

Field Guide to the Fish of Puget Sound and the Northwest Coast

David Somerton and Craig Murray

Foreword by Allan C. DeLacy

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Foreword

The appreciation, utilization, and defense of aquatic resources go forward on many fronts. But before rational attention can be given to a resource, that resource must be recognized. Too little is known about the identity of the finfish resource and its value, both esthetic and harvestable, in the segment of the sea that is the subject of Field Guide to the Fish of Puget Sound and the Northwest Coast, Encroachment by an increasing human population on the margin of the sea necessitates a detailed familiarity with the nearshore habitat and its biota. Recreational divers now are sufficiently numerous to augment appreciably the available information about the coastal waters. Improved underwater recognition of the fish species will accelerate the acquisition of new knowledge pertaining to the shallow water marine ecosystem. Foreseeable, for instance, is the possibility of someday initiating an annual fish count resembling the yearly bird census, already a well established activity of knowledgeable and dedicated birdwatchers.

One of the authors' goals deserves special comment--identification without destruction. Fluctuation in community structure provides a clue to the health of the community. Repetitive destruction of community members for purposes of identification can be self-defeating if observers are hoping to learn something about the long-term welfare of the population. *Field Guide to the Fish of Puget Sound* brings closer the day when a fish community visually monitored can serve with increased sensitivity as an environmental barometer.

Alian C. DeLacy January 1976

Preface

Several years ago we began the process of learning how to identify, underwater, fish that we commonly saw while diving in Puget Sound. We started by assembling a small library of material which was either partially or wholly concerned with identifying marine fish of Washington. Each source of information was helpful in its own way. However, all had a basic inadequacy for our purposes: they were designed only for identifying fish that were in hand. Consequently, identification of a fish was based on body characteristics which, although quite definitive, were practically indistinguishable underwater. Faced with this difficulty, we were forced to spear specimens to identify on land or to memorize characteristics of fish and later attempt to make an identification based on our recollections. Often we remarked that the task would be much simpler if a field guide existed which used features for identification that were easily recognized under a variety of viewing conditions, and which could be taken underwater as well as used on land or in a boat.

In Field Guide to the Fish of Puget Sound and the Northwest Coast we have attempted to construct a reference that will be useful not only for divers, but for anglers and tide pool explorers as well. Contained in this guide are most fish species that are likely to be encountered in Puget Sound and the Strait of Juan de Fuca at depths of less than 150 feet, as well as several additional species that are common along the open coast from Oregon through British Columbia. Nearly all traditional sport fish and many tide pool species are included.

There are several features of the guide that were designed to facilitate the identification of fish. Commonly seen families are situated near the front or the back to be more easily found. Species within a family are arranged according to their similarity of appearance. Most of the species descriptions are accompanied by an illustration which is labeled with features that for us are the most helpful for distinguishing between fish of similar appearance. Finally, the guide is printed on water-resistant material so that it can be handled with wet hands or actually taken underwater.

We hope that this guide may in some way help you see and appreciate the variety of fish life that exists in Puget Sound and coastal Washington. We would like to express our sincere appreciation to the following people who have given us their assistance, criticism, and encouragement: Dr. Allan C. DeLacy, Dr. Bruce Miller, Mr. Steven Borton, Mr. Finn Larsen, Rev. J. N. Allan, and Mr. Robert Barringer.

David Somerton Craig Murray March 1976

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Common Fishes of Puget Sound and Coastal Washington

Introduction

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Approximately 212 species of fish have been found in Puget Sound; however, many of these are so rare or occur in such deep water that it is extremely unlikely that a diver would ever encounter them. Included in this guide are 99 species which we feel will be at least occasionally seen in Puget Sound or the Strait of Juan de Fuca. Also included are two species that are common on the open coast but which have never been recorded in Puget Sound. Species are grouped into families, and on the back cover is a guick reference guide to the major families.

For each species we have attempted to indicate its preferred depth range and relative abundance. Both characteristics are quite subjective and are based primarily on our experience and that of other divers as well as what we have found in the literature. These should be taken very loosely as representative values since local environmental conditions will often cause the observed depth range and abundance to differ from our estimates. The key words that we have used to describe a fish's preferred depth range are as follows:

Intertidal-confined primarily to the region that is exposed during a low tide

Shallow-usually found at a depth less than 50 feet

Deep-usually found at a depth greater than 100 feet

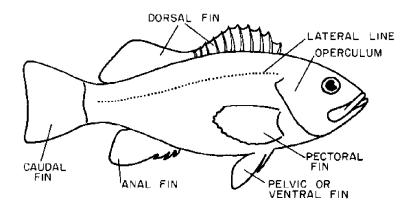
Moderately Deep—typically found in deep water, but frequently makes excursions into shallow areas

Open Water-typically lives off the bottom so that the depth of water is relatively unimportant

The indices of relative abundance that we have used are defined for a typical dive in the fishes' preferred habitat, which is noted for most species in the text. The categories are as follows:

Abundant—many individuals will be seen Common—at least one individual will normally be seen Uncommon—occasionally one individual will be seen

These abundance categories have been omitted for the salmon and trout because their abundance is so seasonal and they are seldom seen by divers. Throughout the text we have used the technical names for various body parts of fish. These are presented on the following page for quick reference.



Field Guide to the Fish of Puget Sound and the Northwest Coast

Finally, we would like to give a few tips on "fish watching." First, try to familiarize yourself with this guide before attempting to use it in the water. Second, don't be discouraged when unable to identify many fish—it takes time. Third, a flashlight helps to see into places where fish hide and enhances a fish's color. Fourth, try diving at night and in a wide variety of habitats. Fifth, keep a record of the fish that are identified on each dive. You will find it interesting to compare what was seen in different locations.

Salmon, Trout, and Char

(Family-Salmonidae)

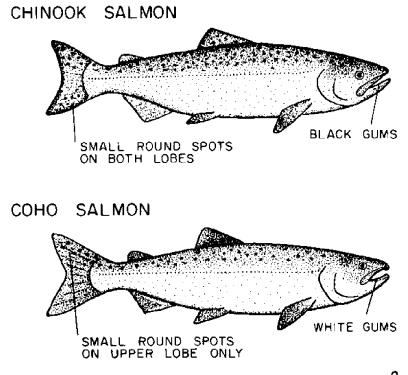
Eight species of the Salmonid family are commonly found in the coastal waters of Washington. Salmonids, along with the smelts, are characterized by having a small adipose fin on the back immediately before the tail fin. Most of these are open-water fish often found at considerable distances from land. All must return to fresh or brackish water to spawn. When they return to fresh water, salmon undergo radical changes in shape and/or color and while in this phase will look quite unlike the illustrations on pages 3-7 which depict adult fish in the marine environment. Because members of this family are similar in appearance and are more often encountered by an angler than by a diver, an identification key which requires the fish to be in hand is provided on pages 8–9. The abundance indices for this family have been omitted because these fish do not truly fit into any of the categories that were defined in the introduction.

CHINOOK OR KING SALMON (Oncorhynchus tshawytscha)

The chinook salmon is the largest of the 6 species of Pacific salmon. In coastal waters this fish tends to be found near the bottom, usually preferring areas where points of land jut out into the water or where there are sharp breaks in the bottom contours. Commonly encountered year round. Distinguished by black spotting on the back and both lobes of the caudal fin and by black gums. Color is mainly silvery on the sides, dark green to black on the dorsal surface, with numerous small black spots on the back and both lobes of the caudal fin. Breeding color is mostly dark green-brown. Length to 53 inches; weight to 126 pounds.

COHO OR SILVER SALMON (Oncorhynchus kisutch)

Coho tend to be found in open water and nearer the surface than chinook salmon. Adults will most likely be found in Puget Sound in late summer and fall. Distinguished by black spotting on the back and the upper lobe of the caudal fin and by white gums. Color is silvery on the sides, dark blue dorsally, with numerous dark spots on the back and upper lobe of the tail. Breeding color is bright red on the sides becoming olive green dorsally. Length to 38 inches; weight to 31 pounds.



PINK OR HUMPY SALMON (Oncorhynchus gorbuscha)

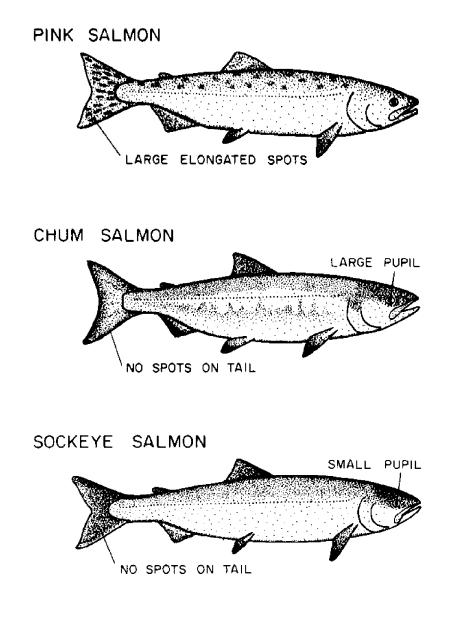
Noted for having alternating strong and weak year classes. In Washington the larger run usually occurs in odd number years. Found in Puget Sound during the fall. Distinguished by the large oval dark spots on the back and both lobes of the caudal fin. Color is silvery on the sides, shading into dark blue dorsally with numerous large oval spots (nearly the size of the eye) covering the back and tail. Breeding colors are olive green shading into white ventrally. The breeding male develops a large hump on the back from which the nickname "humpy" originates. Length to 30 inches; weight to 12 pounds.

CHUM OR DOG SALMON (Oncorhynchus keta)

Adults are found in Puget Sound in late fall and winter but usually move rapidly into the spawning streams. Distinguished by the absence of large black spots from the body, by dark coloration of the tips of the paired fins, and by a large pupil (about half the eye diameter). Color is silvery on the sides shading into dark blue dorsally. Tips of the paired fins usually dark. Breeding colors are mostly olive green with vertical bars of red to brown on the sides. Often the tip of the anal fin becomes nearly white. Length to 40 inches; weight to 33 pounds.

SOCKEYE OR RED SALMON (Oncorhynchus nerka)

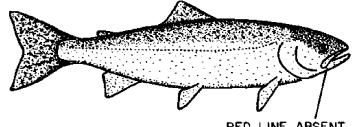
Adults are found in Puget Sound in late summer and fall, but like chum salmon they move rapidly into fresh water. Distinguished by the absence of large black spots from the body and by 28 to 40 long, slender gill rakers on the first gill arch. Color is silvery on the sides shading to greenish blue dorsally, with fine black speckling on the back. Breeding color is bright red, with head and tail colored dark olive green. Length to 33 inches; weight to 15 pounds.



STEELHEAD OR RAINBOW TROUT (Salmo gairdneri)

This species is known as a rainbow trout when its life is spent entirely in fresh water. Found in Puget Sound during summer and again during winter. Distinguished by its relatively short head and the absence of a red dash below the lower jaw. Color is silvery on the sides shading to olive green dorsally with black spots on back and on dorsal and caudal fin. Breeding males have pink on cheeks and in a band along the side. Length to 45 inches; weight to 43 pounds.

STEELHEAD TROUT



RED LINE ABSENT

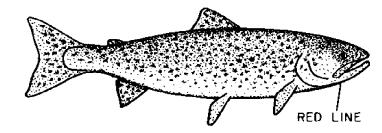
CUTTHROAT TROUT (Salmo clarki)

Usually found in shallow water close to shore, often preferring estuarine conditions. Found in Puget Sound year round. Distinguished by red streaks on the underside of the lower jaw. Color is mostly silvery on sides shading to greenish blue dorsally with numerous black spots on head, body, and unpaired fins. Length to 30 inches; weight to 4 pounds in sea-run fish and up to 41 pounds for non-migratory individuals.

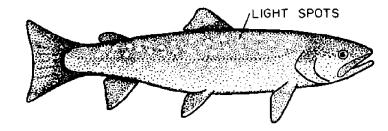
DOLLY VARDEN (Salvelinus malma)

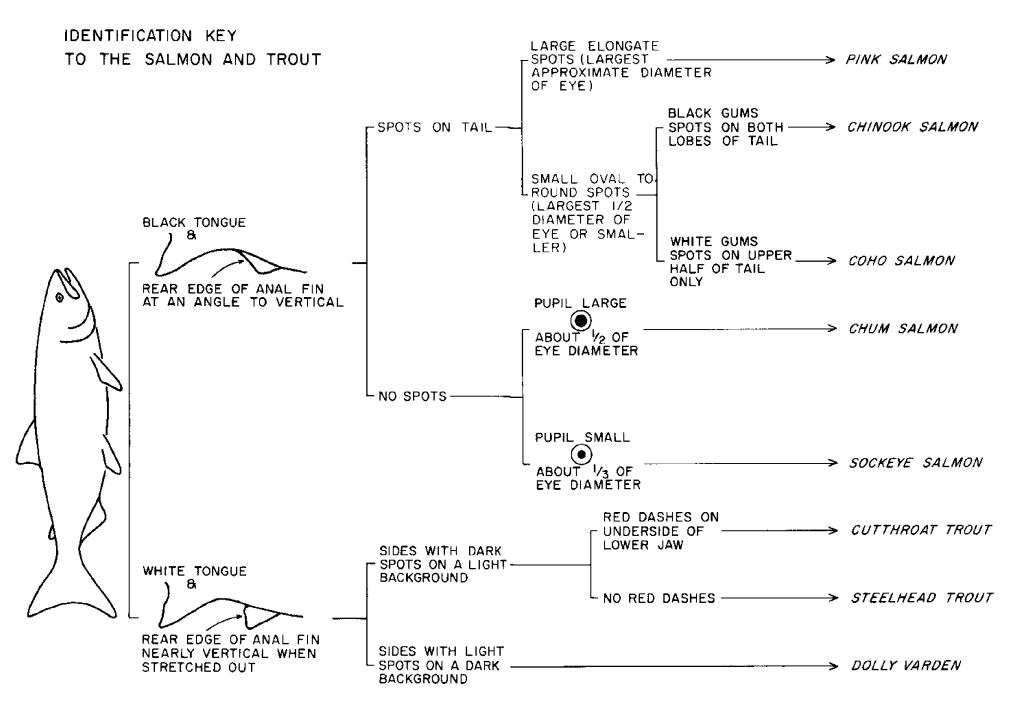
Usually occurs in and near estuaries, often in intertidal areas. Found year round in Puget Sound. Distinguished by large lightcolored spots on a dark background. Color is a dark silver to blue or green on the sides, with numerous brightly colored yellow to red spots. Leading edge of pelvic and anal fins cream-colored. Length to 36 inches; weight to 30 pounds.

CUTTHROAT TROUT



DOLLY VARDEN





Rockfish (Family—Scorpaenidae)

There are 24 species of rockfish that have been recorded in Puget Sound, 11 of which are included here. Rockfish can be recognized by their large heads which usually bear several spines, and by welldeveloped spines on the dorsal, ventral, and anal fins. Typical coloration is in shades of brown or green in the shallow-water species and red in the deep-water forms. The preferred habitat is usually around rocks or other objects which offer suitable hiding places. All members of the genus *Sebastes* give birth to live young.

BLACK ROCKFISH (Sebastes melanops)

Common. Often form schools. Distinguished by coloration and by the smooth, streamlined upper profile of the head. Color is mostly in shades of black and grey, usually with a line of lighter blotches above the lateral line. Young have a distinct black spot on the hind portion of the dorsal fin. Length to 23 inches; weight to 10.5 pounds.

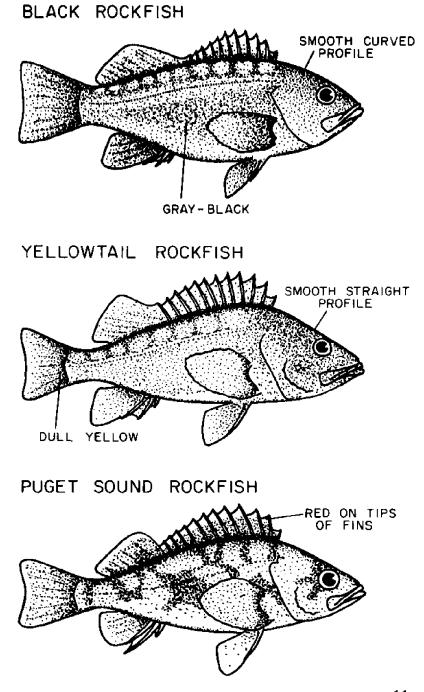
A similar appearing species, blue rockfish (Sebastes mystinus), which is common on the open coast, can be differentiated from the black rockfish by the slightly forward slope of the hind edge of the anal fin, and by its distinct blue color.

YELLOWTAIL ROCKFISH (Sebastes flavidus)

Common. Often encountered in large schools located well off the bottom. Similar in appearance to the black rockfish, but can be differentiated by the shape of the head (see illustration), and the presence of yellow in the fins. Color is primarily grey-green with dusky yellow on all fins, especially the tail. Sometimes a line of rectangular light spots above the lateral line will be quite distinct. Length to 26 inches.

PUGET SOUND ROCKFISH (Sebastes emphaeus)

Uncommon; locally abundant. Usually seen in small schools. Range is restricted to the inland waters of Washington. Distinguished by the clear, brilliant red coloration on the edge of the dorsal fin, and its small size. Color is variable—mostly greenbrown blotches on a lighter background. Sometimes very pale tan with a light brown stripe below the lateral line. Paired fins are red. Length to 6 inches.



COPPER ROCKFISH (Sebastes caurinus)

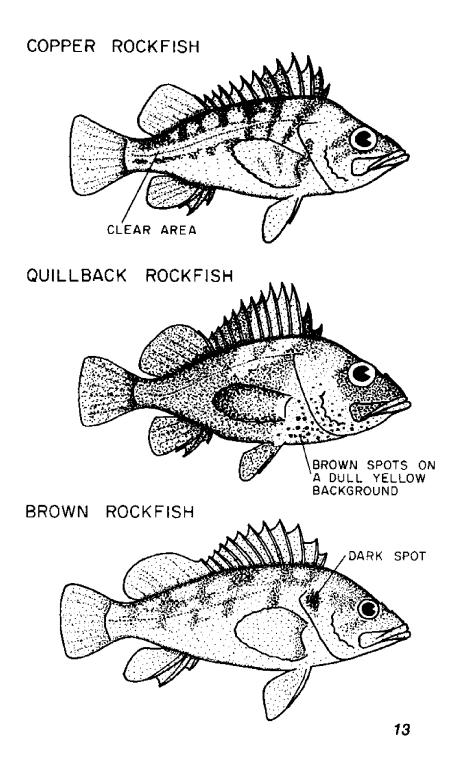
Abundant. Distinguished by the clear area along the hind twothirds of the lateral line. Color is quite variable, usually dark browngreen mottling with a lighter background which at times is a distinct pink. Often there is some yellow on the sides. Length to 20 inches; weight to 10 pounds.

QUILLBACK ROCKFISH (Sebastes maliger)

Common. Recognized by the color pattern and, when erected, the deeply incised first dorsal fin. Color is mostly dark brown with dusky yellow about the head, and there are often distinct brown spots on the underside of the head. A dull yellow is usually present on the first few spines of the dorsal fin which extends in a mottled pattern down the sides. Length to 16 inches.

BROWN ROCKFISH (Sebastes auriculatus)

Common. Appears to be more abundant in Puget Sound than in the Strait of Juan de Fuca. Prefers shallow areas where kelp is abundant. Identified by the brown coloration and by a dark blotch on the upper portion of the gill cover. Color is mostly a mottled dark brown with dusky pink fins. Length to 20 inches.



YELLOWEYE ROCKFISH OR RED SNAPPER (Sebastes ruberrimus)

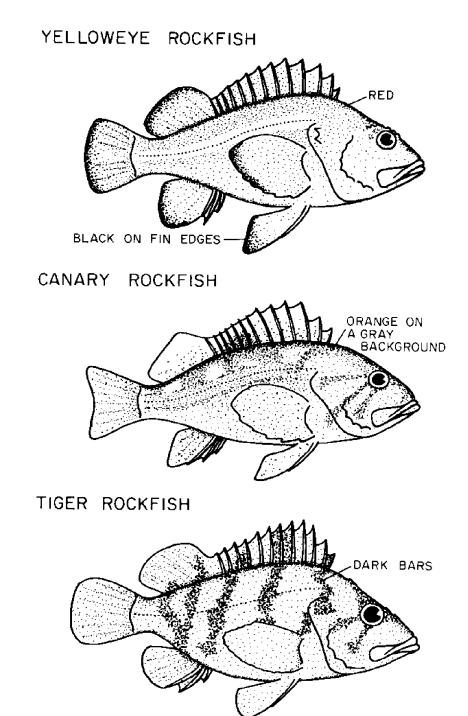
Common. Usually an inhabitant of deeper water. More common in the Strait of Juan de Fuca and the open coast, than in Puget Sound. Distinguished by the red coloration and the brilliant yellow eye color. Color is primarily red-orange shading to yellow below. All fins except the spiny dorsal are tipped with black. Young have 2 light stripes running the entire length of the body and joining immediately before the tail. Length to 36 inches; weight to over 50 pounds.

CANARY ROCKFISH (Sebastes pinniger)

Common. Appears to be a schooling fish and primarily a resident of deep water. Distinguished by the orange color and the 3 orange stripes on the head. Color is mostly bright orange mottling on a grey background, sometimes with 2 light stripes paralleling the lateral line; orange on fins. Length to 30 inches.

TIGER ROCKFISH (Sebastes nigrocinctus)

Uncommon. A solitary, secretive rockfish that is typically found in deep water, especially near rocky crevices and caves. Appears to be more common in the Strait of Juan de Fuca. Distinguished by the color pattern and, upon close examination, the bony ridges on the head. Color is primarily light red with several black-red bars. Length to 24 inches.



CHINA ROCKFISH (Sebastes nebulosus)

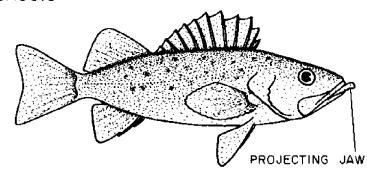
Uncommon. Found in deep water and appears to be more common on the open coast than in Puget Sound. Remains close to crevices and retreats when disturbed. Distinguished by its coloration. Color is mostly black with yellow-white spotting, and with a broad yellow stripe starting on the front of the dorsal fin and extending along the sides. Length to 17 inches.

BOCACCIO (Sebastes paucispinis)

Uncommon. Usually found in deep water. Distinguished by the very large mouth with a projecting lower jaw. Color is light brown to coppery shading to light pink ventrally. Length to 36 inches.

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CHINA ROCKFISH



Sculpins

(Family---Cottidae)

There are 36 members of the sculpin family recorded in Puget Sound; 16 are included here. Sculpins are recognized by their typically blunt heads and large fan-like pectoral fins. They are primarily bottom-dwelling fish, usually preferring areas with rocks and pilings, and in some species, sand. Characteristically, they are seen well-camouflaged, hiding in caves or crevices, and often they are quite lethargic, moving only when provoked.

CABEZON (Scorpaenichthys marmoratus)

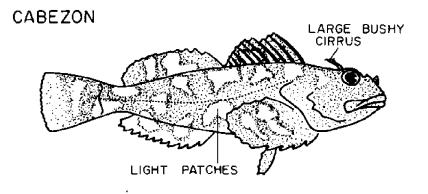
Common. Distinguished by the absence of scales, and the large bushy cirrus above each eye. Color is variable, mostly olive green with numerous large blotches of lighter green. Young individuals are often distinctly red. Length to 30 inches; weight to 30 pounds.

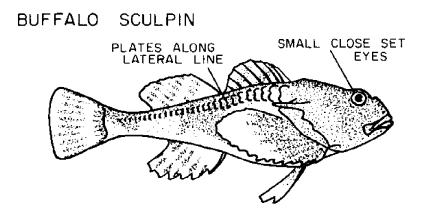
BUFFALO SCULPIN (Enophrys bison)

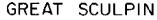
Abundant. Distinguished by the blunt globular head, proportionately small close-set eyes, large opercular spines, and upon close examination, large raised plates along the lateral line. When removed from water, this fish usually opens the gill covers and erects the opercular spines. Color is mostly brown-green; lighter below. Length to 12 inches.

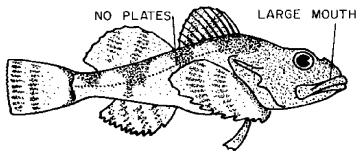
GREAT SCULPIN (Myoxocephalus polyacanthocephalus)

Common. Most often confused with the buffalo sculpin but may be distinguished by an elongated head, large mouth, and absence of plates along the lateral line. Color is predominantly a mottled green-brown. Length to 30 inches.









RED IRISH LORD (Hemilepidotus hemilepidotus)

Common. Recognized by the large eyes, the notch in the spiny dorsal fin, and the conspicuous band of scales, 4–5 scales wide, which surrounds the base of the dorsal fin. Color is variable, usually red or brown, mottled with lighter shades of the ground color, and orange spots on belly. Length to 20 inches.

PACIFIC STAGHORN SCULPIN (Leptocottus armatus)

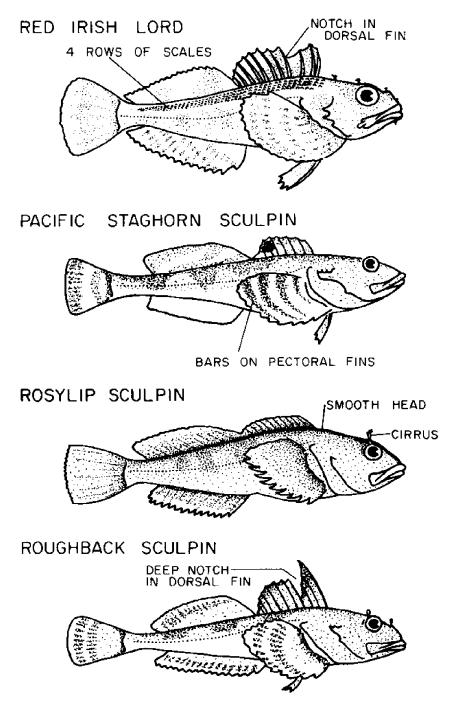
Abundant. Prefers areas with muddy or sandy bottoms. Sometimes buries itself up to the eyes. Distinguished by a flattened, streamlined head and dark bars on the pectoral fins. Color is mostly olive green, abruptly changing to white below, with a black blotch on the hind portion of the first dorsal fin. Dark grey to yellow bars on pectoral fins. Length to 18 inches.

ROSYLIP SCULPIN (Ascelichthys rhodorus)

Common. Most commonly found in the Strait of Juan de Fuca and along the open coast. Primarily a tide-pool fish. Distinguished by smooth skin, a small bushy cirrus above each eye, and on close examination the absence of pelvic fins. Color is dark olive brown with a lighter shade along the lateral line and the tips of the dorsal, caudal and pectoral fins. Length to 4.5 inches.

ROUGHBACK SCULPIN (Chitonotus pugetensis)

Abundant. A nocturnal sculpin which is found on sandy or muddy bottoms; apparently buries itself during the day. Distinguished by the deeply-notched first dorsal fin. Occasionally seen with only the first part of the dorsal fin erected. Color is primarily dark brownish green becoming white below. Often there are black blotches on the back, and during the breeding season a red blotch is present on the side. Length to 9 inches.



SCALYHEAD SCULPIN (Artedius harringtoni)

Common. Apparently territorial. Distinguished by a relatively stout body, a golden yellow color on the underside of the head, and 2 pairs of prominent cirri on the head of mature males. Color is mostly brownish green with light tan on the sides. The anal fin on mature males is golden yellow with a fine white reticulated pattern. Length to 4 inches.



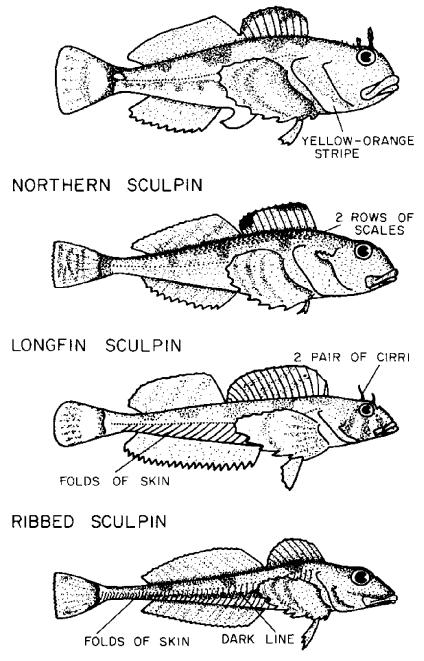
Uncommon. Distinguished by a double row of scales surrounding the dorsal fins (similar appearing sculpins have more than two rows) and a branched comb-like preopercular spine. Color is a dark offive brown mottling with lighter color ventrally. Black spots on margin of dorsal fin. Length to 4 inches.

LONGFIN SCULPIN (Jordania zonope)

Uncommon in Puget Sound; common in the Strait of Juan de Fuca. Appears to be territorial and displays considerable activity for a sculpin. Distinguished by a slender body, 2 pairs of cirri on the head and plate-like folds of skin below the lateral line. Color is basically olive green marked with red. Breeding males have a bright orange anal fin and red and purple bands about the head. Length to 4 inches.

RIBBED SCULPIN (Triglops pingeli)

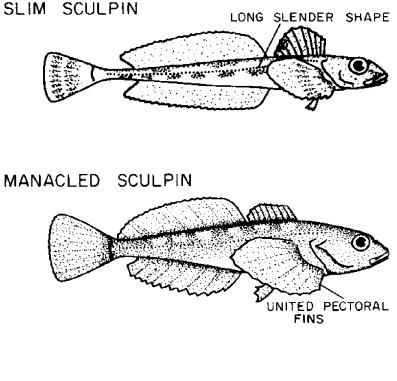
Uncommon. Distinguished by a tapering body and plate-like folds of skin below the lateral line. Separated from the preceding species by its color pattern. Color is olive brown shading to white below. The males have a black stripe running along the side; the females have a similarly located broken stripe. Length to 8 inches.

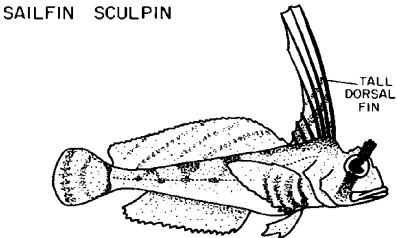


SCALYHEAD SCULPIN

SLIM SCULPIN (Radulinus asprelius)

Common. Inhabits areas of soft or rubble bottom in moderate to deep water. Recognized by its long slim body. Color is mostly light brown to olive green shading to white on the belly, with a dark streak extending downward and forward from the eye. Length to 6 inches.





MANACLED SCULPIN (Synchirus gilli)

Uncommon. Often found in kelp beds clinging to fronds. Distinguished by united pectoral fins but usually identified by its "kelp coloration." Color is yellow to greenish brown dorsally and pale below. Length to 2.5 inches.

SAILFIN SCULPIN (Nautichthys oculofasciatus)

Common. Primarily nocturnal. Sometimes found on soft bottoms near rubble. Swims by undulations of the long dorsal fin. Identified by a tall narrow first dorsal fin. Color is mostly light tan with dusky blotches on the back. There is a prominent black bar running through the eye and downward across the cheek. Length to 8 inches.

SILVERSPOTTED SCULPIN (Biepsias cirrhosus)

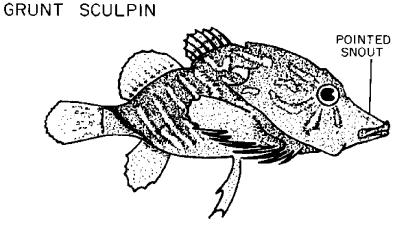
Uncommon in Puget Sound; common on open coast. Sometimes found in eelgrass beds and in kelp fronds. Recognized by a large rounded second dorsal fin, prominent cirri on the snout and a noticeably compressed body form. Color is variable, usually olive brown to green grading to light yellow below, with several distinct silvery-white spots along the sides. Length to 7.5 inches.

SILVERSPOTTED SCULPIN

GRUNT SCULPIN (Rhamphocottus richardsoni)

Uncommon. Usually found in shallow water on a suitable substrate such as rocks or pilings where it is seen hopping along on the enlarged lower rays of its pectoral fins. Distinguished by the short stout body and the large head with prominent blunt ridges. Color is primarily light tan to orange, with several brown bars running diagonally across the sides. There is a blotch of orange at the base of the tail fin. Length to 3 inches.

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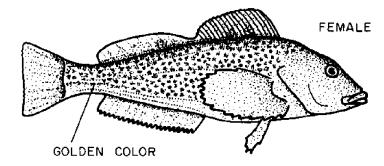


Greenlings

(Family-Hexagrammidae)

There are 6 members of this family that are found in Washington; 5 are commonly encountered. The greenlings, including lingcod, are characterized by one long continuous dorsal fin which is notched immediately behind the midpoint and also by several lateral lines and at least one fleshy projection or cirrus above each eye. These are principally shallow-water fish that inhabit rocky areas, although lingcod are also found in deep water.

KELP GREENLING

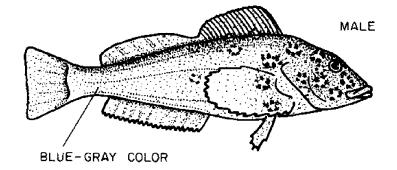


KELP GREENLING (Hexagrammos decagrammus)

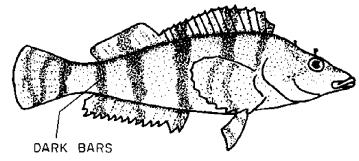
Common. Identified by a distinctive color pattern. Color is quite different between the sexes. Females are mostly golden with numerous brown spots on the sides, while males are mostly a dark blue-grey with several bright blue spots on the head. Length to 21 inches; weight to 5 pounds.

PAINTED GREENLING (Oxylebius pictus)

Common. Appears to favor areas sheltered from wave action. More common in Puget Sound than in the Strait of Juan de Fuca. Recognized by a narrow pointed snout and the distinctive color pattern. Color is generally light tan or grey with seven dark red vertical bars on the sides. The ground color on breeding males may darken so as to nearly obscure the bars, with white spotting becoming distinct. Length to 10 inches.







WHITESPOTTED GREENLING (Hexagrammos stelleri)

Uncommon in Puget Sound; common in the Strait of Juan de Fuca. Distinguished by a slender body shape, an overhanging upper lip, and when present, white spots on the sides. Color is variable, usually brown-green mottled with black, sometimes with numerous distinct white spots. Length to 16 inches; weight to 3.5 pounds.

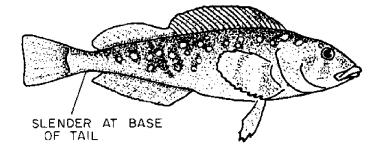
ROCK GREENLING (Hexagrammos lagocephalus)

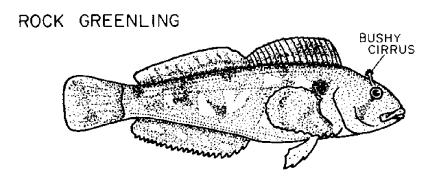
Uncommon. Distinguished by a dark spot above the base of each pectoral fin and, upon close examination, by the large bushy cirrus over each eye. Color is quite variable, mostly dark green mottled with red and brown blotches; often with 2 dark red lines angling backward from each eye. Length to 24 inches.

LINGCOD (Ophiodon elongatus)

Common. Largest representative of the greenling family. Usually found deeper than other greenlings. Prefers areas of strong tidal currents. In winter, males are occasionally seen in shallow water guarding a mass of pinkish eggs. The brooding males should not be molested. Distinguished by an elongated body, a large mouth with prominent canine teeth, and clusters of spots on its sides. Color is typically light green or brown with a darker spotting, usually with clusters of large spots along the sides. Length to 6 feet; weight to over 80 pounds.

WHITESPOTTED GREENLING







LARGE MOUTH

CLUSTERED SPOTS

Seaperch

(Family-Embiotocidae)

There are 6 species of seaperch found in the coastal waters of Washington: 4 frequently, 2 occasionally. Typically, they inhabit areas with rocks or pilings which support growth of kelp or mussels. Although basically shallow-water fish, seaperch tend to move into deep water during winter. Swimming is usually accomplished with a characteristic rowing motion of the pectoral fins. Seaperch give birth to well-developed young which have a remarkable resemblance to the parent. Recognized as a group by oval, highly compressed bodies.

SHINER PERCH (Cymatogaster aggregata)

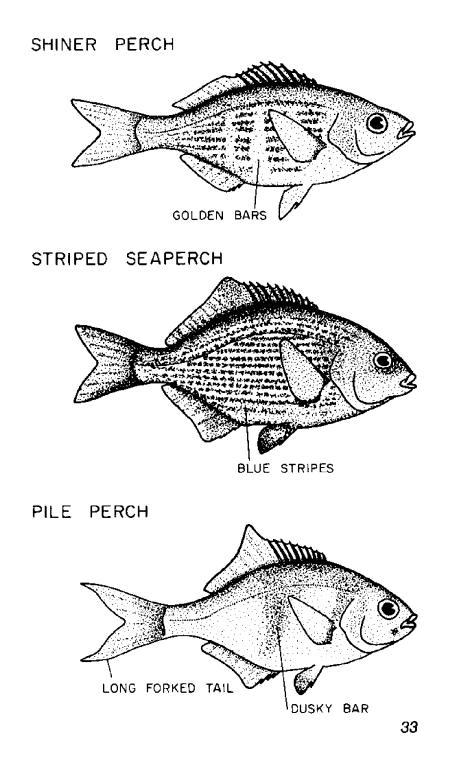
Abundant. The most commonly seen seaperch in sandy areas; usually occurs in small schools. Distinguished by its small size and color pattern. Color is generally silver with horizontal black stripes along the sides which are broken by 3 vertical yellow bars. On breeding males, the stripes darken and partially obscure the bars. Length to 6 inches.

STRIPED SEAPERCH (Embiotoca lateralis)

Abundant. Most commonly seen seaperch in rocky areas; usually occurs in schools. Distinguished by its dark coloration. Color is mostly coppery, with about 15 horizontal iridescent blue stripes along the sides. Young individuals are usually bright golden in color. Length to 15 inches.

PILE PERCH (Rhacochilus vacca)

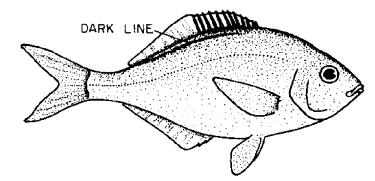
Abundant. Occurs singly or in small schools and tends to be a more mobile, swimming fish than other local seaperch. Distinguished by its color pattern and a long, noticeably forked tail. Color is mostly silvery with an indistinct dusky bar on the side. Length to 17 inches.



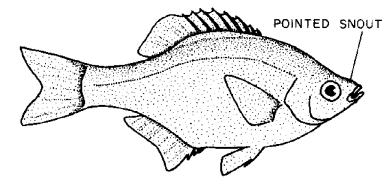
WHITE SEAPERCH (Phanerodon furcatus)

Uncommon. Appears to be more common on the open coast, and the Strait of Juan de Fuca. Similar in appearance to pile seaperch. Distinguished by its deeply forked tail, a distinct black stripe along the base of the dorsal fin, and the absence of a dusky bar on its side. Color is mostly silver with a yellowish tinge to the fins. Length to 12 inches.

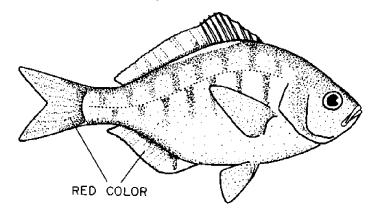
WHITE SEAPERCH



KELP PERCH



REDTAIL SURFPERCH



KELP PERCH (Brachyistius frenatus)

Uncommon. Usually seen singly, or mixed in with schools of other seaperch; prefers areas with kelp. Known to pick external parasites from other fish. Distinguished by its color, small size, and narrow, pointed snout. Color is primarily coppery orange, sometimes with a line of light spots along the lateral line. Length to 8 inches.

REDTAIL SURFPERCH (Amphistichus rhodoterus)

Abundant. Found only on the exposed open coast. Distinguished by its color pattern. Color is silvery with 10 broken dark bars along the sides. Anal and caudal fins are red. Length to 16 inches.

Snailfish and Lumpfish

(Family---Cyclopteridae)

There are 10 members of this family found in Puget Sound; 2 are included here. Snailfish are generally "tadpole"-shaped, with a blunt head, tapering body, and long dorsal and anal fins which sometimes join at the tail. A characteristic feature of the group is the presence of a disc between the pectoral fins by which these fish attach themselves to rocks. Many snailfish will curl their tails around their bodies when provoked. Most species are found in deep water. Lumpfish are globular-shaped fish and also possess the adhering disc.

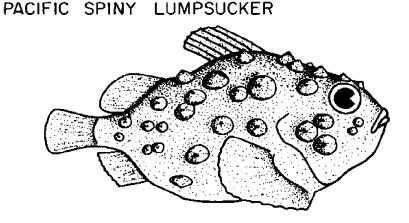
SHOWY SNAILFISH (Liparis pulchellus)

Uncommon. Recognized by its "tadpole" shape, broad head, and widely spaced eyes. Prefers a soft bottom. Distinguished from similar appearing snallfish by its very small caudal fin which is almost united with the dorsal and anal fins; other snailfish have a distinct caudal fin. Color is mostly brown becoming lighter below, with dots and wavy longitudinal lines present. Length to 10 inches.

PACIFIC SPINY LUMPSUCKER (Eumicrotremus orbis)

Uncommon in Puget Sound; common on the Strait of Juan de Fuca and the open coast. Often swims in directions other than forward. Distinguished by its spherical shape and many coneshaped protuberances on the body. Color is generally light green, with lavender on the lips. Length to 5 Inches. SMALL TAIL

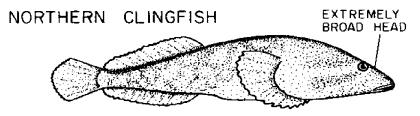
SHOWY SNALLFISH





NORTHERN CLINGFISH (Gobiesox maeandricus)

Uncommon. Usually found in tidepools. This species, like the preceding two, has a ventral adhering disc, and a similar habit of curling up. Clingfish are distinguished by their shape, which is quite similar to a tadpole cut in half lengthwise. Color is brown to red mottled with lighter shades. Length to 6 inches.



Herring and Smelt

(Families-Clupeidae and Osmeridae)

There are approximately 8 members of these 2 families that may be seen in Washington. These fish normally form large schools and prefer open water. The 2 most commonly encountered species are presented here.

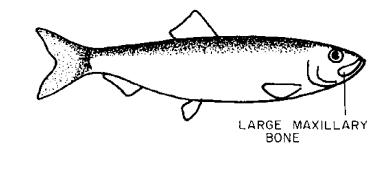
PACIFIC HERRING (Clupea harengus)

Common. An abundant open-water fish. Normally seen by divers in its young stages when it exists in large schools in shallow areas. In the spring, adults spawn in intertidal regions that have abundant vegetation. Distinguished by its silvery coloration, absence of spotting or second dorsal fin, and large maxillary bone. Color is mostly dark blue-green on the back, shading to silver on the sides. Length to 13 inches.

SURF SMELT (Hypomesus pretiosus)

Common. An abundant, open-water fish that may be seen occasionally in shallow water. Spawns on sandy beaches. Distinguished by its color pattern. Color is brownish green on the back, shading to silver below, with a prominent dark line along the side. Length to 8 inches.

PACIFIC HERRING



SURF SMELT

Sand Lance (Family—Ammodytidae)

PACIFIC SAND LANCE (Ammodytes hexapterus)

Common. Usually seen in large schools. Sometimes buries itself in sand. Could be mistaken for Pacific herring, but may be distinguished by its more slender shape and a long continuous dorsal fin. Color is silvery on the sides, shading to dark green dorsally. Length to 8 inches.



Miscellaneous Fish with Long Continuous Dorsal Fins

(Families—Batrachoididae, Bathymasteridae, Zoarcidae, Ophidiidae)

PLAINFIN MIDSHIPMAN (Porichthys notatus)

Uncommon. Primarily found in moderately deep water; however, during the spring these fish move into shallow water to spawn. At this time males are seen guarding the egg mass. Notable for having rows of numerous photophores or light organs along the body. Apparently nocturnal, burying itself during the day. Distinguished by a wide, flat head with widely separated protruding eyes. Color is mostly dark olive green shading to grey on the sides and golden yellow on the belly. Length to 15 inches.

NORTHERN RONQUIL (Ronquilus jordani)

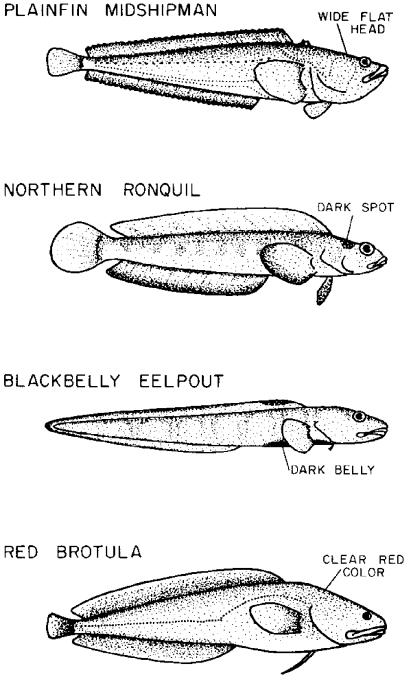
Uncommon. Typical habitat is the interface between rocky and sandy areas. Distinguished by elongated body, long dorsal and anal fins, and the dark spot behind the eye. Usually coloration is olive green becoming lighter below, sometimes almost completely light tan. Upon close examination, several longitudinal yellow stripes on the sides are evident. During the breeding season, the males become brightly colored with blue and yellow. Length to 6,75 inches.

BLACKBELLY EELPOUT (Lycodopsis pacifica)

Abundant. There are several very similar appearing species in the eelpout family which are occasionally seen by divers in Puget Sound. The blackbelly eelpout seems to be the most commonly encountered. The eelpouts prefer areas with a mud or sand bottom in deep water. A member of this family may be recognized by its elongated slender shape, large head with an overhanging upper jaw, and long dorsal and anal fins which join at the tail. The blackbelly eelpout usually may be distinguished by its dark belly. Length to 18 inches.

RED BROTULA (Brosmophycis marginata)

Uncommon. Primarily an inhabitant of deep water. Usually seen hiding inside caves or crevices in rocky areas. Distinguished by its red color and long thin ventral fins. Color is mostly bright red grading to white below. All fins are bright red. Length to 18 inches.



Tube-snouts

(Family-Aulorhynchidae)

TUBE-SNOUT (Aulorhynchus flavidus)

Abundant. Usually seen in eelgrass or kelp beds. Sometimes forms large schools. Male builds and defends nest of algae in which female spawns. Swims with a characteristic lunging motion. Distinguished by elongated shape, long slender snout, and a triangular dorsal fin. Color is primarily olive green, sometimes with yellowish or brownish tinges. Length to 7 inches.



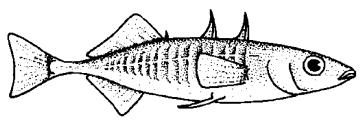
Sticklebacks

(Family-Gasterosteidae)

THREESPINE STICKLEBACK (Gasterosteus aculeatus)

Common. Usually prefers areas of brackish water, especially favoring eelgrass beds and pilings. Male builds nest of algae. Noted for elaborate courtship behavior. Distinguished by 2 large spines on the back and bony plates along the sides. Color is variable, mostly bluish green. Length to 4 inches.

THREESPINE STICKLEBACK



Pipefish

(Family—Syngnathidae)

BAY PIPEFISH (Syngnathus griseolineatus)

Common. Primarily inhabits eelgrass beds where it is often found intertwined with the blades of eelgrass. Male incubates eggs in a brood pouch on the abdomen. Related to tropical sea horses. Recognized by an extremely elongated body, a nearly rectangular dorsal fin, and an absence of ventral fins. Color is mostly shades of brown or green. Length to 13 inches.





Cartilaginous Fish

The species comprising this broad category of fish all possess a cartilaginous skeleton. Scales when present resemble small teeth.

SPINY DOGFISH (Squalus acanthias)

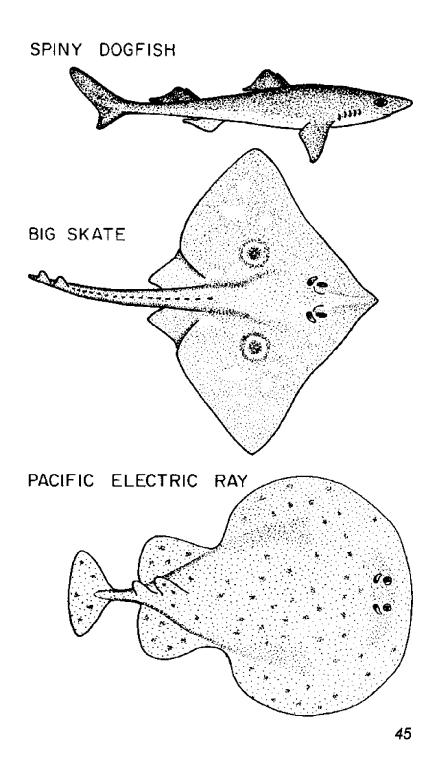
Common. Gives birth to well-developed young. Of the 9 species of sharks recorded in Puget Sound, dogfish are by far the most commonly encountered. Despite their abundance, dogfish are seen infrequently by divers. They are distinguished from all local sharks by 2 nearly equal-sized dorsal fins, each with a sharp spine in front. Color is primarily greyish brown with white spotting on the back of young individuals. Length to 51 inches.

BIG SKATE (Raja binoculata)

Uncommon. Produces a brown rectangular envelope-like egg case which is about 4 inches long. Prefers soft bottoms at moderate depth. Distinguished by a flat symmetric body and the prominent dark spot at the base of each pectoral fin. Color is mainly dark olive brown with numerous light spots. Length to 8 feet. A similar appearing species, the longnose skate (*Raja rhina*), is distinguished from this species by its long, flexible snout and absence of a distinct dark spot at the base of each pectoral fin.

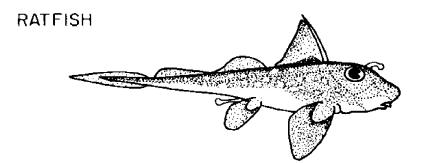
PACIFIC ELECTRIC RAY (Torpedo californica)

Uncommon. Bears live young. Capable of giving a strong electric shock. Prefers a soft bottom. Distinguished by its rounded form and well-developed dorsal fins. Color blue to brown with dark spots. Length to 36 inches.



RATFISH (Hydrolagus colliei)

Common. Primarily found at moderate depth; however, there may be some movement into shallower water at night. Reflection from eyes is green. Swims with large pectoral fins. Males have a fleshy appendage on the forehead and a clasper at the base of each ventral fin. Color is mostly a coppery brown shading to white below with many light spots. Length to 38 inches.



Gobies

(Family-Gobiidae)

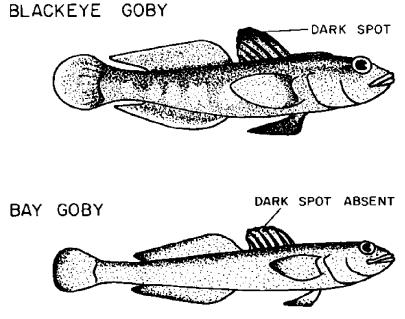
There are 3 members of this family found in Puget Sound; 2 are presented here. Gobies are small bottom-dwelling fish which inhabit shallow areas. They are distinguished by ventral fins joined to form a flaring cone that is free from the body.

BLACKEYE GOBY (Coryphopterus nicholsi)

Common. Usually found in areas with rock or rubble bottoms. They are territorial and often seen conspicuously exposed. Distinguished by black coloration on the ventral fins and the top of the first dorsal fin. Color is light orange-olive with purple and green markings. Coloration is quite brilliant during breeding season. Length to 4.75 inches.

BAY GOBY (Lepidogobius lepidus)

Common. Prefers muddy bottoms. Distinguished by the thin body shape and the absence of a black blotch on the first dorsal. Color is mostly pale olive green mottled with dark. Length to 4 inches.



Cod (Family—Gadidae)

4

There are 4 members of this family recorded in Puget Sound; all save the Pacific hake are presented here. Most of the species are abundant in deeper water and are only occasionally seen in shallow areas. The species that are pictured are recognized as being members of this family by having 3 separate dorsal fins without spines.

PACIFIC COD (Gadus macrocephalus)

Common. Prefers deep water, although occasionally seen in shallow areas. Distinguished by a long chin barbel (longer than diameter of eye). Color is brownish grey mottled with lighter shades of grey. Length to 39 inches.

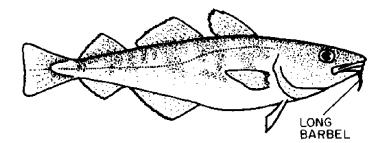
PACIFIC TOMCOD (Microgadus proximus)

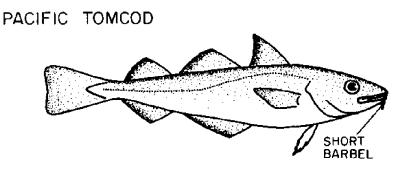
Common. Usually seen on sandy bottoms especially at night. Identified by its small size, a short chin barbel (shorter than diameter of eye), and a pointed first dorsal fin with a curved rear margin. Color is primarily light brown to olive green. Length to 12 inches.

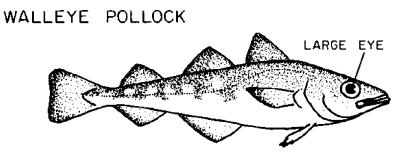
WALLEYE POLLOCK (Theragra chalcogramma)

Uncommon. Prefers deep water. Distinguished by absence of a chin barbel, a distinctively large eye, and a protruding lower jaw. Color is mostly olive green to brown mottled with lighter shades. Length to 26 inches. A similar appearing fish, Pacific hake (*Merluccius productus*), may be distinguished by having only 2 separate dorsal fins and a more silvery coloration.

PACIFIC COD







Poachers

(Family---Agonidae)

There are 13 members of this family recorded in Puget Sound; 7 are presented here. Poachers are distinguished by bodies that are covered with spiny, bony plates. Most of these fish are bottom dwellers, preferring soft bottoms at moderate depths; however, some have adapted to life in rocky areas and one to an off-bottom existence in eelgrass beds. Swimming in most species is accomplished by a rowing motion of the pectoral fins.

STURGEON POACHER (Agonus acipenserinus)

Common. The most commonly seen and the largest of the poachers. Distinguished by a flattish snout with numerous cirribelow. Color is mostly light tan with dark blotches on the back. Length to 12 inches.

NORTHERN SPEARNOSE POACHER (Agonopsis emmelane)

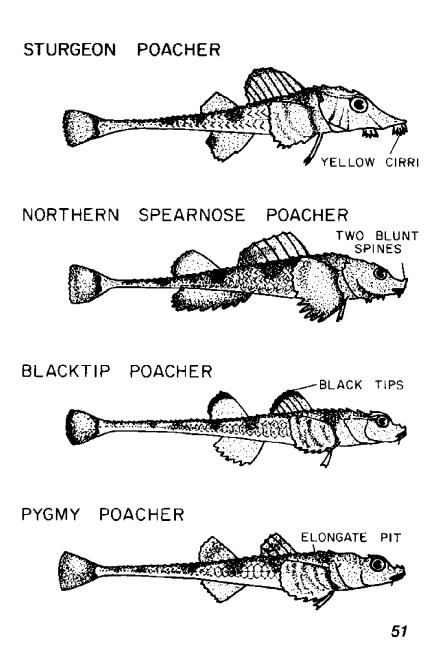
Common. Distinguished by 2 blunt spines located on the tip of the snout and a translucent spot or "window" on the tail. Color is generally light brown with black blotches on the back. Length to 3 inches.

BLACKTIP POACHER (Xeneretmus latifrons)

Uncommon. Recognized by a short shout (approximately equal to the diameter of the eye) and black tips on the dorsal fins. Length to 7.5 inches.

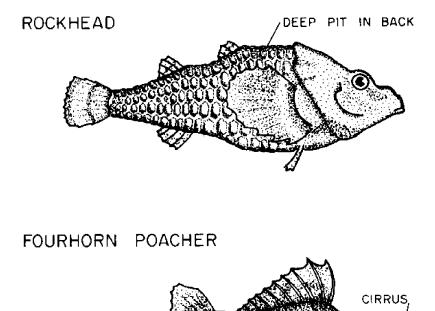
PYGMY POACHER (Odontopyxis trispinosa)

Common. Distinguished by its relatively smooth sides, small size, and an elongated depression in the back. Color is mostly greyish brown with several dark blotches on the back. Length to 3 inches.



ROCKHEAD (Bothragonus swani)

Uncommon. Prefers intertidal rocky areas on the open coast and the Strait of Juan de Fuca. Distinguished by a "chunky" shape and a deep pit on the back of the head. Color is quite variable; mostly shades of red to brown with darker bars across the back. Length to 3,5 inches.

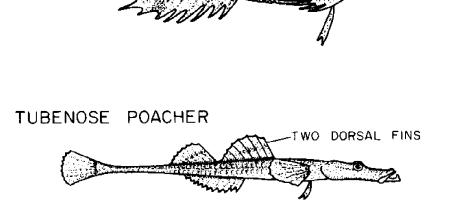


FOURHORN POACHER (Hypsagonus quadricornis)

Uncommon. Most commonly found on the open coast. Occurs in somewhat deeper water than the preceding species. Recognized by high-set eyes, "chunky" shape, a cirrus on the snout, and a bump on the back immediately before the dorsal fin. Color is brown with yellow markings, margin of tail fin is dark. Length to 3.5 inches.

TUBENOSE POACHER (Pallasina barbata aix)

Uncommon. Preferred habitat is off bottom in eelgrass and kelp beds. Similar to tube-snouts in appearance. More common on the open coast. Distinguished from all other poachers by its slender shape and its habitat. Separated from tube-snouts by having 2 distinct dorsal fins. Color is brown dorsally, shading to a lighter color ventrally. Length to 5 inches.



Pricklebacks, Gunnels, and Wolffishes

(Families-Stichaeidae, Pholidae, and Anarrichadidae)

There are 18 members of these 3 related families recorded in Puget Sound; 9 are included here. These fish are recognized by their elongated eel-like shape. Most of them are primarily inhabitants of shallow rocky areas; sometimes they are encountered under rocks at low tide. Typically they are seen with only heads protruding from caves or crevices.

PENPOINT GUNNEL (Apodichthys flavidus)

Common. Identified by its bright color and, upon close examination, a large "penpoint"-shaped anal spine. Color is variable, mostly vivid green, yellow or red, often with a line of dark or light spots along the sides. Also there is a dark line radiating downward from the eye and across the cheek, and sometimes a line from the eye to the top of the head. Length to 18 inches.

CRESCENT GUNNEL (Pholis lasta)

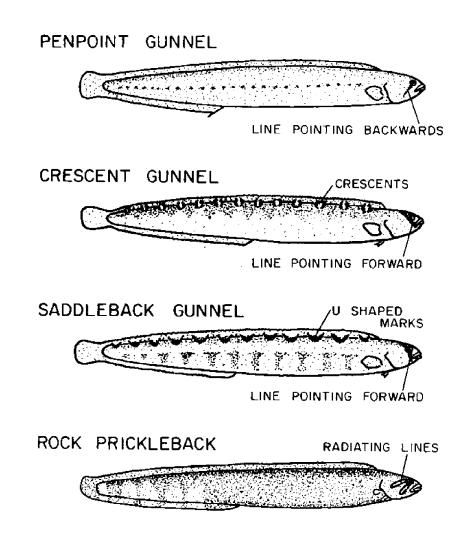
Common. Identified by a line of white spots, each partially ringed with black, lying along the base of the dorsal fin. Color is mostly yellow-green, sometimes mottled with lighter color on the sides. Usually there is a dark line on the head passing downward and forward through the eye. Length to 10 inches.

SADDLEBACK GUNNEL (Pholis ornata)

Common. Distinguished by "U"-shaped black marks located along the base of the dorsal fin. Color is generally olive green shading to yellow below with a dark line passing across the head and through the eye. Dusky bars along the sides are often present. Length to 12 inches.

ROCK PRICKLEBACK (Xiphister mucosus)

Common. Young are often abundant under rocks at low tide. Distinguished by 2 dark bands with light centers radiating backward from each eye. Color is mostly greenish black. Length to 20 inches. A similar appearing species, the Black Prickleback (*Xipher atropurpureus*), may be distinguished from this species by 3 dark bands with light edges radiating from each eye.



HIGH COCKSCOMB (Anoplarchus purpurescens)

Common. Distinguished by a fleshy crest on the top of the head. Color is mostly shades of brown, grey, or black, sometimes with dorsal fin and crest much lighter than the body. Usually a light bar is present immediately before the tail fin. Length to 7.5 inches.

MOSSHEAD WARBONNET (Chirolophis nugator)

Uncommon. Distinguished by numerous evenly sized cirri on the top of the head and black spots along the dorsal fin of the male. Color is mostly brown with pale bars on the sides. Several brown streaks are often present on the lower part of the head. Length to 4.5 inches.

DECORATED WARBONNET (Chirolophis polyactocephalus)

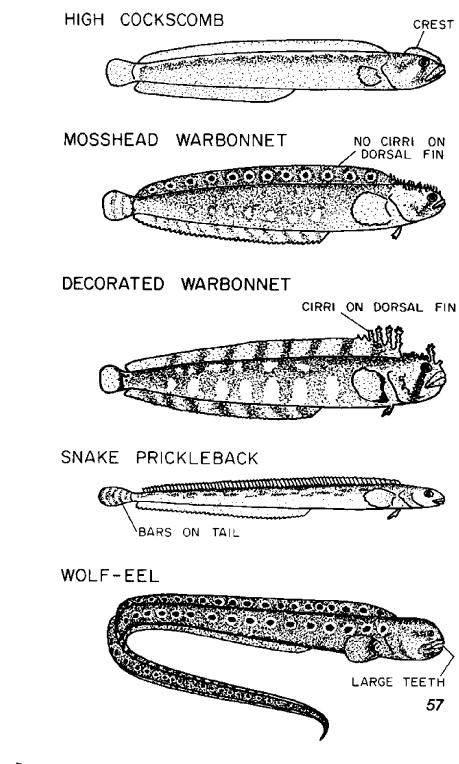
Uncommon. Usually encountered at moderate depths. Recognized by a large cirrus located above the eye and a row of cirri along the first few dorsal fin spines. Color is mostly light brown with prominent dark bars on the unpaired fins. Length to 16.5 inches.

SNAKE PRICKLEBACK (Lumpenus sagitta)

Common. Most often observed on a sandy or muddy bottom, especially at night and frequently completely exposed. Distinguished by a very elongated body and dark bars on the tail fin. Color is light green shading to white on the underside, usually with dark streaks on the sides. Length to 20 inches.

WOLF-EEL (Anarrhichthys ocellatus)

Common. Recognized by robust head, often with large teeth visible in the mouth and a long tapering body. Color is mostly grey, sometimes reddish, with numerous large black spots ringed with lighter color. Length to 8 feet.



Flounders

(Family-Pleuronectidae)

Thirteen members of this family have been recorded in Puget Sound; most are commonly encountered and 11 are included here. They are recognized by the asymmetry of the body, with the eyes and the coloration appearing on the right side. These are bottom dwelling fish, adapted to life on a sandy or muddy substrate. They are experts at camouflage and are often seen partially buried. Adults of most species inhabit deep water, and only the young are found in shallow areas.

C-O SOLE (Pleuronichthys coenosus)

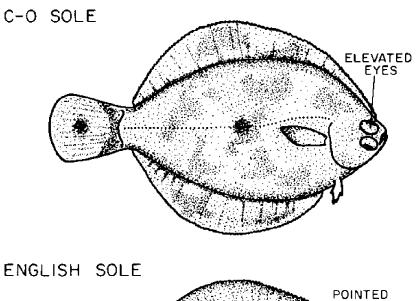
Abundant. Found in a wide variety of habitat types, including rubble bottoms and rocky areas. Distinguished by an oval shape, large protruding eyes, and a dark spot on the side. Color is extremely variable, usually a mottling of black, brown, and white. Length to 14 inches.

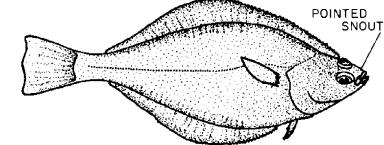
ENGLISH SOLE (Parophrys vetulus)

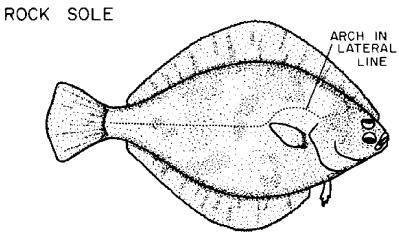
Abundant. Throughout most of Puget Sound, this is the most commonly encountered flatfish in shallow water. Recognized by its distinct narrowly pointed head. Color is usually a uniform light brown. Length to 22 inches.

ROCK SOLE (Lepidopsetta bilineata)

Abundant. Often found in areas with rubble, shell, or pebble bottoms. Distinguished upon close examination by an abrupt arch on the lateral line and by rough scales. Color is variable; mostly browns and greys. Usually coloration is speckled, i.e., the color appears to be associated with individual scales. Length to 24 inches.

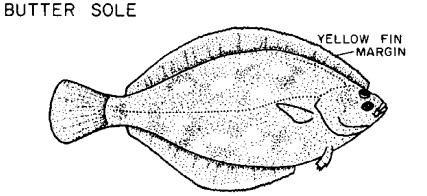




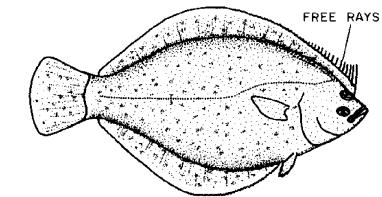


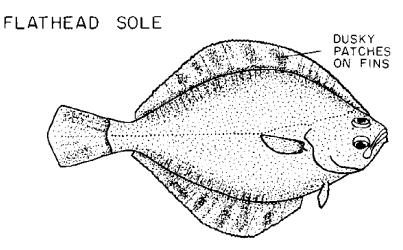
BUTTER SOLE (Isopsetta isolepis)

Common. Prefers a muddy bottom. Distinguished by its bright lemon-yellow color on the tips of the dorsal and anal fins and by the absence of an abrupt arch in the lateral line. Color is mostly grey blotched with yellow. Length to 18 inches.



SAND SOLE





SAND SOLE (Psettichthys melanosticus)

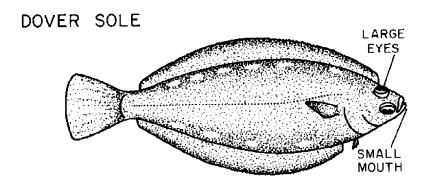
Common. Usually found in areas with clean sand. Identified by long free rays on the front portion of the dorsal fin, a relatively flat head with small, widely separated eyes, and the broad base of the tail fin. Color is mostly a uniform light brown speckled with small black points and sometimes margin of the fins is a distinct yellow. Length to 25 inches.

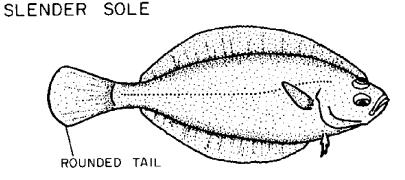
FLATHEAD SOLE (Hippoglossoides elassodon)

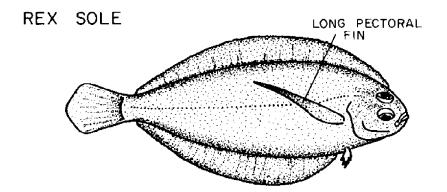
Common. Distinguished by an oval shape, large mouth and even coloration. Color is an even grey or brown, with darker blotches on dorsal and anal fins. Length to 18 inches.

DOVER SOLE (Microstomus pacificus)

Common. Prefers a muddy bottom, usually at moderate depth. Distinguished by relatively large eyes and small mouth and, when swimming, the nearly rectangular body shape. Color is primarily dark brown, sometimes with lighter spots. When out of water, a thick slime layer is noticeable. Length to 28 inches.







SLENDER SOLE (Lyopsetta exilis)

Common. Prefers a soft bottom, usually at moderate depth. Reported to occur in the vicinity of rocky areas. Identified by a slender form, large scales, and a distinctly rounded tail. Color is generally pale brown with fine black speckling. Length to 14 inches.

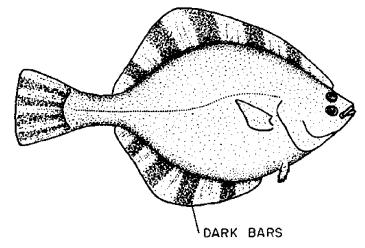
REX SOLE (Glyptocephalus zachirus)

Common. Inhabits areas of moderate depth. Distinguished by a small mouth and a long pectoral fin on the eyed side of the body. Color is primarily a uniform light brown. Length to 23 inches.

STARRY FLOUNDER (Platichthys stellatus)

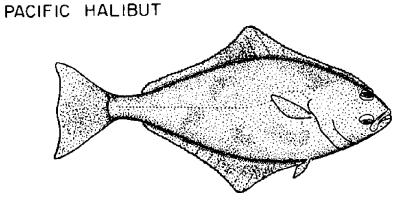
Common. This flatfish is unique in having the eyes and coloration on either the right or left side of the body; in Puget Sound the numbers of each type are about equal. Young are often found in brackish water, and sometimes quite far up river mouths. Distinguished by the color pattern on the fins, and well-separated stellate scales. Color is mostly brown to olive green with dark bands on the unpaired fins. Length to 36 inches; weight to 20 pounds.

STARRY FLOUNDER



PACIFIC HALIBUT (Hippoglossus stenolepis)

Uncommon. Most commonly found on the open coast and the Strait of Juan de Fuca. Distinguished by a concave tail and thick body. Color is dark brown to grey with lighter blotches. Length to 8.8 feet; weight to over 500 pounds.



Sanddabs

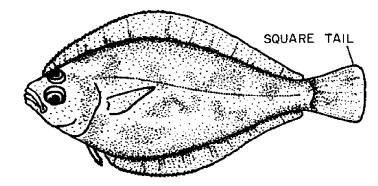
(Family-Bothidae)

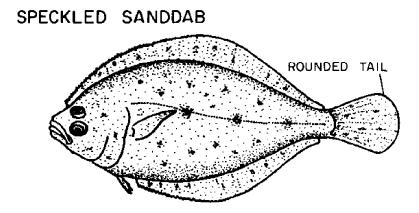
Two members of this family have been recorded in Puget Sound and both are included here. They may be distinguished from most flounders by eyes and coloration on the left side of the body.

PACIFIC SANDDAB (Citharichthys sordidus)

Common. Usually inhabits moderately deep water. Most often confused with the speckled sanddab; however, it may be distinguished by its larger eyes (snout as long as or shorter than diameter of lower eye), squared-off tail and generally more even coloration. Color is usually dusky brown mottled with dark. Length to 16 inches.

PACIFIC SANDDAB





SPECKLED SANDDAB (Citharichthys stigmaeus)

Common. Usually inhabits shallow areas. Distinguished by its speckled coloration, the rounded tail, and the small eyes (snout longer than the diameter of the lower eye). Color is variable, mostly light dusky brown finely speckled with black. Length to 6 inches.

Common Fishes of Puget Sound and Coastal Washington

This list represents most of the fishes likely to be encountered in Puget Sound and along the Washington coast. Omitted are those fish that are either very rare or found only in extremely deep water. Numbers indicate pages on which fish illustrated in this field guide are described.

Readers who wish to pursue the identification of fish beyond the limits of this field guide are encouraged to consult the exhaustive work of J. L. Hart, *Pacific Fishes of Canada*, published by the Fisheries Research Board of Canada.

With two exceptions, the fish are listed here alphabetically by common family names and subsequently by common species names within the family. Where only one species within a family is listed, that species is listed under its common species name followed by its common family name in parentheses. Although salmon and trout belong to the same family (Salmonidae), these fish are listed separately here.

brotula, red (Brotulas), 40	
clingfish, northern (Clingfishes),	
36	
Codfishes	
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Pacific hake	
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flathead sole. 60 Pacific halibut. 64 petrale sole rex sole, 62 rock sole, 58 sand sole, 60 slender sole, 62 starry flounder, 64 Flounders--lefteve Pacific sanddab, 66 speckled sanddab, 66 Gobies arrow goby bay goby, 46 blackeye goby, 46 Greenlings kelp greenling, 28 lingcod, 30 longspine combfish painted greenling, 28

rock areenling, 30 whitespotted greenling, 30 Gunnels crescent gunnel, 54 longfin gunnel penpoint gunnel, 54 red gunnel rockweed gunnel saddleback gunnel, 54 Herrings American shad Pacific herring, 38 Pacific sardine Lamprevs Pacific lamprev river lamprey lumpsucker, Pacific spiny (Lumpfishes), 36 midshipman, plainfin (Toadfishes), 40 pipefish, bay (Pipefishes), 42 Poachers bigeve poacher blackfin poacher blacktip poacher, 50 bluespotted poacher fourhorn poacher, 52 gray starsnout northern spearnose poacher, 50 pygmy poacher, 50 rockhead, 52 smooth alligatorfish spinycheek starsnout sturgeon poacher, 50 tubenose poacher, 52 warty poacher **Pricklebacks** black prickleback bluebarred prickleback daubed shanny decorated warbonnet, 56 high cockscomb, 56 mosshead warbonnet, 56 ribbon prickleback rock prickleback, 54

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