000 fathoms. Tremendous schools of ’ahi move into Kauai waters in the late spring, with sizes known to reach a world record of 276 pounds. Marlin are fished year-round, but most fishing is in summer (May to September) when aku, the prime bait for marlin, move into the area in large schools. From September to January, aku are still present around the island, but are not as lightly schooled.

Mahimahi, although caught in Kauai waters, are not as abundant here as around the islands located farther east.

SHORE FISHING

’O’io, papio, moi, and ’ama’ama are abundant all around the island of Kauai. ’Aweoweo, menpachi, halaloa, and various kinds of goatfish are taken by shore anglers. Torch fishing and “squidding” are popular, especially in Kapaa Bay, Anaeho Bay, and over the reef off Haena. At Haena during moonlit nights at low tide, the local people enjoy reef fishing with bamboo poles for ’upapalu or “moonlight fish.” There is pier fishing for a variety of fishes at Nawiliwili Harbor, Hanalei, Port Allen, and Kukuiula Harbor.

One of the finest bonefishing grounds in the world is located off Hanalei along the north shore, where the former world record was held for years (18 pounds 2 ounces). Hawaiian bonefish (’o’io) are taken surf fishing or bottomfishing with cut bait—water conditions are not conducive to fly fishing.
The tropical islands of American Samoa (Chart 39) are in the south Central Pacific Ocean, approximately 2,200 miles southwest of the Hawaiian Islands and 900 miles northeast of the northern tip of New Zealand. American Samoa is an Unincorporated Territory of the United States and comprises seven islands—Tutuila, Aunu'u, Ta'u, Ofu, Swains, and Rose Atoll. Five of these islands are mountainous and volcanic in origin, and two (Rose Atoll and Swains Island) are tiny coral atolls each less than 2 miles in diameter. The combined land area of all the islands is 80 square miles, about one-sixteenth the land area of our smallest State, Rhode Island.

The five larger islands are surrounded intermittently with narrow stretches of coral reef, beyond which the water depth plunges rapidly away from shore. Submerged bank areas may extend out 1/4 to 4 miles before dropping dramatically from 50 fathoms to depths greater than 500 fathoms. The islands are bathed by the warm waters of the South Equatorial Current system, with sea surface temperatures ranging from 75° to 86°F over the course of a year.

The climate of American Samoa is tropical, and air temperatures are generally uniform, averaging 78° to 80°F at sea level. Rainfall is generally heavy, increases with altitude, and is greater on the south and east coasts. Trade winds blow from the southeast quarter about 80% of the time but are relatively light compared to those of Hawaii. Best weather is from November to April when these winds are generally lightest.

About 90% of the total population of 27,000 is located on Tutuila Island, the largest of the island group and the island where Pago Pago is located. The island is about 18 miles long and 5 miles wide with a mountain range along its length. It is nearly bisected by the deep waters of Pago Pago Harbor, one of the finest and most beautiful ports in the South Pacific.

A tourist industry is developing rapidly on Tutuila Island, and the increased tourism has brought a growing interest in the sport fishing potential of Samoa's productive grounds which now yield high commercial catches of billfish and tuna. Two licensed sport fishing boats are now available for charter out of Fagatogo on Pago Pago Bay. Fishing grounds are close, in and offshore of the island.

**Offshore Fishing**

Large game fish are abundant throughout the year in Samoan waters, and many good fishing locations are within a relatively short run from port. Billfish grounds off Tutuila Island produce saula (blue marlin), saula-lele (sailfish), asi (yellowfin tuna), atu (skipjack tuna), rainbow runner, masinass (dolphin), and oho (wahoo). Waters on the north side of the islands are virtually unfished, but show potential of being excellent big game fishing grounds as well. While they are caught year-round, the best time for large asi is March to July, and for atu, October to March.

Inshore of the billfish grounds along the 100-fathom drop-off, there are handlining and trolling for ono, tagi (dogtooth tuna), sapatu (barracuda), and large jacks or ulua. Most tagi are caught handlining at dusk or at night. Sharks are also common along these ledge areas, particularly the gray reef shark.

Bottomfishing is excellent and usually takes place in waters 100 fathoms or less: the main catch consists of groupers and snappers. Visitors to the island should be warned that the flesh of some snappers may be toxic, and it is wise to inquire locally about the edibility of certain species. Groupers, collectively called "gatala" by Samoans, are generally taken at 10 to 40 fathoms over reefs and ledge areas. The most common species are gatala, gatala moana, i'a manaia, and ata'ata, which is similar to California's giant sea bass and ranges up to 500 pounds but generally is from 100 to 400 pounds. Of the snappers, the most common varieties are the colorful bluelined snapper or savali, which is the most abundant; the green snapper or filoa (reported to be slightly toxic in Samoan waters), the red snapper or malia', and another common snapper caught handlining known locally as mu. It is definitely known to cause ciguatera poisoning and should not be eaten. Agama (ukui), a non-toxic snapper, is sometimes taken over bottomfishing areas along with some of the large jacks, atule (kalua), sapatu, tagi, and sharks. Deepwater snappers such as opa or culi (onaga) are more abundant farther offshore over ledges at 200 to 300 fathoms. These deeper areas, however, are
Seldom fished because fishing for other game fishes is so good closer to Tutuila Harbor. The same is true for the bottomfishing areas around the Manua Island group, which are fished mainly by natives who launch canoes in the surf on the west end of Ta'u Island. Rose Atoll, a turtle and bird preserve, is also too far from port to be a feasible fishing ground at this time.

**SHORE FISHING**

The inshore reefs of Tutuila abound with over 600 varieties of colorful fishes, and few have gone untasted by the Samoans, who prefer to comb nearby reefs rather than venture to offshore fishing grounds. As a result, these reefs have been subjected to heavy fishing pressure over the years and, unfortunately, are showing signs of depletion.

Most shore fishing is done by wading out over the reefs at high tide. A variety of sea creatures are captured in almost equal variety of ways—with traps, nets, spears, hook and line, or simply bare hands and a pail. The most common methods are bamboo pole fishing and cast netting. Young snappers and groupers are the main catch, but "lupo" (young jacks), "malau" and other, squirrelfishes, goatfishes, and even an occasional butterflyfish and surgeonfish are taken. The shore is accessible all along the southern side of the island and on the north shore at Fagasa where the road follows the shoreline. It is advisable to check with local chiefs or marae before fishing near their villages—just as you would ask a property owner permission before fishing on his land. Spearing is legal, but generally discouraged.

Atule and mullet are fished in lagoons and bays around the island. Atule are caught in good numbers by pole fishing from shore in Pago Pago Harbor, mainly from the docks and piers on the west side of the harbor. Unlike his Hawaiian counterpart, the Samoan atule is caught easily during the day as well as at night. Skiff anglers also catch this tasty little fish handlining. Mullet are taken in sandy bays and lagoons with cast nets. Pail Lagoon is considered one of the best fishing areas for this silvery schooling fish.

A very unusual fishery exists in American Samoa, one which the population looks forward to with eager anticipation. It is the fishery for palolo. Each year at a predictable time, in either October or November, the tail ends of a species of reef-dwelling sea worm become detached and swim to the surface, in wriggling masses. On these nights, and usually on for a few hours, the reef comes alive with great swarms of palolo. The native's armed with dip nets, pails, and other capturing devices, wade out over the reefs to scoop up large quantities of this unusual Samoan delicacy. Palolo are usually eaten raw, but for the less brave they can be cooked with chopped onions or scrambled with eggs.
40/ GUAM

Guam [Chart 40], about 3,340 miles west of Honolulu and 1,500 miles east of Manila, is the largest and southernmost island in the Mariana island group. Administered by the U.S. Navy for over half a century, this territory was placed under the administrative jurisdiction of the Department of the Interior in 1950 by executive order of the President of the United States. That year, the Organic Act was passed by the U.S. Congress, giving Guamanians U.S. citizenship and establishing the present 21-seat legislature.

The island is important as a distribution center for Micronesia and as a major link between these islands and the rest of the world. Because of its strategic geographical location and beautiful tropical setting, Guam has several large military bases, a growing tourist industry, and many thriving new businesses.

The physical geography of the island contrasts sharply north to south. The northern part of the island is a low-lying limestone plateau covered by a thick growth of jungle vegetation. The south, rising to more than 1,000 feet above sea level, is characterized by high volcanic hills covered with sword grass. The island is about 23 miles long and varies from 4 to 8 miles wide.

The climate is tropical with air temperatures ranging from 70° to 90°F. Daytime temperatures are usually in the 80's. Average rainfall is about 90 inches, three-quarters of which falls during the rainy season from July to October. The driest month is April.

Guam's offshore waters abound with a variety of game fish; undoubtedly the most famous is the blue marlin. On 21 August, 1969, a world-record blue marlin was caught off Ritidian Point near the northern tip of Guam. This huge fish weighed in at 1,153 pounds with a total length of 14 feet 8 inches. A fishing derby is held each year at the end of the Liberation Day celebration in July, and many sport anglers register for this annual event.

Most offshore fishing takes place on the leeward or western side of the island because of rough waters usually prevalent on the windward or eastern side. The trolling grounds produce blue marlin, black marlin, sailfish, yellowfin tuna, skipjack tuna, mahimahi, rainbow runner, tosuna or wahoo, barracuda, and sharks. Marlin, wahoo, and tuna are caught occasionally throughout the year; the best time for mahimahi is during January and February; and yellowfin and skipjack tuna are usually most abundant February through August.

Bottomfishing is excellent over submarine ledge areas surrounding the island and over offshore banks. The catch consists mostly of snappers and groupers. Some of the more common snappers are the pink kali kali, pink paka, yellowtail, gendali, lehi, ehu, onaga or red, and tagali. Groupers are collectively called "gadao" by Guamanians. Dogtooth tuna and jacks (called collectively tarakito) are also taken in some of the bottomfishing areas.

Many people on the island enjoy fishing from shore, and the most popular methods seem to be spin fishing and surf casting. The island is rimmed by many miles of beautiful coral reefs and the water over these reefs ranks among the clearest in the world, especially during the dry season. Anglers with spinning gear cast from the reef shelves for snappers, groupers, and jacks, and from the piers and in boat channels for atulai (akule or bigeye scad) and atagai (kila, unicornfish). Other fishes such as young snappers, wrasses, mullet, atakayos (young jacks), needlefish, and achuman (openulu or mackerel scad) are taken occasionally by hook-and-line anglers. The surround net captures an assortment of reef fishes including those mentioned above as well as some of the goatfishes and parrotfishes. Cast net operators fling their circular nets over the water for fish that wander about the reefs in schools; such as manini (known locally as "kicho"), young mullet, goatfish, and sesjun (rabbitfish). There is also some spearing for octopus, parrotfish, and surgeonfish, as well as other reef fishes.

Some of the more popular shore-fishing areas are shown on the chart. Atulai are taken during most of the year [May to March] along the channel area that cuts through the reef at Agana and at the southern tip of the island near Merizo. There is shore fishing in Apra Harbor for papio, atulai, and occasionally achuman (openulu). Tataga are taken at Agana and sometimes at the north side of Cabras Island, as well as near the reef's outer edge on the southern shore of Yigo Bay. The latter area is also good for snappers, mullet, kakaka, and buna. It is advisable to check locally about the waters you plan to fish, since currents over the reefs are sometimes dangerous.

Sport fishing boats are available for charter out of Port Merizo and Agana. Skiffs can be rented at Port Merizo, and there are boat launching facilities at the Apra Harbor seaplane ramp and at the Agana boat basin.
MARINE GAME FISHES

The following pages list some of the more common marine game fishes caught within the geographical areas covered in this Guide. Major species are illustrated. Fishes taken along the west coast of the continental United States are described first; those taken around the tropical Pacific islands of Hawaii, American Samoa, and Guam are covered on succeeding pages. The list is separated in this way to assist the reader in finding the fishes familiar to his general geographic area. To help avoid confusion with common fish names an index to common names referred to in this list is provided in the back of the guide. All-tackle records are those recognized by the International Game Fish Association as of 1974. Fish illustrations by Susan E. Smith.
Marine Game Fishes of the United States West Coast

This list describes those marine and anadromous species commonly taken by anglers along and off the coasts of California, Oregon, Washington, and Alaska. Off southern California most pelagic species taken by the marine angler are subtropical, and common only from Point Conception south to off Baja California, Mexico. Point Conception, 40 miles west of Santa Barbara, Calif., is generally agreed to be the major ecological and faunal dividing point for many pelagic species. However, Pacific bonito, Pacific mackerel, and bluefin tuna, which are common in the south, occur at times north of Point Conception, and conversely, northern species such as coho salmon sometimes range south of Point Conception. In the deeper cooler water over the continental shelf there are also found many species that range north of Point Conception.

From Point Conception north to south central Alaska one encounters a fairly constant species composition throughout this temperate environment. North of Point Conception, extending to at least Cape Blanco, Oreg., there exists a major coastal "upwelling" area which results in cool water nearshore much of the year. Another environmental change from temperate to subarctic occurs from about the Aleutian chain in Alaska north beyond the Bering Sea.

For the most part, this list uses common and scientific names as defined in the American Fisheries Society checklist [Bailey et al. 1970], except for the use of "surfperch" for all members of the family Embiotocidae. Some species descriptions will have more than one common name; however, the common name approved by the American Fisheries Society is capitalized. The authorized scientific name and the name of the individual credited with describing the species for the scientific record are given last.

For those anglers wishing to ensure correct identification of their west coast catch, we suggest the following publications. Much of the information in this list was derived from identification lists prepared by the following authors:


ALOPIIDAE: THRESHER SHARKS

1. THRESHER SHARK. Fox shark. Swivelled: Alopias vulpinus (Bonnerre). DISTRIBUTION: Temperate and tropical waters of the Pacific, Indian, and Atlantic oceans and the Mediterranean Sea. SIZE: Reported to reach 20 to 25 feet (610-762 cm) long and weigh up to 1,000 pounds (453.6 kg) or more. However, the usual catch is less than 30 pounds (13.6 kg). All-tackle record for the Pacific (Mayor Island, New Zealand) is 729 pounds (330.7 kg) and 101 inches (256 cm) long. COLOR: Gray to black above, fading to white below. A pelagic shark common to the offshore waters of the eastern Pacific south of Cape Flattery. Wash. Caught during summer in central and southern California; best fishing is in the Los Angeles outer harbor. One of the most desirable species of shark for table food; also excellent when smoked.

2. SHORTFIN MAKO. Bonito shark: Isurus oxyrinchus Rafinesque. DISTRIBUTION: Temperate and tropical waters of the Pacific Ocean to Hawaii and Japan. Known in the eastern Pacific from the Columbia River to Chile. SIZE: Reported to reach 12 feet (366 cm) long and weigh up to 1,000 pounds (453.6 kg) or more. However, the size usually ranges from 4 to 8 feet (122-244 cm) long. All-tackle record in the Pacific (Mayor Island, New Zealand) is 4.01 pounds (181.3 kg) and 12 feet 2 inches (370.9 cm) long. COLOR: Dark gray above, white below. Appears off the southern California coast in summer, and is the subject of a growing sport fishery. A pelagic shark, may be dangerous to humans, but regarded as a good food species.

LAMNIDAE: MACKEREL SHARKS

3. BLUE SHARK. Pronoce glauco (Linnaeus). DISTRIBUTION: Tropical and temperate seas of the world; in eastern Pacific Ocean from Chile to the Gulf of Alaska. SIZE: Length is reported to 15 feet (457 cm), but most caught off southern California are less than 8 feet (244 cm) and weigh less than 50 pounds (22.7 kg). All-tackle record in the Atlantic (Rockport, Mass.) is 410 pounds (185.6 kg) and 11½ feet (356 cm) long. COLOR: Dark blue above, white below. One of the more important pelagic sharks in catches of the southern California sport fishery during summer and fall. Good fighter on light tackle, but not a particularly good food species. Common to offshore waters, but also occurs inshore off southern and central California during summer and fall.

4. BROWN SMOOTHIEOUND. Mustelus henlei (Gill). DISTRIBUTION: Gulf of California, Mexico, to Humboldt Bay.
MYILOBATIDAE: EAGLE RAYS

9. BAT RAY. Myliobatis californica. Gill. DISTRIBUTION: Gulf of California. Mexico. to Oregon. SIZE: Maximum known weight is about 210 pounds (95.3 kg) with a spread of about 4 feet (122 cm). COLOR: Dark brown or black above, white below. ORDER: Minor importance to sport anglers; commonly taken in the surf zone however.

RHINOBATIDAE: GUITARFISHES

7. SHOVELNOSE GUITARFISH. Rhinobatos productus (Ayres). DISTRIBUTION: Gulf of California. Mexico. to Monterey Bay. Calif. SIZE: Reaches a length of about 5 feet (152 cm) and a weight of up to 40 pounds (18.1 kg). COLOR: Brownish gray. white underside. ORDER: Often caught by pier, bay, and surf anglers. and common over sand and mud bottoms in shallow bays and estuaries in southern California. Not a desirable food species. although the dorsal meat is reportedly to be palatable. Provides considerable recreation and taken all year throughout most of its range.

8. THORNBACK. Platyrhinos triseriatus (Jordan and Gilbert). DISTRIBUTION: Turtle Bay. Baja California. Mexico. to central California. Rare north of Point Conception. SIZE: Length to about 24 feet (76 cm). COLOR: Brown on back, white or cream colored below. ORDER: Although taken in fair numbers. they are not the major o. of most anglers. Common in depths to 150 feet (45.7 m).

ACIPENSERIDAE: STURGEON

10. WHITE STURGEON. Acipenser transmontanus Richardson. DISTRIBUTION: Columbia, Baja California, Mexico. to Gulf of Alaska. SIZE: Largest white sturgeon taken along the Pacific was reported to be about 20 feet (610 cm) long weighing 1,800 pounds (816.5 kg). COLOR: Gray. ORDER: Most important species taken in Susun. San Pablo. San Francisco. and Coos bays. the Columbia/River estuary. upper Willapa Bay. and upper Grays Harbor. Heavy fishing on the late 1800's for caviar and smoked sturgeon reduced the population drastically. Today the lower Columbia River appears to be the center of distribution. in the San Francisco area the numbers of sturgeon appear to be increasing and the fishery is becoming more popular. Several species of sturgeons exist in North America. Some are found only in fresh water. and some. like the white sturgeon. are anadromous.

11. GREEN STURGEON. Acipenser medirostris Ayres. DISTRIBUTION: Ensenada. Baja California. Mexico. to Alaska. Bering Sea. and Japan. SIZE: Length to 7 feet (2.1 m). weight to 350 pounds (158.8 kg). most caught are much smaller than this. COLOR: Olive green with three longitudinal olive stripes on body. ORDER: Similar in habits to the white sturgeon. although less is known of its life history.

SALMONIDAE: TROUT AND SALMON

12. CHINOOK SALMON. Oncorhynchus tshawytscha (Walbaum). Young juveniles or "feeders" are sometimes called "blackmouth." DISTRIBUTION: Northern California to Alaska and south on the Asiatic side to the Amur River. USSR. also to northern Japan. SIZE: Record weight reported to be 126 1/2 pounds (57.4 kg). however. few are caught over 50 pounds (22.7 kg) and most average 10 to 25 pounds (6.1-11.3 kg) when mature. COLOR: At sea. dark gray above with silver sides and belly; black spots on back. and both lobes of tail; gums at base of teeth. white. ORDER: Most desirable of marine salmon. fish in northern waters and subject of an extensive ocean troll fishery. Principal fishing areas begin in the south off Pismo Beach and Avila. Calif. and extend into southern Alaska. Fished primarily by trolling with dead bait or lures. and drift fishing with live or frozen baits. Offshore fishing depth for this species is usually greater than for other salmon species.

13. COHO SALMON. silver salmon. silversides. salmon trout. Oncorhynchus kisutch (Walbaum). DISTRIBUTION: Coronado Islands. Mexico. to Alaska. and south on the Asiatic side to Japan. SIZE: Coho grow to a length of 3 feet (91 cm) and a weight of 10 pounds (4.5 kg). COLOR: At sea. metallic blue green above. silver sides and belly. Other black spots on back. dorsal fin. and upper lobe of tail fin. gums at base of teeth white. ORDER: Ocear trollering for coho ("silvers") is most successful from near Fort Bragg. Calif. northward. although some are caught in the San Francisco area and a few are taken as far south as Point Magu. Calif. area every year. Principal fisheries for this species are along the coasts of Oregon. Washington. and Alaska. Fishing technique used in the ocean is much the same as for other salmon.
**Distribution**

- Pink Salmon: Humpback Salmon, Oncorhynchus gorbuscha. Northern California to northwestern Alaska and along the Asian coast. **Size:** Reported to reach 2 feet (76 cm) and a maximum weight of about 12 pounds (5.4 kg). Averages about 6 pounds (2.7 kg) when mature. **Color:** Metallic blue above, silver on sides, oval spots on tail and back with many as large or larger than eye diameter. Smallest of the five species of salmon. Common to the west coast, but usually not common south of Oregon. Major fisheries for this species are in the Strait of Juan de Fuca, in Puget Sound, and to the north. Pink salmon usually do not run very far upstream but spawn in the lower parts of rivers. They are unique among Pacific salmon in that all females are ovoviviparous. **Spawns:** February to May in small coastal streams. Summer, sometimes descend in second or third year and usually remain in estuaries for 1 or more years before returning to spawn. A predator on young salmon in the spring.

- Sockeye Salmon: Red salmon, Oncorhynchus nerka. **Size:** Length reported up to 2 feet (76 cm), weight up to about 7 pounds (3.3 kg). **Color:** Greenish blue above, silvery on sides. Best fishing is from northern Oregon to northwestern Alaska and Asia. Spawning season lasts from March to August, major season is from June to August. Usually enter rivers that are closed by lagoons. The sockeye salmon rarely takes a hook so is not a major contributor to the sport catch.

- Chum Salmon: Dog salmon. Oncorhynchus keta. **Size:** Length up to 3 feet (91 cm); average weight of 10 to 12 pounds (4.5-5.4 kg) when mature. **Color:** In brackish or salt water, silver; in fresh water, dark gray. These salmon are usually caught with a fish hook or by hand hooking. **Spawns:** Spring and fall. Chum salmon are common to the west coast, but usually not common south of Oregon. Major fisheries are in the Strait of Juan de Fuca, in Puget Sound, and to the north. Chum salmon usually do not run very far upstream but spawn in the lower parts of rivers. They are unique among Pacific salmon in that all females are ovoviviparous. Best fishing is from northern Oregon to northwestern Alaska and Asia. Spawning season lasts from March to August, major season is from June to August. Usually enter rivers that are closed by lagoons. The sockeye salmon rarely takes a hook so is not a major contributor to the sport catch.

- Dolly Varden: **Size:** Length reported to 3 feet (91 cm) and a maximum weight of 20 pounds (9.1 kg). **Usual catch is 1 to 3 pounds (0.5-1.4 kg) in weight, and 15 to 20 inches (38-51 cm) long. **Color:** Olive green to brownish above with paler yellow spots, brown specks on sides. Run in small coastal streams. Sometimes run in estuaries. Dolly Varden is a common to the west coast, but usually not common south of Oregon. Major fisheries for this species are in the Strait of Juan de Fuca, in Puget Sound, and to the north. Dolly Varden usually do not run very far upstream but spawn in the lower parts of rivers. They are unique among Pacific salmon in that all females are ovoviviparous. Best fishing is from northern Oregon to northwestern Alaska and along the Asian coast. Spawning season lasts from March to August. Major season is from June to August. Usually enter rivers that are closed by lagoons. The sockeye salmon rarely takes a hook so is not a major contributor to the sport catch.

- Rainbow Trout: **Size:** Length reported up to 2 feet (76 cm); average weight of 1 pound (0.45 kg). **Color:** Greenish blue above, silvery on sides. Best fishing is from northern Oregon to northwestern Alaska and Asia. Spawning season lasts from March to August, major season is from June to August. Usually enter rivers that are closed by lagoons. The sockeye salmon rarely takes a hook so is not a major contributor to the sport catch.

- Cutthroat Trout: **Size:** Length reported up to 2 feet (76 cm); average weight of 1 pound (0.45 kg). **Color:** Greenish blue above, silvery on sides. Best fishing is from northern Oregon to northwestern Alaska and Asia. Spawning season lasts from March to August, major season is from June to August. Usually enter rivers that are closed by lagoons. The sockeye salmon rarely takes a hook so is not a major contributor to the sport catch.

- Night Smelt: **Size:** Length reported to about 3 inches (7.6 cm); average weight of 1 ounce (28.3 g). **Color:** Silver; olive green on back. Best fishing is from northern Oregon to northwestern Alaska and Asia. Spawning season lasts from March to August, major season is from June to August. Usually enter rivers that are closed by lagoons. The sockeye salmon rarely takes a hook so is not a major contributor to the sport catch.

- Surf Smelt: **Size:** Length reported to about 3 inches (7.6 cm); average weight of 1 ounce (28.3 g). **Color:** Silver; olive green on back. Best fishing is from northern Oregon to northwestern Alaska and Asia. Spawning season lasts from March to August, major season is from June to August. Usually enter rivers that are closed by lagoons. The sockeye salmon rarely takes a hook so is not a major contributor to the sport catch.
above, silvery on sides and belly, common to the coasts of Oregon, Washington, and Alaska. Fished with net, found in calm, shallow bays and along the coast. May (March, April, and May) it is a very oily fish, and called candlefish because when dried and threaded with a wick it may be used as a candle.

SMELT OF LESS IMPORTANCE TO THE MARINE ANGLER

23. LONGFIN SMELT. Spumatus hubbs (Ayres) DISTRIBUTION: San Francisco Bay, Calif., to Prince William Sound, Alaska. SIZE: To about 6 inches (15 cm), color. Sides silver with brownish dorsal areas. Spawns in coastal rivers and comprises a minor portion of the sport smelt catch.

24. WHITEHAT SMELT. Allolabrus elongatus (Ayres) DISTRIBUTION: San Pedro, Calif., to Strait of Juan de Fuca. SIZE: To about 3 inches (7.6 cm) in length. Color: Sides silver back grayish. Similar in appearance to the night smelt, but like the longfin, it comprises a minor portion of the total sport catch of smelt. Spawning behavior not known.

GADIDAE: CODFISHES

25. PACIFIC COD. Gadus macrocephalusTilesius DISTRIBUTION: Santa Monica, Calif., to northeastern Alaska and Asia. SIZE: Length recorded to at least 3 feet (114 cm) and weight up to 40 pounds (18 kg). Color: Brownish gray above fading to lighter below; brown spots on upper parts.edges of fins white. An excellent food species commonly abundant off the coast of northern Oregon, Washington, and Alaska. Moves from deep to shallower water, though usually caught in water deeper than 60 feet (18 m). Reported to spawn in winter and in early spring and is abundant in coastal waters at that time.

26. TOMCOD. Microgadus tomcod (Girard) DISTRIBUTION: Point Sal, Calif., to Unimak Island, Alaska. SIZE: Usually less than 12 inches (30 cm) long and 1 pound (0.45 kg) in weight. fis over 2 pounds (0.9 kg) are very rare. Color: Olive or brownish above, white on sides below. Abundant off San Francisco north and taken by pier, net, and skiff anglers. A good food fish, but sometimes discarded because of its size.

27. PACIFIC HAKE. Merluccius productus (Ayres) DISTRIBUTION: Gulf of California, Mexico, to Alaska, and Asiatic coast. SIZE: Record length to about 3 feet (91 cm), most are 1 to 1 1/2 feet (30-46 cm) long. COLOR: Gray to dusky brown, with a brassy overwash. Sometimes taken off Oregon and Washington while salmon fishing in deep water. It is not a desirable sport species, though it is suitable for eating if prepared promptly.

ATHERINIDAE: SILVERSIDES

28. JACkSmElt. Atherinops saira (Ayres) DISTRIBUTION: Santa Maria Bay, Baja California, Mexico, to Yaquina Bay, Oregon. SIZE: Reported to reach a length of 22 inches (56 cm); most fish caught weigh about 1/2 pound (0.2 kg) or less. Color: Dusky green above, sides silvery, metallic band edged above with blue eyes extending length of body. Commonly found year-round in bays and estuary areas. Usually caught in water of less than 100 feet (30 m). Known to spawn in bays during winter and spring, sometimes in suitable bays. One of the most abundant species in the catch of pier anglers in southern and central California.

29. TOPSMELT. Atherinopsis affinis (Ayres) DISTRIBUTION: Gulf of California, Mexico, to Vancouver Island, British Columbia. SIZE: Length to about 14 inches (36 cm). Average weight about 1/2 pound (0.5 kg). COLOR: Bluish gray to bright green above, silvery below; metallic band edged above with blue or purple extending length of body; eyes, mouth, and same general areas and habitats as the jacksmelt. Fairly common in pier catches along the central California coast. Distinguished from the jacksmelt by the first dorsal fin, which is located farther back; the last rays being opposite the origin of the anal fin.

30. CALIFORNIA GRUNION. Leuresthes tenuis (Ayres) DISTRIBUTION: Magdalena Bay, Baja California, Mexico, to San Francisco, Calif. SIZE: Length to about 7 inches (18 cm); average weight to about 1/2 pound (0.1 kg) or less. Color: Bluish green above, silver below, a lateral metallic band tinged with blue and bordered above with violet extends length of body. Not a common north of Point Conception. Tends to range along sandy shoreline, usually in water less than 50 feet (15 m). Best beaches for catching grunion are from Los Angeles south to Mexico. Spawns from March through August. Beaches itself between waves to spawn at night during high tides following the first three to four nights after the full and the dark of the moon.

PERCICHTHYIDAE: TEMPERATE BASSES

31. STRIPED BASS. Morone saxatilis (Walbaum) DISTRIBUTION: Delmarva Point, Baja California, Mexico, to Humboldt Sound, British Columbia. SIZE: Reported to 6 feet (183 cm) and 125 pounds (56.7 kg) in the Atlantic. All-tackle record (Cuttyhunk, Mass.) is 22 pounds (10.2 kg). Color: Salmon green above, sides metallic and iridescent. Always located in water of less than 50 feet (15 m). It is a very oily fish. Spawns from March through August. Beaches itself between waves to spawn at night during high tides following the first three to four nights after the full and the dark of the moon.

32. GIANT SA BASS. Morone saxatilis (Walbaum) DISTRIBUTION: Gulf of California, Mexico, to Humboldt Bay, Calif. SIZE: Recorded to over 500 pounds (226.8 kg) and over 7 feet (2.1 m) long. All-tackle record for the Pacific (Anacapa Island, Calif.) is 665 pounds (299.6 kg), with a length of 7 feet 5 inches (226 cm). Some live to a very old age. A 435-pound (197.3 kg) fish was determined to be between 72 and 75 years old. Color: Dark brown to gray with blackish...
SERRANIDAE: SEA BASSES

33. KELP BASS, calico bass, bull bass. Paralabroroides clathratus (Girard) DISTRIBUTION: Magdalena Bay, Baja California, Mexico, to Columbia River. SIZE: Greatest weight recorded is 41 1/2 pounds (19 kg) and a length of 28 inches (71 cm). They are reported to attain an age of 20 years or more. COLOR: Olive or brownish above with sides mottled with angular lighter shaded areas, becoming silvery below. Belly and fins tinged with yellow. [Common from Point Conception, Calif., to Baja California, Mexico, in coastal kelp beds. A major game species about kelp beds in southern California and a good food fish. Nonmigratory, spawning April through July in and near kelp over rough bottoms. Distinguished from the barred sand bass in that the third, fourth, and fifth dorsal spines are about the same length, whereas the third dorsal spine of the barred sand bass is much longer than the other spines.

34. SPOTTED SAND BASS, Paralabroroides maculifasciatus (Stebachner) DISTRIBUTION: Gulf of California and Magdalena Bay, Baja California, Mexico, to Monterey Bay, Calif. SIZE: Length to about 22 inches (56 cm). COLOR: Greenish gray above becoming lighter below; juveniles have dark spots on sides. In recent years the population level of this species is much reduced in southern California. Best fishing is found about Anacapa Island and near kelp beds from La Jolla, Calif., south along Baja California, Mexico, and in the Gulf of California. Large fish prefer rocky bottoms just outside kelp beds and along drop offs in waters 115 to 150 feet (35.1-45.7 m) deep. Small fish can be found over sandy areas around and in the kelp in shallower water of about 30 to 70 feet (12.2-21.3 m) deep.

35. BARRED SAND BASS, sand bass, Paralabroroides nebulifer (Girard) DISTRIBUTION: Magdalena Bay, Baja California, Mexico, to San Diego, Calif. SIZE: Length to about 25 1/2 inches (65 cm). COLOR: Dark gray to greenish brown on back, with vertical irregular dusky bands on sides and yellow below, golden-brown spots on cheeks. [A major sport species in southern California, frequently taken at the Coronado Islands and off Baja California, Mexico, as well as around Catalina Island and around kelp beds off San Diego. Best fishing along the coast to the Santa Barbara Channel Islands. Is a migratory pelagic species, occurring during summer, and early fall in southern California.

36. OCEAN WHITEFISH, whitefish, blanquillo. Caulolatilus princeps (Jenyns) DISTRIBUTION: Peru to Vancouver Island, British Columbia. SIZE: Weights recorded up to 12 pounds (5.4 kg); however, 3 to 5 pounds (1.4-2.5 kg) is normal. COLOR: Rich brown to yellowish on back becoming lighter below with light spots on sides, yellow edging on fins; dorsal and anal fins blue; pectoral blue on yellow stripe. [Commonly caught from Point Conception, Calif., south to offshore Mexico. Usual depths of fishing are from 30 to 300 feet (9.1-91.4 m) over rocky bottom. Good fishing around southern California islands, and offshore banks such as Cortez and Tanager banks. Best fishing is spring through fall.

37. YELLOWTAIL, saurel, white salmon, amberjack, Seriola dorsalis (Gill) DISTRIBUTION: Chile to southern Washington. SIZE: Usual weight about 10 to 20 pounds (4.5-9.1 kg); record fish in the California-Mexico area reported to about 5 feet (1.52 m) long weighing 80 pounds (36.3 kg). All-tackle record for the Pacific (Bay of Islands, New Zealand) is 111 pounds (50.3 kg) and 62 inches (157.5 cm) long. COLOR: Bright metallic blue to brownish green above, yellow lateral stripe from eye to yellow tail white below. [A major sport species in southern California, frequently taken at the Coronado Islands and off Baja California, Mexico, as well as around Catalina Island and around kelp beds off San Diego. Best fishing along the coast to the Santa Barbara Channel Islands. It is a migratory pelagic species, occurring during summer, and early fall in southern California.

38. JACK MACKEREL, Spanish mackerel, saurel, Trachurus symmetricus (Ayres.) DISTRIBUTION: Baja California, Mexico, to southeastern Alaska, and offshore put to 500 miles. SIZE: Length usually only about 1 foot (30 cm) reported to 32 inches (81 cm). COLOR: Irresolute blister green, mottled on back, becoming lighter on sides and fading to silvery below. [A major commercial species, and an important sport fish in southern California. Frequently taken from sport boats and sometimes from jetties and piers in southern California. In its northern range it is sometimes taken from piers. Best fishing is July through September.

39. DOLPHIN, mahimahi, dorado. Coryphaena hippurus Linnæus. DISTRIBUTION: Tropical and temperate seas. Recorded off the west coast from Chile south to off Grays Harbor, Wash. SIZE: All-tackle record for the Atlantic (Spanish Wells, Bahama Islands) is 85 pounds (38.6 kg) and 69 inches long (175.3 cm). In the Pacific, weight reported to 45 pounds (20.4 kg) and length to 6 feet (183 cm). COLOR: Brilliant blue or blue-green above; sides bright golden yellow spotted with bright-blue and white-green spots; white below. When dying, this fish will flash many rapidly changing colors. [During some years having warmer water they are taken in fair numbers while surface trolling for striped marlin off San Diego, Calif. A brilliantly colored fish and an excellent fighter.
POMADASIDAE: GRUNTS

40. SARGO, china croaker. Anisotremus davidsoni [Steindachner]. DISTRIBUTION: Gulf of California, Mexico. to Santa Cruz, Calif. CAIb. ZONE: north of Point Conception. Calif. SIZE: Reported to attain 23 inches (58 cm) and 4 pounds (1.8 kg); however, most angler-caught sargo are much smaller than this. COLOR: Silver with grayish tinge on back, edge of Gill cover black, dark spot on base of fin. Vertical bar extending down from middorsal fin area. Found nearshore and in bays, common to shallow waters with rocky bottom. Best fishing during summer.

Deep olive fins, mostly yellow. Usually caught in shallow water over sandy bottom, in the surf zone, and in bays and sloughs. It is a migratory species, and best fishing is in late summer, especially at Newport Beach and San Onofre, Calif.

43. CALIFORNIA CORBINA, corvina. California wriggling, surffish. Menticirrhus undulatus [Girard]. DISTRIBUTION: Gulf of California, Mexico, to Point Conception, Calif. SIZE: Reaches a length of about 2½ feet (76 cm) or more and is reported to reach a weight of 8 pounds (3.6 kg). COLOR: Gray to steel blue with silvery luster on back, paling to white below, sometimes has a wavy diagonal line on sides. The corbina is a surf-zone species common from Point Conception south along sandy beaches. The area from Long Beach [Belmont Shores] to San Diego is reported to have the best fishing. Corbina are found inshore during summer and are believed to range into deeper water during winter. Best fishing is July to October. An excellent food species.

46. QUEENFISH, basking. Seriphus politus [Ayres]. DISTRIBUTION: Off Magdalena Bay, Baja California, Mexico. to Yaquina Bay, Calif. SIZE: Length to about 15 inches (38 cm). COLOR: Adults are bluish or dusky black with a coppery sheen above; silver below with dark specks; Gill cover edged with black; pelvic fins black. Somewhat rare and taken only irregularly by southern California anglers.

SCIAENIDAE: DRUMS

41. WHITE SEABASS, Catalina salmon-sea trout. croaker. Cynoscion nolbus [Ayres]. DISTRIBUTION: Magdalena Bay, Baja California, Mexico, to Juneau, Alaska. SIZE: Length to 5 feet ½ inches (166.4 cm) and weight of 83½ pounds (38.0 kg)—an all-tackle record for a fish caught near San Felipe, Mexico. Average catch is 3 to 25 pounds (23.2-11.3 kg). COLOR: Steel blue to gray above with gold highlights, silvery below. Young have several dark vertical bars. A prized game fish and excellent food species. Caught along the coast northward from Baja California, Mexico, to central California. Most are caught near the mainland shore over sandy bottom, or around the edges of kelp beds, also near the kelp beds about Catalina and San Clemente islands. Young white seabass are commonly taken close to shore in southern California.

43. SPOTFIN CROAKER, golden croaker. Roncador steornsi [Steindachner]. DISTRIBUTION: Magdalena Bay, Baja California, Mexico. to Point Conception, Calif. SIZE: Reported to reach a length of at least 27 inches (69 cm) and a weight of 10½ pounds (4.8 kg). COLOR: Silver gray with bluish luster above, becoming white below, dark spot at base of pectoral fin. This species is common south of the San Pedro—Long Beach, Calif., area and is fished along sandy beaches and in bays. Known to congregate in "holes" outside the surf zone. Spawns offshore in summer and tends to be a coastal migratory species. Late summer is best time for fishing.

KYPHOSIDAE: SEA CHUBS

48. HALFMOON, Catalina perch. blue perch. Medialivos californiensis [Steindachner]. DISTRIBUTION: Gulf of California, Mexico to Klamath River, Calif. SIZE: Maximum recorded length is 19 inches (48.3 cm) with a weight of nearly 5 pounds (2.3 kg), although the usual catch is much smaller in size. COLOR: Slate colored to dark blue above, becoming paler blue and mottled on sides and below. A popular fish with the rocky shore angler. Best fishing is along the coast of southern California and about its offshore islands. Common to rocky shores and kelp beds. Best depths for fishing are from near the surface to 100 feet (30.5 m).
EMBIOTOCIDAE: SURFPERCHES

50. REDTAIL SURFPERCH. porgy. Amphiastichus rhodoterus (Agassiz). DISTRIBUTION Monterey Bay, Calif. to Vancouver Island, British Columbia. SIZE: Length reported up to 16 inches (41 cm); COLOR: Light olive green above, silver sides and belly; orange to brassy bars alternating across lateral line, light red to purple caudal, anal, and pelvic fins. Primarily a sandy-shore species common in the surf zone from northern California northward. Best catches around the mouths of streams and during spring. Sometimes taken from piers and jetty near inlets.

51. BARRED SURFPERCH. Amphiastichus argenteus Agassiz. DISTRIBUTION: Playa Maria Bay, Baja California. Mexico. and Bodega Bay, Calif. SIZE: Usual size caught by the angler is 1 to 2 pounds (0.45-0.9 kg) with a record catch of 17 inches (43 cm) and 4 1/2 pounds (2.0 kg). COLOR: Olive green to yellow green on back, silvery w: vertical bars on sides with intermittent spots. Mainly a surf species in southern California, most abundant along the coast from Morro Bay, Calif., south into Mexico. A very important game fish in the sandy surf zone where it congregates in bottom depressions. Shore fishing is best from December to March.

52. CALICO SURFPERCH. Amphiastichus koelzi (Hubbs). DISTRIBUTION: Northern Baja California, Mexico, to Shi Shi Beach, Wash. SIZE: Average weight is near 1 pound (0.5 kg); maximum recorded length is over 11 inches (28 cm). COLOR: Light olive above, fading to silver below; brownish specks forming irregular crossbars, sometimes brassy luster on head and belly. Common in central California from Morro Bay to the San Francisco area. Beaches in the Monterey Bay area are reported to offer excellent fishing for this species caught in the sandy surf zone and frequently appears in the pier catch.

53. WALLEYE SURFPERCH. Hyperprosopon argenteum Gibbons. DISTRIBUTION: Point San, Rosarito, Baja California. Mexico, to Vancouver Island, British Columbia. SIZE: Usual length is from 4 to 6 inches (10-15 cm) with a record length of about 12 inches (30 cm). Average weight is a little over 1/4 pound (0.1 kg). COLOR: Metallic gray above fading to silver on sides and belly; dusky bars sometimes present on sides; usually identified by its large eyes and black-tipped pelvic fins. Found mostly over sandy bottom near rocky areas. Probably the most abundant surfperch common to the open rocky coast and in bays. A shallow-water species and a dominant one in pier catches.

54. SILVER SURFPERCH. silver perch. Hyperprosopon ellipticum (Gibbons). DISTRIBUTION: Rio San Vicente, Baja California, Mexico, to Vancouver Island, British Columbia. SIZE: Reaches a maximum length of about 10 1/2 inches (27 cm). Most catches are much smaller and average weight is about one-tenth of 1 pound (0.05 kg). COLOR: Metallic dark gray above, silver on sides and belly; dusky bars on sides; tail usually pink. This small surfperch is another sandy-shore species taken by surf anglers. Similar in appearance to the walleye surfperch, however, it does not have black-tipped pelvic fins.

55. BLACK SURFPERCH. black perch, bay perch, Embiotoca jacksoni Agassiz. DISTRIBUTION: Point Abreojos, Baja California, Mexico, to Fort Bragg, Calif. SIZE: Usual weight about 1/4 pound (0.3 kg); known to reach a length of 15 1/4 inches (39 cm). COLOR: Variable, dark olive green to light reddish brown sometimes tinged with red or yellow; occasionally with blue stripes formed by small blue crescents in the middle of each scale; anal and pelvic fins often reddish orange. Common to rocky coasts near kelp areas; also found around piers, pilings, and in coastal bays. A shallow-water species, only rarely taken in sandy surf.

56. STRIPED SURFPERCH. Embiotoca lateralis Agassiz. DISTRIBUTION: Point Cabrils, Baja California, Mexico, to Fort Wrangell, Alaska. SIZE: Average weight little over 1 pound (0.5 kg); maximum length recorded 15 inches (38 cm). COLOR: Red, blue, and yellow stripes along scale rows over coppery background on body; head with blue spots and stripes; pelvic fins dusky. This colorful surfperch is commonly caught around rocky shores, near pilings, or quickheads in bays; frequently
found in kelp beds areas. An important sport species along the northern California, Oregon, Washington, and British Columbia coasts.


65. **PINK SURFPERCH**, Zalembia roseiventris (Jordan and Gilbert). DISTRIBUTION: San Cristobal Bay, Baja California, Mexico, to central California. Size: Length is reported to be to 8 inches (20 cm). Color: Distinguished by its rose-red coloration; pink brown on upper body; two brown spots under the dorsal fin. A deepwater species (30-300 feet or 9.1-91 4 m).

**LABRIDAe: WRASSES**

66. **CALIFORNIA SHEEPHEAD**, Perophorus californiensis (Ayres). DISTRIBUTION: Gulf of California, Mexico, to Point Conception. Size: Length reported up to 35 inches (90 cm). Color: Greenish brown; dusky vertical bars, male with dark-blue bar under dorsal fin. Found in rocky areas along the coast and in bays in California. Few are caught south of the Los Angeles area. Similar to black perch in that they are rarely caught in sandy surf areas.

**WRAasses of Less Importance to the Marine Angler**

67. **ROCK WRASSE**, Halichoeres semicinctus (Ayres). DISTRIBUTION: Gulf of California, Mexico, to Point Conception. Size: Length reported up to 3 inches (7.6 cm). Color: Greenish brown; dusky vertical bars, male with dark-blue bar under dorsal fin. Found over rocky bottom, but of minor importance to sport anglers, of not undesirable, due to its habit of snatching bait from the hook.

68. **SEñORITA**, Oxygulus californiensis (Günther) DISTRIBUTION Central Baja California, Mexico, to central California. Size: Length to 10 inches (25 cm). Color: Reddish orange above, yellow below. Black area on caudal fin base. A long slender wrasse. Very...
abundant within its range. But here the rock wrasse is considered a pest because it often steals bait intended for more desirable species.

**Sphyraenidae: Barracudas**

69. **Pacific Barracuda.** California barracuda. *Sphyraena argentea* (Girard). DISTRIBUTION: Cape San Lucas, Baja California, Mexico, to Kodiak Island, Alaska. Although it is not common north of Point Conception, Calif. SIZE. Record weight is reported to be about 150 pounds (82 kg) and is about 4 feet (1.2 m). COLOR. Uniform dull black, sometimes with reddish spots on sides; two dark bars below eye. [A major game species in southern California, and sometimes caught farther north off Avila, Calif., in summer. Usually caught by trolling or casting live but near the mainland coast or about the southern California islands. Summer is the best fishing season. Young fish are usually found closer to shore than the adults.]

**Stichaeidae: Pricklebacks**

70. **Monkface Prickleback.** monkface eel, benny eel. *Gadichthys volucens* (Girard). DISTRIBUTION: San Clemente and the Coronado islands, Calif. to Santa Monica Bay, San Diego.ENDER. Length to 30 inches (76 cm). COLOR. Uniform dull black, sometimes with reddish spots on sides; two dark bars below eye. [Common in rocky intertidal areas out to 80 feet (24.4 m). Inhabits deep rocky pools between the tide lines in crevices or holes in the rocks. Algae seem to be its primary food although it also will take shrimp and other marine invertebrates. Most are caught by pole-holders—anglers who poke a baited hook into tide-pool crevices during low tide.]

**Scrombridae: Mackerels and Tunas**

71. **Albacore.** longfin tuna. *Thunnus alalunga* (Bonnaterre). DISTRIBUTION: Temperate waters of the Atlantic Ocean, in Pacific Ocean, from Guadalupe Island, California, Mexico, to southeast Alaska. SIZE. Reported to reach a length of 5 feet (152 cm) and a weight of 93 pounds (42.2 kg). (A record sport-caught fish off California coast was reported to weigh 66 pounds (30.0 kg). All-tackle record for a fish caught off Cape Point, South Africa, weighed 70 pounds (31.8 kg) with a length of 50½ inches (128.3 cm). COLOR. Dark steel blue or gray blue on back becoming silver gray on sides and belly; narrow white stripe on caudal fin. [Best sport fishing is in July through September (August) best offshore in southern California. Some sport anglers fish for albacore off central and southern California and Oregon in August and September. Albacore is a migratory pelagic species that tends to inhabit the clearer offshore California current waters that lie outside the greenish-colored nearshore upwelling waters.

72. **Yellowfin Tuna.** Allison tuna. *Thunnus albacares* (Bonnaterre). DISTRIBUTION: Cosmopolitan in tropical and subtropical seas. Hawaii islands, eastern Pacific from Chile to Point Buchon, Calif. SIZE. Reported to 450 pounds (204.6 kg); however, catches are rarely over 125 pounds (56.7 kg). All-tackle record in the Pacific, (San Benicio Island, Mexico) is 308 pounds (139.7 kg) with a length of 84 inches (213 cm). Color: Dark steel blue above, fading into silver gray below; iridescent yellow belly running from head to tail. Fin's lengthen with age and are tinged with silver. Irregular white dots form bars on belly of younger fish. [A pelagic schooling species, rarely enters the sport fishery off southern California in the summer and then only during years having very high sea surface temperatures. Although not often caught off southern California, it is much sought after by U.S. anglers off the coast of Mexico.]

73. **Bluefin Tuna.** Thunnus thynnus orientalis (Temminck and Schlegel). DISTRIBUTION: In the eastern Pacific from Peru to Shelikof Straits, Alaska, and west to Asia (Kuril Islands). SIZE. Recorded weight to 297 pounds (134.7 kg) in Pacific, however, most angler-caught bluefin are in the range of 10 to 40 pounds (4.5-18.1 kg). COLOR. Deep blue above, silver on sides and white below; irregular white spots on belly. [Excellent game species. Sometimes taken off southern California in summer, though not in great numbers. A pelagic schooling species, popular fishing areas off Santa Monica Bay and Oceanside, Calif., and off Catalina, San Clemente, and the Coronado islands.]
**STITOPIHORIDAE: BILLFISHES**

77. **STRIPE MARLIN**, *Tetrapturus audax* (Philippi) DISTRIBUTION: Throughout the warmer waters of the Indian and Pacific oceans. In the eastern Pacific from Chile to Point Conception, Calif. SIZE: Known to reach a weight of 350 pounds (158.6 kg) and a length of 12 feet (366 cm). Average weight of fish caught off San Diego is 110 to 140 pounds (49.9-63.5 kg). All-tackle record in the Pacific (Cape Brett, New Zealand) is 394 pounds (178.7 kg) with a length of 134 inches (340.4 cm). COLOR: Dark purplish blue above, fading to silvery below; dorsal and anal fins cobalt blue. Sides with blue stripes. This species is pelagic in habitat and is found throughout the tropical and subtropical Pacific. The major billfish species caught off southern California during summer and fall (mid-August to mid-September usually best). Caught by trolling baits or lures.

80. **BLACK ROCKFISH**, *Sebastes melanops* Girard. DISTRIBUTION: Paradise Cove, Calif., to Amchitka Island, Alaska. SIZE: Usual weight of adults ranges to about 3 pounds (1.4 kg) and length is reported up to 23.4 inches (60 cm). COLOR: Black with gray mottling on sides shading to a white belly. Black spots above the base of the spine and dorsal fin. Dorsal and anal fins dark gray. Often confused with the blue rockfish, but distinguished by the slanted or straight anal fin, and absence of spots on dorsal fin. A shallow-water species usually found around rocky or kelp areas; however, they do range in depth to 200 or 300 feet (61-91 m). Best fishing from central California ports such as Morro Bay and Monterey Bay and north to off Oregon and Washington.

**SCORPAENIDAE: SCORPIONFISHES**

79. **BLUE ROCKFISH**, *Sebastes mystinus* (Jordan and Gilbert). DISTRIBUTION: Point Santo Tomás, Baja California, Mexico. to Bering Sea, Alaska. SIZE: Record length is near 21 inches (53 cm), most catches are less than 15 inches (38 cm). COLOR: Dark blue above, shading to lighter below with light-blue mottling. fins uniformly blackish. Young are reddish up to 2.5 inches (6.0 cm) long. Often confused with black rockfish, but distinguished by the slanted or straight anal fin, and absence of spots on dorsal fin. A shallow-water species usually found around rocky or kelp areas; however, they do range in depth to 200 or 300 feet (61-91 m). Best fishing from central California ports such as Morro Bay and Monterey Bay and north to off Oregon and Washington.

81. **OLIVE ROCKFISH**, *Sebastes serranoides* (Eigenmann and Eigenmann). DISTRIBUTION: San Benito Islands, Baja California, Mexico. to Redding Rock, Calif. SIZE: Reported to reach a length of 24 inches (61 cm); usual length is 6 to 12 inches (15-30 cm) and weight is usually less than 2 pounds (0.9 kg). COLOR: Olive brown above. fading to lighter on belly. whitish blotsches on back under dorsal fin. Common to shallow water (50-100 feet or 15.2-30.5 m) around kelp beds and rocky bottom areas. Good fishing from central California south. Best fishing is along the southern California coast and about the offshore islands. Often confused with the yellowtail rockfish and kelp bass; however, if the number of soft rays in the anal fin is more (instead of six to eight) it is very probably an olive rockfish. See also kelp bass for differences in dorsal fin shape.

83. **KELP ROCKFISH**, *Sebastes atrovirens* (Jordan and Gilbert). DISTRIBUTION: Point San Pablo, Baja California, Mexico. to Timber Cove, Calif. SIZE: Usual weight is about 1 pound.
GRASS ROCKFISH. kelp rockfish. Sebastes rastrerellber (Jordan and Gilbert). DISTRIBUTION: Playa Maria Bay. Baja California, Mexico, to Yaquina Bay. Or. SIZE: Length to 28 inches (71 cm). Commonly caught in waters of 100 feet (30.5 m) or less. over or near kelp beds, than 2 pounds (0.9 kg)

BROWN ROCKFISH, bolina. Sebastes auriculatus Girard. DISTRIBUTION: Central Baja California. Mexico. to southeastern Alaska. SIZE: Length to 21 inches (53 cm). COLOR. Brown with light-brown mottling: dusky pink on fins and lower part of head. dark brown blotch on gill cover. Common around wharf pilings and rocky areas in shallow water out to about 180 feet (54.9 m) from central California north. and fairly abundant in San Francisco Bay and Puget Sound.


BROWN ROCKFISHES OF LESS IMPORTANCE TO THE MARINE ANGLER:


DUKY ROCKFISH. Sebastes ciliatus (Tilesius). DISTRIBUTION: Guayalope Island. Baja California, Mexico. to Point Conception. Calif. SIZE: Length to 16 inches (41 cm). COLOR: Gray brown with brown spots on dorsal area. becoming light gray below. brown streaks radiating from eye; fins pinkish.

GOPHER ROCKFISH. Sebastes carnerosus (Jordan and Gilbert). DISTRIBUTION. San Roque. Baja California. Mexico to Eureka. Calif. SIZE: Length to about 15½ inches (39 cm). COLOR. Olive brown with flesh-colored or-whitish spotting and blotches.

(0.5 kg): maximum length is reported to be near 17 inches (43 cm) COLOR: Mottled olive brown over lighter shades: throat yellow: head and body covered with dark speckles. As its name implies, this species is common around kelp beds, and also found around rocky reefs. Younger fish are usually caught farther inshore in shallower water than the adults. Distinguished from the grass rockfish by the long gill rakers which are long and slender, not short and stubby as those of the grass rockfish.

86. CHINA ROCKFISH, coelafhtano. gopher. Sebastes nebulosus Ayres. DISTRIBUTION. San Miguel Island. Calif. north to southeastern Alaska. SIZE: Average weight about 2 pounds (0.9 kg): record length to 17 inches (43 cm). COLOR: Dark green with light-green mottling above with lighter green or brown below: fins olive green with pelvic and pectoral fins tipped with red. Sometimes confused with the kelp rockfish (See kelp rockfish for distinguishing characters). This species is taken along the coast in shallow waters with best fishing off central California southward along the coast. Commonly caught in waters of 100 feet (30.5 m) or less. over or near kelp beds or rocky areas. The young are frequently caught from piers.

87. CALICO ROCKFISH. Sebastes dalii (Egeminann and Beeson). DISTRIBUTION. Vicusano Bay. Baja California. Mexico. to San Francisco. Calif. SIZE: Usually small. Average weight 1 ½ pounds (0.61 kg); maximum length 8 to 10 inches (20-25 cm). COLOR: Greenish yellow with irregular brown bars and blotches on sides forming oblique bars; brown spots and streaks on tail fin. Common to southern California. with some taken off central California. Occurs in water 60 to 840 feet (18-3-256.0 m) deep. This species, however. does not appear to be greatly abundant in any one area.

88. WIDOW ROCKFISH. viua. Sebastes entomelas (Jordan and Gilbert). DISTRIBUTION: Todos Santos Bay. Baja California. Mexico. SIZE: Average weight is about 1 ½ pounds (0.7 kg). and record length is 21 inches (53 cm). COLOR: Uniform dusky brown with a yellow or brassy tinge on sides and sometimes reddish on belly. Young specimens have vague orange streaks. Usually taken from below 100 feet (30.5 m) over rocky or rough bottom; however. young are caught near surface. This is an important species in the Monterey Bay area.

89. BROWN ROCKFISH, bolina. Sebastes auriculatus Girard. DISTRIBUTION: Central Baja California. Mexico. to southeastern Alaska. SIZE: Length to 21 inches (53 cm). COLOR. Brown with light-brown mottling: dusky pink on fins and lower part of head. dark brown blotch on gill cover. Common around wharf pilings and rocky areas in shallow water out to about 180 feet (54.9 m) from central California north. and fairly abundant in San Francisco Bay and Puget Sound.


BROWN ROCKFISHES OF LESS IMPORTANCE TO THE MARINE ANGLER:


92. DUSKY ROCKFISH. Sebastes ciliatus (Tilesius). DISTRIBUTION: Guayalope Island. Baja California. Mexico. to Point Conception. Calif. SIZE: Length to 16 inches (41 cm). COLOR: Gray brown with brown spots on dorsal area. becoming light gray below. brown streaks radiating from eye; fins pinkish.

RED ROCKFISHES.

95. VERMILION ROCKFISH. red snapper, rasher, barracuda, bittersweet, red rock cod, genuine red, Sebastes miniatus (Jordan and Gilbert). DISTRIBUTION: San Benito Island, Baja California, Mexico, to Vancouver Island, British Columbia. SIZE: Average weight about 31/2 pounds (1.6 kg). Color: Deep vermilion on back mottled with gray or black, blotsches on sides, orange stripes radiating from eyes; fins red deep and on small specimens often faintly edged with black. Mouth red. Sometimes confused with the canary rockfish, however, the underside of jaw is rough, not smooth, and there is no large black area on spinous dorsal fin as on smaller specimens of the canary rockfish. One of the larger rockfish species, common to depths of 200 to 600 feet (61.0-182.9 m). The young fish are frequently found near shore. An important contributor to the "rock cod" catch in southern California.

96. CANARY ROCKFISH. orange rockfish, codalargo, yellow snapper, filolone, fantail, red rock cod, red snapper, Sebastes psittacus (Gill). DISTRIBUTION: Cape Colnett, Baja California, Mexico, to southern California, and sometimes in, schools nearshore and offshore. SIZE: Average weight about 11/2 pounds (0.7 kg). Color: Clayish, mottled with orange, fins, orange. Sometimes confused with vermillion rockfish. See description of that species for differences. Young canary rockfish are sometimes found in shallow water; adults found over banks in deep water. An important contributor to the central and northern California party boat catch.

97. BOCACCIO. salmon, grouper, young are sometimes called "tomcod." Sebastes paucispinis Ayres. DISTRIBUTION: Point Blanca, Baja California, Mexico, to Kodiak Island, Alaska. SIZE: Average weight is 31/4 pounds (1.5 kg). The record size reported to be about 3 feet (91 cm) and 21 pounds (9.5 kg). Color: Brownish to dusky red above, shading into dull orange red below. Sides light. Reddish tinge overall; sometimes mottled with brown or black. Usually distinguished from other rockfishes by its greatly projecting lower jaw. A very important commercial and sport species off California. Adults are usually found in deep water (to 125' fathoms or 228 m) and young bocaccio are frequently found in schools nearshore and are commonly caught by pier anglers.

98. YELLOWEYE ROCKFISH. turkey-red rockfish, rascal, rascal-rockfish, red snapper, red rockfish, tambor, turkey rock, not-belly. Sebastes ruberrimus (Cramer). DISTRIBUTION: Ensenada, Baja California, Mexico, to Gulf of Alaska. SIZE: Average weight about 51/2 pounds (2.5 kg); known to reach a length of 36 inches (91 cm). Color: Bright vermilion above, sometimes blotted with black. Finished to light below; smaller specimens often have a whitish streak along lateral line. All fins except spinous dorsal are usually edged with black; eye bright yellow. One of the larger and more colorful of the rockfish species. Found over shallow and deep reef areas in water 150 to 1,200 feet (45.7-365.8 m) deep. Excellent food species.

99. GREENSTRIPED ROCKFISH. strawberry rock cod. raina, barona, Sebastes elongatus Ayres. DISTRIBUTION: Cedros Island, Baja California, Mexico, and north to Green Island, Alaska. SIZE: Small; average weight about 1/4 pound (0.3 kg); length recorded to 15 inches (38 cm). Color: Pale red above, white on belly; with olive-green irregular stripes on sides, joining near tail. Black on tip of chin.

100. STARRY ROCKFISH. spotted-rockfish, chinashark. Sebastes constellatus (Jordan and Gilbert). DISTRIBUTION: Near Cedros Island, Baja California, Mexico, to San Francisco, California. SIZE: Reported to attain a length of 18 inches (46 cm); average weight is about 11/4 pounds (0.7 kg). Color: Orange red above, shading to yellow, on sides and below; profusely covered with small bright-green spots; three to five white blotches on back. A brightly colored spines common off southern California. Where it is usually taken over deep reefs.

101. ROSY ROCKFISH. corsair, dabby, Sebastes rosaceus Girard. DISTRIBUTION: Turtle Bay, Baja California, Mexico, to Puget Sound, Washington. SIZE: A small species, averaging about 0.3 pound (0.2 kg). Maximum length reported to be 12 1/4 inches (32 cm). Color: Yellow, blotted with dark red on back and sides, fading to whitish below; purple above lateral line; pinkish fins. Taken in deep water (90 fathoms or 164.6 m) sometimes in shallow water over reefs or rocky areas. A good food species, although small in size.
103. **GREENSPOTTED ROCKFISH.** *Sebastes ochraceus* (Jordan and Gilbert). DISTRIBUTION: Cedros Island, Baja California, Mexico. COLOR: Brick red to brown with numerous dark spots and blotches on body and fins. This species is found in bays and along rocky shores throughout the year in southern California; however, spring and summer appear to be the best fishing season. Although it sometimes occurs over sandy or sandy-mud bottom, this species seems to prefer rocky surroundings and water shallower than 100 feet (<30.5 m). A record length is reported to be 37 inches (94 cm) long and a weight of 28½ pounds (12.9 kg). COLOR: Yellowish red with faint vertical bars on adults.

104. **COW ROCKFISH.** *Sebastes levis* (Eigenmann). DISTRIBUTION: Central Baja California, Mexico. COLOR: Brick red to brown with numerous dark spots and blotches on body and fins. This species is found along rocky shores and is common off Newport Bay in southeastern Alaska. SIZE: Length recorded to about 17 inches (43 cm). COLOR: Brick red to brown with numerous dark spots and blotches on body and fins. An unshadow fish common in bays and along rocky shores throughout the year in southern California; however, spring and summer appear to be the best fishing season. Although it occasionally occurs over sandy or sandy-mud bottom, this species seems to prefer rocky surroundings and water shallower than 100 feet (<30.5 m). A record length is reported to be 37 inches (94 cm) long and a weight of 28½ pounds (12.9 kg). COLOR: Yellowish red with faint vertical bars on adults.

**RED ROCKFISHES OF LESS IMPORTANCE TO THE MARINE ANGLER**

105. **BIGEYE ROCKFISH.** *Sebastes nigrocinctus* (Jordan and Gilbert). DISTRIBUTION: Baja California, Mexico. COLOR: Brick red to brown with numerous dark spots and blotches on body and fins. This species is found along rocky shores and is common off Newport Bay in southeastern Alaska. SIZE: Length recorded to about 17 inches (43 cm). COLOR: Brick red to brown with numerous dark spots and blotches on body and fins. An unshadow fish common in bays and along rocky shores throughout the year in southern California; however, spring and summer appear to be the best fishing season. Although it occasionally occurs over sandy or sandy-mud bottom, this species seems to prefer rocky surroundings and water shallower than 100 feet (<30.5 m). A record length is reported to be 37 inches (94 cm) long and a weight of 28½ pounds (12.9 kg). COLOR: Yellowish red with faint vertical bars on adults.

**STRIPETAIL ROCKFISH.** *Sebastes trispinosus* (Jordan and Gilbert). DISTRIBUTION: Baja California, Mexico. COLOR: Brick red to brown with numerous dark spots and blotches on body and fins. This species is found along rocky shores and is common off Newport Bay in southeastern Alaska. SIZE: Length recorded to about 17 inches (43 cm). COLOR: Brick red to brown with numerous dark spots and blotches on body and fins. An unshadow fish common in bays and along rocky shores throughout the year in southern California; however, spring and summer appear to be the best fishing season. Although it occasionally occurs over sandy or sandy-mud bottom, this species seems to prefer rocky surroundings and water shallower than 100 feet (<30.5 m). A record length is reported to be 37 inches (94 cm) long and a weight of 28½ pounds (12.9 kg). COLOR: Yellowish red with faint vertical bars on adults.

**SALMONFISHES**

106. **FREEFISH.** *Sebastes capistratus* (Jordan and Gilbert). DISTRIBUTION: Baja California, Mexico. COLOR: Brick red to brown with numerous dark spots and blotches on body and fins. This species is found along rocky shores and is common off Newport Bay in southeastern Alaska. SIZE: Length recorded to about 17 inches (43 cm). COLOR: Brick red to brown with numerous dark spots and blotches on body and fins. An unshadow fish common in bays and along rocky shores throughout the year in southern California; however, spring and summer appear to be the best fishing season. Although it occasionally occurs over sandy or sandy-mud bottom, this species seems to prefer rocky surroundings and water shallower than 100 feet (<30.5 m). A record length is reported to be 37 inches (94 cm) long and a weight of 28½ pounds (12.9 kg). COLOR: Yellowish red with faint vertical bars on adults.

107. **FLAG ROCKFISH.** *Sebastes nigromaculatus* (Jordan and Gilbert). DISTRIBUTION: Baja California, Mexico. COLOR: Brick red to brown with numerous dark spots and blotches on body and fins. This species is found along rocky shores and is common off Newport Bay in southeastern Alaska. SIZE: Length recorded to about 17 inches (43 cm). COLOR: Brick red to brown with numerous dark spots and blotches on body and fins. An unshadow fish common in bays and along rocky shores throughout the year in southern California; however, spring and summer appear to be the best fishing season. Although it occasionally occurs over sandy or sandy-mud bottom, this species seems to prefer rocky surroundings and water shallower than 100 feet (<30.5 m). A record length is reported to be 37 inches (94 cm) long and a weight of 28½ pounds (12.9 kg). COLOR: Yellowish red with faint vertical bars on adults.

**GREENLINGS**

108. **CALIFORNIA SCORPIONFISH.** *Scorpaena guttata* Girard. DISTRIBUTION: Near Magdalena Bay, Baja California, Mexico, to Santa Cruz, Calif. SIZE: Length recorded to about 17 inches (43 cm). COLOR: Brick red to brown with numerous dark spots and blotches on body and fins. An unshadow fish common in bays and along rocky shores throughout the year in southern California; however, spring and summer appear to be the best fishing season. Although it occasionally occurs over sandy or sandy-mud bottom, this species seems to prefer rocky surroundings and water shallower than 100 feet (<30.5 m). A record length is reported to be 37 inches (94 cm) long and a weight of 28½ pounds (12.9 kg). COLOR: Yellowish red with faint vertical bars on adults.

109. **SABLEFISH.** *Anoplopomus argenteus* (Pallas). DISTRIBUTION: Point Conception, Calif., to Alaska and Bering Sea. SIZE: Length recorded to about 24 inches (61 cm). COLOR: Highly variable, usually reddish brown with darker mottling; sometimes large red blotches on sides; tail fin tipped with red; dark round spot above pectoral fins inside of mouth bluish. A shallow-water species inhabiting the same areas as the kelp greenling (rocky shores, jetties, etc.).

110. **KELP GREENLING.** *Hexagrammos dolloi* (Pallas). DISTRIBUTION: Point Conception, Calif., to Alaska and Bering Sea. SIZE: Length recorded to about 24 inches (61 cm). COLOR: Highly variable, usually reddish brown with darker mottling; sometimes large red blotches on sides; tail fin tipped with red; dark round spot above pectoral fins inside of mouth bluish. A shallow-water species inhabiting the same areas as the kelp greenling (rocky shores, jetties, etc.).
113. ATKA MACKEREL. Pteroerythrinus munroenierii (Pallas). DISTRIBUTION: Monterey Bay, Calif., to northwestern Alaska. Bering Sea, and Sea of Japan. SIZE: Attains a length of up to 2 feet (61 cm), although the average length is about 12 inches (30 cm). COLOR: Light brown to greenish, often with reddish tinge, conspicuous white spots. Mottling, spots, and other markings are not specific. Common to central California northward off Oregon, Washington, and southeastern Alaska coasts. A desirable food species. Young lingcod are caught near rocky or kelp beds. Adults tend to frequent deeper water up to 350 feet (106.7 m) in areas of rough bottom.

114. WHITESPOTTED GREENLING, Hexagrammos stelleri Tlesius. DISTRIBUTION: Puget Sound, Wash., to Japan. SIZE: Length to at least 19 inches (48 cm). COLOR: Light brown to greenish, often with reddish tinge, conspicuous white spots on body.

115. PAINTED GREENLING, Oxylebius pictus Gill. DISTRIBUTION: Point San Carlos, Baja California, Mexico, to Strait of Georgia. British Columbia. SIZE: Length to at least 10 inches (25 cm). COLOR: Brown and dark-red bars and mottling over grayish-brown body. Flaps on head are red. Rarely taken.

116. CABELON. bullfish. bullhead: blue cod. bull cod. marbled sculpin. Scorpaenichthys marmoratus (Ayres). DISTRIBUTION: Point Arguello, Baja California, Mexico, to Sitka, Alaska. SIZE: Average weight is about 2 pounds (0.9 kg). Largest fish reported was 39 inches (99 cm) long and weighed slightly over 15 pounds (6.8 kg). COLOR: Highly variable from brown to red, greenish or gray, usually with extensive mottling or blotching. Mouth lining in females usually green, males red. The flesh of the cabezon has an excellent flavor, but the roe is reported to be unpalatable. This fish is found over many types of bottom, usually rock and sand, in shallow water out to depths of about 250 feet (76.2 m).

117. RED IRISH LORD. Hemilepidotus hemilepidotus (Tilesius). DISTRIBUTION: Monterey Bay, Calif., to Sea of Okhotsk. SIZE: Average weight is about 3 pounds (0.2 kg). The greatest reported length is 20 inches (51 cm), but is not common over 12 inches (30 cm). COLOR: Dusky to bright red above, becoming lighter below, mottled with brownish. Sometimes covered with brownish to black spots. Flesh is flaky on snout and just above eyes. A rocky-shore species, common to Oregon, Washington, and Alaska. Ranges from shallow intertidal areas out to 156 feet (47.5 m). Feeds on crabs, barnacles, and mussels.

118. PACIFIC STAGHORN SCULPIN, Leptocottus ornatus (Girard). DISTRIBUTION: San Quintin Bay, Baja California, Mexico, to Chugach, Alaska. SIZE: Length to 12 inches (30 cm). COLOR: Greenish brown or gray above, white to yellow below. This abundant inshore sculpin, although sometimes considered a nuisance to fishermen, is an important baitfish in California. Common in bays and brackish-water areas.


120. BUFFALO SCULPIN, Enephrhys barus (Girard). DISTRIBUTION: Monterey Bay, Calif., to Kodiak Island, Alaska. SIZE: Length to 12 inches (30 cm). COLOR: Dark gray green or brown above; purplish brown plates on head and on lateral line.

121. CALIFORNIA HALIBUT, Pleuronichthys californicus (Ayres). DISTRIBUTION: Magdalena Bay, Baja California, Mexico, to British Columbia. SIZE: Record size is about 5 feet (1.52 m) and 74 pounds (32.7 kg). Average size is 6 to 7 pounds (47.32 kg). However, pier-caught fish are usually smaller (called "fly-swatters"). COLOR: Olive-black color to brown, sometimes with lighter or darker mottling; young often with whitish spots. Blind side is unpigmented. Common along sandy shores and nearshore reefs in southern California; some are taken in the Morro Bay, Monterey Bay, and in the San Francisco area. An important species to pier anglers in southern California. Good fishing is sometimes found near live-bait receiver locations. Recently taken in water over 10 to 15 fathoms (18.3 to 27.4 m). In southern California common along shore in the spring, frequenting channels, leading into larger bays and just outside the surf zone. From Morro Bay north to San Francisco and Tomales Bay, fishing is best in summer and early fall.

122. PACIFIC SANDDAB, Pleuronichthys tordids (Girard). DISTRIBUTION: Magdalena Bay, Baja California, Mexico, to northwestern Alaska and Sea of Japan. SIZE: 7.16 inches (16 cm) long, most weigh less than 1/2 pound (0.2 kg). COLOR: Various shades of light brown, sometimes mottled with dull-orange, yellow, or black; Blind side is unpigmented. Common over sandy or muddy-bottom bottoms at depths of 20 to 50 fathoms (36.6 to 91.4 m). An excellent food fish.

123. PACIFIC HALIBUT, Pleuronichthys stromboides Schmidt. DISTRIBUTION: Santa Rosa Island, Calif., to the Bering Sea and Sea of Japan. SIZE:
Average weight of the sport catch off the Washington, Oregon, and northern California coasts is 5 pounds (2.3 kg), but larger fish are common in Alaska. Females recorded to 405 pounds (184 kg), males to 123 pounds (55.6 kg). Length up to 8^{1/2} feet (259 cm). COLOR: Uniform dark brown to black, somewhat with paler blotches and fine motting. Blind side is unpigmented. Commonly caught off Oregon, Washington, and Alaska; not usually taken south of extreme northern California. Sometimes taken in water less than 500 feet (152.4 m). Sometimes appears in relatively shallow water during summer. An excellent food species.

124. STARRY FLOUNDER, diamondback. Platichthys stellatus (Fallas). DISTRIBUTION: Santa Barbara, Calif. to Arctic Alaska and Sea of Japan. An abundant species from central California north to Alaska. SIZE: Weight recorded up to 20 pounds (9.1 kg) and a length of 3 feet (91 cm). However, the average sport-caught fish is about 1 1/4 pounds (0.6 kg). COLOR: Mottled dark brown with alternating white to light orange and black bands on dorsal and anal fins. Blind side is unpigmented. One of the few flounder species that may ordinarily have the eyes and color on either side. One of the most important sport-caught flatfishes along the entire Pacific coast. Lives in shallow water over sandy or mud bottom. Sometimes caught at depths of up to 70 fathoms (126.0 m). It is common in bays and frequently migrates into tidewater streams and up rivers. Has a very rough (sandstone) skin.

125. DIAMOND TURBOT, Hypopsetta guttulato (Jordan). DISTRIBUTION: Southern California and Magdalena Bay, Baja California, Mexico, to Cape Mendocino, Calif. SIZE: Record length is about 18 inches (46 cm). Average weight of the sport catch is about 1 1/2 pounds (0.6 kg). COLOR: Dark to light brown with lighter or darker yellow or red mottlings and spots. Fins with dark blotches or bars. Blind side is unpigmented. Known to range to a depth of about 70 fathoms (128 m), but is frequently caught in shallow water over sandy or gravelly bottom, and sometimes near eel grass beds. Most abundant from central California north into Puget Sound.

126. HORNYHEAD TURBOT, Pleuroprionus ventralis Jordan and Gilbert. DISTRIBUTION: Magdalena Bay, Baja California, Mexico, to Point Reyes, Calif. SIZE: Length recorded to 44 1/2 inches (37 cm). Average weight about 1 1/4 to 1 pound (0.6-0.5 kg). COLOR: Brown with darker mottlings and scattered pale blotches. Common in southern California in bays, sloughs, and other nearshore areas. Similar in habitat preference to the diamond turbot.

127. PETRALE SOLE, roundnose flounder. Opsoceta jordani (Lockington). DISTRIBUTION: Coronado Islands, Baja California, Mexico, to northern Gulf of Alaska. SIZE: Average weight is about 1 1/4 pounds (0.8 kg). Maximum recorded length is 27 1/2 inches (70 cm). COLOR: Uniform dark to light brown. Sometimes with pale blotches. Blind side is unpigmented. An important and desirable food fish caught off central California, Oregon, and Washington coasts. It is commonly found on sand and mud bottoms, usually at depths of 60 feet (18.3 m) or more, during the summer, migrating to deeper water (up to 1,200 fathoms or 365.8 m) during the winter.

128. ROCK SOLE, broadfin flounder. Lepidopsetta bilobata (Ayres). DISTRIBUTION: southern California to the Bering Sea and Sea of Japan. SIZE: Record length is about 22 1/2 inches (57.3 cm). Average weight is about 11 1/2 pounds (6.6 kg). COLOR: Dark to light brown with lighter or darker yellow or red mottlings and spots. Fins with dark blotches or bars. Blind side is unpigmented. Known to range to a depth of 70 fathoms (128 m), but is frequently caught in shallow water over sandy or gravelly bottom, and sometimes near eel grass beds. Most abundant from central California north into Puget Sound.

129. ENGLISH SOLE, lemon sole, pointed-nose flounder. Parophrys vetulus (Girard). DISTRIBUTION: Central Baja California, Mexico, to northwestern Alaska. SIZE: Average weight about 1 pound (0.5 kg); record length is reported to be 24 inches (61 cm). COLOR: Brown, with fins edged with dark brown to black. Blind side is unpigmented. An important species from central California north. Migratory, found in bays and estuaries out to about 200 fathoms (365.8 m). Caught nearshore during the summer, and although sometimes taken from piers and off jetties at this season of the year, more are landed by skiff and party boat anglers than by any other method. A good food fish; however, the flesh of unshorn specimens sometimes has an iodine flavor.

130. SAND SOLE, flame flounder. Parophrys melanonotus (Girard). DISTRIBUTION: Point Magdelena, Baja California, to northwestern Gulf of Alaska. SIZE: Average weight 1/2 pound (0.2 kg); record length is reported to be 21 inches (53 cm). COLOR: Dark gray to brown, speckled with dark brown or black spots. This inshore species is usually caught along sandy shores, around jetties, and in estuaries. The young are sometimes caught around rocky areas in summer. Migrates to deeper water in the winter. Common north of Point Conception, Calif.

131. REX SOLE, Jonah sole. Glyptocephalus zachirus (Lockington). DISTRIBUTION: San Diego, Calif., to the Bering Sea. SIZE: Average weight is about 1/2 pound (0.2 kg); maximum length is reported to be about 23 inches (59 cm). COLOR: Uniform light brown on eyed side; fins darker, pectoral fins black. Blind side is unpigmented. A deepwater species, usually caught on sand and sand-mud bottom. Similar in habitat requirements to the petrale sole and Pacific sanddab. A highly desirable food species.
OTHER MINOR MARINE GAME FISHES.

A brief listing is given below of some additional families and species of fishes which now do not contribute significantly to the sport catch, but sometimes are taken by Pacific coast anglers. This listing is not complete, since marine anglers capture many species during the course of the year that are not listed here, but it reviews some of the more commonly caught minor species.

SKYLLORHINIDAE: CAT SHARKS


SQUALIDAE: DOGFISH SHARKS

139 SPINY DOGFISH, Squalus acanthias Linnaeus. DISTRIBUTION: Temperate and subtropical Atlantic and Pacific oceans; in the eastern Pacific, in Chile, southern California to Alaska, and to Japan.

RAJIDAE: SKATES

140 BIG SKATE, Raja binoculata Girard. DISTRIBUTION: San Quintin Bay, Baja California, Mexico, to northwestern Alaska and Bering Sea. Not common south of Point Conception, Calif.

141. CALIFORNIA SKATE, Raja mirornata Girard. DISTRIBUTION: Southwestern Alaska to Baja California. Mexico. to the Strait of Juan de Fuca.

142. LONGNOSE SKATE, Raja rhina Jordan and Gilbert. DISTRIBUTION: Point Loma, Calif. to Southern Alaska.

DASYATIDAE: STINGRAYS

143. ROUND STINGRAY, Urolophus halleri Cooper. DISTRIBUTION: Pa'ama Bay, Panama, to Humboldt Bay, Calif. Rare north of Point Conception, Calif.

MURAENIDAE: MORAYS

144. CALIFORNIA MORAY, Gymnothorax morax (Ayres). DISTRIBUTION: Magdalena Bay, Baja California, Mexico, to Point Conception, Calif.

CLUPEIDAE: HERRINGS

145. PACIFIC HERRING, Clupea harengus pallasi Valenciennes. DISTRIBUTION: Northern Baja California, Mexico, to northern Eurasia; Bering Sea, and Japan.

146. PACIFIC SARDINE, Sardina sox caeruleus (Lynx). DISTRIBUTION: Guaymas, Gulf of California, Mexico, to Kamchatka Peninsula, USSR.

ENGRAULIDAE: ANCHOVIES

147. NORTHERN ANCHOVY, Engraulis mordax Girard. DISTRIBUTION: La Paz, Baja California, Mexico, to Queen Charlotte Island, British Columbia.

SYNODONTIDAE: LIZARDFISHES


BARTACHOIDIDAE: TOADFISHES

149. PLAINFIN MIDSHIPMAN, northern midshipman, Porichthys notatus Girard. DISTRIBUTION: Gorda Bank, Gulf of California, Mexico, to Sitka, Alaska.

POMADYSIDAE: GRUNTS

150. SALEM. bgeye bass, Xenistius californiensis (Steindachser). DISTRIBUTION: Peru north to Monterey Bay, Calif. Rare north of Point Conception, Calif.

POMACENTRIDA: DAMSELFISHES

151. BLACKSMITH, Chromis punctipinnis (Cooper). DISTRIBUTION: Point San Pablo, Baja California, Mexico, to Monterey, Calif.

CLINIDAE: CLINIDS

152. GIANT KELPFISH, Heterostichus rostratus Girard. DISTRIBUTION: Cape San Lucas, Baja California, Mexico, to British Columbia.

153. ONESFOT FRINGEHEAD, Neoclinus uninotatus Hubbs. DISTRIBUTION: San Diego Bay to Bodega Bay, Calif.
Marine Game Fishes of the Pacific Islands

The following pages describe some of the major game fishes found in marine and brackish waters of Hawaii, American Samoa, and Guam. It is indeed unfortunate that these tropical fishes could not be reproduced in color, for they are among the most beautiful in the world.

The local fish names are given first, since they are by these names that they are known in the tropical Pacific. Usually the Hawaiian name is given first, followed by its equivalent in Samoan (S) or Guamanian (C), and then by its English equivalent if one exists. The authorized scientific name and the name of the person who originally described the species are given last.

For those who wish to pronounce the Hawaiian names correctly, it is relatively simple. There are only 12 letters in the alphabet and the five vowels. A, E, I, O, U are pronounced a in fish, e as in vgin, i as in peep, o as in gwn, and u as in book. Each vowel is pronounced. For instance, shulehelo is pronounced ah-hoe-heh-loh, with the accent on the second and fourth syllable. The consonants are pronounced as in English except that W especially when after the first syllable, has the sound of V as in valuable. For example awoweo is pronounced oh-yeh-oh-yeh-ch. The apostrophe or hahina, as in awoweo and in other Hawaiian fish names, indicates elision of one or more letters. It does not indicate accent, but a break in sound between the letters it separates. In writing Hawaiian names it is important that these marks be used, since they are an essential part of the word.

Marine anglers wishing to make a closer species identification of their catch should read Handbook of Hawaiian Fishes by Gasoline and Brock (1960, University Press, Honolulu). This reference is the best available covering most of the species. Other references for specific families and genera will be found in the section on Reference.

### CARCHARHINIDAE: REQUIEM SHARKS

#### 154.

**MANO (H)**, malo (S), tauta (S), gray shark, sand shark, whaler. 
**CARCHARHINIDAE: REQUIEM FISHES**

The awaawua is primarily an inshore fish, often found in bays and harbors and along sandy shores. In Hawaii it is known to enter streams and rivers and is commonly reared in fish ponds. This species rarely occurs in American Samoa and Guam. Taken by hook and line and by gill net throughout the Hawaiian Islands. Excellent light-tackle quarry that fights gamely and leaps repeatedly when hooked. The awaawua is edible, but the flesh contains many fine bones. Widely used by the Chinese in making fish cakes.

### SPHENIDAE: HAMMERHEAD SHARKS

#### 155.

**MANO KIHIKIHI (H)**, kihu (S), mata-i-tahiga (S), scalloped hammerhead (shark). 
**SPHENIDAE: HAMMERHEAD SHARKS**

**AWAAWA (H)**, awaan (H), poke awa (H), ladyfish, ten pounder. 
**ELOPIDAE: TARPONS, LADYFISHES**

156.

- **AWAAWA (H)**, awaan (H), poke awa (H), ladyfish, ten pounder. Elops hawaiensis. Regan. DISTRIBUTION: Tropical Pacific. SIZE: Up to about 24 inches (61 cm), usually about 12 to 15 inches (30-38 cm). COLOR: Bright silvery with a blue-green hue on the dorsal area. The awaawua is primarily an inshore fish, often found in bays and harbors and along sandy shores. In Hawaii it is known to enter streams and rivers and is commonly reared in fish ponds. This species rarely occurs in American Samoa and Guam. Taken by hook and line and by gill net throughout the Hawaiian Islands. Excellent light-tackle quarry that fights gamely and leaps repeatedly when hooked. The awaawua is edible, but the flesh contains many fine bones. Widely used by the Chinese in making fish cakes.

- **AWAAWA (H)**, awaan (H), poke awa (H), ladyfish, ten pounder. Elops hawaiensis. Regan. DISTRIBUTION: Tropical Pacific. SIZE: Up to about 24 inches (61 cm), usually about 12 to 15 inches (30-38 cm). COLOR: Bright silvery with a blue-green hue on the dorsal area. The awaawua is primarily an inshore fish, often found in bays and harbors and along sandy shores. In Hawaii it is known to enter streams and rivers and is commonly reared in fish ponds. This species rarely occurs in American Samoa and Guam. Taken by hook and line and by gill net throughout the Hawaiian Islands. Excellent light-tackle quarry that fights gamely and leaps repeatedly when hooked. The awaawua is edible, but the flesh contains many fine bones. Widely used by the Chinese in making fish cakes.

### ALBULIDAE: BONEFISHES

#### 157.

'010 (H), bonefish. Albula vulpes (Linnaeus). DISTRIBUTION: Worldwide in tropical and subtropical oceans. SIZE: Atlantic record (Zululand, South Africa) is 19 pounds (8.6 kg) and 39 5/8 inches (100.7 cm) long. In the Pacific Ocean (Kauai, Hawaii) the record is 18 pounds 2 ounces (6.2 kg) and a length of 3 feet 5¼ inches (105.4 cm). Hawaiian bonefish are usually about 15 to 18 inches (38-46 cm) long. COLOR: Bright iridescent silver. The '01o is a schooling fish that feeds along sandy bottom, usually over sand patches or channels between coral formations in the reef. Sometimes enters the surge zone along beaches. Although caught throughout the year in Hawaii, the season usually begins in December when the fish come fairly close to shore to spawn, and fishing is usually good through April. Exceptionally large fish have been taken from waters off Kauai, Oahu, and Maui. This species is uncommon in American Samoa and does not occur in Guam. Caught surf casting and bottomfishing with cut bait: some are taken with gill nets. Like the awaan, the flesh of the bonefish is

---

1. Most tropical sharks belong to the group, many are inshore or reef-inhabiting species, others also occur far out at sea. A few are considered potentially dangerous to humans and attain considerable size. Although sometimes considered a nuisance to anglers, sharks are rapidly growing in popularity as game fishes. The gray reef shark is especially abundant around American Samoa. It also occurs around Hawaii and Guam, but is not sought by anglers. Sharks are usually caught by handling at anchor or drift and by trolling over channel areas between reefs and over offshore ledges.
palatable, but contains numerous, fine bones. It is, however, a Hawaiian favorite for making fish cakes and poki (raw, spiced).

**CHANIDAE: MILKFISHES**

158. **AWA (H), agua (G), milkfish. Chaetodipterus forskyi** DISTRIBUTION: Throughout the tropical Indo-Pacific. SIZE: Up to 3 feet (91 cm) long; most caught are around 18 to 24 inches (46-61 cm). COLOR Silvery. The awa is a schooling, surface-feeding fish, common to brackish water areas, bays, and inlets in the Hawaiian Islands. Common in American Samoa, but very rarely fished for; uncommon in Guam. Hawaiian anglers catch awa in late and early morning, from 6 to 9 a.m., and from 5 to 8 p.m., using a hook and line. The fish is often seen leaping from the water when hooked. Also taken with gill nets: young fish are sometimes taken with cast nets. Considered a fine food fish; some are raised commercially in fish ponds in Hawaii.

**BELONIDAE: NEEDLEFISHES**

160. **'AH'A'HA (H), ise (S), keel-tailed needlefish, needlefish, Pterostoma argulus (Lesueur)** DISTRIBUTION: Worldwide. SIZE: Attains a length of about 15 inches (38 cm). COLOR Blue-green, on back, fading to silvery below. A near-offshore schooling species, often seen skittering or gliding over the water's surface. Common in Hawaii and American Samoa, although not sought after by Samoan fishermen. In Guam, a much larger species of needlefish called "pulus" or "pulifish", Tylosurus crocodilus (Peron and Lesueur), is one of the more common fishes taken with spinning gear. In general, needlefish are taken by pole and line using artificial lures or live, bait. The greenish flesh of the 'aha ha is reported to have a very good flavor.

**HOLOCENTRIDAE: SQUIRRELFISHES**

161. **MENPACHI (H), 'uenu (S), spasaq (G), squirrelfish, Myripristis berndti Jordan and Evermann and M. amoenus (Castelnau)** DISTRIBUTION: Tropical Pacific Ocean. SIZE: Up to 14 inches (36 cm). COLOR Bright red, red. These two species of menpachi are common inshore reef fishes in Hawaii. Both are nocturnal and congregate in caves and deep crevices during the day, venturing out over the reef at night to feed. Usually taken with spars: also with gill nets and hooks and lines and in traps. Popular for mostly at night. Menpachi are highly esteemed as food fish and subsequently bring a high price at Hawaiian markets.

**SERRANIDAE: SEA BASSES**

162. **ROI (H), ata moana (S), gado (G), blue-spotted grouper, Cephalopholis argus Bloch and Schneider. DISTRIBUTION: Tropical Indo-Pacific. SIZE: Reaches about 20 inches (51 cm) long. COLOR. Purple brown with light-blue spots. Pale blue with two faint crossbars which tend to fade with age. Distinguished by the black margin on the spiny dorsal fin. A common grouper caught by spinning gear and spears around Guam and American Samoa. Introduced to Hawaii in 1956 from the Marianas Islands, but did not become established. A good food fish.

163. **GADO (G), gata (S), Epinephelus fuscatus (Forskal)** DISTRIBUTION: Tropical Indo-Pacific. SIZE: Reported to reach about 14 inches (36 cm). COLOR Red with dusky crossbars which tend to fade with age. Distinguished by the black margin on the spiny dorsal fin. A common grouper caught by spinning gear and spears around Guam and American Samoa. Introduced to Hawaii in 1956 from the Marianas Islands, but did not become established. A good food fish.

164. **'ATA'ATA (S). Epinephelus tawina (Forskal)** DISTRIBUTION: Tropical Indo-Pacific. SIZE: Up to 500 pounds (226.8 kg) in weight and averages anywhere from 100 to 400 pounds (45.4-181.4 kg). COLOR: Young fish are tan with irregular brown bars and red motting and spotting; large specimens are uniform dark brown. This large Samoan grouper is common over rocky areas in, water from 50 to 500 feet (15.3 to 152.4 m) deep, and is taken by handline. A large unidentified grouper caught by Guam handliners might be closely related to the Samoan species, although its positive identification has yet to be determined. This Guam grouper is reported to reach over 80 pounds (36.3 kg) and is excellent eating. When fresh, it has several broad, faint vertical bars on the body which fade soon after death to a uniform dark brown.
165. GATALA, (S), gadao (G), grouper, Epinephelus merra Bloch. DISTRIBUTION: Tropical Indo-Pacific. SIZE: Up to 18 inches (46 cm). COLOR. Yellowish, white with dark orange-brown spots; more yellow in the dorsal region. A very abundant inshore reef-inhabiting grouper in American Samoa and Guam. One of the two most common groupers taken spearfishing and with spinning gear over Guam's shallow reefs. Once introduced to Hawaii from Tahiti, but did not become successfully established. Food value considered good.

166. GATALA (S), T a manana (S), gadao, (G). grouper, Variola louti (Forsskal). DISTRIBUTION: Tropical Indo-Pacific. SIZE: Reaches to reach 3 feet (91 cm) long. COLOR. Yellowish brown or orange everywhere spotted with small reddish or pinkish spots with those toward the back margined with a purple or blue line. Pectoral and tail fins bright yellow: eye red, underside of head and body red. The brilliantly colored grouper occurs everywhere spotted with small reddish or pinkish spots on the young in American Samoa and Guam. and is very common around American Samoa over reef and ledge areas at about 10 to 40 fathoms (18.3-73.2 m). Young fish frequent shallow-water reefs and sometimes enter deep tide pools in American Samoa. In Guam the young of this species appear to prefer deeper water. In Samoa they are caught handlining and sometimes trolling. In Guam most are taken by spearfishermen. Considered a fine food fish.

KUHLIIDAE: AHOLEHOLES

167. AHOLEHOLE (H), mountain bass, silver perch. Kuhnia sandvicensis (Stendachner). DISTRIBUTION: Hawaiian Islands. SIZE: Up to 12 inches (30 cm); usually from 4 to 6 inches (10-15 cm). COLOR: Rear and fins often dusky gray. An abundant inshore fish found in bays and harbors, and in large schools in and around plinths in harbors and bays, or in large schools over reefs. The young are numerous in tide pools while adults inhabit deeper water, but generally no deeper than 20 feet (6.1 m). Aholehole is usually nocturnal and can move in groups during the day and emerge at night to feed. Taken with cast nets, by hook and line, and by spearfishing in crevices and holes in the reef. Lights are sometimes used to attract them at night. An excellent food fish.

168. UMATAN (G), sasele (S), Kuhia rupestris (Gavier and Valenciennes). DISTRIBUTION: Widespread in tropical central Indo-Pacific. SIZE: In Guam this fish may reach 14 to 15 inches (36-41 cm) and up to 1/2 to 2 pounds (0.7-0.9 kg). Usually runs about 8 to 9 inches (20-23 cm) and about 1/2 to 3/4 pound (<0.3 kg). This close relative of the aholehole occurs in American Samoa and is very common to most streams and rivers of Guam. Similar in habits and appearance to K. sandvicensis, but seems to have a greater affinity to freshwater. Young umatan are found close to mouths of tributaries while large adults are usually found farther upstream in fresh water. Taken with nets and spears and with light spinning tackle using live bait, artificial flies, and small poppers as an excellent food fish.

PRIACANTHIDAE: BIGEYES

169. AWEWOE (H), mamagas (G), maetai, (S). red bigeye, Priacanthus cruentatus (Lacepede). DISTRIBUTION: Circumtropical. SIZE: Up to about 12 inches (30 cm), averages about 6 to 8 inches (15-20 cm). COLOR: Variable, known to change its coloration rapidly from deep red to silvery, or to a mottled silvery pink and red. Fins are sometimes speckled with black. In Hawaii and American Samoa this nocturnal reef fish is found in shallow reefs and in bays and harbors where it feeds primarily on free-swimming invertebrates and small fishes. It is uncommon in Guam. In Hawaii, the awewoe is usually taken during the evening and moonlit nights and considered best. Occasionally great schools of juvenile fish appear nearshore at night, and it was once thought by early Hawaiian fishermen that the appearance of these immense schools signified the imminent death of royalty. Taken pole fishing, handlining, and spearing. Opinions about the food value of this fish vary from fair to excellent.

170. ALALAU (H), Pteronisculus palauensis (Jordan and Evermann). This is another member of the bigeye family taken by Hawaiian fishermen that does not occur as close to shore as the awewoe, usually found in water deeper than 50 feet (15.2 m). SIZE: Reaches up to 14 inches (36 cm) long.

APOGONIDAE: CARDINALFISHES

171. 'UPAPALU (H), lani (G), fo (S), moonlight fish, moonlight Anio. Apogon messemusus (Steindachner). DISTRIBUTION: Tropical Pacific Ocean. SIZE: Up to 9 inches (23 cm). COLOR. Both purplish with black markings. The fish pictured is A. messemususus. Two small inshore reef fishes are very common in the Pacific Islands. U'apalu are nocturnal and feed on small crustaceans. Males carry eggs in their mouths for incubation. In Hawaii these two cardinalfishes are often taken pole fishing on moonlit nights over the reefs. Food value is considered good.

CARANGIDAE: JACKS AND POMPANOS

172. KAHALA (H), greater amberjack, Serriola dumerilii (Risso). Two other amberjacks, Serriola rivoliana and S. quinquangularis, also occur in Hawaiian waters and may enter the sport catch. DISTRIBUTION: Circumtropical. SIZE: All-tackle record (Bermuda) is 149 pounds (67.6 kg) with a length of 71 inches (180 cm). Most caught in Hawaii are around 2 feet (61 cm) long and about 8 to 10 pounds (3.6-4.5 kg). COLOR. Light metallic brown with a purplish tinge. When alive a fagential-yellow band extends from the head to the base of tail. The kahala inhabits Hawaii's deeper coastal waters between 40 and 100 fathoms (73-182.9 m), living near the bottom. The most productive fishing areas seem to be over deep-sea ledges or drop-offs. This fish also occurs in Samoa and similar species, if not the same, occur in Guam. Usually caught handlining offshore, although on rare occasions this fish may come close to shore within casting reach of shore anglers. Small fish are considered good eating, large fish only fair.
173. 'OPELU (H). opelu-mama (H). achuman (G). mackerel scad. Decoerptus puntulatus (Eydoux and Souleyet). This fish is very similar to the Atlantic mackerel scad. Decoerptus macarellus (Cuvier). DISTRIBUTION: Tropical Pacific Ocean. SIZE: Up to 20 inches (51 cm) in length; usually less than 10 inches (25 cm). COLOR: Blush or greenish yellow above, silvery below. □ Found in schools near the surface and in mid-water and commonly to the coastal waters of Hawaii and Samoan; rarely taken in Guam. In Hawaii, the young under 5 inches (<13 cm) long school far out at sea where they often become the prey of aku or skipjack tuna. Caught by hook and line at night and with special opelu lift net during the day. An excellent food fish, also used as bait and live chum for large tuna and marlin.

174. AKULE (H). aji (H). atule (S). analui (G). hitting (G). mackerel bigeye scad. Selar crunomphalus (Bloch). In Hawaii, fish up to 5 inches (13 cm) are called "halahali" or "halali"; those about 5 to 7 inches (13-18 cm) called "ma'au", and those over 7 inches called akule. DISTRIBUTION: Tropical Pacific. SIZE: Up to 15 inches (38 cm); average caught by anglers is under 8 inches (20 cm). COLOR: Olive green on dorsal area, golden or silvery on sides and head; tail fin yellow; and a faint spot on gill cover. □ The akule is a schooling fish inhabiting the mid- or surface waters along the coasts of all the islands. The young often come close to shore to protected bays and harbors. In Hawaii, young fish or "halalu" offer great sport to shore anglers fishing with light spinning and tackle and most are caught from about July to December. Adult fish are found offshore where they are netted or handlined in season by commercial fishermen. In American Samoa, this fish occurs throughout most of the year and is caught in lagoons and bays around Tutuila, usually pole fishing from shore and piers and handling from boats. In Guam, large schools of juveniles occasionally enter bays and are taken with surround nets and sometimes with spinning gear. Usually pole fishing from shore and piers and handling from boats. From March to October. Fresh and salted anchovy (naha) is used for bait. Occasionally taken with throw nets and gill nets. Considered an excellent food fish.

175. WHITE ULUA (H). ulu kihikihi. kagami ulua (H). thread crevally. Alecis citionis (Bloch). Previously known as Carangoides goa. A similar species, Alecis indica (Rüppell), also occurs in Hawaii and may enter the sport catch. DISTRIBUTION: Tropical Pacific Ocean. SIZE: Up to 3'5 feet (107 cm) long; usually about 10 to 15 pounds (4.5-6.8 kg). COLOR: Adult fish are dusky white, often darker along the dorsal area; young are silvery. □ The juvenile form, called ulua kihikihi, is one of the most beautiful fish in Hawaiian waters, with the first four or five spiny rays of the dorsal and anal fins produced into long trailing streamers. As the fish matures, these spines grow shorter, and in some adults they disappear completely. The young are often found in harbors and other sheltered waters, but upon reaching maturity this once delicate creature assumes a more jack-like appearance, moves to deeper and more open water. Taken from rocky shores with heavy bait-casting gear. Offshore they are frequently caught deepwater trolling or handling at depths of about 10 to 30 fathoms (18.3-54.9 m). An excellent food fish, served raw or cooked.

176. 'OMAKA (H). Atule mate (Cuvier and Valenciennes). DISTRIBUTION: Tropical Pacific. SIZE: Up to 12 inches (30 cm); averages about 8 to 10 inches (20-25 cm). COLOR: Greenish yellow often with a brassy tinge over silvery sides. □ This jack is found in protected bays and estuaries in Hawaii, and juveniles are very abundant in fall around floating objects. Most 'omaka are caught with light spinning tackle from shore and piers, and handling from boats from March to October. Fresh and salted anchovy (naha) is used for bait. Occasionally taken with throw nets and gill nets. Considered an excellent food fish.

177. PA'U'U (H). tarakito (G) (young, called "papio") (H). "lupo" (S). "tarekiitos" (G), as are the young of other jacks. crevalle. jack crevally. Caranx ignobilis (Forskål). DISTRIBUTION: Tropical Indo-Pacific and Red Sea. SIZE: Up to about 3 feet (91 cm). COLOR: Pale olive above with a greenish tinge around the head; sides white; yellow anal fin. □ One of the more common jacks found around the Pacific Islands. The young are caught by shore anglers with pole and line in brackish-water bays and harbors throughout the islands. In Hawaii live shrimp, or "opae," is used almost exclusively as bait for small fish under 2 pounds (0.9 kg). Adult fish are found over nearshore reefs and are caught casting from rocky shores and jetties and sometimes by spearing. An excellent food fish.

178. OMLI (H). ho-shi ulua (H). oshi (H). illoli (H). omilululu (H). malaulau (S). tarakito (G). star jack. spotted jack. blue ulua. blue crevally. Caranx melampygus Cuvier and Valenciennes. DISTRIBUTION: Tropical Indo-Pacific. SIZE: Up to 1 foot (30.5 cm); most fish are about 1 to 2 pounds (0.5-0.9 kg). COLOR: Rather variable, usually Brownish blue above and silver tan on sides and belly. Fish between 10 and 24 inches (25-61 cm) have many small blackish spots on body; larger fish tend to lose spotting and become more of a uniform dark metallic blue. □ The 'omili is another very common jack found throughout the Pacific Islands. This fish often moves in close to shore following channels in coral reefs and is taken by shore anglers with surf-casting gear. It is probably the most common ulua caught from shore in Hawaii; especially on the island of Hawaii where it is known locally as illoli. Generally, young fish are found in shallow bays and estuaries while medium-sized fish from 6 to 20 inches (15-51 cm) are taken over reefs. The largest fish are taken with trolling gear just outside the reefs. Also taken spearing, gill netting, and handlining. An excellent food fish.
PAKE ULUA (H). mempachi ula (H). young called papio (H). taraiko (G). or lupo (S). Coryphaena sexfasciata Quoy and Gaimard. DISTRIBUTION: Tropical Indo-Pacific. SIZE: Up to 5 feet (152 cm) or more long; most caught weigh about 2 pounds (0.9 kg). COLOR: Dark blue green to gold above; yellow-green to silver below. The upper lobe of the caudal fin is black. Juveniles have four to seven dark vertical bars. Young fish are found in tide pools and brackish-water areas out to deeper coastal waters; adult fish live along rocky shores in turbid water and over reefs. In Hawaii, the pake ula is one of the largest of the jacks taken by anglers but this fish appears to be less common now than in previous years. Caught by hook and line from shore and from boats. adult fish are often taken along with 'opelu and akule while handlining at night. Some are taken by spear. An excellent food fish.

BLACK ULUA (H). tarako (G). jack. Coronx lugubris Poey. DISTRIBUTION: Circumtropical. SIZE: Up to 3 or 4 feet (91-122 cm) long; average weight 4½ pounds (2.0 kg). This fish frequents outer reef channels and is similar in appearance to C. sexfasciatus, but has a darker body color and an almost black head. Caught by anglers in Hawaii and particularly abundant around Guam where they are taken with handles over bottomfishing areas around the island. Although there are reports of the flesh of this species being poisonous in certain parts of the Atlantic, it is commonly eaten in the tropical Pacific.

KAMANU (H). Hawaian salmon. rainbow runner. Elegostis bipinnaetus (Quoy and Gaimard). DISTRIBUTION: Circumtropical. SIZE: The all-tackle record—a fish taken off Kauai—measured 3 feet 11 inches (119.4 cm) and weighed 30 pounds 15 ounces (14.0 kg). Most kamanu caught in the Pacific Islands weigh around 12 to 15 pounds (5.4-6.8 kg). This fish is reported to reach 70 pounds (31.8 kg), although this seems doubtful. COLOR: Dark blue followed in succession down the sides by a light-blue stripe, then a yellow stripe, then another light-blue stripe. Yellowish silver below. fins yellow. This sleek and colorful member of the jack family is an open-ocean species, usually seen and caught near the water's surface. Exceptionally large fish are taken in Hawaii, especially off Kauai and Oahu. Also caught off American Samoa and Guam. Caught by trolling with small lures and hooks. Also with handlines. Excellent as cooked or raw.

LITTLE MAHI MAHI (H). pompano dolphin. Coryphaenoides rupestris Linnæus. DISTRIBUTION: Circumtropical. This fish is similar in appearance and habits to the mahimahi, but is known to reach a length of only about 30 inches (76 cm). Occasionally taken by Hawaiian anglers.

OPAKAPAKA (H). pink papa (G). pink snapper. Pristipomoidesいずfilamentosus (Bleeker). DISTRIBUTION: Tropical Indo-Pacific. SIZE: Up to 3 feet (91 cm) long; about 18 pounds (8.2 kg); usually 5 to 6 pounds (2.3-2.7 kg). COLOR: Light violet brown dorsally, fading to dusky white below; pectoral fin yellowish. Last rays of dorsal and anal fins produced into filaments that reach base of tail fin. Like the uku, the opakapaka is a deepwater fish most abundant over rocky bottom drop offs. One of the more common snappers caught over Guam's banks, with most taken at depths of 100 to 150 fathoms (182.9-274.3 m). This fish is also reported to be abundant over the offshore ledges of American Samoa, at about 200 to 300 fathoms (365.8-546.5 m), but these bottomfishing areas are seldom fished. In Hawaii, it is generally found in shallower water at about 40 to 100 fathoms (73.2-182.9 m) and young fish are sometimes taken in 20 fathoms (36.6 m). Taken handlining in Hawaii, most are caught during the winter months. An excellent food fish.
187. YELLOWTAIL KALIKALI (G), Pristipomoides auricilla [Jordan, Evermann, and Tanaka]. DISTRIBUTION: Tropical Pacific. SIZE: Up to about 18 inches (46 cm) long. COLOR: Body purplish with 17 to 18 narrow, irregular chevron-shaped yellow bands; iris yellow; edge of upper lip yellow; fins yellow; upper lobe of tail fin with a purple margin. Large males over about 6 inches (15 cm) have a more distinct yellow blotch on upper lobe of tail fin. A very common deepwater snapper in Guam, caught handlining over offshore ledges and banks at similar depths as P. filamentosus. An excellent food fish.

188. YELLOWEYE OPAKAPAKA (G), Pristipomoides flavipinnis Shishihara. DISTRIBUTION: Ryukyus and Guam. SIZE: Up to at least 17 inches (43 cm) or more. Long: fish over 16 inches (41 cm) occur frequently in catch. COLOR: Body lavender above becoming pale towards belly; eye yellow; snout and head mottled with narrow, irregular, light-yellow streaks. Scales have yellow spots which form thin horizontal stripes above lateral line; fins yellowish. This is another common Guam snapper taken at about the same depths as P. filamentosus and P. auricilla. An excellent food fish.

189. KALIKALI (H), pink kalikali (G). Pristipomoides sieboldi [Bleeker]. DISTRIBUTION: Tropical Pacific and Indian oceans. SIZE: Up to about 18 inches (46 cm). COLOR: Light lavender above becoming paler below. Scales above the lateral line have pale blue spots in the center. Forming lengthwise lines, that become indistinct toward the belly. Margin of dorsal fin orange with light lavender; tail fin dark lavender with a light margin. This offshore snapper is commonly taken around Guam handlining off offshore banks and ledges at depths from 100 to 150 fathoms (182.9-274.3 m); none have been reported from depths less than 100 fathoms (182.9 m). In Hawaii, the kalikali is relatively minor in the sport catch, where it is taken from depths of 60 to 200 fathoms (182.9-365.8 m) with most caught in water 20 fathoms (146.3-210.5 m). Common in excellent food fish.

190. ONAGA (H. C.), 'ula'ula koae (H), palu (S). red snapper. Etelis carbunculus Cuvier. DISTRIBUTION: Tropical Pacific and Indian oceans. SIZE: Up to 36 pounds (16.3 kg); most run about 4 to 5 pounds (1.8-2.3 kg). COLOR: Red above; silvery pink below. Eye red and gill cover red or pink; dorsal and tail fin red. In Hawaii caught over offshore rocks; in water deeper than the uku or opakapaka at depths of 80 to 130 fathoms (146.3-237.7 m) but not more than 160 fathoms (292.6 m). This is also a common snapper taken, offshore areas and banks, off Guam and Samoa, usually at depths of 100 fathoms (182.9 m) or more. Caught handlining year-round, mostly during daylight. Onaga is a very important market fish in Hawaii. The meat has a delicate sweet flavor, and is usually served raw. It brings a high price at the market especially during the New Year's season when the demand for traditional "ono-dashi" is at its peak. Also prepared as a special dish for weddings.

191. 'ULA'ULA (H), ehu (G). Etelis marshi [Jenkins]. DISTRIBUTION: Tropical Indo-Pacific. SIZE: In Hawaii up to 2 feet (61 cm) long. In Guam this fish is known to reach about 6 feet (181 cm) in weight, but most caught are about 2 pounds (0.9 kg). COLOR: The 'ula'ula is similar in appearance and habits to the onaga, but lacks the red coloration on the inside of the mouth and usually has a yellowish band along the middle of the sides. Taken handlining along with onaga in Hawaiian waters, and one of the more common snappers found in Guam and American Samoa over offshore ledges and banks. An excellent food fish.

192. LEHI (G). Apherarus rufulus Cuvier and Valenciennes. DISTRIBUTION: Tropical Pacific. SIZE: Up to at least 3 feet (91 cm) long. COLOR: Brick red. This common Guam snapper taken handlining on the bottom over the Galvez Bank and off much of the leeward and windward coasts. This species also occurs in American Samoa and Hawaii, but is not important in the sport catch.

193. GINDAI (G), Rooseveltia brigshami (Seale). DISTRIBUTION: Tropical Indo-Pacific. SIZE: Up to 20 inches (51 cm) long. COLOR: Alternating red and yellow vertical bars; dorsal, pectoral, and caudal fins yellow. This colorful Guam snapper is commonly taken over 100 fathoms (182.9 m) deep; caught around the island. It also occurs in American Samoa and occasionally appears in Hawaiian markets. A good food fish.

194. TA'APE (H), savani (S). funai (G). bluebanded snapper, yellow-and-blue seabream. Lutjanus kasmira [Porsk]. DISTRIBUTION: Tropical Indo-Pacific. SIZE: Reported to reach 15 inches (38 cm) long. COLOR: Bright lemon yellow with pale-blue stripes edged with lavender or deep purple. This distinctively colored fish is probably the most abundant inshore snapper taken in American Samoa, where it is commonly found in water 20 to 100 fathoms (36.6-182.9 m) deep. Relatively common around Guam at depths of 35 to 40 fathoms (64.0-73.2 m), though generally incidental in the sport catch. Introduced to Hawaii from the Marquesas in 1958 and 1969, where it now has entered the sport and commercial catch in significant numbers. In the Hawaiian Islands ta'ape are found in large schools over hard bottom from 40 to 100 feet (12.2-30.5 m) deep, with adults sometimes in water up to 240 feet (73.2 m) deep. Caught handlining at night; some are taken in traps in Hawaii. A very good food fish.

195. TA'OAU (H), bus (G). red-marginated seabream. Lutjanus fulvus [Bleeker and Schneider]. DISTRIBUTION: Tropical Pacific. SIZE: Reaches a length of about 13 inches (33 cm). COLOR: Dusky yellow above fading to pale yellow or whitish below, with thin longitudinal yellow stripes along
the scale rows. Dorsal and tail fins dusky red: anal and pectoral fins yellow. Pectoral fin yellow on upper edge: small gold flecks and broken lines on head and cheek area. An inshore fish found in brackish water and around stream mouths out to about 40 or 50 feet (12.2-15.2 m) of water, sometimes entering deep-tide pools. Feeds on small fishes and invertebrates and often seen in small aggregations. Successfully introduced to Hawaiian waters in 1956 and 1958. Taken by hook and line from shore and from boats; taken also with gill nets, surround nets, and spears. Considered a very good food fish.

196. **KAKAKA** (G), *vava su* (S), *felotega* (S), *taia uli uli* (S). *Lutjanus monostigma* (Cuvier and Valenciennes). DISTRIBUTION: Tropical Pacific. SIZE: Up to 46 cm. Most caught are about 10-12 inches (25-30 cm). COLOR: Olive-green body (sometimes coppery red, particularly in Samoan waters); scales on side brassy, belly yellowish white or light coppery red, lips bright red; fins all bright orange yellow. In general, this fish usually is distinguished by the small but prominent black spot on its side. One of the larger nearshore snappers commonly taken from shore over reef areas around the islands of Guam and American Samoa. Like other members of the snapper family, it has been linked with cases of ciguatera, or fish poisoning, but in Guam it is commonly eaten and is also sold in the markets of American Samoa despite reports of it sometimes being toxic there.

197. **MU** (S), *tagafi* (G). *Lutjanus bohar* (Forskål). DISTRIBUTION: Widespread throughout the Tropical Pacific. SIZE: Attains 36 inches (91 cm). COLOR:Adult fish are uniformly red with a light greenish tinge around the head area: yellow eyes. Sometimes brownish above, lighter below with two oval light spots on side. Base of pectoral and pelvic fins: rosy; otherwise fins dusky. This snapper is commonly caught by handliners in American Samoa and Guam, usually in water 100 fathoms (182.9 m) or less, but does not occur in Hawaii. The flesh is reputed to be poisonous and should not be eaten, even though in Guam many large fish (17-25 pounds or 7.7-11.3 kg) which are usually the most toxic, were taken by the Guam Division of Fish and Game in relatively deep water (35 fathoms or 64.0 m), and none proved to be poisonous.

198. **MALA I** (S), *ifa fael* (G), red snapper. *Lutjanus gibbus* (Forskål). DISTRIBUTION: Tropical Indo-Pacific. SIZE: Up to 24 inches (61 cm). COLOR: Body uniform red with red eyes. Large adults often are slightly dusky above and reddish below. A common snapper taken about reefs in American Samoa and Guam, occurring in schools or small schools. Sometimes taken by handlining over the deeper parts of the reef; in Guam, some are taken spearing. Reportedly the flesh of this species causes severe poisoning in other parts of its range; however, fish taken from American Samoa and Guam waters are said to be not toxic and are commonly eaten.

199. **FLOA** (S), *hilidok* (G). Green snapper. *Lethrinus miniatus* (Forster). DISTRIBUTION: Tropical Indo-Pacific and Red Sea. SIZE: Up to about 36 inches (91 cm). COLOR: Body dark brown to grayish, sometimes with dark blotting on sides; dorsal, anal, and tail fins pinkish, pectoral and fin yellow. This long-snouted species is a common inshore reef fish in American Samoa and Guam, and is taken with a baited hook in water up to 30 feet (9.1 m) deep in American Samoa and up to 300 feet (91.4 m) in Guam. Large specimens are known to be slightly toxic in Samoa and other parts of this fish's range, however, it is said to be not toxic in Guam where it is highly prized as a food fish.

200. **MU** (H), *mamamu* (H), *mumu moa* (S). *Lutjanus malabaricus* (Valenciennes). DISTRIBUTION: Tropical Indo-Pacific. SIZE: Up to 2 feet (61 cm). COLOR: Dusky to olive green with two whitish crossbars (sometimes three and four bars); black crescent at base of pectoral. Dorsal fin brownish and reddish at tip; caudal and anal fins orange and yellow, at base anal pectoral and ventral fins reddish; inside of mouth red. This species occurs over reefs in Hawaii and is common in Samoan waters. It is considered a good eating fish and is usually caught by handline. Some are taken with spears and nets.

### MULLIDAE: GOATFISHES

201. **WEKE'A** (H), *i'a au* (S), *alou* (S). *Lutjanus apodus* (Valenciennes). DISTRIBUTION: Tropical Indo-Pacific. SIZE: Up to 18 inches (46 cm); "oama" average about 5 inches (13 cm) or less. COLOR: Silvery white with a yellow horizontal band extending from eye to tail; spotted by blue. A very common inshore goatfish throughout the Pacific Islands, occurring on or near the bottom in schools or small aggregations over sandy patches that intersperse reef areas. When feeding, it rummages in the sand for food with its fingerlike chin barbels. Leaving puffs of sand clouds in its wake. In Hawaii during late summer the young or "oama" swarm in shallow sandy areas and are caught from shore with poles and lines. Adult fish are mostly speared or netted: some are caught in fish traps and handlining from boats. In Guam, juveniles ("teau") are much sought after by cast netters and surrounding seamounts are quite common in the lagoon habitat. Considered a good food fish.

202. **WEKE'ULA** (H), *salmonete manunungo* (G), *valeni* (S), *ula oa* (S). *Mulloidichthys dilepis* (Valenciennes). DISTRIBUTION: Tropical Indo-Pacific and Red Sea. SIZE: Up to 16 inches (41 cm) long; usually about 8 to 10 inches (20-25 cm). COLOR: Rosy red on the dorsal region, fading to white pink below. There is a prominent light-yellow band along the sides, extending from the eye and fading out towards the tail region. Ventral and pectoral fins are pale rosy; caudal fin has a yellowish tinge. The weke'ula is nocturnal, occurring in shallow-reef areas over sandy bottom, seeming to prefer more rocky surroundings than other goatfishes and deeper water of about 5 to 15 fathoms (9.1-27.4 m); probably deeper off the Kona coast of Hawaii. In Hawaii the weke'ula is...
usually neat, although sometimes taken by hook and line from shore and from boats or by "torch fishing" with spears or hand nets. A good food fish.

203. MALU (H). salmonete acu (G). goatfish. Porupeneus porphyreus (Bennett). DISTRIBUTION: Widespread, in the central Indo-Pacific. SIZE: Reaches a length of about 18 inches (41 cm). This is another relatively common goatfish similar to the weke-a'a in habits and appearance, except the malu is stockier, the bar of the soft-rayed dorsal fin is very dark, and the blotch on the side is more deep than long, taken by spearing and with nets.

204. KUMU (H). red goatfish. Porupeneus porphyreus (Jenkins). DISTRIBUTION: Tropical Pacific Ocean. SIZE: Up to 8 or 9 pounds (3.6-4.1 kg); usually 1 to 3 pounds (0.5-1.4 kg). COLOR: Usually reddish with a rather prominent stripe through the eye. Although young specimens occasionally have a greenish-color phase distinguished by the white saddles behind the soft dorsal fin. A fairly common Hawaiian goatfish found at various depths throughout reef areas, especially hard substrates, often coming very close to shore. Caught mostly by spearing and in traps during the day; some are taken at night by spears of divers or waders on the reef with lights. The kumu is an extremely prized food fish in Hawaii. The flesh is considered a delicacy.

205. MOANO (H). Porupeneus multifasciatus (Quoy and Gaimard). DISTRIBUTION: Hawaiian Islands. SIZE: Up to 12 inches (30 cm) or 3 pounds (1.36 kg); averages about one-third of a pound (0.2 kg). COLOR: Dark red with alternating bands of pale rosy and darker red. Usually distinguished by the dark-red-to-black bar that extends down between the two dorsal fins. This small goatfish is found over sand bottom from the shore to depths of about 40 fathoms (73.2 m). If you see a goatfish, note it is usually found where patches of sand intersperse rock or coral. An abundant shore reef fish, taken in traps and by shore anglers with spinning and bait-casting gear. Often along with papio and other small goatfishes. On the big island of Hawaii most are speared, although some are taken handlining (drifting and at anchor). Although small, the moano is considered by some to be among the tastiest of Hawaiian food fishes. Some to be among the tastiest of Hawaiian food fishes.

206. NENEHE (H). manaloa (H). nenue parii (G). sea chub. rudderfish. Kyphosus cenchreae (Forskal). DISTRIBUTION: Tropical Indo-Pacific and Red Sea. SIZE: Up to 10 or 12 pounds (4.5-5.5 kg); averages about 4 to 6 pounds (1.8-2.7 kg). COLOR: Gray-brown with blue reflections, lighter below. Narrow dark bands on side between scale rows. Some fish have irregular blotches of yellow on sides, and on rare occasions a specimen may be entirely yellow. In Hawaii, the nenehe is partial to rough and turbulent waters along rocky coasts where it is often found in large schools. In Guam, it seems to prefer the edges of channels and reef margins. This species feeds mostly on algae. Large fish are generally taken by spear, cast nets, and Gill nets. The young are sometimes caught during the day by hook and line. Nenehe is rather difficult to hook because of its small mouth, but when hooked it fights vigorously. Generally not esteemed as a food fish in Hawaii, but some consider it a delicacy; it is much sought after by Guamanians. The flesh has a strong flavor, probably due to the fish's algal diet.

207. MAOMAO or "mamo" Abudefduf abdominalis (Quoy and Gaimard). DISTRIBUTION: Hawaiian Islands. SIZE: Up to 9 inches (23 cm); most taken about 5 inches (13 cm) long. COLOR: Pale brassy or green with four or five black vertical bands as indicated. Belly white with yellow tinge near the anal fin. This delicious little pan fish abounds in shallow-water reefs, harbours, and bays throughout the islands. It feeds on small crustaceans in the water and is often found in loose aggregations hovering over the reef or darting around pilings and other underwater structures. Maomao are the prime quarry of Hawaii's children who catch them from shore with pole and line using a very small hook. Also caught by spearing, in traps, and with cast nets.

208. KUPIP (H). dodo (G). sergeant major. Abudefduf sordidus (Forskal). This fish is similar in appearance and habits to maomao, but is readily distinguished from it by a prominent black spot near the tail immediately behind the soft dorsal fin. The body color is also more grayish than that of maomao.

209. PO'O-PA'A (H). o'opu-kai (H). spotted hawkfish. Cirrhitus pinatus (Bloch and Schneider). DISTRIBUTION: Tropical Pacific. SIZE: Up to about 10 inches (25 cm); most caught are about 5 inches (13 cm) long. COLOR: Red, brown, and white spots and blotches. Like the rest of the hawkfish family this fish is characterized by a fleshy fringe on the snout. This nocturnal predator prefers the turbulent water of the surge zone where it lies in wait for passing prey, sometimes of large rocks or coral heads. Occasionally it darts out to snatch its prey, then returns to its original spot or swims to another vantage point to begin another vigil. During the day, the po'o-pa'a hides in crevices in the reef. Taken by hook and line and spearing. Considered only fair as a food fish, and is used mainly in making soup. The meat tends to fall apart when fried.

210. 'A'AWA (H). hinaelea (H). spot wrasse. blackspot wrasse. Bodianus bilunulatus (Lacépède). DISTRIBUTION: Tropical Pacific. SIZE: Up to about 25 inches (61 cm) or about 8 or 9 pounds (3.6-4.1 kg); most caught are about 5 pounds (2.3 kg) or under. COLOR. Highly variable with age and sex. In the case with many members of the wrasse family, females go through three color phases with growth: fish 4 to 12 inches (10-30 cm) long are usually not well marked, having a black spot under the soft dorsal fin; those over 12 inches (30 cm) are usually plain bluish black. Males are marked as illustrated. Dark reddish brown or purplish bands on head area thinning to narrower and somewhat redder stripes on sides and belly, which is white or pale yellow; eye red. Pronounced white band on head area, dorsal, caudal, and anal fins yellow. The 'a'awa is one of the larger Hawaiian wrasses and is fairly abundant throughout the coral reef habitat. It is considered a delicacy.
212. PO'O (H). Cheilinus rhodochrous Günther. DISTRIBUTION: Tropical Indo-Pacific. SIZE: Up to 2 feet (61 cm); most are about 10 inches (25 cm) or about 2 pounds (0.9 kg). COLOR: Highly variable with growth. At 10 inches (25 cm), plain olive drab with a white saddle near the tail (see illustration). Fish 20 inches (51 cm) and over have no white saddle, but have large black spots at base of the dorsal and anal fins, and the ventral fin is dark. □ The po'o is commonly found in reef areas around the islands of Molokai, Lanai, Maui, and Hawaii, at depths up to 40 or 50 feet (12-15 m). In the Hawaiian Islands it is often caught along with 'a'awa while handling and spearing. Taken by spear in Guam. A good food fish.

213. HINALEA (H), sage (C). Thalassoma pavo (Lacepède). DISTRIBUTION: Tropical Pacific. SIZE: Up to 11 inches (28 cm); usually about 6 inches (15 cm). COLOR: Pale greenish with two or three irregular, broad, horizontal rows of peacock blue with greenish stripes, which intermingle with greenish stripes, brown blotches, and purplish bars. Dark brown to black spots and reticulations on head. □ This colorful wrasse is common to open rocky areas and shallow-water coral reefs. It is sometimes found in deeper water tide pools. Although principally a daytime feeder, the hinalea is often caught at night and is caught by hook and line from shore as well as from boats in the Hawaiian Islands. It is taken occasionally by spear in Guam. The very slimy skin makes it difficult to hold. Opinions vary on its food value; generally not sought after.

214. HINALEA LAUWILI (H). 'ala'ai (H), jaddee wrasse. Thalassomo duperreyi (Quoy and Gaimard). DISTRIBUTION: Hawaiian Islands. SIZE: Up to about 12 inches (30 cm); most caught are under 6 inches (15 cm). COLOR: Adults are green with a striking orange-brown shoulder bar. □ A very abundant Hawaiian wrasse found throughout the islands along shallow rocky shorelines as well as in pure reef breaks. This fish has an annoying habit of robbing a baited hook meant for more desirable species and is often considered a pest by anglers seeking bigger and tastier game. Its food value is considered poor.

215. SCARIDAE: PARROTFISHES


217. HUMPBACK PARROTFISH. Scarus gibbus Rüppell and Cetoscorus bicolor (Rüppell). These parrotfishes are highly sought by Guam anglers. Not as common as they once were, especially the large specimens; both are hunted with spears. S. gibbus, larger of the two, is known to reach 30 to 40 pounds (13-18 kg). Food value is excellent.

MUGILIDAE: MULLETS

218. 'AMA'AMA (H). Mugil cephalus Linnaeus. DISTRIBUTION: Tropical and temperate seas worldwide. SIZE: Up to about 16 inches (46 cm); most caught are around 12 inches (30 cm) long. COLOR: Silvery gray. □ Although schools of 'ama'ama are found along the open coast, they seem to prefer calm waters close to shore, around mouths of streams and inlets and in brackish-water bays and harbors. Just about the most difficult fish to catch by pole and line. The fish does not seem to discourage a select breed of Hawaiian islanders who patiently wait for this finicky fish to take a tiny hook baited with bread or limu (seaweed). For those with less patience, the 'ama'ama can be taken by a variety of other fishing gear such as cast nets, gill nets, and surround net (hukilau) and at nighttime torchlight fishing with hand nets or cast nets. In Hawaii the fishing season is closed from December through February. On American Samoa this fish is taken mostly with cast nets, and in Guam most are taken with cast nets and around nets. Although light spinning tackle is sometimes used near sand beaches. An important food fish. In Hawaii a small number are raised commercially in fish ponds.

beaches in surge areas. From August through December small mo‘i or “mo‘i-lī” occur in large schools along beaches and in sheltered coves with some venturing into tide pools. Primarily taken casting with baits, plugs, and spoons, also taken with cast nets, Gill nets, and spears. Moonlit nights are considered best for catching mo‘i by casting, although this popular sport fish is caught both night and day

HANDLED with respect. It carries formidable weapons at the base of the tail in the form of recurved spines which it can erect by bending its caudal peduncle. and it usually does so when threatened. These bladelike spines can inflict a nasty wound. Opinions on its food value vary from fair to good.

224. PALANI (H), ugapao (G). surgeonfish. Acanthurus dsumumari Cuvier and Valenciennes. DISTRIBUTION: Tropical Indo-Pacific. SIZE: Up to and exceeding 18 inches (46 cm). COLOR: Spotted with black; bright-blue tail fin; fine blue lines on body fading towards belly; caudal spine white and broadly edged with black; yellow dorsal and anal fin. D The palani, a close relative of the pualu, is another surgeonfish that occasionally enters the spot catch in Hawaii and Guam. It occurs in bays and outer reef areas as well as sandy patches. Most are taken by traps; some are spearred. Food value considered fair.

225. KALA (H), tataga (G). ume (S), n‘ilua segi (S). unicornfish. Naso unicornis (Forster). DISTRIBUTION: Tropical Indo-Pacific. SIZE: Reaches a length of 24 inches (61 cm): averages about 16 inches (41 cm) long. COLOR: Dusky olive: fins light blue; also light blue around the double keel blades. Body color is sometimes very pale. D The kala occurs in inshore reefs and along rocky shores, where it feeds on algae. It is a schooling fish; however, large individuals are sometimes seen singly on the outer edges of the reef. The young are found occasionally in tide pools. Characterized by the horn on its snout just about at eye level, which is hardly noticeable in young specimens, but lengthens with age. The skin is leathery and strong, and the two keel blades on each side of the tail are immovable and always in an open position. In Hawaii, kala are mostly spearred, although some are taken with cast nets, Gill nets, and hooks and lines. In Guam, this fish is taken spinning and with surrounding nets. Food value considered only fair.

226. SESJUN (G). rabbitfish. Siganus (Linnaeus). DISTRIBUTION: Tropical Indo-Pacific. SIZE: Most caught in Guam are 8 or 9 inches (20-23 cm) in length. COLOR: Brown with narrow bluish lines forming a reticulated pattern along
the back, head plain gray or brownish, views silverly, tail fin with three to four faint brown bars. Flas slams, slippery skin with many concealed scales. Sejoo, is a herbivorous species that browses across rock or reef areas. It often in large schools. It is a very common shallow-water reef fish found around the island of Guam, where it is caught with cast nets, gill nets, and handlines. It should be handled carefully—it can inflict venomous puncture wounds with its fin spines. An excellent food fish.

SCOMBRIDE: MACKERELS AND TUNAS

227.

227. 'AHI [H], asi [S], yellowfin tuna, Thunnus albacares [Bonnaterre]. DISTRIBUTION: Cosmopolitan in tropical and subtropical seas. SIZE: All-tackle record (San Benedicto Island, Mexico) is 308 pounds (139.8 kg) with a length of 7 feet (2.1 m). In Hawaii, fish are known to range up to 300 pounds (136.1 kg). Average size varies with fishing area. In general, deepwater fish found at about 1,000 fathoms (1,828.8 m) averaged about 100 pounds (45.4 kg); those caught in 25 to 100 fathoms (46-182.9 m) averaged about 20 pounds (9.1 kg). COLOR: Blue green above, silvery below. Dark fins and skin are usually present. It is flattened rather than rounded. During the night, its habits are generally the same as the Kawakawa. Sometimes in certain areas such as off southeaster Lhana, it is relatively close to shore. More often found in water 100 fathoms (182.9 m) and deeper. Captured trolling year-round using feathered jigs and other small lures. It is taken by the rigid dorsal fin and squad. This popular game fish can be caught year-round throughout the Pacific Islands, trolling or handlining with feathered jigs, plugs, or spoons. In Hawaii, most fishing takes place July to November: in Guam, February to August: and in American Samoa, March to July. Excellent eating, cooked or raw (sashimi style).

228.

228. KAWAKAWA [H], black skipjack tuna, Katsuwonus pelamis (Linnaeus). DISTRIBUTION: Cosmopolitan in temperate and tropical seas. SIZE: All-tackle record (Bunaken National Park, Indonesia) is 228 pounds (103.6 kg). Averages about 20 pounds (9.1 kg). COLOR: Dark blue above fading into silver below with about 30 purplish-gray bars on sides that fade bright blue when the fish is fighting a hook. Ordinarily a solitary fish that roams the surface waters of the open sea, usually over deep-sea ledges where the bottom drops off sharply. Often seen near floating logs and other debris that provide shelter to small fish upon which the ono feeds. In Hawaii, it is usually caught along with 'ahi while trolling over submarine ledges in water 25 to 100 fathoms (45.7-182.9 m) deep. Taken intermittently throughout the year over the billfish grounds off Continental shelf and offshore. The ono is a strong persistent fighter. It pointed jaws studded with sharp teeth should be carefully avoided. An excellent food fish: aptly named "ono." Hawaiian word meaning "to have sweet taste."

229.

229. AKU [H], atu [S], skipjack tuna, Katsuwonus pelamis (Linnaeus). DISTRIBUTION: Cosmopolitan in temperate and tropical seas. SIZE: All-tackle record (Mauritius) is 40 pounds (18.1 kg) with a length of 30 1/2 inches (76.2 cm). In Hawaii, it averaged about 18 to 22 pounds (82-10.0 kg) in summer; 5 to 12 pounds (2.3-5.4 kg) rest of year. In Guam, this fish usually runs 3 to 7 pounds (1.4-3.2 kg) most of the year: 10 to 12 pounds (4.5-5.4 kg) seasonally. COLOR: When alive, dark metallic blue above, light dusky blue below, dark stripes as indicated. Latter half of dorsal region bright blue with oblique purplish stripes which fade soon after death. When excited or feeding, broad dusky bars sometimes appear on sides. The aku is a schooling pelagic species common throughout the Pacific Islands, its habits being generally the same as the Kawakawa. Sometimes in certain areas such as off southeaster Lhana, it is relatively close to shore. More often found in water 100 fathoms (182.9 m) and deeper. Captured trolling year-round using feathered jigs and other small lures. It is taken by the rigid dorsal fin and squad. This popular game fish can be caught year-round throughout the Pacific Islands, trolling or handlining with feathered jigs, plugs, or spoons. In Hawaii, most fishing takes place July to November: in Guam, February to August: and in American Samoa, March to July. Excellent eating, cooked or raw (sashimi style).

230.

230. TAGI [S], dogtooth tuna, scadless tuna, white tuna, Gymnosarda unicolor (Rüppell). DISTRIBUTION: Tropical Indo-Pacific. SIZE: Reported to reach 250 pounds (113.4 kg), but averages about 20 pounds (9.1 kg). COLOR: Deep purple above, silvery below, silvery, shiny yellowish. The tagi is a migratory fish found along the edges of deepwater reefs and submarene ledges where the bottom abruptly drops off into deeper water. It either schools in small groups or is solitary. This fish is not as deep bodied as other members of the tuna family and is distinguished by its large "pepilike" teeth and lack of body scales. A fine food and game fish that puts up a hard, jerky fight when hooked. Caught trolling and also drifting with live, cut, or whole baits. In American Samoa the dogtooth tuna is commonly taken handlining at dusk and at night over 100-fathom (182.9-m) drop off. Caught only incidentally around Guam and does not occur in Hawaii.

231.

231. ONO [H], tosun [G], 'wahoo. Acanthocybium solandri (Cuvier and Valenciennes). DISTRIBUTION: Tropical Atlantic and Pacific oceans. SIZE: All-tackle record (Cat Cay, Bahamas) is 149 pounds (67.6 kg) with a length of 6 feet 7 1/2 inches (202.6 cm). In Hawaiian and Samoan waters, one average around 30 to 40 pounds (13.6-18.1 kg). In Guam, tosun average about 20 pounds (9.1 kg). COLOR: Generally dark blue above fading into silver below with about 30 purplish-gray bars on sides that fade bright blue when the fish is fighting a hook. Ordinarily a solitary fish that roams the surface waters of the open sea, usually over deep-sea ledges where the bottom drops off sharply. Often seen near floating logs and other debris that provide shelter to small fish upon which the ono feeds. In Hawaii, it is usually caught along with 'ahi while trolling over submarine ledges in water 25 to 100 fathoms (45.7-182.9 m) deep. Taken intermittently throughout the year over the billfish grounds off Continental shelf and offshore. The ono is a strong persistent fighter. Its pointed jaws studded with sharp teeth should be carefully avoided. An excellent food fish: aptly named "ono." Hawaiian word meaning "to have sweet taste."

XIPHIDAE: SWORDFISHES

232.

232. 'A'U [H], makojiki [H], swordfish, broadbill, Xiphias gladius Linnaeus. DISTRIBUTION: Cosmopolitan in tropical and temperate seas. SIZE: All-tackle record (Loquique, Chile) is 1,182 pounds (536.2 kg) with a length of 14 feet 11 1/4 inches (455.4 cm). Averages about 250 pounds (113.4 kg) of Hawaii's commercial catch. COLOR: Variates from metallic purplish to blackish brown to almost black: generally, dark brown. This solitary open-ocean fish is sought by big-game anglers throughout its range but few are ever taken by them in the tropical Pacific. Broadbilled are hard to find, hard to hook, and even harder to land. In Hawaii, most are taken by commercial longliners. Sport-caught fish are usually taken slow-trolling or drifting live, whole, and cut-baits. The distinguishing mark from the mako is a sword that is flattened rather than rounded in cross section, and by the rigid dorsal fin that is not as intricate as in other billfishes. An excellent food fish.
ISTIOPHORIDAE: BILLFISHES

235. A'U (H), kurokajiki (H), saula (S), blue marlin. Makaira nigricans Lacépède. DISTRIBUTION: Tropical and temperate waters of the Indo-Pacific and Atlantic oceans. SIZE: All-tackle record (Ritidian Point, Guam) is 1,153 pounds (523.0 kg) with a length of 14 feet 8 inches (447.1 cm); however, an unofficial catch was recorded at over 1,600 pounds (725.8 kg) from off Oahu. In the Pacific Islands, most run about 300 or 400 pounds (136.1-181.4 kg). COLOR: When alive, cobalt blue above and silver below; sometimes with pale-blue stripes on sides and blue patches on dorsal area and tail. Colors fade quickly after death and fish becomes a dark slate blue. Occasionally confused with the striped marlin because of its more robust form and relatively low dorsal fin, of which the longest fin rays are shorter than the greatest depth of the body. Differs from the black marlin in that the pectoral fin can be folded flush to the sides of the body. The blue marlin is the largest of all marlins usually occurring in water 70°F to 88°F. It is the leading big game fish in the central Pacific and is the most abundant sport-caught marlin in Hawaii, American Samoa, and Guam. This extremely powerful and fast-swimming fish feeds mainly on members of the tuni family, particularly the skipjack tuna or aku. Occurs year-round throughout the islands' covered bays and in Hawaii is most abundant during the summer. Sport fishing boats troll over bank areas looking for signs of schooling baitfish upon which marlin feed. They are also taken on offshore ledges where the bottom drops precipitously from 100 to 1,000 fathoms (182.9-1,828.8 m) or more. Trolling with large Hawaiian lures or "konaheads" is especially productive, although live, cut, and artificial baits also are used.

SCORPAENIDAE: SCORPIONFISHES

237. NOHU (H). nobu omakaha (H), scorpionfish. Scorpaenopsis cucopsis Jenkins. DISTRIBUTION: Hawaiian Islands. SIZE: Up to at least 20 inches (51 cm). COLOR: Mottled redfish. The nohu is usually found on the outer edges of reefs in water over 20 feet (6.1 m) deep. This fish lives on the bottom where it blends in remarkably well with its surroundings, often making short lunges to capture unsuspecting prey. Although it resembles the highly venomous stonefish of the tropical Pacific, there have been no reports of injuries from being spined by the nohu. It is considered a prized food fish.
Glossary of Terms

A-FRAME NET A one-man net fitted on a 6-foot long "A" frame, used to capture smelt (family Osmeridae) as the fish come inshore to spawn on the surf. The net is held near the bottom end of the "A" and planted down barrierklike in the water facing the surf. The fish are caught as they ride the breakwater out to sea and are shelled into the wide end of the net, then shaken back into a sack at the pointed end. (See also DIP NETTING.)

ANADROMOUS Refers to fishes that spend most of their lives in salt and brackish waters but ascend rivers to spawn in fresh or nearly fresh water.

BOTTOMFISHING Fishing a bait or lure on or near the bottom from an anchored or drifting vessel. The bait is usually weighted and allowed to remain stationary until a fish bites or the angler retrieves it.

CASTING Throwing forth a bait or lure, letting out line at each throw and then retrieving it. The bait also can be allowed to sink to the bottom or drift with the current.

CAST NET A one-man circular net weighted at the rim with small sinkers and designed to be flung over the water so that it falls face down or dishlike over schools of fishes, entraping them as it sinks to the bottom. Also called throw net and hand casting net.

CHARTER BOAT A fishing boat hired for the exclusive use of one or more anglers, usually for a particular type of fishing. Tackle and bait usually are furnished.

CHUMMING A means of attracting fish to the hook by throwing whole or chopped fish or shellfish into the water. Oily fish usually make the best chum. In some areas bread crumbs and corn meal are also used as chum. Live bait chumming is allowed in some areas, prohibited in others.

CIGARETTE An illness with symptoms such as diarrhea and paralysis caused by eating certain fishes living in tropical and subtropical regions, usually, where coral reefs are well developed. It is seldom fatal.

COASTAL Refers to marine fishes which spend much of their lives within a few miles of shore.

CONTINENTAL SHELF A submarine plain extending out from shore to a depth of 100 fathoms (183 meters), beyond which the ocean bottom begins a relatively rapid descent to the deep ocean floor.

CRAB RING A crab trap made of coarse mesh webbing attached to two iron hoops, designed to lie flat on the bottom but form a basket when raised. A bag of small mesh netting containing bait (scrap fish or shellfish) is secured to the center of the smaller inner ring to attract the crab and keep it occupied while the trap is pulled out of the water. Popularly used for market (Dungeness) and rock crab along the coast from central California north to Oregon and Washington.

DIP NET A conical small-mesh net attached to a rigid frame on a long handle and used to catch fish and other marine animals. Also called a hand net or scoop net.

DRIFT FISHING Trailing a weighted or unweighted line with live or dead baits behind a drifting boat. Artificial lures are sometimes used, particularly when "jigg ing."

ESTUARY A partially enclosed body of water having a free connection with the open sea within it saltwater and freshwater mix.

FEEDER SALMON A term usually applied to smaller, sexually immature salmon that concentrate in an area to feed, opposed to large, mature salmon that move into an area prior to spawning.

FISH TRAP A portable trap for fish and shellfish usually made of wire mesh fitted over a rigid frame with an opening on one side. Like all traps it is designed so that entry is easier than exit. In the tropical islands fish traps are commonly used to capture a variety of reef animals.

GILL NET A "curtainlike net suspended in the water with mesh openings large enough to permit only the heads of the fish to pass through, ensnaring them around the gills when they attempt to escape.

GILL RACKERS Bony, fingerlike projections on the gill arches. Located underneath the gill cover or operculum of bony fishes.

HANDLINING Angling with a fishing line held in the hand, without using a rod or reel.

INLET A narrow passage of water connecting the open sea with protected coastal or inland water.

JACK SALMON A term applied to small, but sexually precocious male salmon (chinook or coho) capable of spawning at 2 years of age. Most male chinook and coho mature a year or more later.

JETTY FISHING Fishing from any man-made structure constructed of rock or stone or the like, which projects out into the sea or other body of water.

JIG An artificial lure made to simulate live bait. It is usually made with a lead head set on a single hook and is heavier than most other lures.

JIGGING Manipulating a jig to imitate a live bait, thus attracting the fish to the hook. The jig can be lowered vertically or cast some distance away, then jerked upward a short distance. Immediately after this upward jerk the lure is allowed to sink back. This procedure is repeated until a fish is hooked, which usually is on the rise of the jig.

LURE An artificial bait.

MOOCHING A method of salmon fishing from a drifting or propelled boat. The bait is sunk deep with a heavy sinker then brought upward at an angle as the boat is maneuvered forward a few yards or the line retrieved. The bait is then allowed to sink once again to the bottom and the procedure repeated. Usually whole or cut herring is used and rigged so that it has a spinning action in the water.

ORIGIN OF FIN The anterior end of the base of a fin.

PARTY BOAT A fishing boat carrying large groups of anglers for a fee and operating on a scheduled basis. Space on the boat is sold to the general public until either the boat is filled to capacity or the scheduled sailing time is reached. The captain usually determines the type of fishing and area to be fished, and the fee usually includes bait but not tackle.

PELAGIC Spoken of fish and other sea animals that are more or less independent of the bottom. They are characteristically active swimmers, spending much of their time in midwater or near the surface.

PIER FISHING Fishing from any private or public structure set on pilings that extends over a body of water.

PLANKTON A collective term applied chiefly to all those minute and extremely diverse forms of plants and animals that drift with the currents.

PLUG A nonspecific term for any artificial lure having a distinct "body" made of wood or plastic and having one or more sets of single, double, or treble hooks attached. Most plugs are designed to wobble or create a commotion in the water when retrieved.

POKE-POLING A unique method of rocky-shore fishing for blennies and other crevice-seeking animals that...
inhabit deep tide pools along the Pacific coast mainland. The gear is essentially homemade. A long bamboo pole of about 9 to 12 feet is fitted with a semiflexible wire tip to which a nylon-cord leader and hook are attached. The bait, usually mussel or shrimp, is "poked" into crevices under and between large boulders in rocky-surge areas at low tide, then retrieved quickly after the first sharp tug of a fish.

POPPER  A lightweight artificial lure made of cork or plastic having a cncave face that produces a popping sound when twitched on the water's surface. Attracts fish by the commotion it causes in the water.

SCUTE  A modified fish scale formed into an external bony or horny plate.

SKIFF FISHING  Recreational fishing from a relatively small private or rented boat that does not carry any paying passengers.

SPINNER  An artificial lure with metal or plastic blades that whirl on a shaft or a swivel as the lure is retrieved. Attracts fish by the commotion it causes as well as by its flash.

SPINNING  A method of rod-and-reel fishing distinguished by the use of a fixed-spool reel or "spinning" reel. When casting, the line slips off the end of the reel spool. Which does not revolve as does a conventional bait-casting reel spool. Spinning gear makes it easier to cast very light lures and avoid backlashes in the line.

SPOON  An artificial lure with a curved or dished out body that wobbles but does not revolve. Attracts fish by its movements as well as color.

STILL FISHING  Fishing natural baits from shore, pier, or anchored boat. Usually the bait is fished on or near the bottom, although sometimes held off the bottom with a float.

SQUIDDING  Casting metal lures called "squids" into the surf. This term is also used in Hawaii to describe fishing for octopus, called "squid" by islanders. When "squidding," one walks out across the reef armed with a spear, looking for octopus with the aid of a glass-bottomed box. Lights are used when fishing at night for "night squid."

SURF FISHING  Casting a bait or lure along sandy beaches for fishes that frequent the surf zone. A long flexible rod is usually used to help hurl the bait a maximum distance and to hold the line high enough to clear the breakers. Also called surf casting.

SURF NETTING  A unique type of Pacific coast fishing using special one- or two-man nets to catch smelt along sandy beaches. (See also A-FRAME NET.) Generally, there are two separate fisheries—one during the daylight hours for day or surf smelt, and the other at night (and often on the same beaches) for night smelt. The fish are strained from receiving breakers as they come into shallow water to spawn, usually a few hours just before and after high tide.

SURROUND NET  A beach seine typically a long net having floats along the upper edge and weights along the bottom, used to capture an assortment of fishes in shallow protected water. The net is held in place on the shore at one end while the other end is pulled out around the fish to another point farther down the shore line. The net is then pulled slowly to the beach enclosing the fish in a decreasing semicircle. In Hawaii, large-group surround net fishing is called "hukilau."

SPEAR FISHING  Impaling fish with a spear from either above or below the water's surface.

TORCH FISHING  Locating or attracting marine animals at night with a light held above the surface of the water. Torch fishing usually takes place on calm dark nights over shallow reefs at low tide and when the animal is located it is either speared or netted.

TROLLING  Trailing artificial or natural baits behind a moving boat. The bait can be made to skip along the surface or trailed below at any depth to just above the bottom. A bait or lure trailing behind an angler walking along a pier, bridge, or breakwater is also called trolling.

WATER COLUMN  Spoken of the water from the surface to the bottom at a given point.
Index to Common Names of Fishes

The following is an alphabetical listing of some of the common fish names used by marine anglers who fish along the Pacific coast and around the Pacific Islands. Many times confusion arises when one common fish name such as "shopper" or "bash" refers to more than one species, or when more than one name is used for the same species depending upon the geographical area fished and sometimes even the size of the fish itself. The purpose of this index is to help locate information on the fish described in the Marine Game Fish section. The numbers in this index are not page numbers but refer to the paragraph numbers preceding each species description on the two fish lists.

<table>
<thead>
<tr>
<th>Name</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>'aweweoa, Atka mackerel</td>
<td>169</td>
</tr>
<tr>
<td>barberpole</td>
<td>153</td>
</tr>
<tr>
<td>for flag rockfish</td>
<td>107</td>
</tr>
<tr>
<td>for treefish</td>
<td>106</td>
</tr>
<tr>
<td>barracuda</td>
<td>95</td>
</tr>
<tr>
<td>California</td>
<td>69</td>
</tr>
<tr>
<td>for black croaker</td>
<td>47</td>
</tr>
<tr>
<td>for black rockfish</td>
<td>80</td>
</tr>
<tr>
<td>black</td>
<td>32</td>
</tr>
<tr>
<td>for black croaker</td>
<td>47</td>
</tr>
<tr>
<td>for opaleye</td>
<td>49</td>
</tr>
<tr>
<td>bully</td>
<td>33</td>
</tr>
<tr>
<td>calico</td>
<td>33</td>
</tr>
<tr>
<td>giant</td>
<td>32</td>
</tr>
<tr>
<td>ground</td>
<td>35</td>
</tr>
<tr>
<td>kelp</td>
<td>33</td>
</tr>
<tr>
<td>mountain</td>
<td>167</td>
</tr>
<tr>
<td>rock</td>
<td>31</td>
</tr>
<tr>
<td>sand</td>
<td>35</td>
</tr>
<tr>
<td>spotted sand</td>
<td>34</td>
</tr>
<tr>
<td>striped</td>
<td>31</td>
</tr>
<tr>
<td>sugar</td>
<td>35</td>
</tr>
<tr>
<td>for barred sand bass</td>
<td>35</td>
</tr>
<tr>
<td>for olive rockfish</td>
<td>82</td>
</tr>
<tr>
<td>bass rockfish</td>
<td>80</td>
</tr>
<tr>
<td>for olive rockfish</td>
<td>82</td>
</tr>
<tr>
<td>cat ray</td>
<td>9</td>
</tr>
<tr>
<td>bay perch</td>
<td>65</td>
</tr>
<tr>
<td>bigeye bass</td>
<td>150</td>
</tr>
<tr>
<td>bigeye, red</td>
<td>169</td>
</tr>
<tr>
<td>bigeye rockfish</td>
<td>105</td>
</tr>
<tr>
<td>bigeye scad</td>
<td>174</td>
</tr>
<tr>
<td>big skate</td>
<td>140</td>
</tr>
<tr>
<td>bullfish</td>
<td>73</td>
</tr>
<tr>
<td>bluefish</td>
<td>73</td>
</tr>
<tr>
<td>bonito, Pacific</td>
<td>74</td>
</tr>
<tr>
<td>for aku</td>
<td>229</td>
</tr>
<tr>
<td>for kawakawa</td>
<td>228</td>
</tr>
<tr>
<td>bonito shark</td>
<td>2</td>
</tr>
<tr>
<td>borracho</td>
<td>95</td>
</tr>
<tr>
<td>broadbill</td>
<td>76, 232</td>
</tr>
<tr>
<td>broadfin flounder</td>
<td>128</td>
</tr>
<tr>
<td>brown Irish lord</td>
<td>119</td>
</tr>
<tr>
<td>brown rockfish</td>
<td>89</td>
</tr>
<tr>
<td>for quillback rockfish</td>
<td>90</td>
</tr>
<tr>
<td>brown smoothhound</td>
<td>4</td>
</tr>
<tr>
<td>buba</td>
<td>195</td>
</tr>
<tr>
<td>buffalo cod</td>
<td>112</td>
</tr>
<tr>
<td>buffalo sculpin</td>
<td>120</td>
</tr>
<tr>
<td>bull bass</td>
<td>33</td>
</tr>
<tr>
<td>bull cod</td>
<td>116</td>
</tr>
<tr>
<td>bullfish</td>
<td>116</td>
</tr>
<tr>
<td>bullhead</td>
<td></td>
</tr>
<tr>
<td>for cabezon</td>
<td>116</td>
</tr>
<tr>
<td>for Pacific staghorn sculpin</td>
<td>118</td>
</tr>
<tr>
<td>bull trout</td>
<td>19</td>
</tr>
<tr>
<td>butterfish</td>
<td></td>
</tr>
<tr>
<td>for Pacific pompano</td>
<td>78</td>
</tr>
<tr>
<td>for sabelfish</td>
<td>109</td>
</tr>
<tr>
<td>button perch</td>
<td>40</td>
</tr>
<tr>
<td>Fish Name</td>
<td>Weight/Bay</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Pacific halibut</td>
<td>200</td>
</tr>
<tr>
<td>Northern halibut</td>
<td>123</td>
</tr>
<tr>
<td>Oregon halibut</td>
<td>90</td>
</tr>
<tr>
<td>Northern rockfish</td>
<td>181</td>
</tr>
<tr>
<td>Red rockfish</td>
<td>68</td>
</tr>
<tr>
<td>Pacific salmon</td>
<td>124</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>111</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>111</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
<tr>
<td>Chinook salmon</td>
<td>126</td>
</tr>
<tr>
<td>Pink salmon</td>
<td>119</td>
</tr>
</tbody>
</table>
pink 186
red 136
for canary rockfish 98
for mala‘i 198
for onaga 190
for vermilion rockfish 95
for yelloweye rockfish 99
yellow 136
for canary rockfish 98
see also rockfish(es)
sockeye salmon 15
sole 193
butter 135
C-O 134
carlina 132
dover 137
English 129
lemon 129
longfin 131
petrale 127
rex 131
rock 128
sand 130
slender 136
southern halibut 121
Spanish flag 107
Spanish mackerel 107
speckled rockfish 90
spiny dogfish 139
spotfin croaker 44
spotfin surfperch 63
spot goatfish 201
spotted hawkfish 209
spotted jack 178
spotted rockfish 100
spotted sand bass 34
spotted turbot 133
spot weke 201
spot wrasse 210
spring salmon 12
squarespot rockfish 94
squillfish(es) 161
staghorn sculpin Pacific 118
star jack 178
starry flounder 124
starry rockfish 100
steelhead 18
stringray, round 143
strawberry rock cod 102
striped bass 31
striped mackerel 75
striped marlin 77, 236
striped mullet 218
striped surfperch 56
striper 31
stripetail rockfish 105
sturgeon 107
green 11
Pacific 10
white 10
sugar bass 107
for barred sand bass 35
for olive rockfish 82
surfsh 107
for California corbina 43
for smelt 20, 21
surfperch 107
barred 51
black 55
calico 52
kelp 62
pale 58
pink 65
rainbow 60
redtail 50
rubberlip 57
sharpnose 64
shiner 61
silver 54
spotfin 63
striped 56
walleye 53
white 59
surf smelt 20
surgeonfish(es) 222-225
swell shark 138
sweltalil 1
swordfish 76, 232
T 136
ta‘ape 194
talk 230
tagai 197
taua uIll uill 196
 tambon 99
tang, convict 222
tangshun 212
tanifa 154
tarakitos 177, 178-180
see jack
taraiko 177, 178-180
see jack
tataga 225
tau 201
ten-pounder 156
thornback 99
threadfin, Pacific 221
thresher shark 1
 tiger 107
titui 159
 toa 195
 tomcod
Pacific 26
for young boccaccio 97
for white croaker 45
topmolt 29
tossun 231
treefish 106
troun ,
 blueback 17
 bull 9
 Columbia River 17
 cutthroat (sea-run) 17
 Dolly Varden 19
 malma 19
 rainbow (sea-run) 18
 red-spotted 19
 rock 110
 salon
 for coho salmon 13
 for Dolly Varden 19
 for steelhead (rainbow trout) 18
 steelhead 18
true cod 25
tuna
albacore 71
Allison 72
black skipjack 228
bluefin 73
dogtooth 230
longfin 76
scaleless 230
skipjack 229
white 230
yellowfin 72, 227
tunny, little 228
turbob
 diamond 125
 hornbyhead 126.
 spotted 133
 turkey-red rockfish 99
 turkey rock 99
tye 12
U
ugupao
for palani 224
for pualu 223

uhu
for Scarus perspicillatus 215
for Scarus dubius 216
uku 185
ula oa 202
'ula'ula 191
'ula'ula kona 190
ula
black 180
blue 176
hoshi 178
kagami 175
mempachi 179
pake 179
white 175
ula kihikhi 175
umatane 108
ume 225
unicornfish 225
uouo 219
'upapalu 171
'u'u 161
V
vava sui 196
vermilion rockfish 95
vete 202
viuva 88
W
wahoo 231
walleye surfperch 53
weke
red 202
spot 201
weke-a'a 201
weke-ula 202
whaler 154
whitebait smelt 24
whitebelly rockfish 81
white croaker 45
whitefish, ocean 36
white salmon 37
white seabass 41
whitespotted greenling 114
whitesurfperch 59
white sturgeon 10
white tuna 230
white rock 175
whiting
for ocean whitefish 36
for California corbina 43
wahoo rockfish 88
wrasses(s) 65-68, 210-214
blackspot 210
rock 67
saddles 214
spot 210
Y
yellow-and-blue seaperch 194
yellowbacked rockfish 90
yelloweye opakapaka 188
yelloweye rockfish 99
yellowfin croaker 42
yellowfin tuna 72, 227
yellow shiner 61
yellow snapper
for canary rockfish 98
yellowtail 37
kelp 85
for yellowtail rockfish 85
yellowtail rockfish 85
yellowtail kalikai 187
Z
zebra 75
Acknowledgments

We acknowledge with appreciation the assistance of the following agencies and persons in the development of this publication. Much of the information was assembled during the period 1960-63 and published in 1963 by the U.S. Bureau of Sport Fisheries and Wildlife as the “Atlas of Eastern Pacific Marine Game Fishing” (Circular #174). This information has been updated and supplemented. Major contributors of information for the previous “Atlas” and for this Guide are listed as follows: Alaska Fish and Game Department, American Samoa Office of Marine Resources, California Department of Fish and Game, Guam Division of Fish and Wildlife, Hawaii Division of Fish and Game, Oregon Fish Commission, Washington Department of Fisheries, and Washington Department of Game. Individuals assisting are listed below.

To the many sport fishing boat and party boat skippers and operators, members of government agencies, and interested sport fishermen who have contributed, and to John Gottschalk for his support and guidance, we wish to express our sincere appreciation. We also acknowledge the invaluable assistance of John Smiles and NOAA Visual Services cartographers Jim Schick and Jim Goodlin, who prepared the detailed fishing charts. Special thanks go to Dan Miller who took time out from his busy schedule to review the complete and very lengthy manuscript.

Norman Abramson
Johanna Alban
Charles Anderson
Tom Arcoleo
Robert Ayers
Orville Boll
Fred Berry
Peter Boxford
Robert Brown
Raymond Breuser
Raymond Buckley
Eugene Burke
Jerry Butler
Charles Campbell
Larry Carrola
William Craig
Roland Crisafi
Lillian Dempster
Gene Deschamps
Jim Dixon
Kenji Ego
Frank Felter
John Fortune
Ronald Garvey
Wally Giguère
Daniel Gotshall
Richard Haley
Frank Haw
Dave Heanes
Frank Hester
Thomas Hida
Edmund Hobson
Albert Ignacio
Isaac Ichihara
Robert Iversen
Harry Kami
Richard Kanayama
Susumu Kato
James Kikuchi
Stanley Kubik
Al Lasater
Clayton Lewis
Bikke Oughton
Robert Looftel
Rubio Lujan
Mike Lund
Thomas Manar
Sharon Marchese
Ervin Maringale
C. Dale Snow

Eddie McEwen
Alan McGie
Daniel Miller
Howard Minor
Charles Morgan
Ed Neal
Nancy Nelson
Edwin Niska
William Nott
Henry Okamoto
Eric Onizuka
Russ Orrell
Jay Quast
John Randall
Russell Redick
Harry Rietze
Tom Riley
Ron Rogers
Henry Sakuda
John Severa
Paul Shiota
Richard Shumura
Robert Simpson
Rose Simpson
William Smoker
C.

Joseph Souza
Don Stevens
Shirley Strubbing
Jeannette Strubhaker
Paul Strubhaker
Barbara Sumida
Stanley Swedlow
Gerald Tailbot
Michio Takata
Richard Thompson
Spencer Tinker
Frank Van Hull
Jack Van Huyning
William Van Brugge
Bill Vogler
Charles Walters
Ron Warner
Percy Washington
Ray Welsh
Henry Wendler
Sigrid Fasterherven
Ed Whitesell
Francis Williams
Charles Yamamoto
Howard Yoshida
Parke Young
Barbara Zimmer
References

ALASKA DEPARTMENT OF FISH AND GAME.

ANDREWS, R.

APLIN, J. A.

BAADE, R. T.

Campbell, C. J., and F. E.-Locke, editors.

HELSTROM, H. and V. HELSTROM
(Editors).

HOBSON, E. S. and E. H. CHAVE.

HOLM, D.

HOSAKA, E. Y.

IKEHARA, I. I., H. T. KAMI, and R. S. SAKAMOTO.

INTERNATIONAL GAME FISH ASSOCIATION.

JORDAN, D. S., and B. W. EVERMANN.

JORDAN, D. S., and A. SEALE.

JOSEPH, J.

JUDD, H. P.

KAMI, H. T.

KAMI, H. T., I. I. IKEHARA, and F. P. DE LEON.

KENNEDY, T. F.

LA-MONTE, F.


G. W. VILBY.

de SYLVA, D. P.

ERIKSON, C. E.

FITCH, J. E.

FITCH, J. E., and R. J. LAVENBERG.

FREEMAN, B. L., and L. A. WALFORD.

FREUND, G.

GILBERT, C. H.

GOADBY, P.

GOSKINE, W. A., and V. E. BROCK.

HART, J. L.

HARVILLE, J. P. (editor).

HAW, F., and R. M. BUCKLEY.

HAWAI’I VISITORS BUREAU.

HECKART, L. J., D. E. JONES, and R. T. BAADE.
LOGAN, S. M.

MILLER, D. L. and D. GOTshall.


MILLER, D. L. D. GOTshall.
and R. NITSSOS.

MILLER, D. J. and M. W. ODEMAR.

MILLER, L. W.

NELSON, D. C.


RANDALL, J. L. and R. K. PARKAYAMA.

REED, R. D. and R. H. ARMSTRONG.

ROEDEL, P. M.

SMITH, J. L. B.

SQUIRE, J. L. JR.

TARBATURE, L. F.

SWERDLOFF, S. N.

TARP, P. H.

WADMAN, R. D.

WALFORD, L. A.


WHITECHILD, L. R.