NOAA Technical Memorandum NMFS-AFSC-117

Guide to Rockfishes (Scorpaenidae) of the Genera *Sebastes*, *Sebastolobus*, and *Adelosebastes* of the Northeast Pacific Ocean, Second Edition

by
James Wilder Orr, Michael A. Brown, and David C. Baker

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Alaska Fisheries Science Center

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National Marine Fisheries Service
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ABSTRACT

The rockfishes (family Scorpaenidae) of the northeast Pacific Ocean north of Mexico comprise five genera, three of which are included in this guide: *Sebastes*, *Sebastolobus*, and *Adelosebastes*. *Sebastes* includes some 100 species worldwide; 66, including one to be described, are presently recognized from the northeast Pacific. *Sebastolobus* (commonly known as the thornyheads) includes only three species worldwide; all three range into the northeast Pacific. The single species of *Adelosebastes* (the Aleutian scorpionfish, *A. latens*) is known only from the Aleutian Islands and Emperor Seamounts. Of the three genera treated here, *Sebastes* poses the most difficulties in identification, both because of the numbers of species and because of their morphological similarity and variability. This second edition contains 21 additional photographs that were not available when this guide was first published and now includes color images of 68 species photographed under natural and electronic flash conditions in the field. Most specimens were photographed immediately after collection; 12 species photographed underwater are also included in a separate section. The two species represented only by line drawings (*Sebastes rufinanus* and *S. melanosema*) are known only from the type series. Drawings of these species were produced from published photographs of the types.

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The rockfishes (family Scorpaenidae) of the northeast Pacific Ocean north of Mexico comprise five genera, three of which are included in this guide: *Sebastes*, *Sebastolobus*, and *Adelosebastes*. *Sebastes* includes some 100 species worldwide; 66, including one to be described, are presently recognized from the northeast Pacific. *Sebastolobus* (commonly known as the thornyheads) includes only three species worldwide; all three range into the northeast Pacific. The single species of *Adelosebastes* (the Aleutian scorpionfish, *A. latens*) is known only from the Aleutian Islands and Emperor Seamounts. Not included in the guide are four southern scorpaenids: the California scorpionfish, *Scorpaena guttata*; stone scorpionfish, *S. mystes*; spotted scorpionfish, *S. plumieri*; and rainbow scorpionfish, *Scorpaenodes xyris*. Of these, only the California scorpionfish is rarely encountered north of southern California (to Santa Cruz; Eschmeyer et al., 1983). Of the three genera treated here, *Sebastes* poses the most difficulties in identification, both because of the numbers of species and because of their morphological similarity and variability.

Primarily designed as an aid in field identification, this guide follows the basic format of Hitz's (1965) "Field identification of the northeastern Pacific rockfish (*Sebastodes*)," the first guide to successfully use color as a major character to identify species of *Sebastes*. Since Hitz (1965), significant advances in our knowledge of the diversity of northeast Pacific rockfishes have been made. The genus *Sebastodes* has been recognized as synonymous with the genus *Sebastes*, which originally contained only Atlantic species. Ten additional species of *Sebastes* have been described. This guide also updates species ranges based on the numerous documented significant range extensions. We have also expanded this guide to include the genera *Sebastolobus*, a genus commonly encountered and misidentified with *Sebastes* species, and *Adelosebastes*, recently reported from the Aleutian Islands (Orr and Baker 1996). This revised edition of the original guide (Orr et al., 1998) now includes color photographs of all species encountered in National Marine Fisheries Service (NMFS) groundfish surveys and by fishery observers off the west coast of North America. Only *S. melanosema* and *S. rufinanus*, both species known only from the type series, are represented by line drawings from photographs of the types.

METHODS AND DATA SOURCES

This guide is limited to rockfishes distributed in the 200-mile territorial waters along the Pacific coast of the United States and Canada. Distributions are described by major political boundaries (i.e., state and country borders) or bodies of water (e.g., Gulf of Alaska, Bering Sea). In addition, Alaska and California are further divided into general regions. California is separated into three regions: northern (the California-Oregon border to Point Arena), central (Point Arena to Point Conception), and southern (Point Conception to the Baja California border). Alaska is divided into the

Gulf of Alaska (British Columbia border to Unimak Pass), Aleutian Islands (Unimak Pass to Attu Island), and Bering Sea (Aleutian Islands to the Chukchi Sea).

Meristic data were compiled from various sources, including Chen (1971, 1986), Miller and Lea (1972), Matarese et al. (1989), Hart (1973), and original species descriptions. Abbreviations follow Chen (1986), with dorsal-fin (D) spines (in roman numerals) followed by soft rays (arabic numerals; last two rays counted as one). Anal-fin rays (Ar) alone are listed, as all scorpaenids possess three anal-fin spines. The last two rays of both dorsal and anal fins are counted as one. All pectoral-fin rays (P1) from the left side are listed. Total gillraker (GR) counts include all rakers, including rudiments. Lateral line pores (LLp) include all pores from the neurocranium to the caudal fin, without noting the caudal-fin base; lateral line scales (LLs) include the scale rows just below the lateral line. Vertebral (V) counts include the ural centrum, bearing the caudal fin.

The range of this data was verified from specimens archived in several collections including the University of Washington Fish Collection (UWFC), Los Angeles County Natural History Museum (LACM), California Academy of Sciences (CAS), Scripps Institute of Oceanography (SIO), U. S. Natural History Museum (USNM), University of British Columbia (UBC), and Oregon State University (OSU). Distributions were compiled from the literature (same sources as above, as well as Allen and Smith, 1988) and updated from the RACEBASE database of the Resource Assessment and Conservation Engineering Division, which includes data from surveys conducted by the Alaska Fisheries Science Center from 1948 to 1999. For each species, we attempted to verify unusual records by tracing voucher specimens and examining original haul data.

USING THE GUIDE

Species are grouped into five color categories: Red, Black, Red/Black, Banded ("Striped" of Hitz, 1965), or White-Spotted Red. Within these categories, species are sorted by head spines strength (weak or strong). Finally, species are grouped together based on the authors' ideas of externally similar species. However, because species are first sorted by color and head spine strength, the most similar species may not be grouped together.

1. Determine the color category, using the following guidelines:

Red category rockfishes (28 species) possess a light background coloration of orange, yellow, or, most commonly, red. Typically, dark blotches are present on the back and often extend from the base of the dorsal fin to below the lateral line; these blotches may be diffuse or relatively discrete. The infrequent dark phase of some typically red rockfishes is noted under the description of body color. In general, dark red-category rockfishes have a much redder body than black category rockfishes.

Black category rockfishes (18 species) have a predominantly dark background coloration. Most are a uniform dark color, ranging from black to brown with darker

blotching or pale areas on the dorsum and lightening to white, gray, or pink ventrally. Others, often more shallow water species, may display strongly contrasting colors such as black and yellow.

Red/black category rockfishes (7 species) possess almost equal proportions of light and dark colors, as the label suggests, which makes selecting either the red or black category difficult. No unifying color pattern is apparent among these fishes; however, a characteristic color combination (e.g., horizontal green striping in greenstriped rockfish, *Sebastes elongatus*, and the pink pectoral-fin slash in northern rockfish, *S. polyspinis*) is often sufficient for identification.

Banded category rockfishes (4 species) possess 4-6 discrete vertical bands of dark color (red to black) on a light background of white, pink, or yellow.

White-spotted red category rockfishes (13 species) possess a light colored body with 2-5 pale areas (i.e., spots) above the lateral line, white spots scattered over the body (whitespeckled rockfish, *S. moseri*), or both (starry rockfish, *S. constellatus*).

2. Determine head spine strength:

After placing the fish in a color category, visually estimate the prominence of the eight pairs of head spines (see page 6 for positions and numbers of spines). Generally if the spines, especially those nearest the orbit (numbers 2-5), are easily visible at about elbow's length, the spines are considered strong. Otherwise, the spines should be considered weak.

3. Count head spines:

Head spines should be counted to determine which pairs of the eight possible are present. For each species, a diagrammatic dorsal view of the rockfish's head is provided. A number with a line to the head indicates that the spine is typically present in large juveniles and adults; if a number has no line, the spine is typically absent. A number in parentheses indicates that the spine may be present or absent. Variation in the presence of head spines has not been quantified for most species, thus parentheses may indicate that the spine is typically present but often absent or vice versa. Often spines are lost with body growth, and juveniles typically have more and stronger spines than adults. For example, the dusky rockfish, *S. ciliatus*, is known for having a smooth head with spines reduced or absent, yet small juveniles possess head spines 1, 2, 4, 5, and 7 that are moderately strong. Thus this guide is primarily for adults and large juveniles that have developed the adult morphology. To identify smaller and pelagic juveniles, use the following guides to early life history stages: Matarese et al. (1989) or Moser et al. (1996).

With the information from these three characters, choices should be narrowed to two or three rockfishes. Around most of the figures in the guide, a combination of characters are highlighted that, when present, distinguish the species from all others. Along with these specific characters, two additional features depicted in the figure are often useful in distinguishing similar species: second anal-fin spine length relative to

third and mouth size, as reflected in maxilla length relative to the orbit. The second anal-fin spine is noted on the figure when it is always obviously longer than the third. Previous guides have noted finer distinctions in the relative length of the second and third spines but these differences have not been found to be useful for identification. Many of these characters are subjective as well as variable and, therefore, depend on the experience of the user to be used properly. To confirm the identification, use the similar species section to check particular characters. Next to the name of each similar species, characters are listed based on the relative ease of determination and the usefulness of the feature to clearly distinguish between the two species. Finally, check the specimen against other characters provided, such as peritoneum color and shape between the eyes, and habitat information, such as depth and distribution.

The photographs and figures themselves should only be used as a guide to the appearance of the fish. Photographs in species accounts are generally taken from trawl caught specimens with fresh coloration. Line drawings have been drawn from photographs and accurately represent the dark and light patterns and body shape of that specimen. However, many of these features often vary among populations and, in many species, among individuals of a given population.

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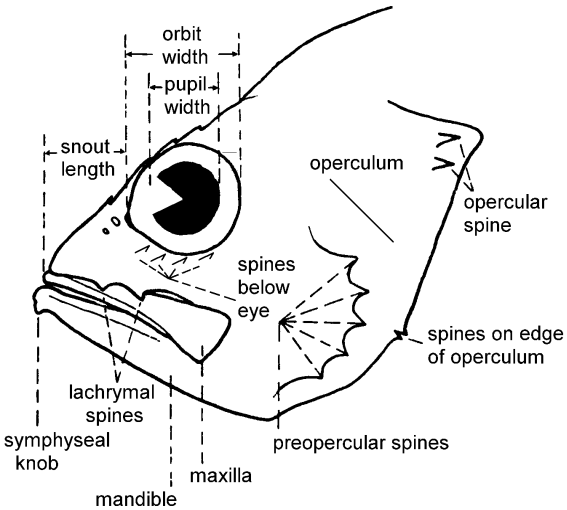
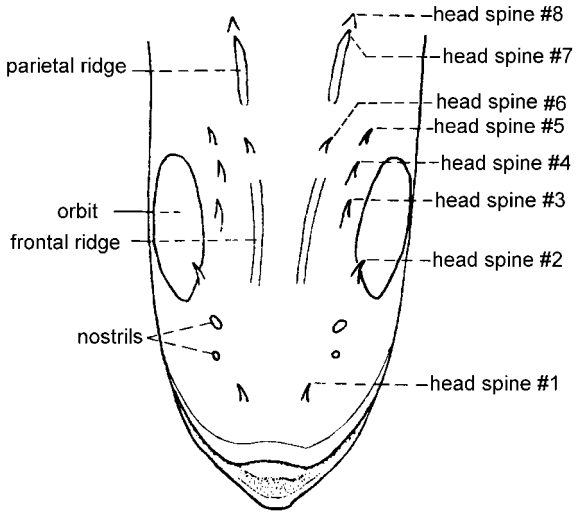
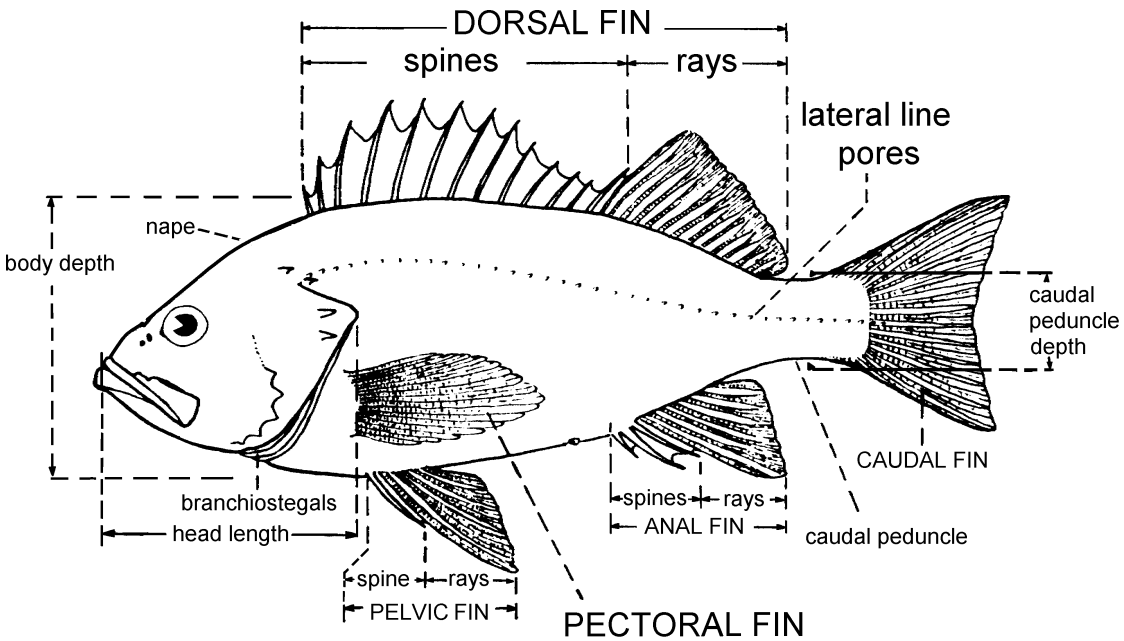
ILLUSTRATED GLOSSARY







LIST OF SPECIES

RED CATEGORY

Weak Head Spines

Pacific ocean perch	*Sebastes alutus*	8
Redstripe rockfish	*Sebastes proriger*	8
Yellowmouth rockfish	*Sebastes reedi*	9
Chilipepper	*Sebastes goodei*	9
Bocaccio	*Sebastes paucispinis*	10
Shortbelly rockfish	*Sebastes jordani*	10
Halfbanded rockfish	*Sebastes semicinctus*	11
Dwarf-red rockfish	*Sebastes rufinanus*	11

Strong Head Spines

Darkblotched rockfish	*Sebastes crameri*	12
Sharpchin rockfish	*Sebastes zacentrus*	12
Harlequin rockfish	*Sebastes variegatus*	13
Stripetail rockfish	*Sebastes saxicola*	13
Splitnose rockfish	*Sebastes diploproa*	14
Aurora rockfish	*Sebastes aurora*	14
Chameleon rockfish	*Sebastes phillipsi*	15
Cowcod	*Sebastes levis*	15
Yelloweye rockfish	*Sebastes ruberrimus*	16
Rougheye rockfish	*Sebastes aleutianus*	16
Shortraker rockfish	*Sebastes borealis*	17
Blackgill rockfish	*Sebastes melanostomus*	17
Vermilion rockfish	*Sebastes miniatus*	18
Canary rockfish	*Sebastes pinniger*	18
Mexican rockfish	*Sebastes macdonaldi*	19
Semaphore rockfish	*Sebastes melanosema*	19
Shortspine thornyhead	*Sebastolobus alascanus*	20
Longspine thornyhead	*Sebastolobus altivelis*	20
Broadbanded thornyhead	*Sebastolobus macrochir*	21
Aleutian scorpionfish	*Adelosebastes latens*	21

RED/BLACK CATEGORY

Weak Head Spines

Northern rockfish	*Sebastes polyspinis*	22
Bank rockfish	*Sebastes rufus*	22

Strong Head Spines

Greenstriped rockfish	*Sebastes elongatus*	23
Copper rockfish	*Sebastes caurinus*	23
Pygmy rockfish	*Sebastes wilsoni*	24
Puget Sound rockfish	*Sebastes emphaeus*	24
Calico rockfish	*Sebastes dalli*	25

BLACK CATEGORY

Weak Head Spines

Light dusky rockfish	*Sebastes ciliatus*	26
Dark dusky rockfish	*Sebastes* sp. cf. *ciliatus*	26
Blue rockfish	*Sebastes mystinus*	27
Black rockfish	*Sebastes melanops*	27
Silvergray rockfish	*Sebastes brevispinis*	28
Gray rockfish	*Sebastes glaucus*	28
Yellowtail rockfish	*Sebastes flavidus*	29
Olive rockfish	*Sebastes serranoides*	29
Speckled rockfish	*Sebastes ovalis*	30
Widow rockfish	*Sebastes entomelas*	30
Squarespot rockfish	*Sebastes hopkinsi*	31

Strong Head Spines

Brown rockfish	*Sebastes auriculatus*	31
Quillback rockfish	*Sebastes maliger*	32
China rockfish	*Sebastes nebulosus*	32
Gopher rockfish	*Sebastes carnatus*	33
Black-and-yellow rockfish	*Sebastes chrysomelas*	33
Grass rockfish	*Sebastes rastrelliger*	34
Kelp rockfish	*Sebastes atrovirens*	34

BANDED CATEGORY

Strong Head Spines

Redbanded rockfish	*Sebastes babcocki*	35
Flag rockfish	*Sebastes rubrivinctus*	35
Tiger rockfish	*Sebastes nigrocinctus*	36
Treefish	*Sebastes serriceps*	36

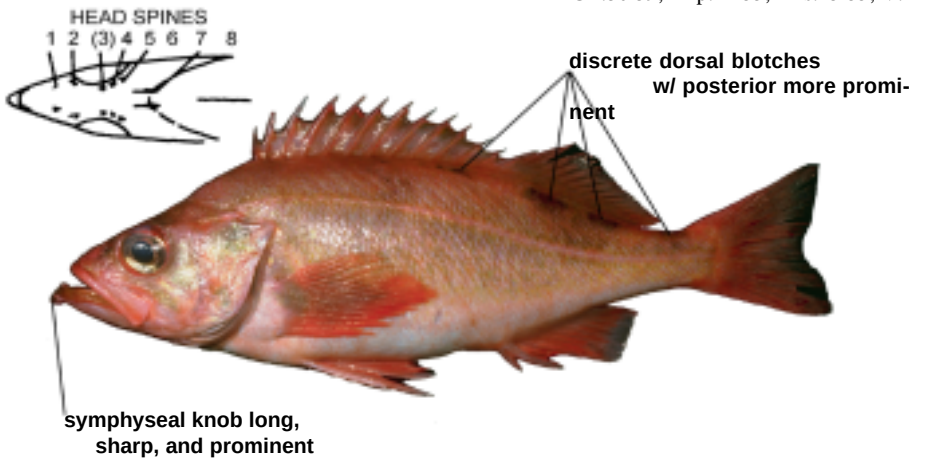
WHITE-SPOTTED RED CATEGORY

Strong Head Spines

Rosethorn rockfish	*Sebastes helvomaculatus*	37
Greenspotted rockfish	*Sebastes chlorostictus*	37
Rosy rockfish	*Sebastes rosaceus*	38
Pink rockfish	*Sebastes eos*	38
Greenblotched rockfish	*Sebastes rosenblatti*	39
Swordspine rockfish	*Sebastes ensifer*	39
Starry rockfish	*Sebastes constellatus*	40
Whitespeckled rockfish	*Sebastes moseri*	40
Bronzespotted rockfish	*Sebastes gilli*	41
Pinkrose rockfish	*Sebastes simulator*	41
Honeycomb rockfish	*Sebastes umbrosus*	42
Freckled rockfish	*Sebastes lentiginosus*	42
Southern rockfish	*Sebastes notius*	43

Body color: Light red, including fins; dark olivaceous areas on back under soft dorsal fin and on caudal peduncle.

Maximum length: 22 in (55 cm)
Maximum depth: 451 fm (825 m)
Common depth: 55-192 fm (100-350 m)
Peritoneum color: dark
Shape between eyes: convex to flat
Counts: D:XIII-XIV,13-17, Ar:6-9, P1:15-19, GR:30-39, LLp:44-55, LLs:43-55, V:27



PACIFIC OCEAN PERCH *Sebastes alutus*

Similar species:
Yellowmouth RF - symphyseal knob weaker, rounded; yellow, red, and black blotches inside mouth; specimens <40 cm w/ discrete opercular blotch, diffuse dorsal blotches; 57-67 scales below lateral line (43-55 in POP).
Sharpchin RF - dorsal blotches large w/ at least one extending across lateral line; forked bar radiates from eye; head spines strong and count differs; anal spine 2 longer than 3; dorsal rays typically 14 (typically 15 in POP); anal rays typically 7 (typically 8 in POP); pectoral rays typically 17 (typically 18 in POP).
Redstripe RF - lateral line light, contrasted by dark mottling above and below; head spine count typically differs.
Northern RF - dorsal spines typically 14; dark bars radiate posteriorly from eye; pectoral fin w/ oblique pink slash on ventral portion; head spine count differs.
Chilipepper RF - dorsal blotches absent; lateral line red or pink; belly whitish; peritoneum light; head spine count differs.

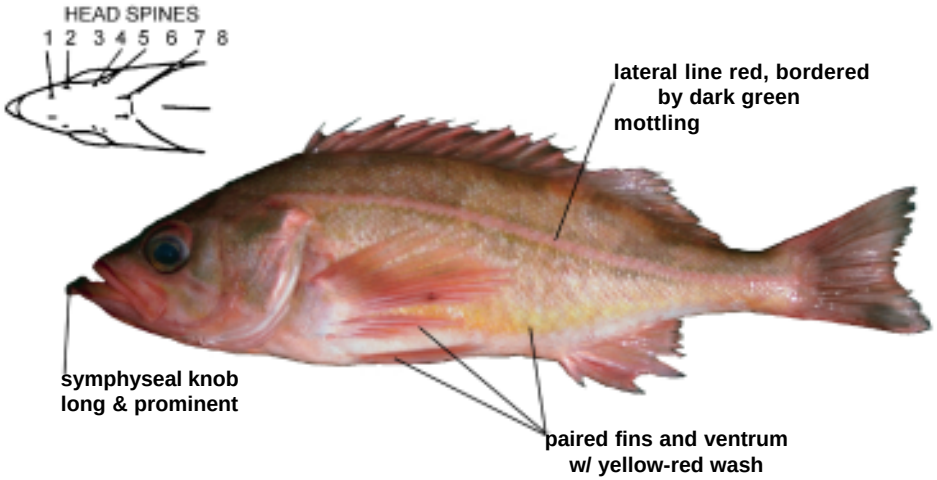
Distribution: Bering Sea - Baja California

WEAK HEAD SPINES **RED**

PACIFIC OCEAN PERCH

Body color: Light red, mottled w/ olive dorsally and flushed w/ yellow on lower sides; lateral line in a clear, light-red zone, bordered by dark olivaceous mottling; lips blackened.

Maximum length: 20 in (52 cm)
Maximum depth: 233 fm (425 m)
Common depth: 55-164 fm (100-300 m)
Peritoneum color: dark
Shape between eyes: convex
Counts: D:XIII,13-15, Ar:6-7, P1:16-18, GR:36-43, LLp:47-55, LLs:55-60, V:27



REDSTRIPE ROCKFISH *Sebastes proriger*

Similar species:
Yellowmouth RF - symphyseal knob weaker, rounded; yellow and black blotches inside pinkish mouth; diffuse dark dorsal blotches (green mottling in Redstripe RF).
Northern RF - dorsal spines typically 14 (13 in Redstripe RF); dark bars radiate posteriorly from eye; pink slash on ventral portion of pectoral fin; head spine count differs.
Sharpchin RF - dorsal blotches large w/ at least one extending across lateral line; forked bar radiates posteriorly from eye; head spines strong and count differs;anal spine 2 longer 3 (equal in length in Redstripe RF).
Pacific Ocean Perch - lateral line not bordered by mottling; head spine count typically differs.
Chilipepper - dorsal blotches absent; lateral line not bordered by mottling; peritoneum light; head spine count differs; belly whitish.

Distribution: Bering Sea - Baja California

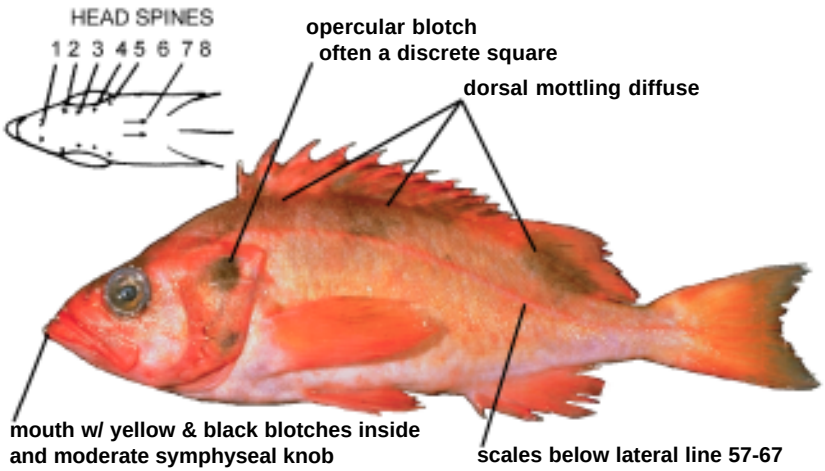
WEAK HEAD SPINES **RED**

REDSTRIPE ROCKFISH

Body color: Red intermixed w/ yellow-orange (or black in individuals < 40 cm); diffuse olivaceous mottling on back; mouth w/ yellow, red and black blotches on whitish background.

Maximum length: 23 in (58 cm)
Maximum depth: 200 fm (366 m)
Common depth: ? fm (? m)

Peritoneum color: silver w/black dots
Shape between eyes: convex to flat
Counts: D:XIII,13-15, Ar:7-8, P1:18-20, GR:30-36, LLp:47-55, LLs:57-67, V:26



YELLOWMOUTH ROCKFISH *Sebastes reedi*

Similar species:
Pacific Ocean Perch - symphyseal knob sharp, elongate; no yellow blotches inside mouth; dorsal blotches discrete, opercular blotch diffuse; 49-55 scales below lateral line.
Redstripe RF - lateral line light, contrasted by dark mottling above and below; head spine count differs; gill rakers 36-43 (30-36 in Yellowmouth RF).
Chilipepper RF - no dorsal blotches; head spine count differs; belly whitish.
Sharpchin RF - dorsal blotches large w/ at least one extending across lateral line; forked bar radiates posteriorly from eye; head spines strong and count differs; 43-50 scales below lateral line; anal spine 2 longer than 3.
Rougheye RF, **Shortraker RF**, and **Blackgill RF -** head spines strong and count differs; 32-55 scales below lateral line; 0-8 spines below eye.

Distribution: Gulf of Alaska - Central California

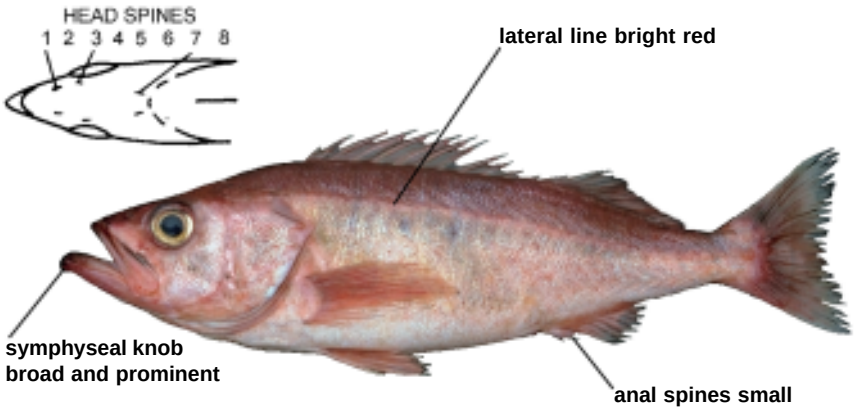
WEAK HEAD SPINES **RED**

YELLOWMOUTH ROCKFISH

Body color: Pinkish-red; fins pink; belly whitish; young w/ light olive on back.

Maximum length: 22 in (56 cm)
Maximum depth: 233 fm (425 m)
Common depth: 27-137 fm (50-250 m)

Peritoneum color: light
Shape between eyes: convex
Counts: D:XIII,13-14, Ar:8-9, P1:16-18, GR:34-39, LLp:50-57, LLs:60-77,V:26



CHILIPEPPER *Sebastes goodei*

Similar species:
Shortbelly RF - anus far anterior to anal fin (1.1 to 1.5 orbit widths); pectoral rays 19-22 (16-18 in Chilipepper); head spine count differs; peritoneum dark.
Bocaccio - mouth larger, maxilla extends to back of eye or beyond, lower jaw massive, greatly projecting; head spine count differs.
Pacific Ocean Perch - dorsal blotches present; dark peritoneum; head spine count differs; spines present on lower edge of operculum (absent in Chilipepper).
Redstripe RF - lateral line clear, olivaceous mottling dorsal and ventral; peritoneum dark; head spine count differs; spines present on lower edge of operculum (absent in Chilipepper).

Distribution: British Columbia - Baja California

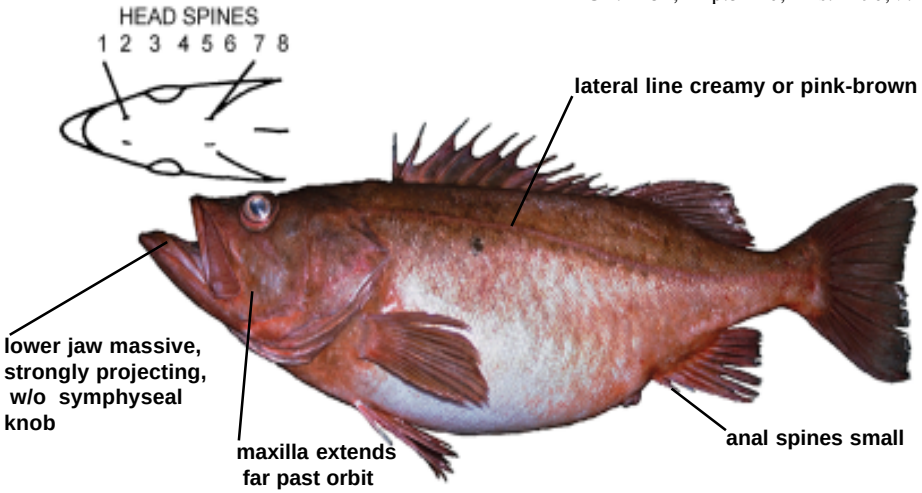
WEAK HEAD SPINES **RED**

CHILIPEPPER

Body color: Olive-brown dorsally becoming pink to red ventrally; specimens less than 10 inches (25 cm) w/ small brown spots on sides.

Maximum length: 36 in (91 cm)
Maximum depth: 260 fm (475 m)
Common depth: 27-137 fm (50-250 m)

Peritoneum color: light
Shape between eyes: convex
Counts: D:XII-XV,13-15, Ar:8-10, P1:14-16, GR:27-32, LLp:51-70, LLs:72-90,V:26



BOCACCIO *Sebastes paucispinis*

Similar species:
Silvergray RF - body dark gray dorsally, light ventrally; gill rakers 33-36 (28-31 in Bocaccio); dorsal rays 15-17 (13-15 in Bocaccio); scales below lateral line 58-70 (72-90 in Bocaccio); symphyseal knob present; anal spines not small.
Shortbelly RF - anus midway between pelvic-fin base and anal-fin origin; maxilla extends to midorbit; head spine count differs; anal spines not small; peritoneum dark; maximum length 32 cm.
Chilipepper RF - maxilla extends to midorbit, symphyseal knob present; body red w/ whitish belly; head spine count differs.

Distribution: Gulf of Alaska - Baja California

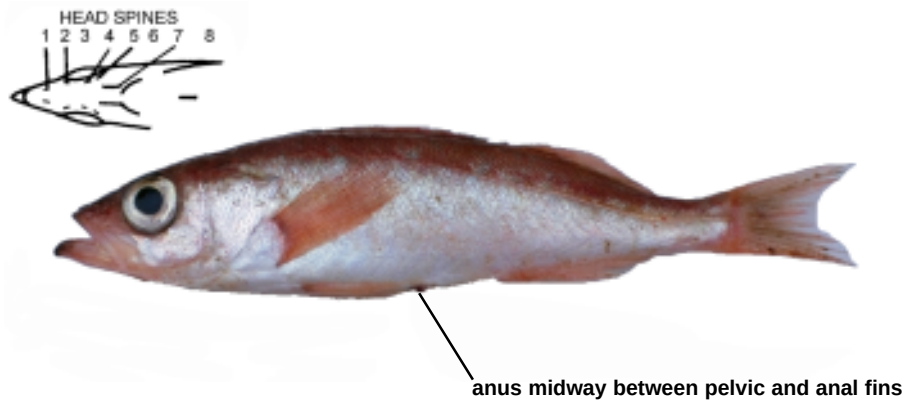
WEAK HEAD SPINES **RED**

BOCACCIO

Body color: Olive-pink dorsally, becoming silver-pink on sides; fins same color as adjacent body parts to reddish.

Maximum length: 13 in (32 cm)
Maximum depth: 192 fm (350 m)
Common depth: 27-137 fm (50-250 m)

Peritoneum color: dark
Shape between eyes: convex
Counts: D:XIII,13-16, Ar:8-11, P1:19-22, GR:40-47, LLp:52-64, LLs:65, V:26



SHORTBELLY ROCKFISH *Sebastes jordani*

Similar species:
Note: The **Shortbelly RF** is the only species with the anus midway between pelvic and anal fins.
Chilipepper RF - anus < 1.0 orbit width from anal-fin origin; lateral line red; pectoral rays 16-18 (19-22 in Shortbelly RF); head spine count differs; peritoneum light.
Bocaccio - anus < 1.0 orbital width from anal-fin origin; lower jaw massive and strongly projecting; head spine count differs; anal spines small; peritoneum light.

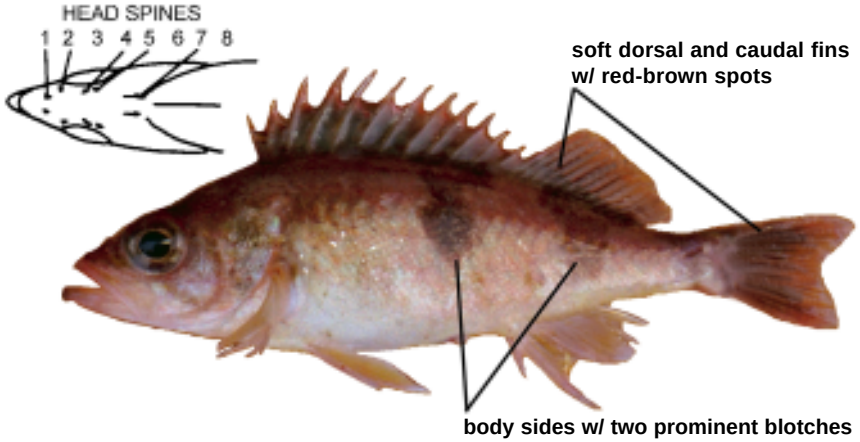
Distribution: British Columbia - Baja California

WEAK HEAD SPINES **RED**

SHORTBELLY ROCKFISH

Body color: Dusky-pink above and silvery-pink on sides; two conspicuous dark-red blotches on posterior half of body; brown on back; brown streaks on membranes of caudal fin; fins light pink, back washed w/ light yellow-green.

Maximum length: 10 in (25 cm)
Maximum depth: 220 fm (402 m)
Common depth: 32-220 fm (58-402 m)
Peritoneum color: dark
Shape between eyes: flat
Counts: D:XIII,12-14, Ar:6-8, P1:16-18, GR:36-42, LLp:40-50, LLs:?, V:26



HALFBANDED ROCKFISH *Sebastes semicinctus*

Similar species:
Stripetail RF - head spines strong; large dark blotches absent; eye large, 2.7-3.2 in head length (3.2-3.4 in Halfbanded RF).
Darkblotched RF - head spines stronger and count differs; body reddish w/ 5 discrete blotches crossing lateral line; body deep; anal spine 2 shorter than 3.
Sharpchin RF - dorsal blotches vague; symphyseal knob prominent (small to moderate in Halfbanded RF); head spines strong.

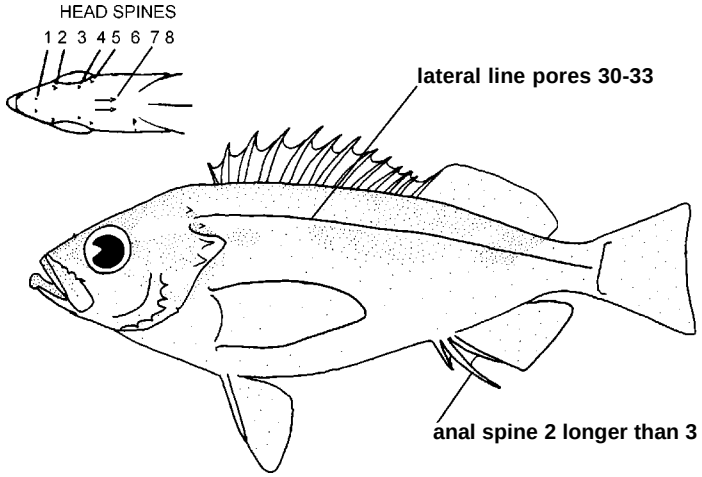
Distribution: Oregon - Baja California

WEAK HEAD SPINES **RED**

HALFBANDED ROCKFISH

Body color: Dusky red dorsally, lighter red ventrally; fins reddish; lateral line pale.

Maximum length: 7 in (17 cm)
Maximum depth: 31 fm? (183 m?)
Common depth: 31 fm ? (183 m?)
Peritoneum color: black
Shape between eyes: convex
Counts: D:XIII,14, Ar:8, P1:17, GR:37-38, LLp:30-33, LLs:?, V:27



DWARF-RED ROCKFISH *Sebastes rufinanus*

Similar species:
Aurora RF - body pinkish red; gill rakers 24-28 (37-38 in Dwarf-red RF); anal rays 5-6 (8 in Dwarf-red RF); head spines strong; small knobs on upper jaw.
Splitnose RF - prominent knobs on upper jaw; head spines strong.
Chameleon RF - anal rays 6 (8 in Dwarf-red RF); head spines strong; anterior lachrymal spine w/ several points; 2-4 spines below eye.

Distribution: Southern California

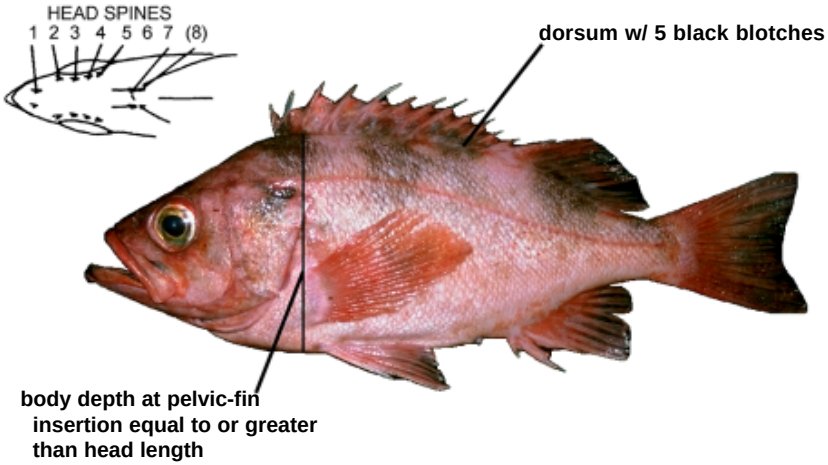
WEAK HEAD SPINES **RED**

DWARF-RED ROCKFISH

Body color: Reddish w/ five discrete black blotches on back, extending across lateral line.

Maximum length: 23 in (58 cm)
Maximum depth: 328 fm (600 m)
Common depth: 55-192 fm (100-350 m)

Peritoneum color: dark
Shape between eyes: convex
Counts: D:XII-XIII,12-15, Ar:5-7, P1:18-20, GR:29-34, LLp:40-51, LLs:48-62, V:26



DARKBLOTCHED ROCKFISH *Sebastes crameri*

Similar species:
Sharpchin RF - symphyseal knob prominent; edge of operculum smooth (1-2 spines in Darkblotched RF); anal spine 2 longer than 3; head spines stronger and count differs.
Harlequin RF - posterior two-thirds of lateral line clear; dorsal fin blackish; anal spine 2 longer than 3; head spines stronger and count differs.
Halfbanded RF - body pink w/ 2 prominent blotches over lateral line; head spines weaker and count differs; body slender; anal spine 2 longer than 3.
Pacific Ocean Perch - dorsal blotches do not extend below lateral line; symphyseal knob elongate, sharp; head spines weaker and count typically differs.
Yellowmouth RF - yellow blotches inside mouth; dorsal blotches diffuse and do not extend below lateral line; head spines stronger and count differs.

Distribution: Bering Sea - Southern California

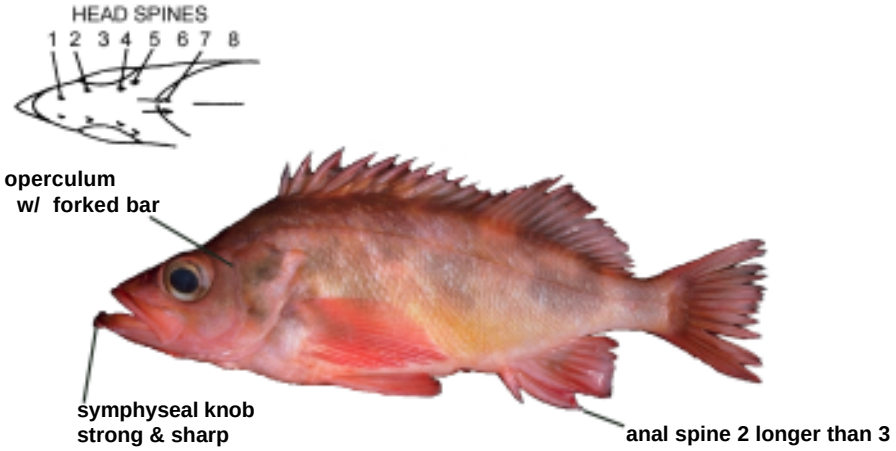
STRONG/WEAK HEAD SPINES **RED**

DARKBLOTCHED ROCKFISH

Body color: Light red w/ several vague, dark brown blotches on back w/ at least one blotch extending below lateral line.

Maximum length: 18 in (45 cm)
Maximum depth: 243 fm (444 m)
Common depth: 82-164 fm (150-300 m)

Peritoneum color: dark
Shape between eyes: convex to concave
Counts: D:XIII,13-15, Ar:7-8, P1:16-18, GR:31-41, LLp:39-47, LLs:43-59,V:27



SHARPCHIN ROCKFISH *Sebastes zacentrus*

Similar species:
Harlequin RF - symphyseal knob moderate; dorsal fin black; posterior two-thirds of lateral line clear.
Darkblotched RF - symphyseal knob weak; head spine count differs; anal spine 2 shorter than 3.
Halfbanded RF - body dusky pink w/ 2 prominent blotches over lateral line; head spines weak; symphyseal knob weak.
Pacific Ocean Perch - head spines weak and typically differ in count; dorsal blotches do not extend below lateral line; blotch on operculum; operculum edge w/ spines.
Yellowmouth RF - symphyseal knob weaker; yellow blotches inside mouth; dorsal blotches diffuse, do not extend below lateral line; operculum edge w/ spines; blotch on operculum.

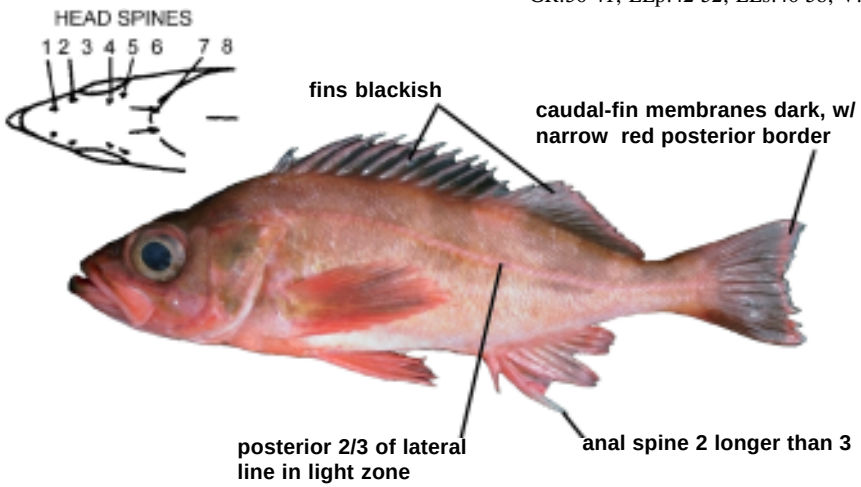
Distribution: Aleutian Islands - Southern California

STRONG HEAD SPINES **RED**

SHARPCHIN ROCKFISH

Body color: Pink to dark red, w/ dark blotches; posterior two-thirds of lateral line clear.

Maximum length: 15 in (37 cm) **Peritoneum color:** dark
Maximum depth: 305 fm (558 m) **Shape between eyes:** flat to convex
Common depth: 55-192 fm (100-350 m) **Counts:** D:XIII,13-15, Ar: 6-7, P1:17-19, GR:36-41, LLp:42-52, LLs:46-58, V:27

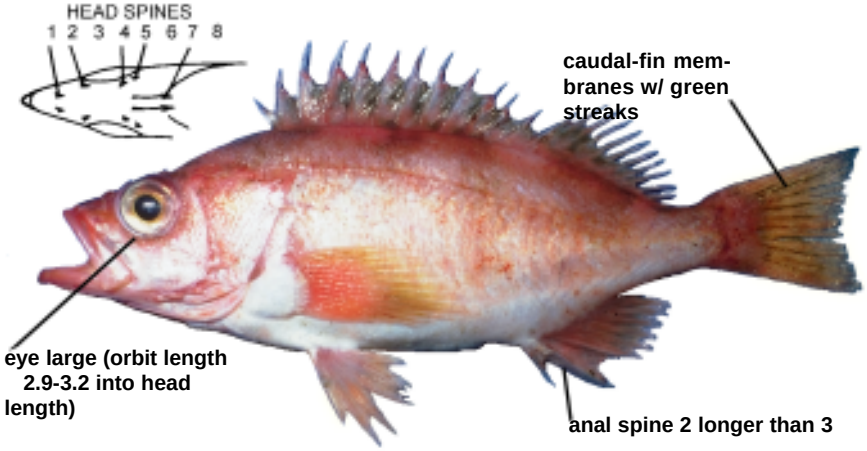


HARLEQUIN ROCKFISH *Sebastes variegatus*

Similar species:
Sharpchin RF - lateral line pigmented, dorsal blotches cross w/o break; symphyseal knob prominent; dorsal and caudal fin membranes reddish.
Redstripe RF - lateral line clear for its entire length, olive mottling dorsally and ventrally; anal spine 2 equal to or shorter than 3; head spines weak.
Darkblotched RF - body w/ 4 or 5 distinct dark blotches crossing lateral line; body deep, depth > head length; head spine count differs; anal spine 2 shorter than 3.
Pacific Ocean Perch - body w/ small discrete dorsal blotches at base of fin; head spines weak and count differs; symphyseal knob prominent (moderate in Harlequin RF).

Distribution: Bering Sea - Oregon

Body color: Yellow-pink w/ light green; several vague, dusky blotches on back, these darker in young; green streaks on membranes of caudal fin, at least on upper portion.
Maximum length: 16 in (41 cm) **Peritoneum color:** dark
Maximum depth: 299 fm (547 m) **Shape between eyes:** flat to concave
Common depth: 55-192 fm (100-350 m) **Counts:** D:XIII,11-14, Ar:5-8, P1:15-18, GR:30-35, LLp:35-43, LLs:43-53,V:26



STRIPETAIL ROCKFISH *Sebastes saxicola*

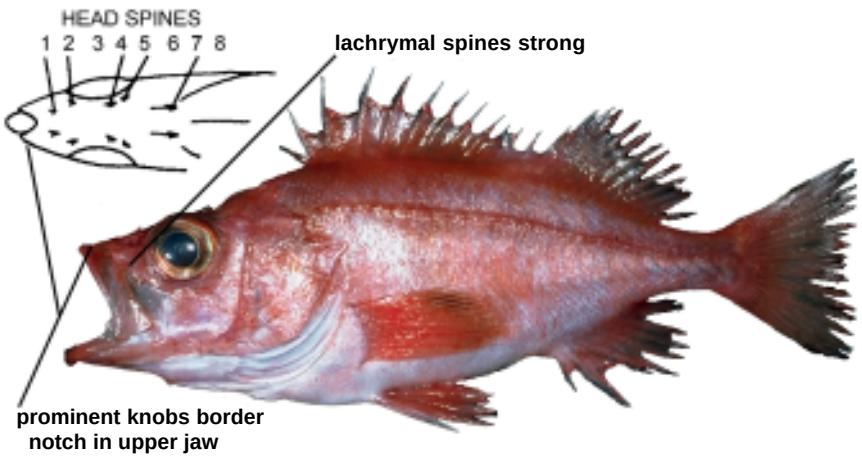
Similar species:
Halfbanded RF - head spines weak; eye small, 3.2-3.4 in head length (2.9-3.2 in Stripetail RF); body w/ two dark-red bars posteriorly.
Sharpchin RF - body w/ discrete blotches; operculum w/ forked bar; caudal fin w/ dusky streaks (broken green streaks in Stripetail RF).
Aurora RF - caudal fin red, w/o streaks; head spine count differs; spines on lower edge of operculum typically absent (strong in Stripetail RF); lateral line pores 27-30 (36-42 in Stripetail RF); gill rakers 24-28 (31-34 in Stripetail RF); eye 3.2-4.1 into head length (2.9-3.2 in Stripetail RF).
Splitnose RF - strong notch in upper jaw; green streaks in caudal fin absent; body uniform rose-red.

Distribution: Gulf of Alaska - Baja California

Body color: Uniform rose-red.

Maximum length: 18 in (45 cm)
Maximum depth: 438 fm (800 m)
Common depth: 82-246 fm (150-450 m)

Peritoneum color: dark
Shape between eyes: concave
Counts: D:XIII,11-14, Ar:5-8, P1:17-19, GR:32-37, LLp:32-43, LLs:53-57,V:26



SPLITNOSE ROCKFISH *Sebastes diploproa*

Similar species:
Aurora RF - head spine count differs; knobs bordering notch in upper jaw less prominent; gill rakers 24-28 (32-37 in Splitnose RF); lateral line pores typically 27-31 (32-43 in Splitnose RF); spines on lower margin of operculum typically absent (typically present in Splitnose RF).
Stripetail RF - body yellow-pink w/ green; dorsal blotches present; notch in upper jaw absent.
Chameleon RF - body whitish pink changing to golden crimson; spines present below eye; head spine count differs; gill rakers 36-39 (32-37 in Splitnose RF).

Distribution: Gulf of Alaska - Baja California

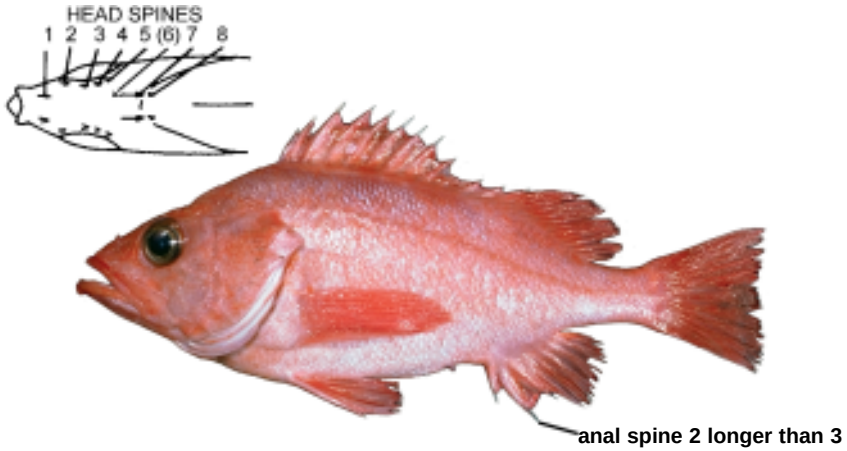
STRONG HEAD SPINES **RED**

SPLITNOSE ROCKFISH

Body color: Uniform creamy light-red or pink.

Maximum length: 16 in (41 cm)
Maximum depth: 420 fm (768 m)
Common depth: 164-274 fm (300-500 m)

Peritoneum color: dark to light w/ spots
Shape between eyes: convex to concave
Counts: D:XIII,12-13, Ar:5-7, P1:17-19, GR:24-28, LLp:27-31, LLs:41-50,V:26



AURORA ROCKFISH *Sebastes aurora*

Similar species:
Splitnose RF - head spine count differs; knobs bordering notch in upper jaw prominent; gill rakers 32-37 (24-28 in Aurora RF); lateral line pores 32-43 (27-31 in Aurora RF); spines on lower margin of operculum typically present (typically absent in Aurora RF).
Stripetail RF - head spine count differs; body yellow-pink w/ green; dorsal blotches present; no notch in upper jaw; spines on lower margin of operculum typically present (typically absent in Aurora RF).
Rougheye RF - 2-8 spines below eye; body red w/ black; gill rakers 28-33 (24-28 in Aurora RF).
Shortraker RF - anal spine 2 shorter than 3; no notch in upper jaw.
Chameleon RF - body whitish pink changing to golden crimson; spines present below eye; gill rakers 36-39 (24-28 in Aurora RF).

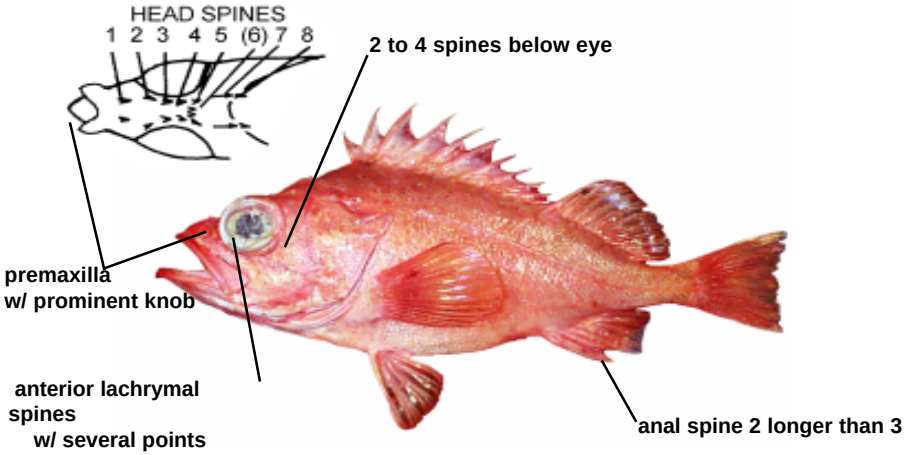
Distribution: British Columbia - Southern California

STRONG HEAD SPINES **RED**

AURORA ROCKFISH

Body color: Whitish pink when first brought to surface, changing to golden crimson upon death and exposure to air; vague dusky streaks on back from above rear margins of orbit posteriorly to about insertion of second dorsal.

Maximum length: 17 in (43 cm)
Maximum depth: 150 fm (274 m)
Common depth: 94-150 fm (171-274 m)
Peritoneum color: dark
Shape between eyes: concave
Counts: D:XIII-XIV,12-13, Ar:5-6, P1:18-19, GR:36-40, LLp:29-33, LLs:?, V:26-27



CHAMELEON ROCKFISH *Sebastes phillipsi*

Similar species:
Aurora RF - spines absent below eye; gill rakers 24-28 (36-39 in Chameleon RF).
Splitnose RF - spines absent below eye; head spine count differs; gill rakers 32-37 (36-39 in Chameleon RF).
Rougheye RF - peritoneum light; area between eyes flat or convex; gill rakers 28-33 (36-39 in Chameleon RF).

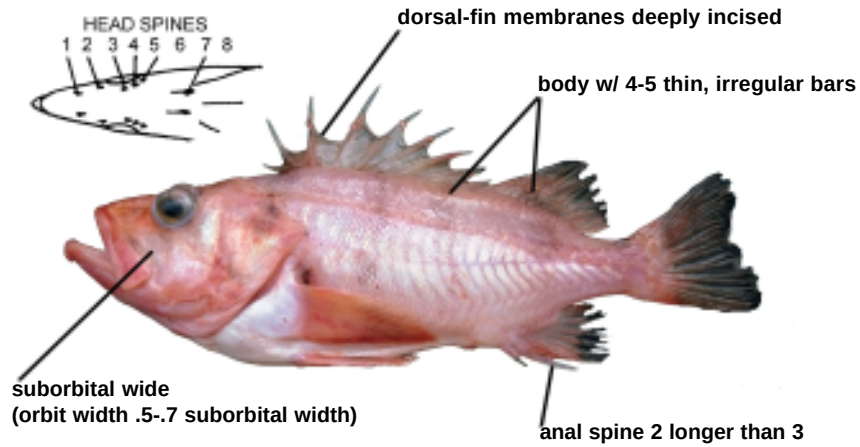
Distribution: Northern California - Southern California

STRONG HEAD SPINES **RED**

CHAMELEON ROCKFISH

Body color: Pink, including fins; 4-5 narrow, somewhat irregular bars.

Maximum length: 37 in (94 cm)
Maximum depth: 200 fm (366 m)
Common depth: 83-134 fm (152-244 m)
Peritoneum color: light
Shape between eyes: convex to flat
Counts: D:XIII-IX,12-13, Ar:6-7, P1:17-18, GR:29-33, LLp:45-53, LLs:?-?, V:26



COWCOD *Sebastes levis*

Similar species:
Bocaccio and **Chilipepper RF** - body w/o bars; narrow suborbital width; dorsal-fin membranes not deeply incised; head spines weak and differ in count; body slender; anal spines small.

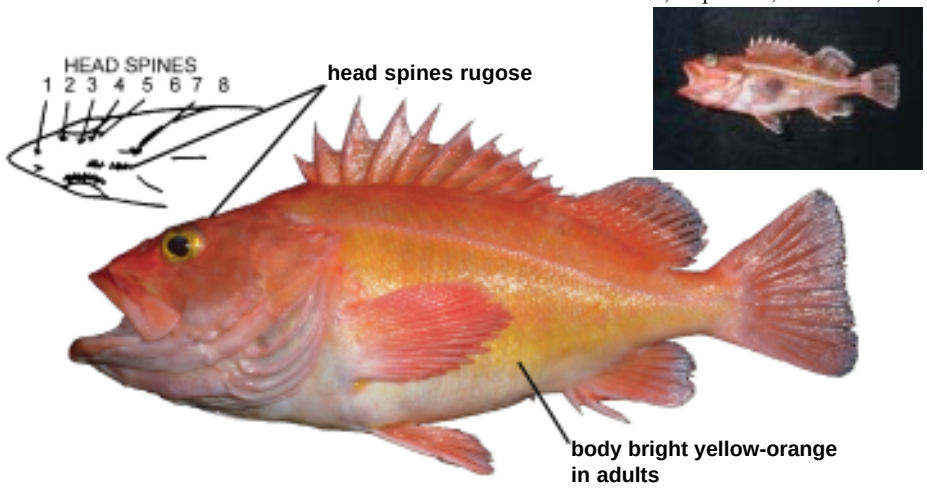
Distribution: Oregon - Baja California

STRONG HEAD SPINES **RED**

COWCOD

Body color: Red on back, bright orange-yellow on sides, most fins w/ black on tips. Young <28 cm red w/ whitish stripe along lateral line, another shorter stripe between lateral line and belly surface, fins w/ blackened tips (see inset photo).

Maximum length: 36 in (91 cm)
Maximum depth: 260 fm (475 m)
Common depth: 27-219 fm (50-400 m)
Peritoneum color: light
Shape between eyes: concave
Counts: D:XIII,13-16, Ar:5-8, P1:18-20, GR:25-30, LLp:39-46, LLs:45-50, V:26



YELLOWEYE ROCKFISH *Sebastes ruberrimus*

Similar species:

Canary RF - body mottled gray dorsally w/ orange; anal fin pointed w/ strong anterior slant (rounded w/ posterior slant in Yelloweye RF); gill rakers 40-45 (25-30 in Yelloweye RF).

Vermilion RF - body mottled gray dorsally w/ red; anal fin pointed w/ strong anterior slant (rounded w/ posterior slant in Yelloweye RF); gill rakers 35-43 (25-30 in Yelloweye RF).

Rougheye RF, **Shortraker RF**, and **Blackgill RF -** body red w/ various dark mottling; 0-8 spines below eye.

Distribution: Aleutian Islands - Baja California

STRONG HEAD SPINES **RED**

YELLOWEYE ROCKFISH

Body color: Red on back, becoming pink on sides, often w/ vague spots and traces of dusky bars; fins reddish, w/ black on tips; inside of mouth red-black to red-white; posterior part of lateral line often light. (See occasional dark phase in inset photo.)

Maximum length: 38 in (97 cm)
Maximum depth: 479 fm (875 m)
Common depth: 55-246 fm (100-450 m)
Peritoneum color: light w/ dots
Shape between eyes: convex to flat
Counts: D:XIII-XIV,12-15, Ar:6-8, P1:17-19, GR:28-33, LLp:29-37, LLs:47-55, V:27

ROUGHEYE ROCKFISH *Sebastes aleutianus*

Similar species:

Shortraker RF - 0 or rarely 1 eye spine; body pink to orange-pink, typically w/o dark color on body; specimens >40 cm w/ gill rakers on first arch 3 times longer than width (5-6 times in Rougheye RF); head spine 6 typically absent.

Blackgill RF - 0 or rarely 1 eye spine; head spine 6 typically absent; mouth, upper branchiostegal membranes, and gill cavity black.

Pacific Ocean Perch - head spines weak and differ in count; discrete dark blotches at base of dorsal fin; symphyseal knob prominent.

Sharpchin RF - discrete dorsal blotches w/ at least one crossing lateral line; prominent symphyseal knob; head spines differ in count; anal spine 2 longer than 3.

Yelloweye RF - body bright yellow-orange (reddish in young <28 cm); head spines rugose w/ multiple points and count differs.

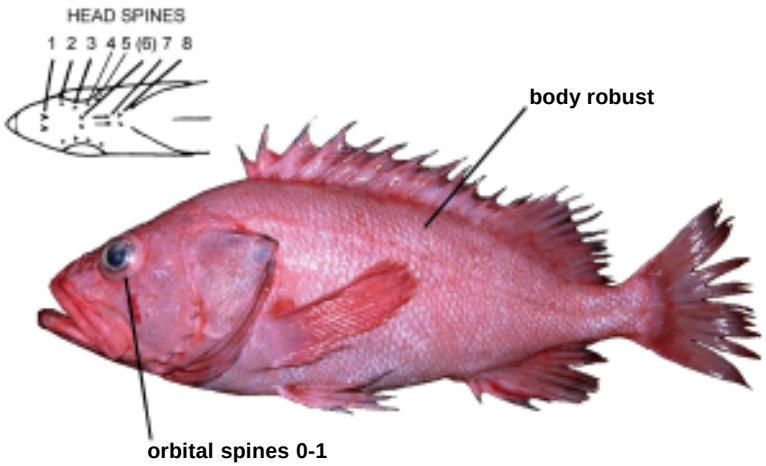
Distribution: Bering Sea - Southern California

STRONG HEAD SPINES **RED**

ROUGHEYE ROCKFISH

Body color: Pink to orange-pink; fins reddish, typically edged w/ black; dusky red bars may be present on dorsum, these may be prominent in young specimens.

Maximum length: 43 in (108 cm)
Maximum depth: 479 fm (875 m)
Common depth: 55-328 fm (100-600 m)
Peritoneum color: light w/ black dots
Shape between eyes: convex to flat
Counts: D:XIII,12-15, Ar:6-8, P1:17-20, GR:27-31, LLp:28-32, LLs:36-46, V:27-28



SHORTRAKER ROCKFISH *Sebastes borealis*

Similar species:
Blackgill RF - body red w/ black mouth, upper branchiostegal membranes, and gill cavity; peritoneum black; gill rakers typically 30-34 (27-31 in Shortraker RF).
Rougheye RF - 2-10 spines below eye; body typically red w/ black mottling; gill rakers on first arch longer in individuals > 40 cm.
Pacific Ocean Perch - head spines weak and differ in count; prominent symphyseal knob; discrete dorsal blotches at base of dorsal fin; body shape slender.
Sharpchin RF - symphyseal knob prominent; discrete blotches w/ at least one crossing lateral line; head spines differ in count; anal spine 2 longer than 3.
Redbanded RF - body w/ five bands crossing lateral line; head spine count differs; anal spine 2 longer than 3; peritoneum dark.

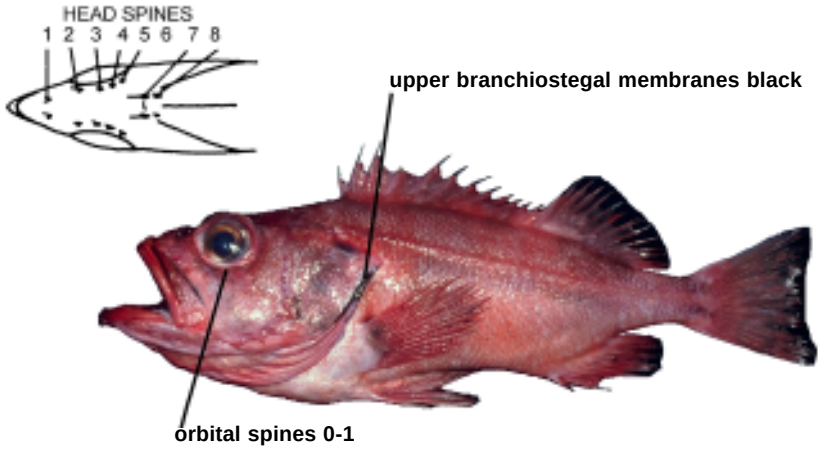
Distribution: Bering Sea - Southern California

STRONG HEAD SPINES **RED**

SHORTRAKER ROCKFISH

Body color: Uniform dark red, including fins; dusky bars may be present on back, these prominent in young specimens; most fins w/ blackened tips.

Maximum length: 24 in (61 cm)
Maximum depth: 420 fm (768 m)
Common depth: 137-328 fm (250-600 m)
Peritoneum color: black
Shape between eyes: flat to convex
Counts: D:XIII,12-15, Ar:6-8, P1:17-20, GR:27-34, LLp:28-34, LLs:32-34, V:26



BLACKGILL ROCKFISH *Sebastes melanostomus*

Similar species:
Shortraker RF - body pink or orange-pink; mouth, branchiostegal membranes, and gill cavity red to red-black; peritoneum light w/ black spots; gill rakers 27-31 (typically 30-34 in Blackgill RF).
Rougheye RF - 2-10 spines below eye; mouth, branchiostegal membranes, and gill cavity red to red-black; peritoneum light.
Pacific Ocean Perch - head spines weak and differ in count; dark blotches discrete at dorsal base; symphyseal knob prominent.
Sharpchin RF - symphyseal knob prominent; discrete blotches w/ at least one crossing lateral line; head spines differ in count; anal spine 2 longer than 3.

Distribution: Washington - Baja California

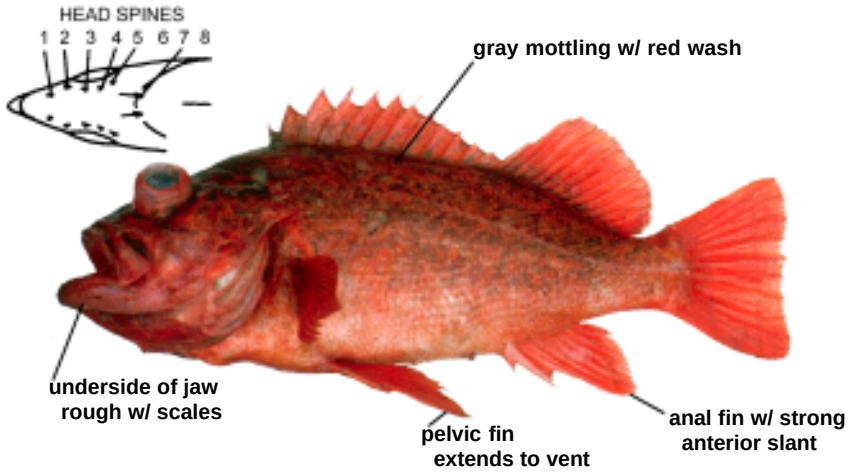
STRONG HEAD SPINES **RED**

BLACKGILL ROCKFISH

Body color: Dark red, mottled w/ gray on back and sides; fins red.

Maximum length: 30 in (76 cm)
Maximum depth: 150 fm (274 m)
Common depth: 100-150 fm (183-274 m)

Peritoneum color: light
Shape between eyes: convex
Counts: D:XIII,13-15, Ar:6-8, P1:16-18, GR:35-43, LLp:40-48, LLs:45-48, V:26-27



VERMILION ROCKFISH *Sebastes miniatus*

Similar species:
Canary RF - body orange w/ olive-gray, orange fins; underside of lower jaw smooth w/ embedded scales; gill rakers 40-45 (35-43 in Vermilion RF); lateral line highlighted in gray.
Yelloweye RF - head spines rugose; body orange-red to orange-yellow w/o olive-gray mottling; lateral line highlighted in gray; anal-fin margin rounded.
Rougheye RF, **Shortraker RF**, and **Blackgill RF** - head spine count differs; anal-fin margin perpendicular; 0-8 spines below eye.

Distribution: Gulf of Alaska - Baja California

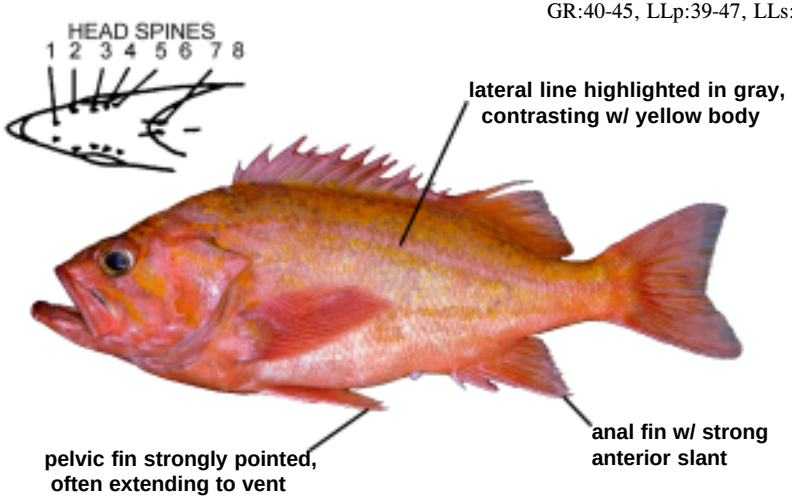
STRONG HEAD SPINES **RED**

VERMILION ROCKFISH

Body color: Olive-gray w/ bright orange, fins orange. (Also see underwater photo.)

Maximum length: 30 in (76 cm)
Maximum depth: 233 fm (425 m)
Common depth: 27-137 fm (50-250 m)

Peritoneum color: light
Shape between eyes: convex
Counts: D:XIII,13-16, Ar:7, P1:16-18, GR:40-45, LLp:39-47, LLs:43-50, V:26



CANARY ROCKFISH *Sebastes pinniger*

Similar species:
Vermilion RF - body and fins red; underside of lower jaw rough w/ exposed scales (jaw smooth in Canary RF); gill rakers 35-43 (40-45 in Canary RF).
Yelloweye RF - head spines rugose; body orange-red to orange-yellow w/out olive-gray mottling; anal-fin margin rounded.
Rougheye RF, **Shortraker RF**, and **Blackgill RF** - body red w/ various black mottling; 0-8 spines below eye; anal-fin margin perpendicular.

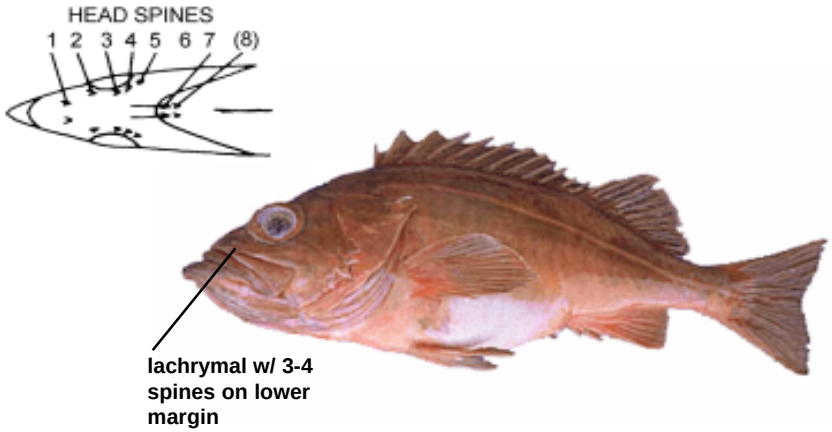
Distribution: Gulf of Alaska - Baja California

STRONG HEAD SPINES **RED**

CANARY ROCKFISH

Body color: Olive-brown to blackish-red dorsally, becoming plain red on side; lateral line in a clear red zone bordered by darker color; ventral and anal fins reddish, other fins darker.

Maximum length: 26 in (66 cm)
Maximum depth: 130 fm (238 m)
Common depth: 50-130 fm (91-238 m)
Peritoneum color: dark
Shape between eyes: flat to convex
Counts: D:XII-XIV,12-15, Ar:7-8, P1:18-20, GR:35-42, LLp:52-58, LLs:?-?, V:26



MEXICAN ROCKFISH *Sebastes macdonaldi*

Similar species:
Redstripe RF - body light red w/ lateral line in gray zone; pectoral fins red to light green (black membranes in Mexican RF); pectoral rays 17 (19 in Mexican RF); lachrymal bone w/ two spines.

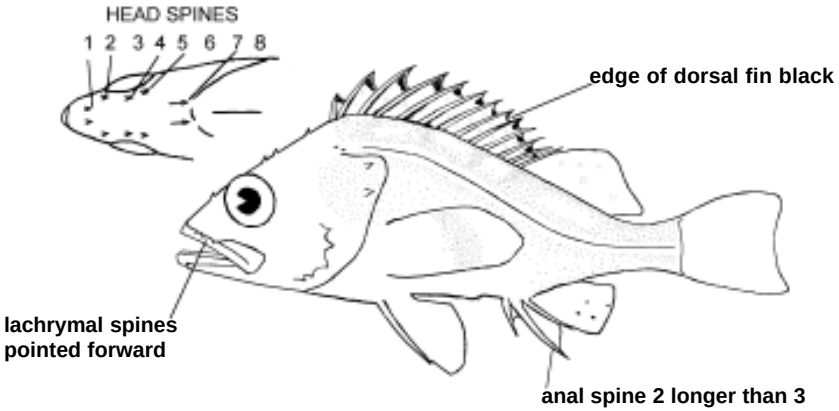
Distribution: Central California - Baja California

STRONG HEAD SPINES **RED**

MEXICAN ROCKFISH

Body color: Red w/ lighter blotches on back; lateral line in clear red zone; dorsal- & anal-fin membranes red w/ black spots; spinous dorsal membranes w/ black edge; caudal-fin membranes red; pectoral-fin membrane w/ black midsection, otherwise red.

Maximum length: 8 in (20 cm)
Maximum depth: 100 fm (183 m)
Common depth: 75-100 fm (137-183 m)
Peritoneum color: dark
Shape between eyes: concave
Counts: D:XIII,11-12, Ar:6, P1:17-18, GR:34-37, LLp:34-43, LLs:?-?, V:26



SEMAPHORE ROCKFISH *Sebastes melanosema*

Similar species:
Splitnose RF and **Aurora RF** - lachrymal spines pointed posteriorly; margins of spinous dorsal-fin membranes reddish (black in Semaphore RF).

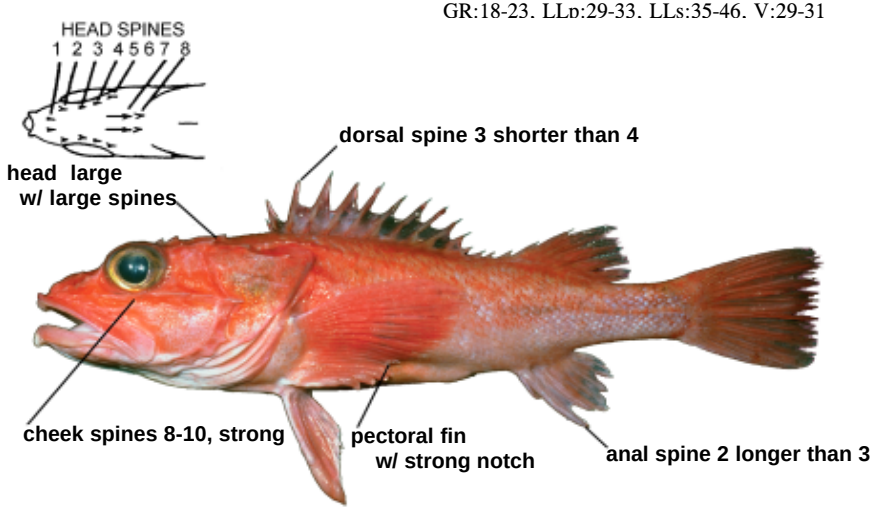
Distribution: Oregon - Baja California

STRONG HEAD SPINES **RED**

SEMAPHORE ROCKFISH

Body color: Bright red to pink, often w/ dusky to black areas on fins and body, dark spot on posterior part of spinous dorsal fin.

Maximum length: 30 in (75 cm)
Maximum depth: 834 fm (1524 m)
Common depth: 55-465 fm (100-850 m)
Peritoneum color: light w/ spots
Shape between eyes: concave
Counts: D:XV-XVIII,8-9, Ar:4-5, P1:22-23, GR:18-23, LLp:29-33, LLs:35-46, V:29-31



SHORTSPINE THORNYHEAD *Sebastolobus alascanus*

Similar species:
Longspine Thornyhead - dorsal spine 3 longer than 4; pectoral fin w/ slight notch; gill chamber mostly black; dorsal spines typically 15 (typically 16 in Shortspine Thornyhead).
Broadbanded Thornyhead - ventral pectoral rays highly branched, lobe-like; body deeper.
Aleutian Scorpionfish (genus *Adelosebastes*) - cheek spines 1-2, weak; lower pectoral rays fingerlike; head spines very large; body deep.
Other Rockfishes (genus *Sebastes*) - cheek spines absent; pectoral fin wedge-shaped w/out notch; body deep; dorsal spines 12-15 (15-18 in Shortspine Thornyhead).

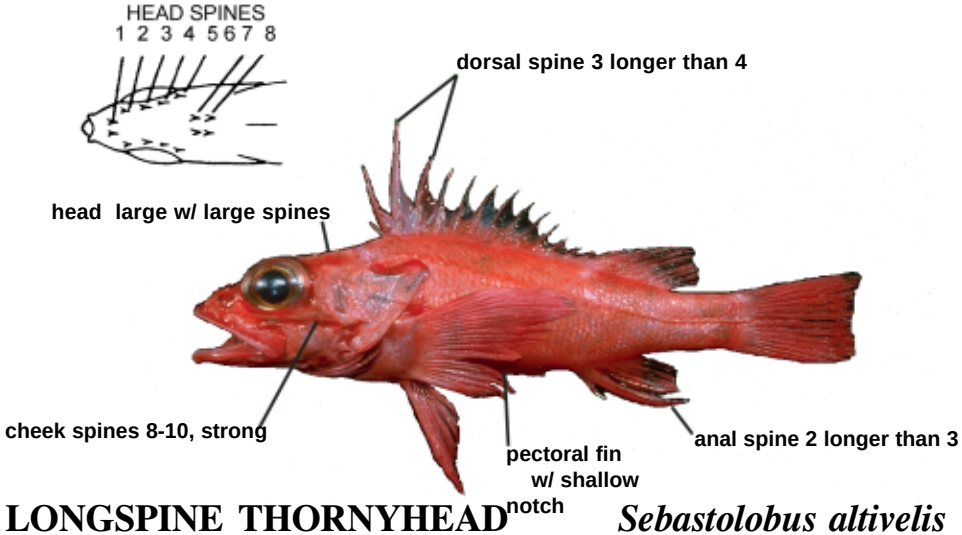
Distribution: Bering Sea - Baja California

STRONG HEAD SPINES **RED**

SHORTSPINE THORNYHEAD

Body color: Bright red w/ black areas on fins and body, dark spot on posterior part of spinous dorsal fin; gill chamber mostly dark.

Maximum length: 15 in (38 cm)
Maximum depth: 960 fm (1755 m)
Common depth: 167-971 fm(305-1775 m)
Peritoneum color: light w/ spots
Shape between eyes: concave
Counts: D:XV-XVII,8-10, Ar:4-6, P1:22-24, GR:21-26, LLp:28-32, LLs:32-38,V:29



LONGSPINE THORNYHEAD *Sebastolobus altivelis*

Similar species:
Shortspine Thornyhead - dorsal spine 3 shorter than 4; pectoral fin w/ strong notch; gill chamber mostly pale; dorsal spines typically 16 (typically 15 in Longspine Thornyhead).
Broadbanded Thornyhead - ventral pectoral rays highly branched, lobe-like; body deeper.
Aleutian Scorpionfish (genus *Adelosebastes*) - cheek spines 1-2, weak; lower pectoral rays fingerlike; head spines very large; body deep.
Other Rockfishes (genus *Sebastes*) - cheek spines absent; pectoral fin wedge-shaped w/out notch; body deep; dorsal spines 12-15 (15-17 in Longspine Thornyhead).

Distribution: Gulf of Alaska - Baja California

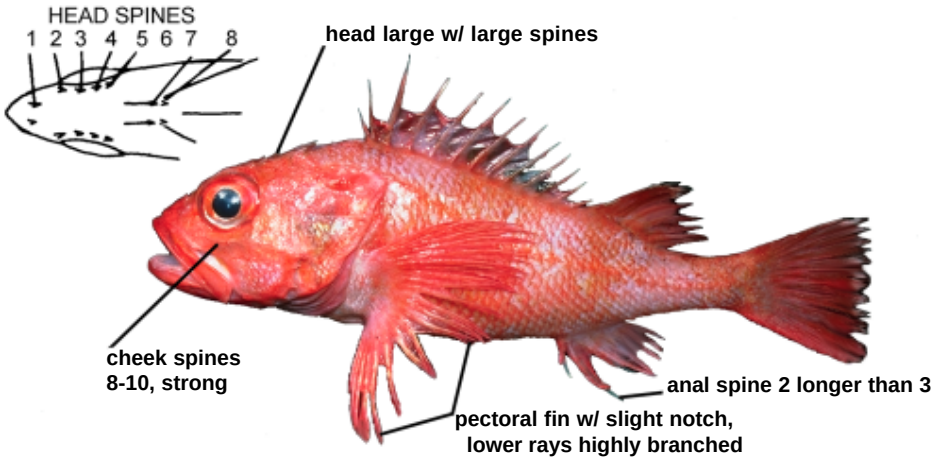
STRONG HEAD SPINES **RED**

LONGSPINE THORNYHEAD

Body color: Bright red-orange to pink; membranes between posterior-most dorsal spines black.

Maximum length: 14 in (35 cm)
Maximum depth: 438 fm (800 m)
Common depth: 82-274 fm (150-500 m)

Peritoneum color: light
Shape between eyes: concave
Counts: D:XIV-XVI,8-10, Ar:5, P1:21-23, GR:18-21, LLp:30-34, LLs:35-38, V:27-30



BROADBANDED THORNYHEAD *Sebastolobus macrochir*

Similar species:
Shortspine Thornyhead - pectoral fin deeply notched, lower rays not highly branched; body less deep w/ caudal peduncle depth > 45% body depth at anal-fin origin (< 45% in Broadbanded Thornyhead).
Longspine Thornyhead - lower pectoral rays not highly branched; body less deep.
Aleutian Scorpionfish (genus *Adelosebastes*) - cheek spines 1-2, weak; lower pectoral rays fingerlike; head spines very large; body deep.
Other Rockfishes (genus *Sebastes*) - cheek spines absent; pectoral fin rounded, lacking notch; dorsal spines 12-15 (14-16 in Broadbanded Thornyhead).

Distribution: Bering Sea - Aleutian Islands

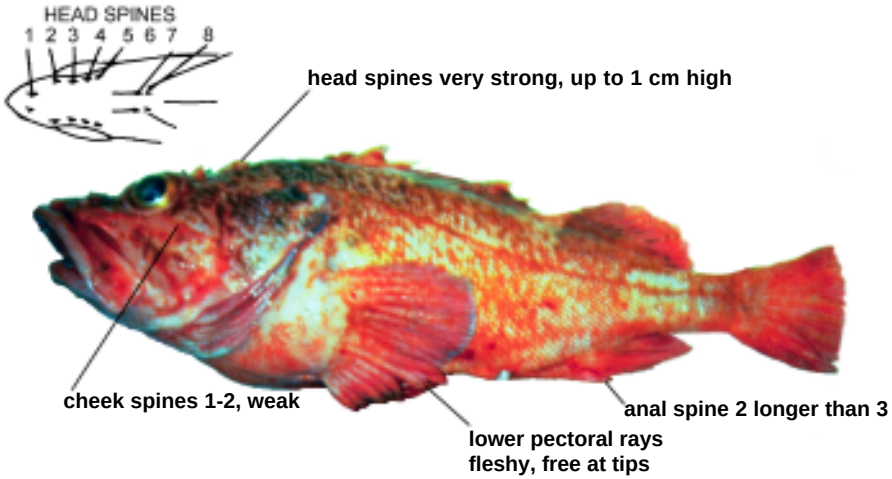
STRONG HEAD SPINES **RED**

BROADBANDED THORNYHEAD

Body color: Bright crimson red; dusky mottling on back forming 3 faint saddles; ventral pectoral rays pink; dusky area on dorsal-most pectoral rays.

Maximum length: 16 in (41 cm)
Maximum depth: 657 fm (1200 m)
Common depth: > 356 fm (> 650 m)

Peritoneum color: gray w/ black spots
Shape between eyes: concave
Counts: D:XII-XIII,12-13, Ar:5, P1:18-23, GR:24-25, LLp:28-29, LLs:74-100, V:26



ALEUTIAN SCORPIONFISH *Adelosebastes latens*

Similar species:
Thornyheads (genus *Sebastolobus*) - cheek spines 5-10, strong; dorsal spines 15-17 (12-13 in Aleutian Scorpionfish).
Other Rockfishes (genus *Sebastes*) - cheek spines absent; pectoral fin rounded, lacking notch, wedge-shaped (slightly notched in Aleutian Scorpionfish); lower jaw equal to or longer than upper jaw (shorter than upper jaw in Aleutian Scorpionfish).

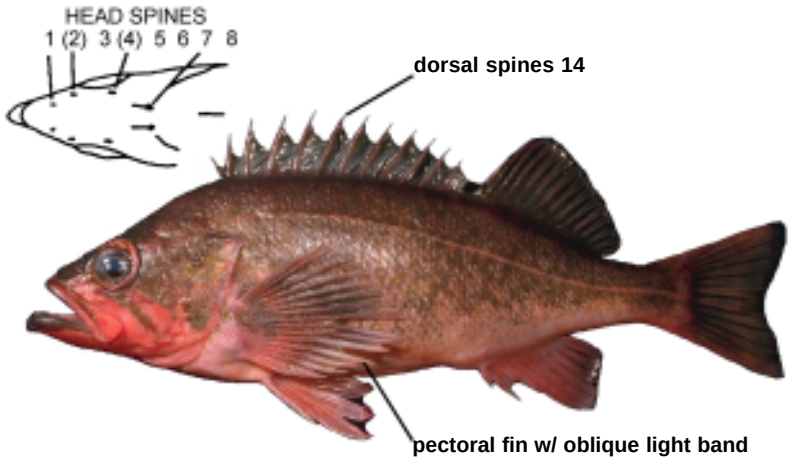
Distribution: Aleutian Islands

STRONG HEAD SPINES **RED**

ALEUTIAN SCORPIONFISH

Body color: Dark gray-green on reddish background; red-orange flecks and fine green spots on body; red-orange to white ventrally; oblique light band on lower portion of pectoral fin.

Maximum length: 16 in (40 cm)
Maximum depth: 342 fm (625 m)
Common depth: 27-164 fm (50-300 m)
Peritoneum color: dark
Shape between eyes: convex
Counts: D:XIV,13-16, Ar:7-9, P1:17-19, GR:35-39, LLp:43-53, LLs:69-70, V:28



NORTHERN ROCKFISH *Sebastes polyspinis*

Similar species:
Light Dusky RF - body gray to greenish-brown; light patch on pectoral fin faint; dorsal spines typically 13.
Pacific Ocean Perch - body red w/ discrete dorsal blotches; symphyseal knob sharp, elongate (moderate in Northern RF); head spine 5 present; dorsal spines typically 13.
Redstripe RF - mottled olive-green stripes above and below light red lateral line; head spine count differs; dorsal spines typically 13; head spine 5 present.
Harlequin RF - head spines strong and spine 5 is present; anal spine 2 longer than 3 (shorter in Northern RF); dorsal blotches prominent; posterior two-thirds of lateral line light; dorsal spines typically 13.
Sharpchin RF - body red w/ dorsal blotches; head spines strong and differ in count; anal spine 2 longer than 3; dorsal spines typically 13.

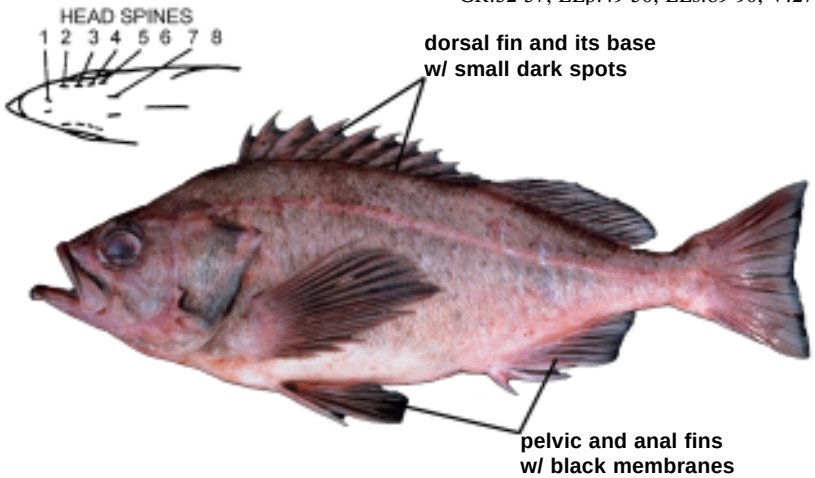
Distribution: Bering Sea - British Columbia

WEAK HEAD SPINES **RED/BLACK**

NORTHERN ROCKFISH

Body color: Dusky light red to gray, southern specimens w/ black spots on back and dorsal fin; membranes of soft dorsal, anal, and pectoral fins blackish. "Red-widow rockfish" (see below) more reddish w/o conspicuous black spots on body.

Maximum length: 23 in (51 cm)
Maximum depth: 135 fm (247 m)
Common depth: 17-135 fm (31-247 m)
Peritoneum color: dark
Shape between eyes: convex
Counts: D:XIII,13-16, Ar:8-9, P1:17-19, GR:32-37, LLp:49-56, LLs:89-90, V:27-28



BANK ROCKFISH *Sebastes rufus*

Similar species:
Speckled RF - body w/o red; lateral line not in clear zone; gill rakers typically 31-33 (32-37 in Bank RF).
Squarespot RF - body w/ squarish blotches along lateral line w/o red; pectoral rays typically 17 (typically 18-19 in Bank RF).
Widow RF - body w/o red; lateral line not in clear zone.
Yellowtail RF - body w/o red; fins washed w/ yellow; anal, pelvic, pectoral fin membranes dusky; anal-fin margin perpendicular; head spine count differs.

Note: "Red-widow rockfish" from central California may represent an undescribed species.

Distribution: Washington - Baja California

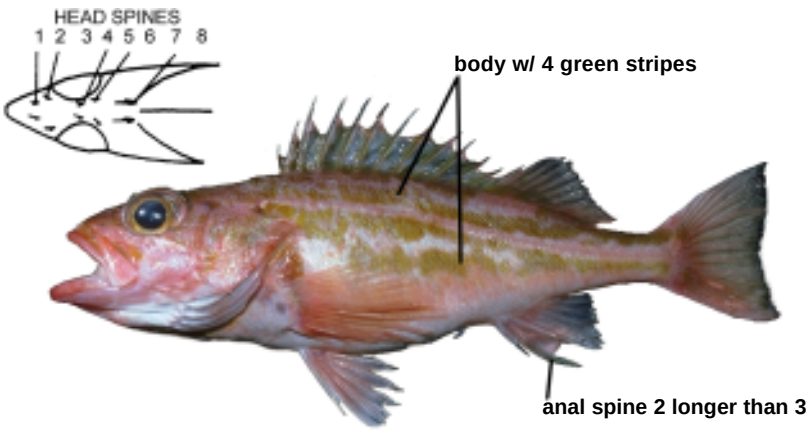
WEAK HEAD SPINES **RED/BLACK**

BANK ROCKFISH

Body color: Pink w/ four mottled, horizontal green stripes on sides of pinkish body.

Maximum length: 17 in (43 cm)
Maximum depth: 269 fm (491 m)
Common depth: 55-137 fm (100-250 m)

Peritoneum color: dark
Shape between eyes: concave
Counts: D:XIII,12-14, Ar:5-7, P1:16-18, GR:28-33, LLp:37-47, LLs:42-55, V:26



GREENSTRIPED ROCKFISH *Sebastes elongatus*

Similar species:
Redstripe RF - lateral line light red bordered by two mottled green stripes; anal spine 2 shorter than 3; head spines weak.

Distribution: Gulf of Alaska - Baja California

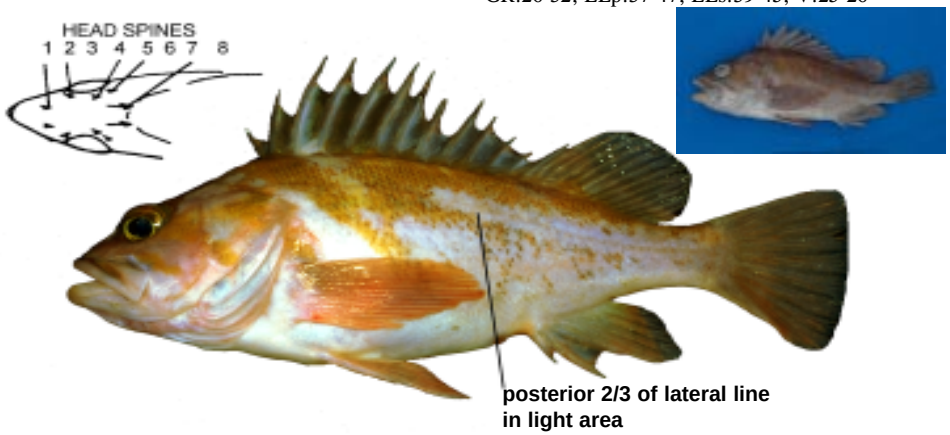
STRONG HEAD SPINES **RED/BLACK**

GREENSTRIPED ROCKFISH

Body color: Dark brown to olive, washed w/ copper-pink and often splashed w/ dull yellow; posterior lateral line and lower sides usually white in fresh specimens, becoming copper-pink on prolonged exposure. (See inset and underwater photo.)

Maximum length: 22 in (58 cm)
Maximum depth: 100 fm (183 m)
Common depth: >100 fm (>183 m)

Peritoneum color: light
Shape between eyes: concave
Counts: D:XIII,11-14, Ar:5-7, P1:16-18, GR:26-32, LLp:37-47, LLs:39-45, V:25-26



COPPER ROCKFISH *Sebastes caurinus*

Similar species:
Brown RF - head spine count differs; body color light brown w/ darker brown mottling; operculum w/ dark blotch.
Gopher RF - body w/ about 6 gray or pink blotches; lateral line dark and broken by blotches.
Quillback RF - anal rays typically 7 (typically 6 in Copper RF); cheeks and breast w/ small spots.

Distribution: Gulf of Alaska - Baja California

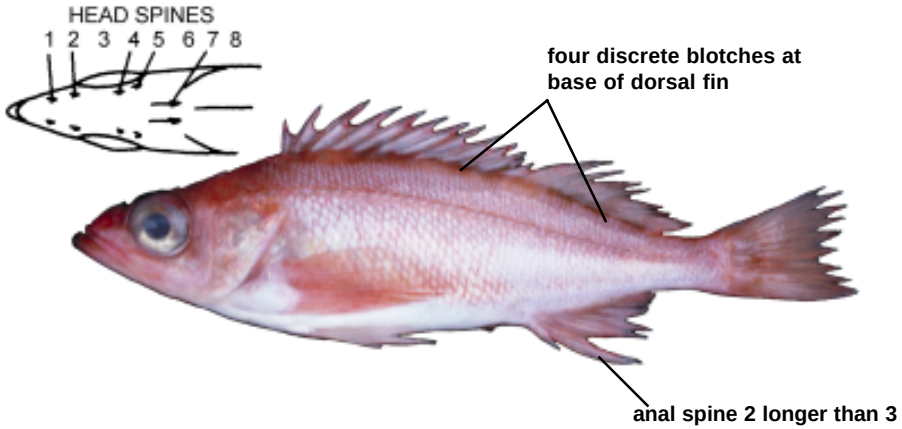
STRONG HEAD SPINES **RED/BLACK**

COPPER ROCKFISH

Body color: Light brown, flushed w/ red; about 4 dark blotches along base of dorsal fin; a brownish-red stripe below lateral line.

Maximum length: 9 in (23 cm)
Maximum depth: 150 fm (274 m)
Common depth: 16-150 fm (30-274 m)

Peritoneum color: dark
Shape between eyes: flat
Counts: D:XIII-XIV,13-15, Ar:5-7, P1:16-18, GR:37-43, LLp:37-46, LLs:45-50, V:27-28



PYGMY ROCKFISH *Sebastes wilsoni*

Similar species:
Puget Sound RF - body color differs, brownish-red stripe absent below lateral line; anal rays typically 7 (6 in Pygmy RF).
Shortbelly RF - anus about midway between anal-fin origin and pelvic-fin base (immediately in front of anal fin in Pygmy RF); anal spine 2 shorter than 3; head spines weaker.
Sharpchin RF - dorsal blotches extend below lateral line; symphyseal knob sharp and prominent; strong dark stripes extend posterior to eye.
Pacific Ocean Perch - symphyseal knob sharp, elongate; head spines weak and count differs; anal spine 2 shorter than 3.

Distribution: Gulf of Alaska - Southern California

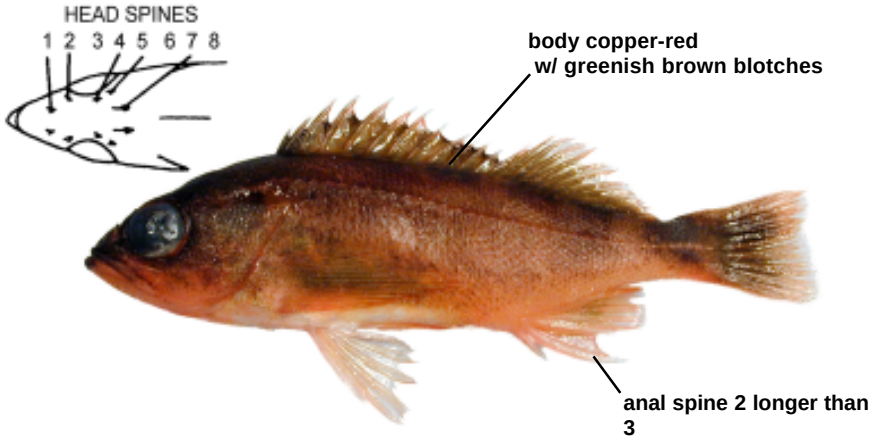
STRONG HEAD SPINES RED/BLACK

PYGMY ROCKFISH

Body color: Copper-red w/ indefinite olivaceous blotches; green bands radiate from eye; spinous dorsal green, w/ bright red at tips of spines; outer soft dorsal bright red, base of fin dark; paired and anal fins clear, brillant red. (Also see underwater photo.)

Maximum length: 7 in (18 cm)
Maximum depth: 200 fm (366 m)
Common depth: 6-200 fm (10-366 m)

Peritoneum color: dark
Shape between eyes: convex
Counts: D:XIII,13-15, Ar:6-7, P1:16-18, GR:37-41, LLp:40-46, LLs:41-46, V:27-28



PUGET SOUND ROCKFISH *Sebastes emphaeus*

Similar species:
Pygmy RF - brownish-red stripe below lateral line, squared blotches at base of dorsal fin; anal rays typically 6 (7 in Puget Sound RF).
Shortbelly RF - anus about midway between origin of anal fin and pelvic-fin base (immediately in front of anal fin in Puget Sound RF); anal spine 2 shorter than 3.
Sharpchin RF - dorsal blotches extend below lateral line; symphyseal knob sharp and prominent; strong dark stripes extend posterior to eye.
Pacific Ocean Perch - symphyseal knob sharp, elongate; head spines weak and count typically differs; anal spine 2 shorter than 3.

Distribution: Gulf of Alaska - Northern California

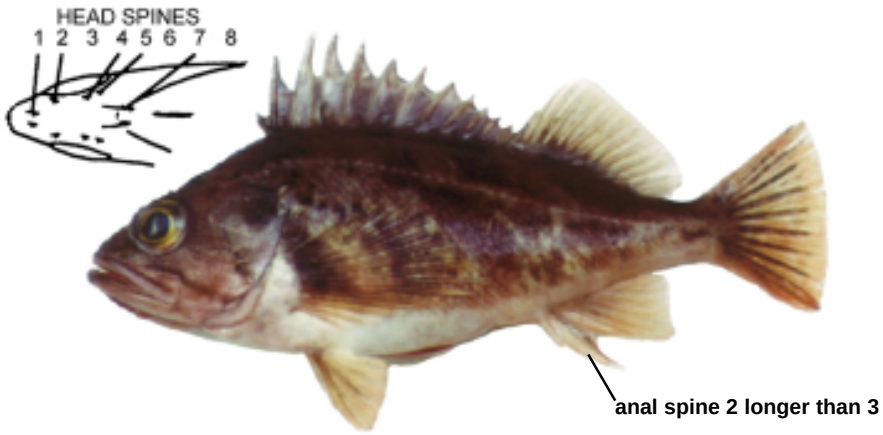
STRONG HEAD SPINES RED/BLACK

PUGET SOUND ROCKFISH

Body color: Light yellow-green w/ oblique brown bars, splotches and spots on body; brown streaks and spots on caudal fin.

Maximum length: 10 in (25 cm)
Maximum depth: 140 fm (256 m)
Common depth: 10-140 fm (18-256 m)

Peritoneum color: light
Shape between eyes: concave
Counts: D:XII-XIV,12-14, Ar:6-7, P1:16-17, GR:30-36, LLp:37-51, LLs:?-?, V:26-27



CALICO ROCKFISH *Sebastes dalli*

Similar species:
Gopher RF - body brown to olive, w/ flesh-colored pale areas; gill rakers 26-30 (30-36 in Calico RF).
Copper RF - body brown to olive or reddish-brown often w/ pale stripe posteriorly; gill rakers 26-32 (30-36 in Calico RF).

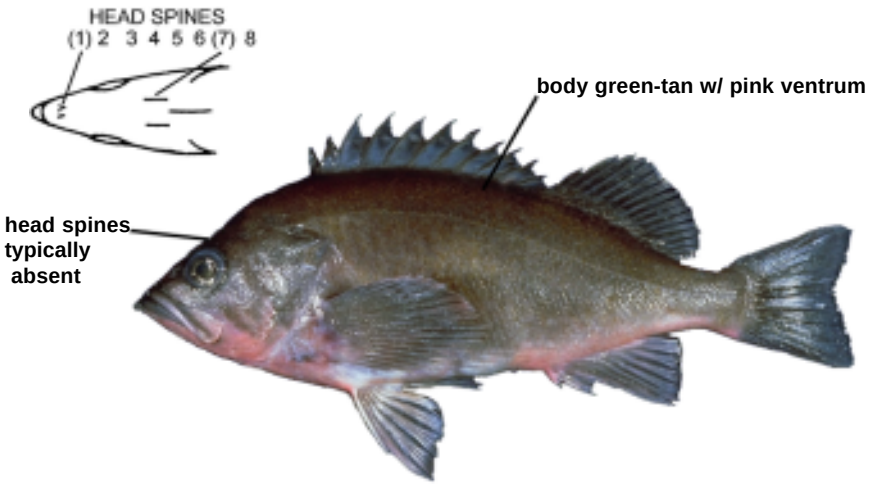
Distribution: Northern California - Baja California

STRONG HEAD SPINES RED/BLACK

CALICO ROCKFISH

Body color: Gray to greenish brown on back and sides, darker blotches under soft dorsal fin; ventral sides and pectoral and pelvic fins tinged w/ pink; orange-red-brown flecks on sides. (Also see underwater photo.)

Maximum length: 21 in (53 cm)
Maximum depth: 287 fm (525 m)
Common depth: 55-164 fm (100-300 m)
Peritoneum color: light to dark
Shape between eyes: convex
Counts: D:XIII,13-16, Ar:7-9, P1:17-19, GR:32-36, LLp:45-52, LLs:47-58, V:28



LIGHT DUSKY ROCKFISH *Sebastes ciliatus*

Similar species:
Dark Dusky RF - symphyseal knob small; peritoneum jet black; body uniform black or dark blue.
Black RF - anal-fin margin rounded w/ anterior slant; peritoneum light; spinous dorsal fin often w/ black spots; mandibular pores reduced (evident in Light Dusky RF); head spine count differs, spine 4 typically present.
Yellowtail RF - peritoneum light; head spine count differs; body w/ brassy wash; fins dusky yellow; dorsal rays typically 14 (typically 15 in Light Dusky RF).
Northern RF - typically 14 dorsal spines (typically 13 in Light Dusky RF); oblique light band on lower portion of pectoral fin (faint in Light Dusky RF).
Widow RF - anal-fin margin w/ strong posterior slant; head spine count differs; maxilla extends anterior to midorbit (maxilla extends to beyond midorbit in Light Dusky RF).

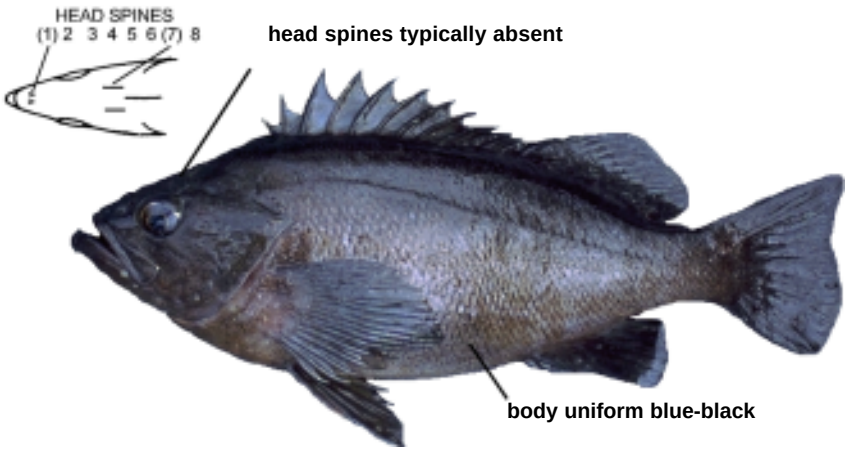
Distribution: Bering Sea - British Columbia

WEAK HEAD SPINES **BLACK**

LIGHT DUSKY ROCKFISH

Body color: Uniform black to dark blue on back and sides, darker mottling below posterior spinous dorsal and anterior soft dorsal fins; slightly lighter on belly.

Maximum length: 18 in (46 cm)
Maximum depth: 84 fm (153 m)
Common depth: <55 fm (<100 m)
Peritoneum color: dark
Shape between eyes: convex
Counts: D:XIII,13-16, Ar:7-8, P1:18-19, GR:32-36, LLp:41-54, LLs:46-53, V:28



DARK DUSKY ROCKFISH *Sebastes* sp. cf. *ciliatus*

Similar species:
Black RF - symphyseal knob obsolete; peritoneum white; body with light blotches at dorsal base and white belly; head spine count differs, spine 4 typically present; anal fin rounded (typically perpendicular in Dark Dusky RF).
Light Dusky RF - symphyseal knob larger; peritoneum light to dark; body typically tan, always light pink on belly.
Blue RF - body blue gray w/ dark bars across head and nape; head spine count differs.

Distribution: Aleutian Islands - British Columbia

WEAK HEAD SPINES **BLACK**

DARK DUSKY ROCKFISH

Body color: Bluish-black w/ darker mottling on back, paler color on sides, and grayish ventrally; fins dark. (Also see underwater photo.)

Maximum length: 21 in (53 cm)
Maximum depth: 300 fm (549 m)
Common depth: 0-300 fm (0-549 m)

Peritoneum color: light or dark
Shape between eyes: convex
Counts: D:XIII,15-17, Ar:8-10, P1:17-19, GR:32-38, LLp:47-53, LLs:50-56, V:26-27

BLUE ROCKFISH *Sebastes mystinus*

Similar species:
Black RF - anal-fin margin rounded w/ slight anterior slant; mouth larger, maxilla extends beyond midorbit; eye larger; head spine count differs; anal rays typically 7-8 (typically 9 in Blue RF); dorsal rays typically 15 (typically 16 in Blue RF).
Light and Dark Dusky RF - body gray or greenish brown in Light Dusky RF, uniform dark blue in Dark Dusky RF; head spines typically absent; mouth larger, maxilla extends beyond midorbit; eye larger; anal rays typically 7-8 (typically 9 in Blue RF); dorsal rays typically 15 (typically 16 in Blue RF).
Yellowtail RF and Olive RF - body dark olive; mouth larger, maxilla extends beyond midorbit; eye larger; head spine count differs.
Widow RF - anal-fin margin w/ strong posterior slant; head spine count typically differs; body dusky brown.

Distribution: Gulf of Alaska - Baja California

WEAK HEAD SPINES **BLACK**

BLUE ROCKFISH

Body color: Black on back, becoming gray mottled w/ black on sides, whitish ventrally; pelvic fins light, other fins dark. (Also see underwater photo.)

Maximum length: 25 in (64 cm)
Maximum depth: 200 fm (366 m)
Common depth: <200 fm (<366 m)

Peritoneum color: light
Shape between eyes: convex
Counts: D:XIII-XIV,13-16, Ar:7-9, P1:18-20, GR:32-39, LLp:46-55, LLs:50-55, V:26

BLACK ROCKFISH *Sebastes melanops*

Similar species:
Blue RF - mouth smaller, maxilla extends anterior to midorbit; eye smaller; anal-fin margin perpendicular; head spine count differs.
Light and Dark Dusky RF - body color gray to greenish brown in Light Dusky RF, uniform dark onto belly in Dark Dusky RF; anal-fin margin perpendicular; symphyseal knob present; mandibular pores evident (reduced in Black RF); head spines typically absent.
Yellowtail RF - body color brassy; fins washed w/ yellow; anal-fin margin perpendicular; head spine count differs.
Olive RF - body color olive-brown; fins olive to yellow; head spine count differs; anal-fin margin perpendicular.
Widow RF - body color dusky brown; anal-fin margin w/ strong posterior slant; head spine count differs; mouth smaller, extending anterior to midorbit (beyond midorbit in Black RF); pectoral rays typically 18 (typically 19 in Black RF).

Distribution: Aleutian Islands - Southern California

WEAK HEAD SPINES **BLACK**

BLACK ROCKFISH

Body color: Dark gray-green to black on back becoming silver on sides and abruptly red-orange to white ventrally; lips blackened; lower portions of pectoral, anal, and pelvic fins washed w/ red-orange to pink.

Maximum length: 28 in (71 cm)
Maximum depth: 205 fm (375 m)
Common depth: 55-164 fm (100-300 m)
Peritoneum color: light
Shape between eyes: convex
Counts: D:XII,13-17, Ar:7, P1:16-18, GR:33-36, LLp:44-53, LLs:58-70, V:26

SILVERGRAY ROCKFISH *Sebastes brevispinis*

Similar species:
Bocaccio - body reddish; head spine count differs; gill rakers 27-32 (33-36 in Silvergray RF); anal rays typically 8 (7 in Silvergray RF); symphyseal knob absent; anal spines small.
Shortbelly RF - anus midway between pelvic-fin base and anal-fin origin; body color reddish; head spine count differs; maximum length 32 cm.
Chilipepper RF - maxilla extends to midorbit; body reddish, lateral line clear red; anal rays 8-9 (7 in Silvergray RF); anal spines small.
Dusky RF - head spines typically absent; body deeper; body brown to tan.
Yellowtail RF - body brassy w/ yellow fins; head spine count differs; body deeper.

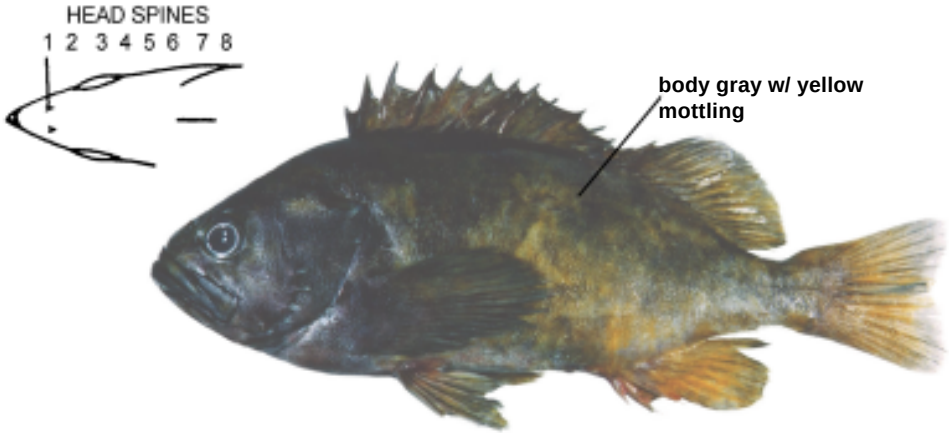
Distribution: Bering Sea - Southern California

WEAK HEAD SPINES **BLACK**

SILVERGRAY ROCKFISH

Body color: Black to gray w/ yellow mottling; three dark bars radiate posteriorly from eye.

Maximum length: 20 in (50 cm)
Maximum depth: 301 fm (550 m)
Common depth: ? fm (? m)
Peritoneum color: dark
Shape between eyes: convex
Counts: D:XIV,14-17, Ar:7-9, P1:18-20, GR:34-41, LLp:37-52, LLs:48-78, V:29-30



GRAY ROCKFISH *Sebastes glaucus*

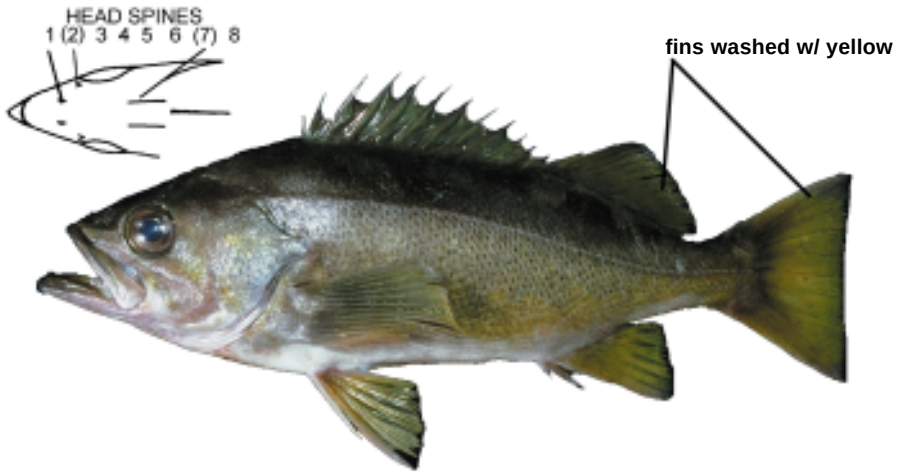
Similar species:
Light and Dark Dusky RF - body tan to dark blue-black; symphyseal knob moderate to small (symphyseal knob absent in Gray RF); pectoral rays typically 18 (typically 19 in Gray RF).
Black RF - body black to gray, white ventrally; body slender (robust in Gray RF); head spine count differs; peritoneum typically light; head spine count typically differs.
Yellowtail RF - symphyseal knob strong (absent in Gray RF); peritoneum light.

Distribution: Aleutian Islands

GRAY ROCKFISH

Body color: Grayish brown w/ brassy yellow wash becoming light gray on side and white ventrally; sides finely speckled w/ brown; several vague light blotches on back; fins dusky yellow. (Also see underwater photo.)

Maximum length: 26 in (66 cm)
Maximum depth: 300 fm (549 m)
Common depth: 27-137 fm (50-250 m)
Peritoneum color: light
Shape between eyes: convex
Counts: D:XII-XIII,14-16, Ar:7-9, P1:17-19, GR:33-39, LLp:49-60, LLs:55-60, V:26



YELLOWTAIL ROCKFISH *Sebastes flavidus*

Similar species:

Olive RF - anal rays typically 9 (7-8 in Yellowtail RF); pale areas on back more prominent; pectoral rays completely dark (often edged w/ pink in Yellowtail RF); pectoral rays typically 17 (typically 18 in Yellowtail RF); fin membranes dark.

Widow RF - anal fin w/ strong posterior slant (perpendicular in Yellowtail RF); body color dusky brown; pectoral, pelvic, and anal fins w/ black membranes (dusky in Yellowtail RF); mouth small, maxilla to midorbit (well past midorbit in Yellowtail RF).

Light and Dark Dusky RF - peritoneum typically gray to black; dorsal rays 15-16 (typically 14 in Yellowtail RF); fin membranes dark.

Black RF - anal-fin margin rounded; body color black to blue-black, white ventrally; pectoral rays typically 19 (typically 18 in Yellowtail RF).

Distribution: Gulf of Alaska - Southern California

WEAK HEAD SPINES **BLACK**

YELLOWTAIL ROCKFISH

Body color: Dark olive-gray dorsally becoming lighter gray on lower sides and white ventrally; clear splotches evident along the top of back; sides finely speckled w/ dark gray; fins dark olive w/ yellow.

Maximum length: 24 in (61 cm)
Maximum depth: 80 fm (146 m)
Common depth: 0-16 fm (0-30 m)
Peritoneum color: light
Shape between eyes: convex
Counts: D:XII-XIII,15-17, Ar:8-10, P1:17-19, GR:29-36, LLp:50-57, LLs:?-?, V:26

OLIVE ROCKFISH *Sebastes serranoides*

Similar species:

Yellowtail RF - anal rays typically 8 (typically 9 in Olive RF); less prominent pale areas on back; pectoral rays often edged w/ pink (none in Olive RF); pectoral rays typically 18 (typically 17 in Olive RF).

Widow RF - anal-fin margin w/ strong posterior slant; fin membranes black; peritoneum dark; anal rays typically 8 (typically 9 in Olive RF); pectoral rays typically 18 (typically 17 in Olive RF); mouth small, maxilla to midorbit (well past midorbit in Olive RF).

Black RF - anal-fin margin rounded; body color black to blue-black, white ventrally; pectoral rays typically 19 (17 in Olive RF); anal rays typically 8 (typically 9 in Olive RF).

Distribution: Oregon - Baja California

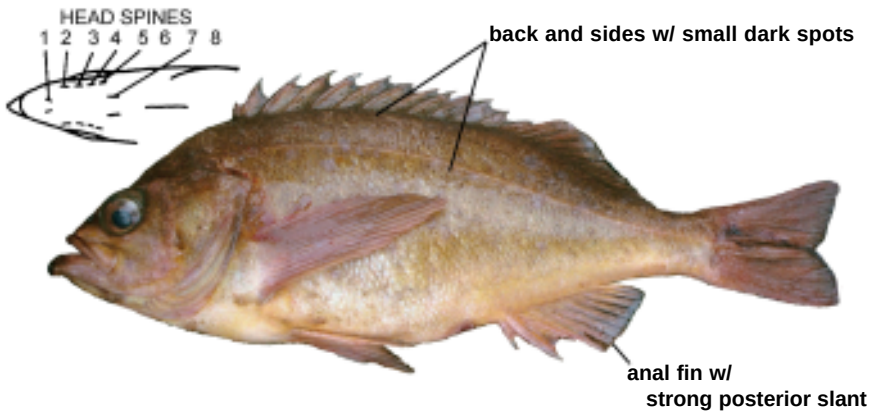
WEAK HEAD SPINES **BLACK**

OLIVE ROCKFISH

Body color: Light brown or tan w/ dark brown or black spotting and vague mottling on back and sides; tips of jaws blackened; membranes of lower fins blackened.

Maximum length: 22 in (56 cm)
Maximum depth: 200 fm (366 m)
Common depth: 16-200 fm (30-366 m)

Peritoneum color: dark
Shape between eyes: convex
Counts: D:XIII,13-16, Ar:7-8, P1:17-19, GR:29-34, LLp:45-55, LLs:?-?, V:27



SPECKLED ROCKFISH *Sebastes ovalis*

Similar species:
Bank RF - body typically dusky red to gray; lateral line in clear zone; gill rakers typically 34-35 (31-33 in Speckled RF).
Brown RF - operculum w/ dark blotch; body w/o small dark spots; maxilla extends to rear of orbit (midorbit in speckled); head spines strong, spine 8 present.
Yellowtail RF - peritoneum light; head spine count differs; anal-fin margin perpendicular.
Widow RF - speckling absent (present in Speckled RF); pelvic- and anal-fin membranes black (dusky in Speckled RF); gill rakers 34-38 and lateral line pores 52-60 (rakers 29-34 and pores 45-55 in Speckled RF).

Distribution: Washington - Baja California

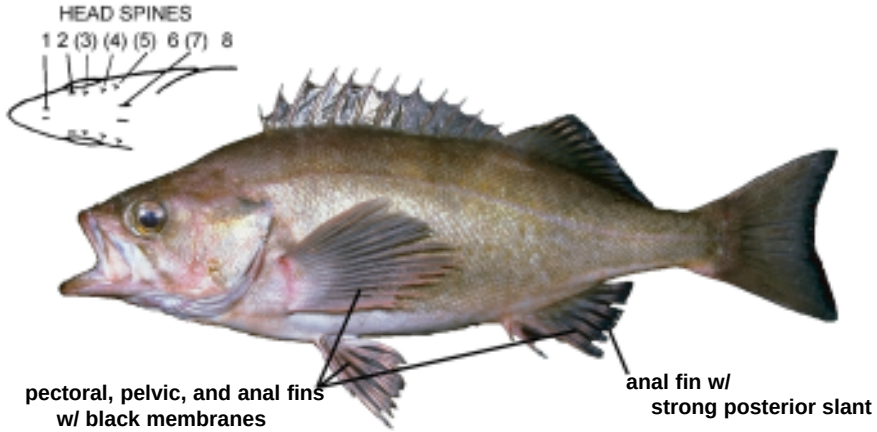
WEAK HEAD SPINES **BLACK**

SPECKLED ROCKFISH

Body color: Uniform dusky-brown w/ traces of light yellow-red; fins brown to black, membranes of pectoral, pelvic, and anal fins black. Specimens < 10 in (25cm) w/ vague streaks of orange.

Maximum length: 23 in (59 cm)
Maximum depth: 205 fm (375 m)
Common depth: 55-192 fm (100-350 m)

Peritoneum color: dark
Shape between eyes: convex
Counts: D:XIII,14-16, Ar:7-10, P1:17-19, GR:34-38, LLp:52-60, LLs:58-66, V:26-27



WIDOW ROCKFISH *Sebastes entomelas*

Similar species:
Yellowtail RF - mouth large, maxilla extends beyond midorbit (maxilla extends anterior to midorbit in Widow RF); body brassy w/ yellow fins; anal-fin margin perpendicular; peritoneum light.
Black RF - mouth large, maxilla extends beyond midorbit (maxilla extends anterior to midorbit in Widow RF) body dusky gray to black; anal-fin margin rounded; pectoral rays typically 19 (typically 18 in Widow RF).
Blue RF - body blue to black w/ stripes on nape; body deep; dorsal rays typically 16 (typically 15 in Widow RF).
Light and Dark Dusky RF - mouth large, maxilla extends beyond midorbit (maxilla anterior to midorbit in Widow RF); body deep; anal-fin margin perpendicular.
Speckled RF - speckling present on dorsum (absent in Widow RF); anal and pelvic-fin membranes dusky (black in Widow RF); gill rakers 29-34 and lateral line pores 45-55 (rakers 34-38 and pores 52-60 in Widow RF).

Distribution: Gulf of Alaska - Baja California

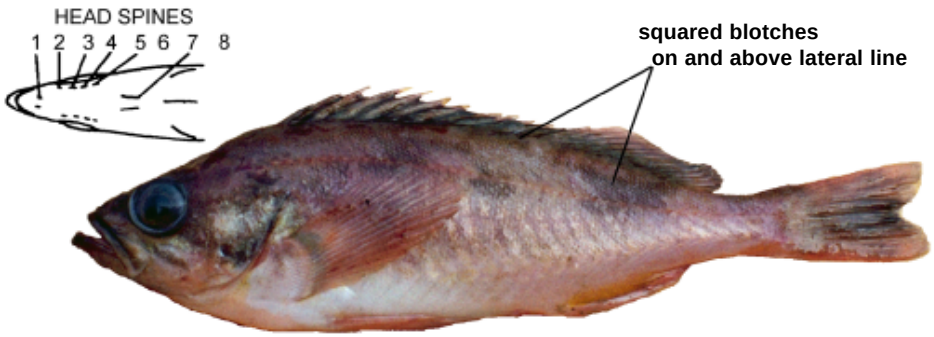
WEAK HEAD SPINES

WIDOW ROCKFISH

Body color: Dusty-tan w/ several angular, dark-brown blotches on or just above lateral line.

Maximum length: 11 in (29 cm)
Maximum depth: 100 fm (183 m)
Common depth: 10-100 fm (18-183 m)

Peritoneum color: dark
Shape between eyes: convex
Counts: D:XII-XIV,14-17, Ar:6-7, P1:16-18, GR:35-43, LLp:49-58, LLs:57-67, V:27



SQUARESPOT ROCKFISH *Sebastes hopkinsi*

Similar species:
Pygmy RF - body w/ squarish blotches at dorsal-fin base only; head spines strong and differ in count.

Distribution: Oregon - Baja California

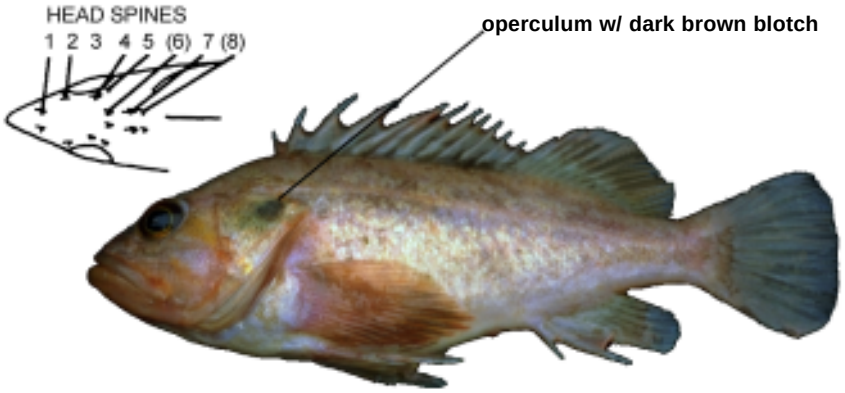
WEAK HEAD SPINES **BLACK**

SQUARESPOT ROCKFISH

Body color: Light brown mottled w/ dark brown; a dark blotch on upper portion of opercle, fins dusky-pink. (Also see underwater photo.)

Maximum length: 22 in (56 cm)
Maximum depth: 70 fm (128 m)
Common depth: >70 fm (>128 m)

Peritoneum color: light
Shape between eyes: convex to flat
Counts: D:XIII,12-15, Ar:5-8, P1:15-19, GR:25-29, LLp:40-50, LLs:45-52, V:26-27



BROWN ROCKFISH *Sebastes auriculatus*

Similar species:
Quillback RF - body mottled yellow anteriorly w/ freckles on breast; dorsal-fin membranes deeply incised; head spine count typically differs.
Copper RF - body mottled w/ white and yellow; posterior two-thirds of lateral line clear; head spine count differs.
Grass RF - body green; gill rakers short and stubby, 17-25 (25-29, not short in Brown RF).
Speckled RF - body w/ small dark spots; head spines weak and differ in count; maxilla extends to midorbit (to rear of orbit or beyond in Brown RF).

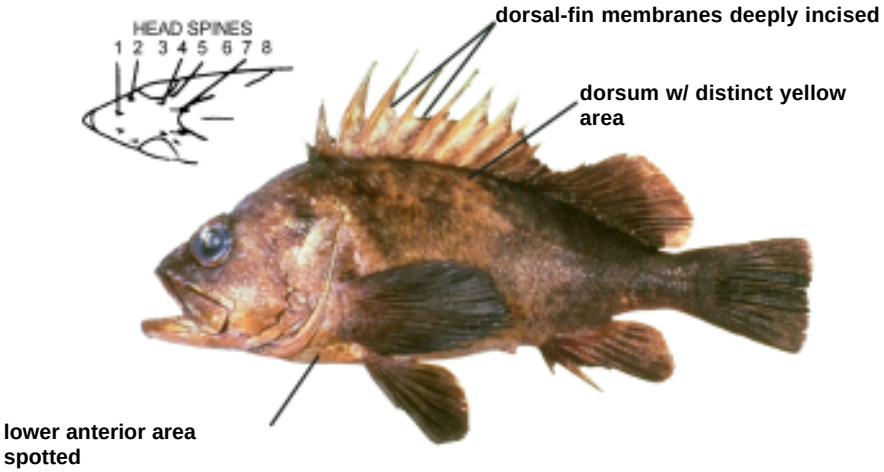
Distribution: Gulf of Alaska - Baja California

STRONG HEAD SPINES **BLACK**

BROWN ROCKFISH

Body color: Gray to brown mottled w/ yellow on anterior portion of body, and w/ orange-brown spotting on lower anterior of body; fins dark, except anterior portion of spinous dorsal fin, which is splashed w/ yellow. (Also see underwater photo.)

Maximum length: 24 in (61 cm)
Maximum depth: 150 fm (274 m)
Common depth: 5-80 fm (9-147 m)
Peritoneum color: light
Shape between eyes: convex to concave
Counts: D:XIII,12-14, Ar:6-7, P1:16-18, GR:29-33, LLp:34-48, LLs:39-45, V:26



QUILLBACK ROCKFISH *Sebastes maliger*

Similar species:
Brown RF - body brown w/ dark mottling; dorsal-fin membranes not deeply incised; head spine count typically differs.
Copper RF - posterior two-thirds of lateral line clear; dorsal-fin membranes not deeply incised; anal rays typically 6 (typically 7 in Quillback RF).
China RF - body black w/ yellow stripe along lateral line and across nape; dorsal-fin margin not deeply incised.

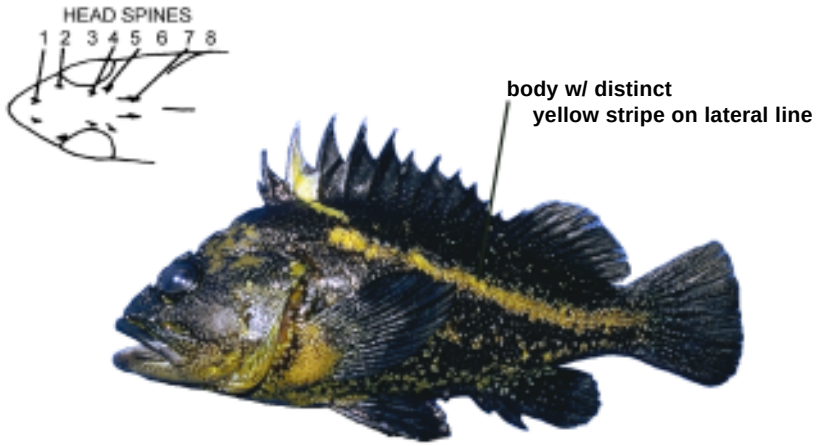
Distribution: Gulf of Alaska - Southern California

STRONG HEAD SPINES **BLACK**

QUILLBACK ROCKFISH

Body color: Blue-black mottled w/ yellow; a broad, irregular yellow stripe present, whitish or bluish-white spotting on body; fins dark. (Also see underwater photo.)

Maximum length: 17 in (44 cm)
Maximum depth: 70 fm (128 m)
Common depth: 10-50 fm (18-92 m)
Peritoneum color: light
Shape between eyes: concave
Counts: D:XIII,12-14, Ar:6-8, P1:17-19, GR:26-31, LLp:37-48, LLs:43-48, V:26



CHINA ROCKFISH *Sebastes nebulosus*

Similar species:
Black-and-Yellow RF - body w/ irregular yellow blotches on back; anal rays typically 6 (typically 7 in China RF).
Quillback RF - body brown w/ yellow mottling; dorsal-fin margins deeply incised.
Brown RF - body brown w/ dark brown mottling; head spine count typically differs.

Distribution: Gulf of Alaska - Southern California

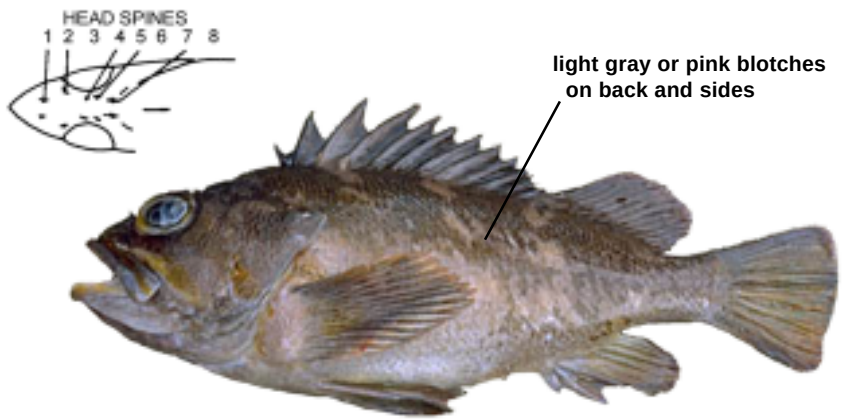
STRONG HEAD SPINES **BLACK**

CHINA ROCKFISH

Body color: Olive-brown w/ irregular clear, light-gray or pink blotches on back, lateral line, and on lower sides; clear areas tend to run together on lower sides.

Maximum length: 17 in (43 cm)
Maximum depth: 30 fm (55 m)
Common depth: 0-9 fm (0-17 m)

Peritoneum color: light
Shape between eyes: concave
Counts: D:XIII,12-13, Ar:5-7, P1:16-18, GR:26-30, LLp:35-49, LLs:?-?, V:26



GOPHER ROCKFISH *Sebastes carnatus*

Similar species:
Black-and-Yellow RF - body black w/ yellow blotches (brown w/ flesh-colored blotches in Gopher RF); gill rakers typically 27-28 (typically 28-30 in Gopher RF).
Quillback RF - body w/ broad yellow mottling (irregular, small, and flesh-colored blotches in Gopher RF); spinous dorsal-fin margin deeply incised.
Brown RF - body w/ darker brown mottling (irregular, small, and flesh-colored blotches in Gopher RF); head spines 6 and 8 typically present.

Distribution: Northern California - Baja California

STRONG HEAD SPINES **BLACK**

GOPHER ROCKFISH

Body color: Black, w/ irregular clear yellow blotches on back, lateral line, and lower sides; clear areas tend to run together on lower sides; yellow patch on membranes between anterior dorsal spines.

Maximum length: 15 in (38 cm)
Maximum depth: 19 fm (37 m)
Common depth: 0-10 fm (0-19 m)

Peritoneum color: light
Shape between eyes: concave
Counts: D:XIII,12-14, Ar:5-7, P1:17-18, GR:25-30, LLp:35-46, LLs:?-?, V:26

BLACK-AND-YELLOW ROCKFISH *Sebastes chrysomelas*

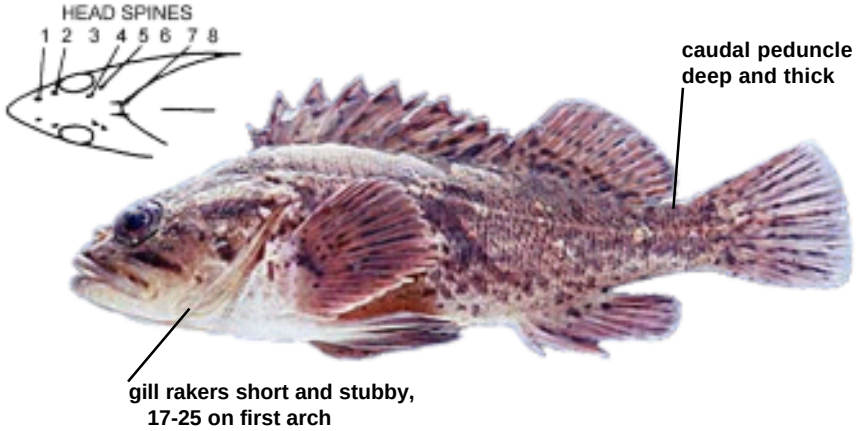
Similar species:
Gopher RF - body brown w/ flesh-colored blotches (black w/ yellow in Black-and-Yellow RF); gill rakers typically 28-30 (typically 27-28 in Black-and-Yellow RF)
China RF - body black w/ broad yellow stripe; anal rays typically 7 (tyically 6 in Black-and-Yellow RF).
Quillback RF - body brown w/ yellow mottling; spinous dorsal-fin membranes deeply incised; anal rays typically 7 (typically 6 in Black-and-Yellow RF).
Brown RF - body brown w/ darker brown mottling; anal rays typically 7 (typically 6 in Black-and-Yellow RF); head spines 6 and 8 typically present.

BLACK-AND-YELLOW ROCKFISH

Body color: Dark olivaceous green, lighter ventrally; fins dark.

Maximum length: 22 in (56 cm)
Maximum depth: 31 fm (56 m)
Common depth: 0-8 fm (0-15 m)

Peritoneum color: light
Shape between eyes: convex
Counts: D:XIII,12-14, Ar:6, P1:18-20, GR:17-25, LLp:40-49, LLs:?-?, V:26



GRASS ROCKFISH *Sebastes rastrelliger*

Similar species:
Brown RF - gill rakers 25-29, not short; dark blotch on operculum (absent in Grass RF); body brown.
Gopher RF - gill rakers 26-30, not short; body brown, mottled w/ light areas.
Black RF - gill rakers 32-39, not short; body black to gray; head spines weak and count differs.
Kelp RF - gill rakers 28-34, not short; pectoral fin reaches vent (does not reach vent in Grass RF); body brown.

Distribution: Oregon - Baja California

STRONG HEAD SPINES **BLACK**

GRASS ROCKFISH

Body color: Dark-olive gray to olive-brown, darker w/ mottling, fins same color as body.

Maximum length: 17 in (43 cm)
Maximum depth: 25 fm (46 m)
Common depth: 5-7 fm (9-12 m)

Peritoneum color: light
Shape between eyes: convex
Counts: D:XIII,13-15, Ar:6-7, P1:16-18, GR:28-34, LLp:36-45, LLs:?-?, V:26

KELP ROCKFISH *Sebastes atrovirens*

Similar species:
Grass RF - gill rakers short and stubby, 17-25 (28-34 not short in Kelp RF); pectoral fin does not reach vent (reaches vent in Kelp RF); head spine count typically differs; body green (olive-brown in Kelp RF).
Brown RF - dark blotch on operculum (absent in Kelp RF); head spines 6 and 8 typically present.
Gopher RF - body mottled w/ light areas; gill rakers 26-30 (typically 31-34 in Kelp RF).

Distribution: Northern California - Baja California

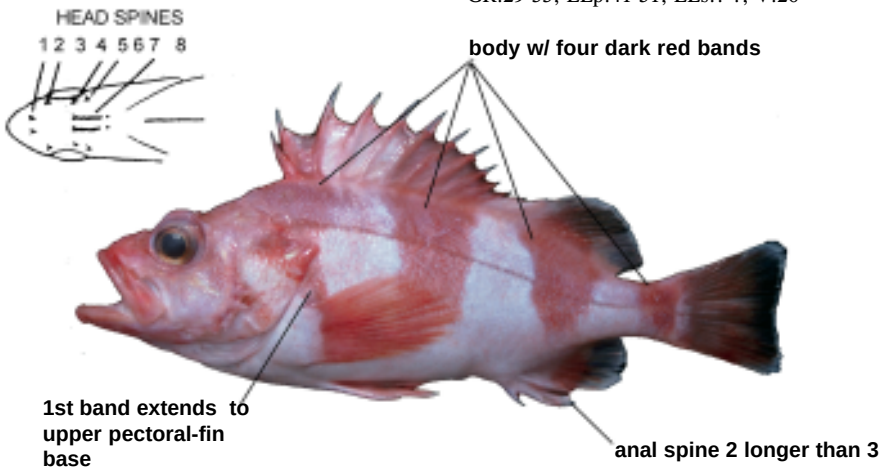
STRONG HEAD SPINES **BLACK**

KELP ROCKFISH

Body color: Light pink w/ several broad vertical dark-red bands on body; bands faded in large specimens.

Maximum length: 22 in (56 cm)
Maximum depth: 343 fm (625 m)
Common depth: 82-219 fm (150-400 m)

Peritoneum color: dark
Shape between eyes: concave to flat
Counts: D:XIII,13-15, Ar:6-8, P1:17-20, GR:29-33, LLp:41-51, LLs:?-?, V:26



REDBANDED ROCKFISH *Sebastes babcocki*

Similar species:
Flag RF - first red band stops ventrally at lower edge of operculum; pectoral rays typically 17 (typically 19 in Redbanded RF); rare north of San Francisco.
Tiger RF - all head spines present; body red w/ black or crimson bars; anal spine 2 equal to or shorter than 3.
Treefish - body dark olive dorsally, yellowish ventrally w/ 5-6 black-olive bands; head spine 8 present.
Shortraker RF - body typically uniform pink to orange-pink occasionally w/ faint darker red bands above lateral line; head spine count differs; anal spine 2 shorter than 3; peritoneum light w/ black dots; pored lateral line scales 28-32 (42-51 in Redbanded RF).

Distribution: Bering Sea - Southern California

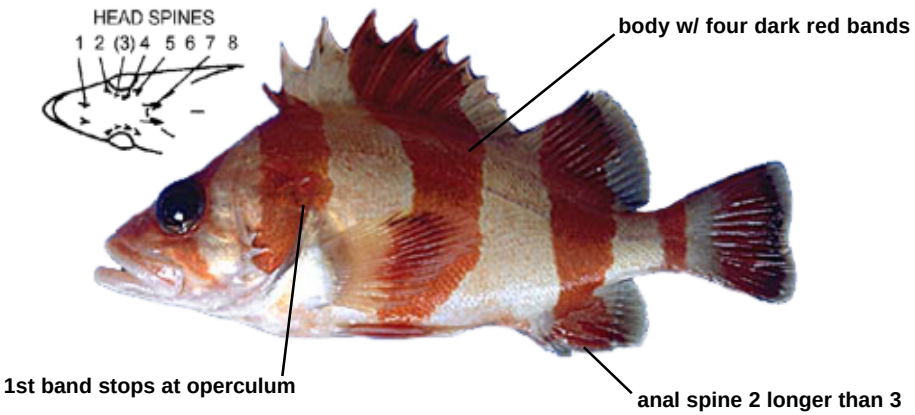
STRONG HEAD SPINES **BANDED**

REDBANDED ROCKFISH

Body color: Light pink w/ several broad vertical dark-red bands on body; bands faded in large specimens.

Maximum length: 25 in (64 cm)
Maximum depth: 165 fm (302 m)
Common depth: 16-100 fm (30-183 m)

Peritoneum color: light to dark
Shape between eyes: concave to flat
Counts: D:XIII,12-15, Ar:6-8, P1:16-18, GR:26-30, LLp:39-49, LLs:?-?, V:26



FLAG ROCKFISH *Sebastes rubrivinctus*

Similar species:
Redbanded RF - first red band passes over operculum and stops at pectoral-fin base; pectoral rays typically 19 (typically 17 in Flag RF); uncommon south of San Francisco.
Tiger RF - all head spines present; body red w/ black or crimson bars; anal spine 2 equal to or shorter than 3.
Treefish - body dark olive dorsally, yellowish ventrally w/ 5-6 black-olive bands; head spine 8 present.
Shortraker RF - body typically uniform pink to orange-pink occasionally w/ faint darker red bands above lateral line; head spine count differs; anal spine 2 shorter than 3; peritoneum light w/ black dots; pored lateral line scales 28-32 (39-49 in Flag RF).

Distribution: Central California - Baja California

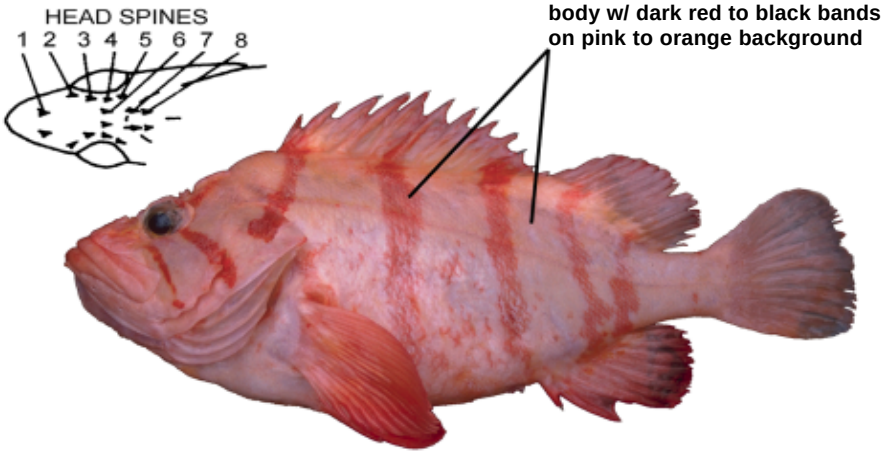
STRONG HEAD SPINES **BANDED**

FLAG ROCKFISH

Body color: Light red to orange w/ several broad, vertical black-red bands on body; in young specimens, tips of ventral and anal fins blackened. (Also see underwater photo.)

Maximum length: 24 in (61 cm)
Maximum depth: 150 fm (274 m)
Common depth: 30-150 fm (55-274 m)

Peritoneum color: light
Shape between eyes: concave
Counts: D:XII-XIV,12-15, Ar:6-7, P1:18-20, GR:27-32, LLp:36-50, LLs:44-53, V:26



TIGER ROCKFISH *Sebastes nigrocinctus*

Similar species:
Redbanded RF and **Flag RF** - red bands on light pink background; head spine 6 and 8 absent.
Treefish - black bands on olive-yellow background; head spine count differs, spine 3 and 6 absent.

Distribution: Gulf of Alaska - Southern California

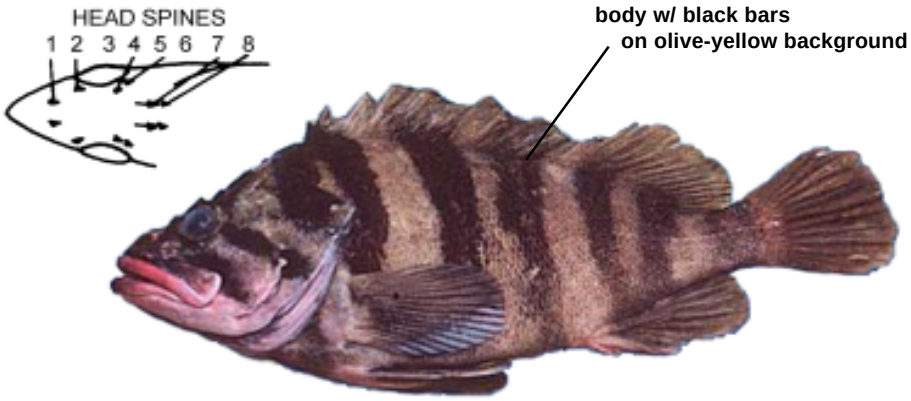
STRONG HEAD SPINES **BANDED**

TIGER ROCKFISH

Body color: Dark olive above, yellowish below; sides of body w/ 5-6 distinct, vertical, black-olive bands; lips tinged w/ pink; anal fin dark.

Maximum length: 16 in (40 cm)
Maximum depth: 25 fm (46 m)
Common depth: <25 fm (<46 m)

Peritoneum color: light
Shape between eyes: concave
Counts: D:XIII,13-15, Ar:5-7, P1:17-19, GR:17-30, LLp:44-54, LLs:?-?, V:26



TREEFISH *Sebastes serriceps*

Similar species:
Redbanded RF and **Flag RF** - red bands on light pink background; head spine 8 absent.
Tiger RF - black bands on light red background coloration; head spine count differs.

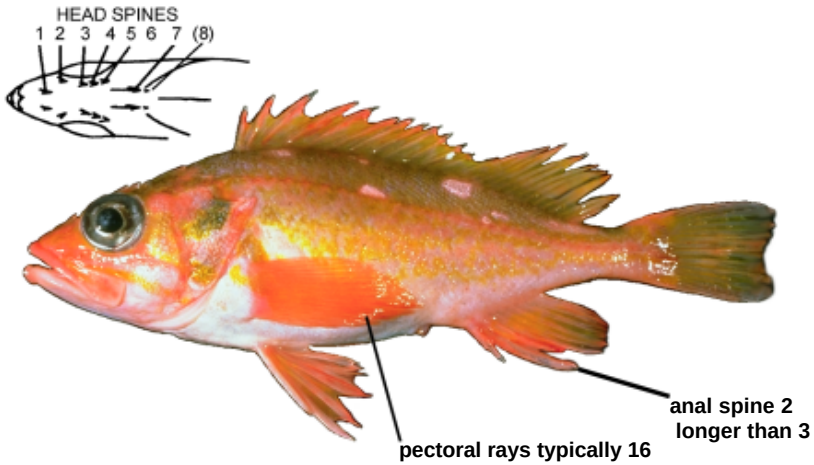
Distribution: Northern California - Baja California

STRONG HEAD SPINES **BANDED**

TREEFISH

Body color: Orange-yellow w/ light olivaceous mottling on back; 4 or 5 clear, white blotches, bordered w/ light pink or orange on upper part of body; dusky area on opercle; fins pink, w/ some yellow-green.

Maximum length: 16 in (41 cm)
Maximum depth: 300 fm (549 m)
Common depth: 55-192 fm (100-350 m)
Peritoneum color: dark to gray w/ spots
Shape between eyes: concave
Counts: D:XII-XIV,12-14, Ar:6-7, P1:15-18, GR:28-33, LLp:34-45, LLs:42-48, V:26



ROSETHORN ROCKFISH *Sebastes helvomaculatus*

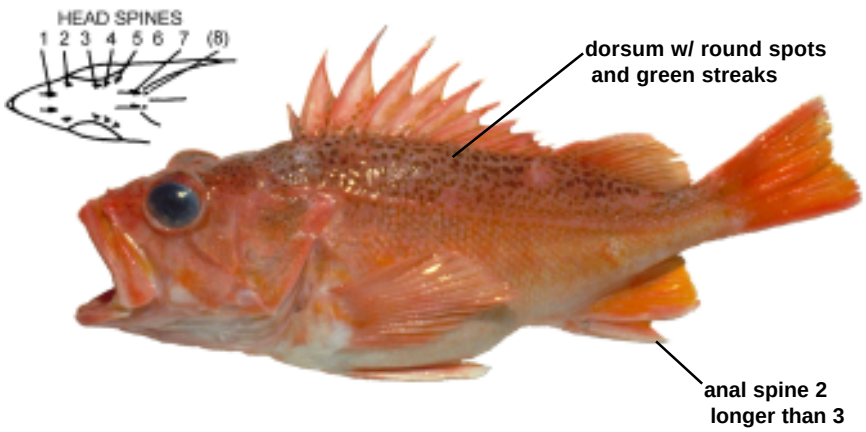
Similar species:
Greenspotted RF - body typically w/ round green spots and streaks on back; pectoral rays typically 17; gill rakers 31-36 (typically 28-31 in Rosethorn RF).
Rosy RF - body dark red w/ purple on back; purple band typically on nape; pectoral rays typically 17.
Pinkrose RF - pectoral rays typically 17; body uniform pink-red.
Swordspine RF - pectoral rays typically 17; prominent symphyseal knob on projecting lower jaw (small knob on jaws of equal length in Rosethorn RF); gill rakers 34-40 (28-33 in Rosethorn RF).
Pink RF and **Greenblotched RF** - body w/ olive-green wavy lines; pectoral rays typically 17.
Freckled RF - prominent knobs on upper jaw (absent in Rosethorn RF); dense freckling on back (mottled in Rosethorn RF); gill rakers 34-39 (28-33 in Rosethorn RF); pectoral rays typically 17; dorsal rays typically 12 (typically 13 in Rosethorn RF).
Distribution: Gulf of Alaska - Baja California

STRONG HEAD SPINES WHITE-SPOTTED RED

ROSETHORN ROCKFISH

Body color: Orange to yellow-pink w/ round, green spots and streaks on back and upper sides; 3 to 5 whitish blotches, bordered w/ light pink or orange, on back; fins yellow-pink.

Maximum length: 20 in (51 cm)
Maximum depth: 110 fm (201 m)
Common depth: 27-110 fm (49-201 m)
Peritoneum color: gray to dark
Shape between eyes: concave
Counts: D:XIII,11-15, Ar:5-7, P1:16-18, GR:31-36, LLp:35-43, LLs:?-?, V:26-27



GREENSPOTTED ROCKFISH *Sebastes chlorostictus*

Similar species:
Rosethorn RF - body typically w/ faint green spots and streaks; pectoral rays typically 16 (17 in Greenspotted RF); gill rakers typically 28-31 (31-36 in Greenspotted RF).
Rosy RF - body red, mottled w/ purple, typically w/ purple band on nape, w/out green spots and streaks.
Pinkrose RF - body uniform pinkish-red,w/out green spots and streaks.
Swordspine RF - body w/out green spots or streaks; mottled w/ red or purple; symphyseal knob prominent (absent in Greenspotted RF); lower jaw projects beyond upper jaw (jaws equal in Greenspotted RF); gill rakers typically 35-40 (31-36 in Greenspotted RF).
Pink RF and **Greenblotched RF** - body w/ irregular greenish blotches and wavy lines on back (round spots in Greenspotted RF).
Freckled RF - prominent knobs on upper jaw (absent in Greenspotted RF).

Distribution: Washington - Baja California

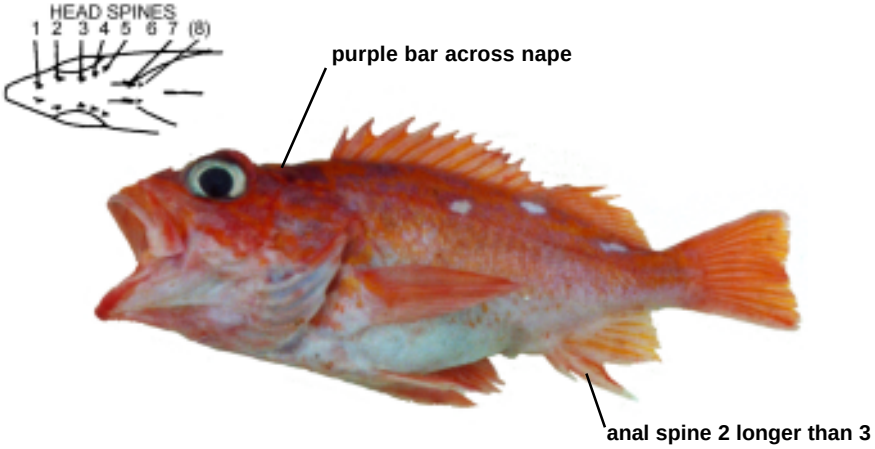
STRONG HEAD SPINES WHITE-SPOTTED RED

GREENSPOTTED ROCKFISH

Body color: Orange-red to purple w/ yellow wash on lower sides; 4 or 5 clear, whitish blotches, bordered w/ purple-red on upper part of body; fins pink w/ yellow. (See also underwater photo.)

Maximum length: 14 in (36 cm)
Maximum depth: 70 fm (128 m)
Common depth: 16-25 fm (30-46 m)

Peritoneum color: gray to dark
Shape between eyes: concave
Counts: D:XIII-XIV,11-14, Ar:5-7, P1:16-18, GR:29-34, LLp:36-46, LLs:?-?, V:26



ROSY ROCKFISH *Sebastes rosaceus*

Similar species:
Rosethorn RF - body orange-red, white spots bordered by light pink or orange; pectoral rays typically 16 (typically 17 in Rosy RF); caudal peduncle typically thinner, depth less than orbit width (greater than orbit width in Rosy RF).
Pinkrose RF - body uniform red; caudal peduncle depth typically less than orbit width (greater than orbit width in Rosy RF).
Starry RF - body covered w/ white dots; gill rakers 25-30 (29-34 in Rosy RF).
Swordspine RF - lower jaw projecting (jaws equal in Rosy RF); symphyseal knob prominent (absent or small in Rosy RF); gill rakers 34-40 (29-34 in Rosy RF).
Greenspotted RF - body orange-red w/ green spots, white spots bordered by light pink or orange; caudal peduncle typically thinner,depth less than orbit width (greater than orbit width in Rosy RF).
Pink RF and **Greenblotched RF** - body w/ irregular greenish blotches.
Freckled RF - prominent knobs bordering notch in upper jaw and dense green freckling on back (absent in Rosy RF); gill rakers 34-39 (29-34 in Rosy RF).
Distribution: Washington - Baja California

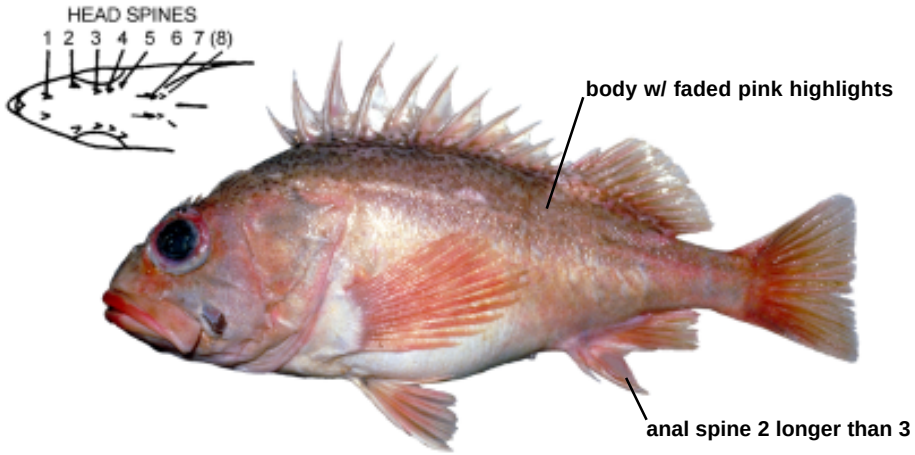
STRONG HEAD SPINES WHITE-SPOTTED RED

ROSY ROCKFISH

Body color: Faded pink w/ vague green streaks and small blotches on back; 3 to 5 whitish blotches on back; fins yellow-pink.

Maximum length: 22 in (56 cm)
Maximum depth: 200 fm (366 m)
Common depth: 42-200 fm (76-366 m)

Peritoneum color: dark or light
Shape between eyes: concave
Counts: D:XIII,11-13, Ar:5-7, P1:17-18, GR:26-31, LLp:34-42, LLs:?-?, V:26



PINK ROCKFISH *Sebastes eos*

Similar species:
Greenblotched RF - pectoral rays typically 17 (typically 18 in Pink RF); gill rakers typically 30-34 (26-31 in Pink RF); spines absent on lower edge of operculum (1-2 in Pink RF); upper gill rakers not rudimentary (rudimentary in Pink RF).
Greenspotted RF - body w/ round green spots; upper gill rakers not rudimentary (rudimentary in Pink RF); scales on lower jaw few or absent (lower jaw scaled in Pink RF); gill rakers 31-36 (26-31 in Pink RF).
Rosethorn RF - pectoral rays typically 16 (typically 17-18 in Pink RF); upper gill rakers not rudimentary (rudimentary in Pink RF).
Freckled RF - prominent knobs bordering notch in upper jaw (absent in Pink RF); back w/ dense green freckling; gill rakers 34-39 (26-31 in Pink RF); upper gill rakers not rudimentary (rudimentary in Pink RF).
Swordspine RF - lower jaw projects (jaws equal in Pink RF); symphyseal knob prominent (absent or small in Pink RF); gill rakers 34-40 (26-31 in Pink RF).
Rosy RF - body red, mottled w/ purple (green spots and streaks in Pink RF)
Distribution: Oregon - Baja California

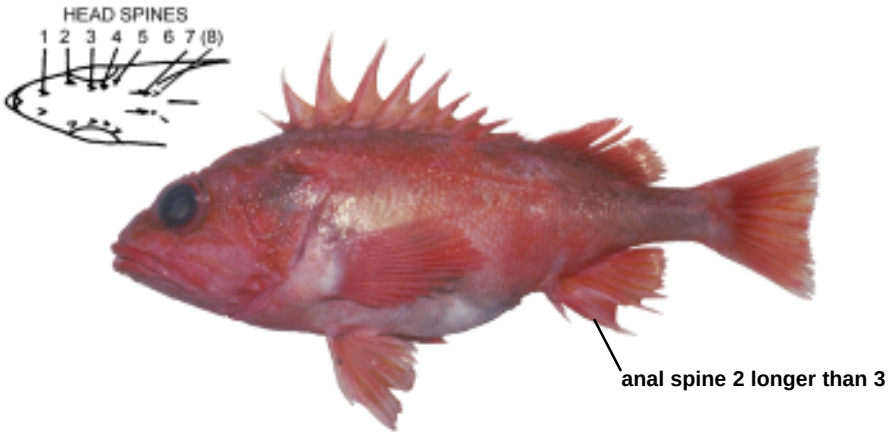
STRONG HEAD SPINES WHITE-SPOTTED RED

PINK ROCKFISH

Body color: Faded pink w/ vague green streaks and small blotches on back; 3 to 5 whitish blotches on back; fins yellow-pink.

Maximum length: 22 in (56 cm)
Maximum depth: 217 fm (396 m)
Common depth: 33-217 fm (61-396 m)

Peritoneum color: dark or light
Shape between eyes: concave
Counts: D:XIII-XIV,11-13, Ar:5-6, P1:16-18, GR:28-34, LLp:34-42, LLs:?-?, V:26



GREENBLOTCHED ROCKFISH *Sebastes rosenblatti*

Similar species:
Pink RF - pectoral rays typically 18 (typically 17 in Greenblotched RF); gill rakers typically 26-30 (30-34 in Greenblotched RF); spines on lower edge of operculum typically 1-2 (absent in Greenblotched RF); upper gill rakers rudimentary (not rudimentary in Greenblotched RF).
Greenspotted RF - body w/ round green spots; scales on lower jaw few or absent (lower jaw scaled in Greenblotched RF).
Rosethorn RF - pectoral rays typically 16 (17 in Greenblotched RF).
Freckled RF - prominent knobs bordering notch in upper jaw (absent in Greenblotched RF); back w/ dense freckling; gill rakers 34-39 (30-34 in Greenblotched RF).
Rosy RF - body red mottled w/ purple, w/out green spots and streaks; scales on lower jaw few or absent (scaled in Greenblotched RF).
Pinkrose RF - body uniform red; scales on lower jaw few or absent (scaled in Greenblotched RF).
Distribution: Central California - Baja California

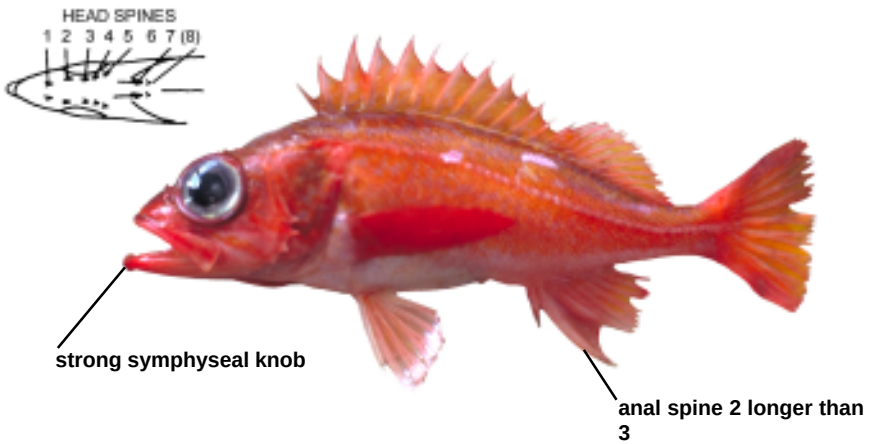
STRONG HEAD SPINES WHITE-SPOTTED RED

GREENBLOTCHED ROCKFISH

Body color: Light red, washed w/ green above lateral line and yellow below; 3 or 4 whitish blotches, bordered w/ light green on back; fins red w/ yellow-green membranes.

Maximum length: 15 in (39 cm)
Maximum depth: 237 fm (433 m)
Common depth: 38-237 fm (70-433 m)

Peritoneum color: dark
Shape between eyes: concave
Counts: D:XIII,12-14, Ar:5-7, P1:16-18, GR:34-40, LLp:34-44, LLs:?-?, V:26



SWORDSPINE ROCKFISH *Sebastes ensifer*

Similar species:
Rosethorn RF and **Greenspotted RF** - body w/ green mottling or spots; symphyseal knob weak and jaws about equal in length; gill rakers 28-33 (34-40 in Swordspine RF).
Rosy RF - body orange-red to purple; jaws about equal in length; gill rakers typically 29-34 (34-40 in Swordspine RF).
Pink RF and **Greenblotched RF** - body pinkish-green, w/ wavy green streaks; jaws about equal in length; gill rakers typically 26-31 (34-40 in Swordspine RF).
Pinkrose RF - body uniform red; jaws about equal in length; gill rakers 28-33 (34-40 in Swordspine RF).
Southern RF - body w/ vermiculations on back; pectoral rays typically 18 (typically 17 in Swordspine RF).
Freckled RF - prominent knobs bordering notch in upper jaw (absent in Swordspine RF); jaws about equal w/out symphyseal knob.

Distribution: Central California - Baja California

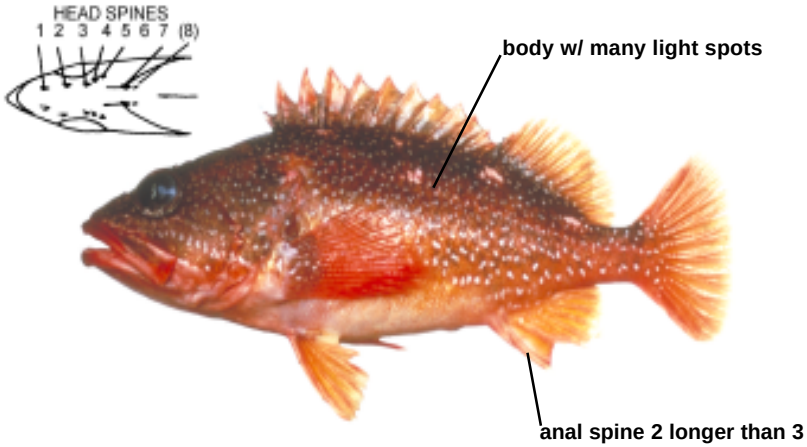
STRONG HEAD SPINES WHITE-SPOTTED RED

SWORDSPINE ROCKFISH

Body color: Orange-red shading into yellowish on lower sides; body profusely covered w/ small, white to pinkish spots; 3 to 5 clear, whitish blotches on back; larger specimens may become dusky on back.

Maximum length: 18 in (46 cm)
Maximum depth: 150 fm (274 m)
Common depth: 13-150 fm (24-274 m)

Peritoneum color: light
Shape between eyes: concave
Counts: D:XIII-XIV,12-14, Ar:5-7, P1:16-18, GR:25-30, LLp:37-47, LLs:?-?, V:25-26



STARRY ROCKFISH *Sebastes constellatus*

Similar species:
Whitespeckled RF -Light blotches above lateral line absent (5 present in Starry RF); body and head more slender; interorbital broad and flat (narrow and concave in Starry RF); head spines weaker; mouth smaller, maxilla extends to midorbit (posterior to orbit in Starry RF).

Other White-Spotted Red species lack scattered white spots.

Distribution: Northern California - Baja California

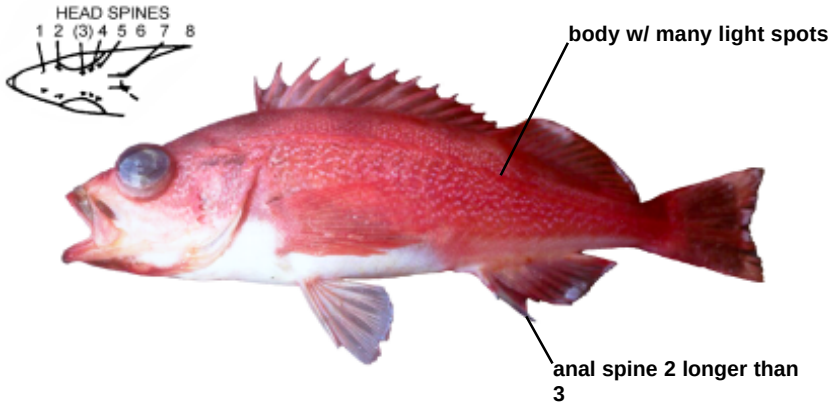
STRONG HEAD SPINES WHITE-SPOTTED RED

STARRY ROCKFISH

Body color: Red w/ white ventrally; small white spots (ca. 1 mm in size) on body and posterior part of head; lateral line more intensely red.

Maximum length: 7 in (17 cm)
Maximum depth: 100 fm (183 m)
Common depth: 70-100 fm (128-183 m)

Peritoneum color: ?
Shape between eyes: flat
Counts: D:XIII,15, Ar:9, P1:17, GR:38, LLp:49, LLs:?-?, V:27



WHITESPECKLED ROCKFISH *Sebastes moseri*

Similar species:
Starry RF -5 large, light blotches above lateral line (absent in Whitespeckled RF); body and head wider; interorbital narrow and concave (broad and flat in Whitespeckled RF); head spines stronger; maxilla extends to posterior of orbit (midorbit in Whitespeckled RF).

Other White-Spotted Red species lack scattered white spots.

Distribution: Southern California

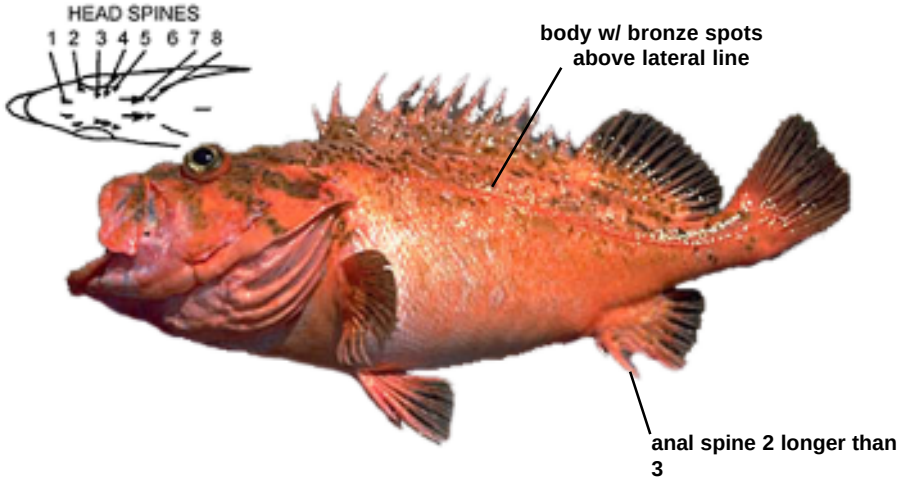
STRONG HEAD SPINES WHITE-SPOTTED

WHITESPECKLED ROCKFISH

Body color: Red, w/ light dusky streaks on back; bronze-colored spots on upper sides and back, including base of dorsal fin; light orange areas under anterior and posterior of soft dorsal fin; lateral line in a narrow, pink zone.

Maximum length: 28 in (71 cm)
Maximum depth: 205 fm (375 m)
Common depth: 41-205 fm (75-375 m)

Peritoneum color: light
Shape between eyes: concave
Counts: D:XIII,13-15, Ar:6-8, P1:18-20, GR:26-30, LLp:40-46, LLs:?-?, V:26



BRONZESPOTTED ROCKFISH *Sebastes gilli*

Similar species:
Other White-Spotted Red species lack bronze spots above lateral line.

Distribution: Central California - Baja California

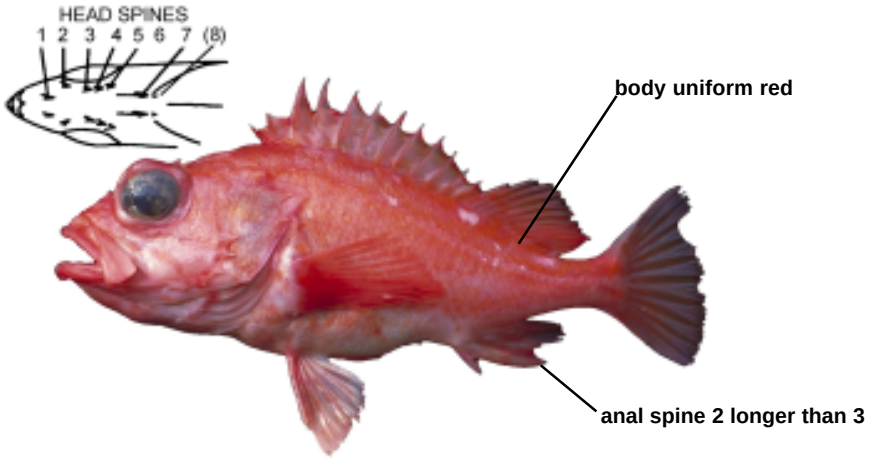
STRONG HEAD SPINES WHITE-SPOTTED RED

BRONZESPOTTED ROCKFISH

Body color: Uniform red w/ 4 or 5 clear, conspicouous white blotches; occasionally dusky on back.

Maximum length: 12 in (30 cm)
Maximum depth: 160 fm (293 m)
Common depth: 54-160 fm (99-293 m)

Peritoneum color: gray
Shape between eyes: concave
Counts: D:XIII,12-14, Ar:5-6, P1:16-18, GR:28-33, LLp:33-40, LLs:?-?, V:26



PINKROSE ROCKFISH *Sebastes simulator*

Similar species:
Rosethorn RF, **Greenspotted RF**, and **Greenblotched RF** - body orange-yellow w/ green mottling or spots.
Rosy RF - body purple-red; caudal peduncle depth greater than orbit width (caudal peduncle depth less than orbit width in Pinkrose RF).
Pink RF - body w/ green streaks; upper gill rakers rudimentary (not rudimentary in Pinkrose RF); lower edge of operculum w/ 1-2 spines (lower edge smooth in Pinkrose RF).
Swordspine RF - prominent symphyseal knob on projecting lower jaw (symphyseal knob absent, jaws about equal in Pinkrose RF); anal spine 2 reaches tips of anal rays (does not reach tips in Pinkrose RF)
Freckled RF - prominent knobs on upper jaw (absent in Pinkrose RF); dense freckling on back (uniform red in Pinkrose RF); gill rakers 34-39 (28-33 in Pinkrose RF); dorsal rays typically 12 (typically 13 in Pinkrose RF).

Distribution: Northern California - Baja California

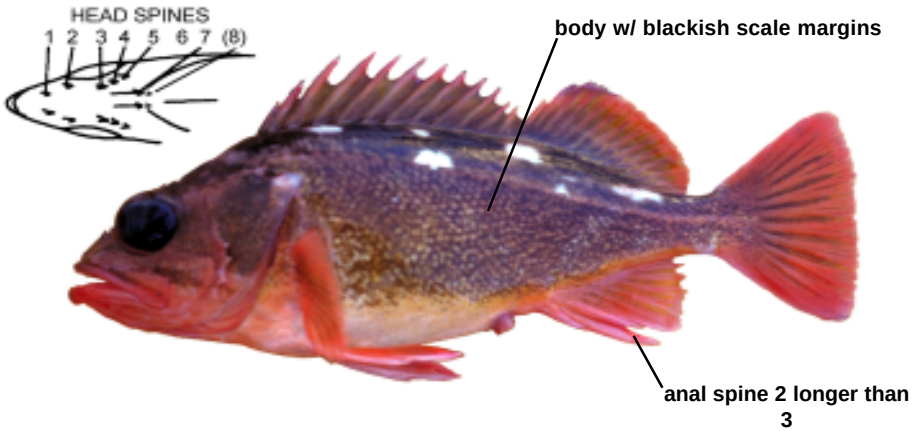
STRONG HEAD SPINES WHITE-SPOTTED RED

PINKROSE ROCKFISH

Body color: Light orange, overlaid w/ fine, blackish dots around margins of scales, giving body a honeycomb appearance; 3 to 5 clear whitish blotches on back; fins orange.

Maximum length: 18 in (45 cm)
Maximum depth: 65 fm (119 m)
Common depth: 16-65 fm (30-119 m)

Peritoneum color: dark
Shape between eyes: concave
Counts: D:XII-XIV,11-13, Ar:5-7, P1:15-18, GR:31-38, LLp:33-44, LLs:?-?, V:26



HONEYCOMB ROCKFISH *Sebastes umbrosus*

Similar species:
Other White-Spotted Red species lack blackish scale margins.

Distribution: Central California - Baja California

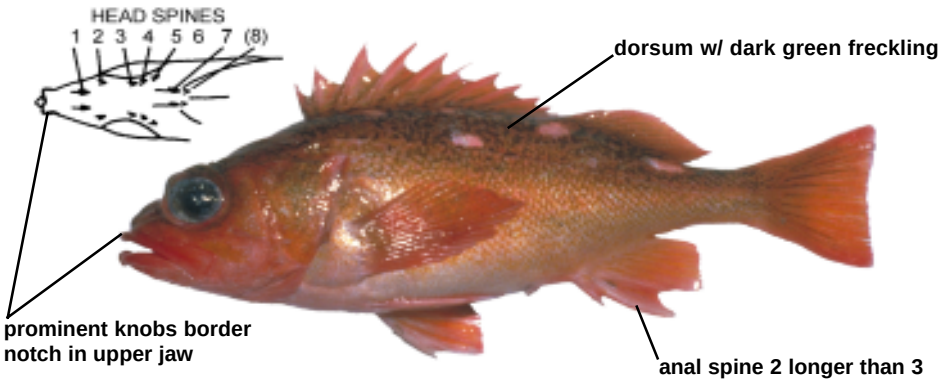
STRONG HEAD SPINES WHITE-SPOTTED RED

HONEYCOMB ROCKFISH

Body color: Pinkish, densely freckled w/ dark green on back; 4 to 5 pale blotches on back; dark streaks on caudal fin.

Maximum length: 9 in (23 cm)
Maximum depth: 92 fm (168 m)
Common depth: 22-92 fm (40-168 m)

Peritoneum color: dark
Shape between eyes: concave
Counts: D:XIII,12-13, Ar:6-7, P1:16-18, GR:34-39, LLp:33-41, LLs:?-?, V:26



FRECKLED ROCKFISH *Sebastes lentiginosus*

Similar species:
Greenspotted RF - knobs on upper jaw absent; gill rakers typically 31-34 (34-39 in Freckled RF)
Rosethorn RF - knobs on upper jaw absent; faint green mottling on back (dense in Freckled RF); gill rakers 28-33 (34-39 in Freckled RF); pectoral rays typically 16 (typically 17 in Freckled RF); dorsal rays typically 13 (typically 12 in Freckled RF).
Rosy RF - knobs on upper jaw absent; body red, mottled w/ purple (dense green in Freckled RF); gill rakers 29-34 (34-39 in Freckled RF).
Pink RF and **Greenblotched RF** - knobs on upper jaw absent; vague green streaks and blotches on back (dense in Freckled RF); gill rakers 26-31 (34-39 in Freckled RF).
Pinkrose RF - knobs on upper jaw absent; body uniform red (dense green freckling in Freckled RF); gill rakers 28-33 (34-39 in Freckled RF); dorsal rays typically 13 (typically 12 in Freckled RF).
Honeycomb RF - knobs on upper jaw absent; scales w/ darkly pigmented margins.
Distribution: Southern California - Baja California

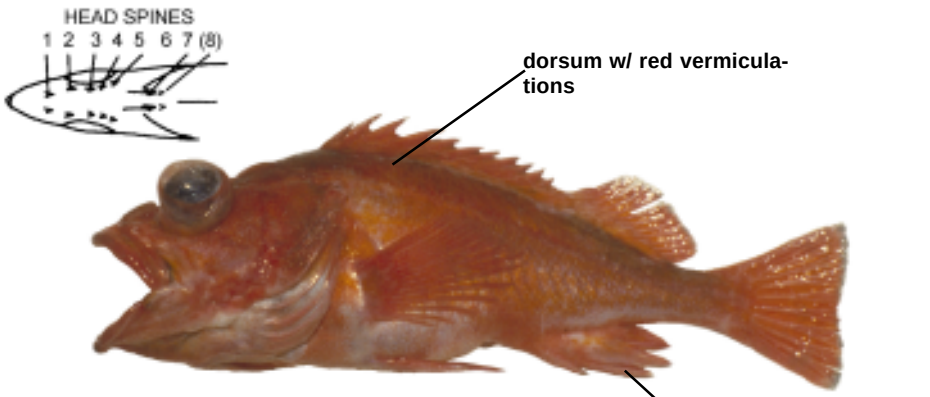
STRONG HEAD SPINES WHITE-SPOTTED RED

FRECKLED ROCKFISH

Body color: Yellow to orange w/ red vermiculations on back; fin membranes golden w/ traces of blue in pectoral and soft dorsal fin.

Maximum length: 8 in (22 cm)
Maximum depth: 137 fm (250 m)
Common depth: 82-137 fm (150-250 m)

Peritoneum color: gray w/ spots
Shape between eyes: concave
Counts: D:XIII,12-13, Ar:6, P1:18, GR:35-38, LLp:33-40, LLs:?-?, V:26



dorsum w/ red vermiculations

anal spine 2 longer than 3

SOUTHERN ROCKFISH *Sebastes notius*

Similar species:
Swordspine RF - body without red vermiculations on back; pectoral and soft dorsal membranes dusky; pectoral rays typically 17 (typically 18 in Southern RF); anal spine 2 reaches tips of anal rays (does not reach tips in Southern RF).

Distribution: Baja California

STRONG HEAD SPINES WHITE-SPOTTED RED

SOUTHERN ROCKFISH

Sources of Figures

Illustrated Glossary — Illustrations after Phillips (1957).
Sebastes alutus — Photo by R. R. Lauth, UW 040216, Gulf of Alaska, 58.75°N 150.35°W, 146 m, 4 Aug 93.
Sebastes proriger — Photo by R. R. Lauth, UW 040217, southeastern Gulf of Alaska, 55.64°N 135.0°W, 202 m, 26 Jul 96.
Sebastes reedi — Photo by D. W. Kessler, UW 040219, southeastern Gulf of Alaska, 54.76°N 134.0°W, 212 m, 27 Jul 93.
Sebastes goodei — Photo by R. R. Lauth, UW 040220, off Pt. Conception, California, 34.90°N 120.91°W, 229 m, 10 Jun 98.
Sebastes paucispinis — Photo by R. R. Lauth, UW 040221, off Vancouver Island, British Columbia, 49.1°N, 126.60°W, 255 m, 1 Sep 95.
Sebastes jordani — Photo by R. R. Lauth, off Monterey, California, Jun 92.
Sebastes semicinctus — Photo by R. R. Lauth, off Oregon, Nov 92.
Sebastes rufinanus — Illustration after photograph of holotype of Lea and Fitch (1972).
Sebastes crameri — Photo by R. R. Lauth, UW 040222, off Washington, 48.83°N 126.60°W, 390 m, 31 Aug 95.
Sebastes zacentrus — Photo by R. R. Lauth, UW 040223, southeast Gulf of Alaska, 55.64°N 134.97°W, 202 m, 26 Jul 96.
Sebastes variegatus — Photo by R. R. Lauth, UW 040224, southeast Gulf of Alaska, 55.64°N 134.97°W, 202 m, 26 Jul 96.
Sebastes saxicola — Photo by R. R. Lauth, off Washington, Nov 92.
Sebastes diploproa — Photo by R. R. Lauth, UW 040225, off Oregon, 44.78°N 124.68°W, 274 m, 21 Oct 93.
Sebastes aurora — Photo by R. R. Lauth, UW 040226, off Oregon, 44.89°N 124.89°W, 424 m, 19 Oct 93.
Sebastes phillipsi — Photo courtesy of S. Grossberg and C. Kimbrell, off San Diego, 32.78°N 117.75°W, 86 m, 11 Mar 00.
Sebastes levis — Photo by R. R. Lauth, UW 040227, off Monterey, California, 37.23°N 122.80°W, 204 m, 30 Oct 97.
Sebastes ruberrimus — Photos by R. R. Lauth, UW 040228, northern Gulf of Alaska, 58.90°N 151.56°W, 3 Aug 93. Inset photo, northern Gulf of Alaska, 1993.
Sebastes aleutianus — Photos by R. R. Lauth, UW 040229, central Aleutian Islands, Alaska, 51.45°N 178.61°W, 399 m, 18 Jul 94. Inset photo UW 040232, northern Gulf of Alaska, 57.26°N 150.76°W, 357 m, 27 Jul 93.
Sebastes borealis — Photo by R. R. Lauth, UW 040230, Gulf of Alaska, 59.69°N 148.91°W, 178 m, 13 Jul 96.
Sebastes melanostomus — Photo by R. R. Lauth, UW 040231, off northern California, 41.44°N 124.51°W, 436 m, 16 Nov 95.
Sebastes miniatus — Photo by R. R. Lauth, off Monterey, California, 37.33°N 122.52°W, 60 m, 28 Jul 92.
Sebastes pinniger — Photo by R. R. Lauth, UW 040233, southeastern Gulf of Alaska, 56.68°N 135.66°W, 163 m, 25 Jul 96.
Sebastes macdonaldi — Photo by M. S. Love.
Sebastes melanosema — Illustration after Lea and Fitch (1979).
Sebastolobus alascanus — Photo by R. R. Lauth, UW 040234, northern Gulf of Alaska, 55.93°N 154.16°W, 293 m, 24 Jul 93.
Sebastolobus altivelis — Photo by R. R. Lauth, UW 040235, off Oregon, 43.38°N 124.93°W, 293 m, 2 Nov 93.
Sebastolobus macrochir — Photo by R. R. Lauth, UW 040236, central Aleutian Islands, Alaska, 51.92°N 176.66°W, 349 m, 24 Jul 94.
Adelosebastes latens — Photo by A. Cleveland, UW 22685, Aleutian Islands, SW of Ilak Island, Alaska, 51.35°N 178.81°W, 687 m.
Sebastes polyspinis — Photo by R. R. Lauth, UW 040237, northern Gulf of Alaska, 56.80°N 152.74°W, 71 m, 19 Jul 93.
Sebastes rufus — Photo by R. R. Lauth, UW 040238, off Monterey, California, 36.73°N 121.98°W, 230 m, 13 Jun 98.
Sebastes elongatus — Photo by R. R. Lauth, UW 040239, off Oregon, 44.41°N 124.77°W, 76 m, 11 Jun 98.
Sebastes caurinus — Photos by J. W. Orr, UW 040240, off Monterey, California, 35.38°N 120.97°W, 82 m, 11 Jun 98. Inset photo, UW 040254, Neah Bay, Washington, Sep 98.
Sebastes wilsoni — Photo by R. R. Lauth, UW 040241, northern Gulf of Alaska, 59.52°N 148.59°W, 96 m, 10 Jul 96.
Sebastes emphaeus — Photo by J. W. Orr, UW 044030, off Shaw Island, San Juan Islands, Washington, 120-150 m, 9 Jan 00.
Sebastes dalli — Photo courtesy of H. J. Walker, SIO Uncatalogued, La Jolla Canyon, California, 2 Mar 68.
Sebastes ciliatus — Photo by D. W. Kessler, northern Gulf of Alaska, 56.35°N 152.42°W, 101 m, 23 Apr 86.

Sources of Figures (cont'd)

Sebastes sp. cf. *ciliatus* — Photo by J. W. Orr, UW 040243, Southeast Alaska, Soapstone Cove, 58.10°N 136.50°W, 10 m, 14 Jul 98.
Sebastes melanops — Photo by J. W. Orr, UW 043489, Southeast Alaska, Soapstone Cove, 58.10°N 136.50°W, 10 m, 14 Jul 98.
Sebastes mystinus — Photo by R. R. Lauth, N of Monterey, California, 37.33 N 122.52 W, 60 m, 28 Jul 92.
Sebastes glaucus — Photo courtesy of A. J. Gharrett.
Sebastes brevispinis — Photo by R. R. Lauth, UW 040245, eastern Aleutian Islands, Alaska, 53.67°N 165.39°W, 208 m, 27 May 96.
Sebastes entomelas — Photo by R. R. Lauth, UW 040246, off Cape Blanco, Oregon, Nov 93.
Sebastes flavidus — Photo by R. R. Lauth, UW 040247, off Oregon, 44.08°N 124.96°W, 386 m, 28 Oct 93.
Sebastes hopkinsi — Photo by R. R. Lauth, off Pt. Conception, California, 34.75°N 120.829°W, 104 m, 16 Jul 92.
Sebastes ovalis — Photo by R. R. Lauth, off Pt. Conception, California, 34.75°N 120.829°W, 104 m, 16 Jul 92.
Sebastes serranoides — Photo by M. S. Love.
Sebastes auriculatus — Photo by J. W. Orr, UW 040248, off Monterey, California, 37.56°N 122.74°W, 54 m, 18 Jun 98.
Sebastes maliger — Photo by D. W. Kessler, UW 040249, Gulf of Alaska, off Kodiak Island, Aug 84.
Sebastes nebulosus — Photo by R. R. Lauth, UW 040250, Neah Bay, Washington.
Sebastes carnatus — Photo by M. S. Love.
Sebastes chrysomelas — Photo by M. S. Love.
Sebastes rastrelliger — Photo by M. S. Love.
Sebastes atrovirens — Photo by M. S. Love.
Sebastes babcocki — Photo by R. R. Lauth, UW 040251, southeastern Gulf of Alaska, 54.53°N 133.53°W, 343 m, 29 Jul 96.
Sebastes rubrivinctus — Photo by M. S. Love.
Sebastes nigrocinctus — Photo by R. R. Lauth, UW 040252, northern Gulf of Alaska, 59.24°N 148.33°W, 112 m, 10 Jul 96.
Sebastes serriceps — Photo by M. S. Love.
Sebastes helvomaculatus — Photo by D. W. Kessler, UW 040253, southeastern Gulf of Alaska, 54.71°N 134.02°W, 216 m, 24 Jul 93.
Sebastes chlorostictus — Photo courtesy of H. J. Walker, SIO 64-1000, 59.5 km W of Point Loma, California, 32.67°N 117.97°W, 79 m, 16 Dec 64.
Sebastes rosaceus — Photo by A. Rocha-Olivares.
Sebastes eos — Photo courtesy of H. J. Walker, SIO 68-6, Ranger Bank, Baja California, 28.47°N 115.53°W, 128-165 m, 19 Dec 67.
Sebastes rosenblatti — Photo courtesy of H. J. Walker, SIO 65-54, Guadalupe Is. N of Discovery Pt., Baja California, 29.17°N 118.27°W, 128-146 m, 1 Mar 65.
Sebastes ensifer — Photo by A. Rocha-Olivares.
Sebastes constellatus — Photo courtesy of H. J. Walker, SIO Uncatalogued, La Jolla Canyon, California, 19 Jan 68.
Sebastes gilli — Photo by M. S. Love.
Sebastes umbrosus — Photo by A. Rocha-Olivares, 1995.
Sebastes simulator — Photo by A. Rocha-Olivares, Sep 95.
Sebastes lentiginosus — Photo courtesy of H. J. Walker, SIO 65-6, Tanner Bank, southern California, 32.7°N 119.13°W, 33.5-57.9 m, 15 Jan 65.
Sebastes notius — Photo by A. Rocha-Olivares.
Sebastes moseri — Photo by B. Eitner, SIO 95-33, holotype, off San Diego Harbor, California, 32.63°N 117.96°W, 128-183 m, 1 Sep 95.

UNDERWATER PHOTOGRAPHS

Figure 1. ***Sebastes auriculatus*. Washington, Puget Sound, Tacoma Narrows, Oct 85. Photo by R. R. Lauth.**

Figure 2. ***Sebastes caurinus*. Washington, San Juan Island, Lime Kiln, 28 Aug 94. Photo by R. R. Lauth.**

Figure 3. ***Sebastes ciliatus*. Alaska, Afognak Is., Triplets, Kodiak Is., 26 Aug 96. Photo by R. R. Lauth.**

Figure 4. ***Sebastes emphaeus*. Washington, San Juan Islands, Kellet Bluff off Henry Is., 29 May 93. Photo by R. R. Lauth.**

Figure 5. ***Sebastes flavidus*. Washington, Strait of Juan de Fuca, Tongue Pt., Diamond Knot wreck, 27 Sep 94. Photo by R. R. Lauth.**

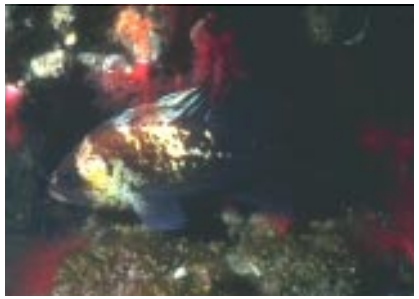


Figure 6. ***Sebastes maliger*. Washington, San Juan Islands, Center Reef. Photo by R. R. Lauth.**

Figure 7. ***Sebastes melanops*. Washington, Puget Sound, Edmonds wreck, May 82. Photo by R. R. Lauth.**

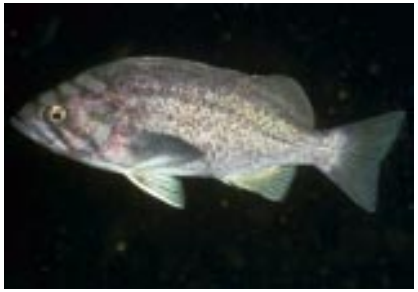


Figure 8. ***Sebastes mystinus*. Washington, Strait of Juan de Fuca, Tongue Pt., Diamond Knot wreck, 27 Sep 94. Photo by R. R. Lauth.**

Figure 9. ***Sebastes nebulosus*. Washington, Neah Bay, Duncan Rock, Oct 84. Photo by R. R. Lauth.**

Figure 10. ***Sebastes nigrocinctus*. Washington, San Juan Islands, Sucia Island, Aug 84. Photo by R. R. Lauth.**

Figure 11. ***Sebastes pinniger*. Washington, Strait of Juan de Fuca, Tongue Pt., Diamond Knot wreck, Sep 94. Photo by R. R. Lauth.**

Figure 12. ***Sebastes rosaceus*. Washington, Cobb Seamount, Aug 97. Photo by W. Robertson.**

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