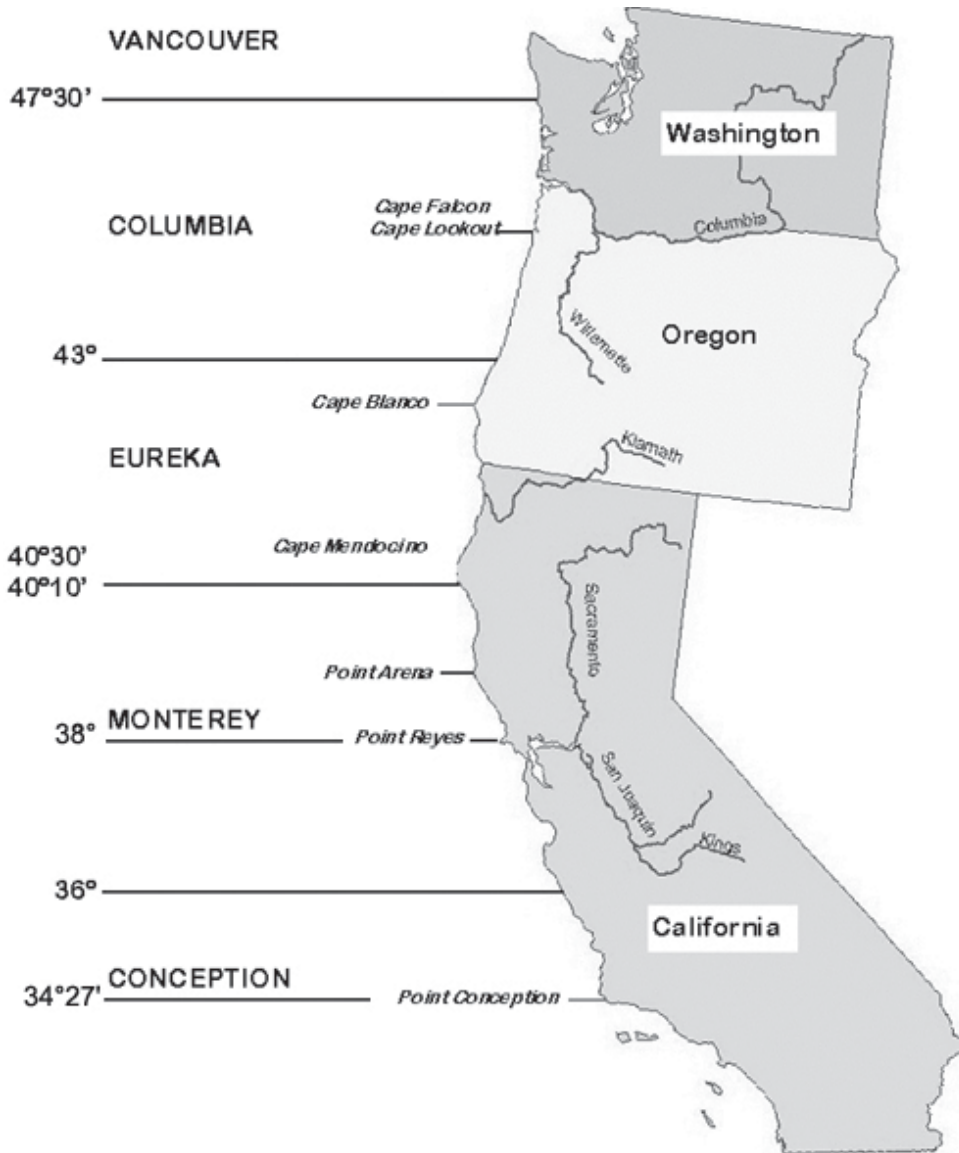




Background: Geography of Rockfish

This background explains the geographic areas and coordinates used in setting regulations; where different types of rockfish are found; and the differences between nearshore, slope and shelf areas. More information on rockfish, including habitat maps, can be found at www.pcouncil.org/habitat/habsuitmaps.html.



INPFC Sub-Areas

International North Pacific Fisheries Commission (INPFC) subareas are sometimes used to define fishing areas. The INPFC was established in 1952 and dissolved in 1993, but the areas defined by the INPFC are still commonly used in fisheries management.

Vancouver: U.S.-Canada border to 47°30' N. latitude

Columbia: 47°30' to 43°00' N. latitude

Eureka: 43°00' to 40°30' N. latitude

Monterey: 40°30' to 36°00' N. latitude

Conception: 36°00' N. latitude to the U.S.-Mexican border

Landmark Locations

The following latitudes and landmarks are commonly used as regulatory boundaries:

Washington

Cape Alava, WA	48°10' N. latitude
Queets River, WA	47°31.70' N. latitude
Pt. Chehalis, WA	46°53.30' N. latitude
Leadbetter Point, WA	46°38.17' N. latitude
Washington/Oregon border	46°16' N. latitude

Oregon

Cape Falcon, OR (south of Cannon Beach):	45°46' N. latitude
Cape Lookout, OR (about 10 miles south of Tillamook)	45°20'15" N. latitude
Cascade Head, OR	45°03.83' N. latitude
Heceta Head, OR	44°08.30' N. latitude
Cape Arago, OR	43°20.83' N. latitude
Cape Blanco, OR (north of Port Orford)	42°50' N. latitude
Humbug Mountain	42°40.50' N. latitude
Oregon/California border	42°00.00' N. latitude

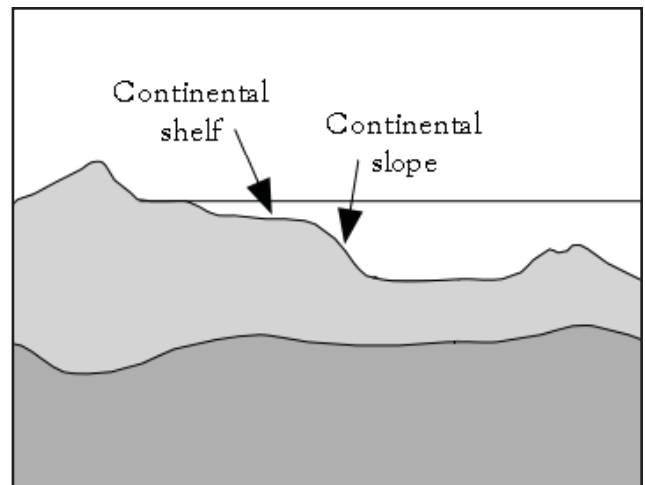
California

Cape Mendocino, CA (slightly north of 40°10')	40°30' N. latitude
North/South management line (south of Eureka, near Garberville)	40°10' N. latitude
Point Arena, CA (about 30 miles south of Mendocino)	38°57'30" N. latitude
Point San Pedro, CA	37°35.67' N. latitude
Pigeon Point, CA	37°11.00' N. latitude
Ano Nuevo, CA	37°07.00' N. latitude
Point Lopez, CA	36°00.00' N. latitude
Point Conception, CA (north of Santa Barbara near Buellton)	34°27' N. latitude

Rockfish Locations

Currently, many regulations are designed to lessen the impacts of fishing on certain species of rockfish. Rockfish (except thornyheads) are divided into categories north and south of 40°10' N. latitude, depending on the depth where they are often caught: nearshore, shelf, or slope.

“Nearshore” is defined (by the California Nearshore Fishery Management Plan) as the area from the high-tide line offshore to a depth of 120 ft (20 fm). “Shelf” refers to the continental shelf, while “slope” refers to the continental slope.



Nearshore rockfish include:

North of 40° 10' N. latitude

black (*Sebastes melanops*)
blue (*S. mystinus*)
brown (*S. auriculatus*)
China (*S. nebulosus*)
copper (*S. caurinus*)
quillback (*S. maliger*)

South of 40° 10' N. latitude

black (*Sebastes melanops*)
black and yellow (*S. chrysomelas*)
blue (*S. mystinus*)
brown (*S. auriculatus*)
calico (*S. dalli*)
California scorpionfish (*Scorpaena guttata*)
China (*S. nebulosus*)
copper (*S. caurinus*)
gopher (*S. carnatus*)
grass (*S. rastrelliger*)
kelp (*S. atrovirens*)
olive (*S. serranoides*)
quillback (*S. maliger*)
treefish (*S. serriceps*)

Shelf rockfish include:

North of 40° 10' N. latitude

bocaccio (*S. paucispinis*)
canary (*S. pinniger*)
chilipepper (*S. goodei*)
greenstriped (*S. elongatus*)
pygmy (*S. wilsoni*)
redstripe (*S. proriger*)
rosethorn (*S. helvomaculatus*)
silvergrey (*S. brevispinis*)
stripetail (*S. saxicola*)
tiger (*S. nigrocinctus*)
vermilion (*S. miniatus*)
widow (*S. entomelas*)
yelloweye (*S. ruberrimus*)
yellowtail (*S. flavidus*)

South of 40° 10' N. latitude

bocaccio (*S. paucispinis*)
bronzespotted (*S. gilli*)
canary (*S. pinniger*)
chameleon (*S. phillipsi*)
chilipepper (*S. goodei*)
cowcod (*S. levis*)
dwarf-red (*S. rufinanus*)
flag (*S. rubrivinctus*)
freckled (*S. lentiginosus*)
greenblotched (*S. rosenblatti*)
greenspotted (*S. chlorostictus*)
greenstriped (*S. elongatus*)
halfbanded (*S. semicinctus*)
honeycomb (*S. umbrosus*)
Mexican (*S. macdonaldi*)
pink (*S. eos*)
pinkrose (*S. simulator*)
pygmy (*S. wilsoni*)
redstripe (*S. proriger*)
rosethorn (*S. helvomaculatus*)
rosy (*S. rosaceus*)
shortbelly (*S. jordani*)
silvergrey (*S. brevispinis*) (mostly in north)
speckled (*S. ovalis*)
squarespot (*S. hopkinsi*)
starry (*S. constellatus*)
stripetail (*S. saxicola*)
swordspine (*S. ensifer*)
tiger (*S. nigrocinctus*)
vermilion (*S. miniatus*)

Table 1-1. Latitudinal and depth distributions of groundfish species (adults) managed under the Pacific Coast Groundfish Fishery Management Plan. ^{a/} (Page 1 of 4)

Common name	Scientific name	Latitudinal Distribution		Depth Distribution (fm)	
		Overall	Highest Density	Overall	Highest Density
Flatfish Species					
Arrowtooth flounder	<i>Atheresthes stomias</i>	N. 34° N lat.	N. 40° N lat.	10-400	27-270
Butter sole	<i>Isopsetta isolepis</i>	N. 34° N lat.	N. 34° N lat.	0-200	0-100
Curlfin sole	<i>Pleuronichthys decurrens</i>	Coastwide	Coastwide	4-291	4-50
Dover sole	<i>Microstomus pacificus</i>	Coastwide	Coastwide	10-500	110-270
English sole	<i>Parophrys vetulus</i>	Coastwide	Coastwide	0-300	40-200
Flathead sole	<i>Hippoglossoides elassodon</i>	N. 38° N lat.	N. 40° N lat.	3-300	100-200
Pacific sanddab	<i>Citharichthys sordidus</i>	Coastwide	Coastwide	0-300	0-82
Petrale sole	<i>Eopsetta jordani</i>	Coastwide	Coastwide	10-250	160-250
Rex sole	<i>Glyptocephalus zachirus</i>	Coastwide	Coastwide	10-350	27-250
Rock sole	<i>Lepidopsetta bilineata</i>	Coastwide	N. 32°30' N.lat.	0-200	summer 10-44 winter 70-150
Sand sole	<i>Psettichthys melanostictus</i>	Coastwide	N. 33°50' N.lat.	0-100	0-44
Starry flounder	<i>Platichthys stellatus</i>	Coastwide	N. 34°20' N.lat.	0-150	0-82
Rockfish Species ^{b/}					
Aurora rockfish	<i>Sebastes aurora</i>	Coastwide	Coastwide	100-420	82-270
Bank rockfish	<i>Sebastes rufus</i>	S. 39°30' N.lat.	S. 39°30' N.lat.	17-135	115-140
Black rockfish	<i>Sebastes melanops</i>	N. 34° N lat.	N. 34° N lat.	0-200	0-30
Black-and-yellow rockfish	<i>Sebastes chrysomelas</i>	S. 40° N lat.	S. 40° N lat.	0-20	0-10
Blackgill rockfish	<i>Sebastes melanostomus</i>	Coastwide	S. 40° N lat.	48-420	125-300
Blue rockfish	<i>Sebastes mystinus</i>	Coastwide	Coastwide	0-300	13-21
Bocaccio ^{c/}	<i>Sebastes paucispinis</i>	Coastwide	S. 40° N. lat., N. 48° N. lat.	15-180	54-82
Bronzespotted rockfish	<i>Sebastes gilli</i>	S. 37° N lat.	S. 37° N lat.	41-205	110-160
Brown rockfish	<i>Sebastes auriculatus</i>	Coastwide	S. 40° N lat.	0-70	0-50
Calico rockfish	<i>Sebastes dallii</i>	S. 38° N lat.	S. 33° N lat.	10-140	33-50
California scorpionfish	<i>Scorpaena gutatta</i>	S. 37° N lat.	S. 34°27' N.lat.	0-100	0-100
Canary rockfish	<i>Sebastes pinniger</i>	Coastwide	Coastwide	27-460	50-100
Chameleon rockfish	<i>Sebastes phillipsi</i>	37°-33° N lat.	37°-33° N lat.	95-150	95-150
Chilipepper rockfish	<i>Sebastes goodei</i>	Coastwide	34°-40° N lat.	27-190	27-190
China rockfish	<i>Sebastes nebulosus</i>	N. 34° N lat.	N. 35° N lat.	0-70	2-50
Copper rockfish	<i>Sebastes caurinus</i>	Coastwide	S. 40° N lat.	0-100	0-100
Cowcod	<i>Sebastes levis</i>	S. 40° N lat.	S. 34°27' N.lat	22-270	100-130

Table 1-1. Latitudinal and depth distributions of groundfish species (adults) managed under the Pacific Coast Groundfish Fishery Management Plan (continued) ^{al} (Page 2 of 4)

Common name	Scientific name	Latitudinal Distribution		Depth Distribution (fm)	
		Overall	Highest Density	Overall	Highest Density
Darkblotched rockfish	<i>Sebastes crameri</i>	N. 33° N lat.	N. 38° N lat.	16-300	96-220
Dusky rockfish ^{d/}	<i>Sebastes ciliatus</i>	N. 55° N lat.	N. 55° N lat.	0-150	0-150
Dwarf-Red rockfish	<i>Sebastes rufinanus</i>	33° N lat.	33° N lat.	>100	>100
Flag rockfish	<i>Sebastes rubrivinctus</i>	S. 38° N lat.	S. 37° N lat.	17-100	shallow
Freckled rockfish	<i>Sebastes lentiginosus</i>	S. 33° N lat.	S. 33° N lat.	22-92	22-92
Gopher rockfish	<i>Sebastes carnatus</i>	S. 40° N lat.	S. 40° N lat.	0-30	0-16
Grass rockfish	<i>Sebastes rastrelliger</i>	S. 44°40' N.lat.	S. 40° N lat.	0-25	0-8
Greenblotched rockfish	<i>Sebastes rosenblatti</i>	S. 38° N lat.	S. 38° N lat.	33-217	115-130
Greenspotted rockfish	<i>Sebastes chlorostictus</i>	S. 47° N lat.	S. 40° N lat.	27-110	50-100
Greenstriped rockfish	<i>Sebastes elongatus</i>	Coastwide	Coastwide	33-220	27-136
Halfbanded rockfish	<i>Sebastes semicinctus</i>	S. 36°40' N.lat.	S. 36°40' N.lat.	32-220	32-220
Harlequin rockfish ^{e/}	<i>Sebastes variegatus</i>	N. 40 ° N lat.	N. 51° N. lat.	38-167	38-167
Honeycomb rockfish	<i>Sebastes umbrosus</i>	S. 36°40' N.lat.	S. 34°27' N.lat.	16-65	16-38
Kelp rockfish	<i>Sebastes atrovirens</i>	S. 39° N lat.	S. 37° N lat.	0-25	3-4
Longspine thornyhead	<i>Sebastolobus altivelis</i>	Coastwide	Coastwide	167->833	320-550
Mexican rockfish	<i>Sebastes macdonaldi</i>	S. 36°20' N.lat.	S. 36°20' N.lat.	50-140	50-140
Olive rockfish	<i>Sebastes serranoides</i>	S. 41°20' N.lat.	S. 40° N lat.	0-80	0-16
Pacific ocean perch	<i>Sebastes alutus</i>	Coastwide	N. 42° N lat.	30-350	110-220
Pink rockfish	<i>Sebastes eos</i>	S. 37° N lat.	S. 35° N lat.	40-200	40-200
Pinkrose rockfish	<i>Sebastes simulator</i>	S. 34° N lat.	S. 34° N lat.	54-160	108
Puget Sound rockfish	<i>Sebastes emphaeus</i>	N. 40° N lat.	N. 40° N lat.	6-200	6-200
Pygmy rockfish	<i>Sebastes wilsoni</i>	N. 32°30' N.lat.	N. 32°30' N.lat.	17-150	17-150
Quillback rockfish	<i>Sebastes maliger</i>	N. 36°20' N.lat.	N. 40° N lat.	0-150	22-33
Redbanded rockfish	<i>Sebastes babcocki</i>	Coastwide	N. 37° N lat.	50-260	82-245
Redstripe rockfish	<i>Sebastes proriger</i>	N. 37° N lat.	N. 37° N lat.	7-190	55-190
Rosethorn rockfish	<i>Sebastes helvomaculatus</i>	Coastwide	N. 38° N lat.	65-300	55-190
Rosy rockfish	<i>Sebastes rosaceus</i>	S. 42° N lat.	S. 40° N lat.	8-70	30-58
Rougheye rockfish	<i>Sebastes aleutianus</i>	Coastwide	N. 40° N. lat.	27-400	27-250
Semaphore rockfish	<i>Sebastes melanosema</i>	S. 34°27' N.lat.	S. 34°27' N.lat.	75-100	75-100
Sharpchin rockfish	<i>Sebastes zacentrus</i>	Coastwide	Coastwide	50-175	50-175

Table 1-1. Latitudinal and depth distributions of groundfish species (adults) managed under the Pacific Coast Groundfish Fishery Management Plan (continued) ^{a/} (Page 3 of 4)

Common name	Scientific name	Latitudinal Distribution		Depth Distribution (fm)	
		Overall	Highest Density	Overall	Highest Density
Shortbelly rockfish	<i>Sebastes jordani</i>	Coastwide	S. 46° N lat.	50-175	50-155
Shortraker rockfish	<i>Sebastes borealis</i>	N. 39°30' N.lat.	N. 44° N lat.	110-220	110-220
Shortspine thornyhead	<i>Sebastolobus alascanus</i>	Coastwide	Coastwide	14->833	55-550
Silvergray rockfish	<i>Sebastes brevispinis</i>	Coastwide	N. 40° N lat.	17-200	55-160
Speckled rockfish	<i>Sebastes ovalis</i>	S. 38° N lat.	S. 37° N lat.	17-200	41-83
Splitnose rockfish	<i>Sebastes diploproa</i>	Coastwide	Coastwide	50-317	55-250
Squarespot rockfish	<i>Sebastes hopkinsi</i>	S. 38° N lat.	S. 36° N lat.	10-100	10-100
Starry rockfish	<i>Sebastes constellatus</i>	S. 38° N lat.	S. 37° N lat.	13-150	13-150
Stripetail rockfish	<i>Sebastes saxicola</i>	Coastwide	Coastwide	5-230	5-190
Swordspine rockfish	<i>Sebastes ensifer</i>	S. 38° N lat.	S. 38° N lat.	38-237	38-237
Tiger rockfish	<i>Sebastes nigrocinctus</i>	N. 35° N lat.	N. 35° N lat.	30-170	35-170
Treefish	<i>Sebastes serriceps</i>	S. 38° N lat.	S. 34°27' N.lat.	0-25	3-16
Vermilion rockfish	<i>Sebastes miniatus</i>	Coastwide	Coastwide	0-150	4-130
Widow rockfish	<i>Sebastes entomelas</i>	Coastwide	N. 37° N lat.	13-200	55-160
Yelloweye rockfish	<i>Sebastes ruberrimus</i>	Coastwide	N. 36° N lat.	25-300	27-220
Yellowmouth rockfish	<i>Sebastes reedi</i>	N. 40° N lat.	N. 40° N lat.	77-200	150-200
Yellowtail rockfish	<i>Sebastes flavidus</i>	Coastwide	N. 37° N lat.	27-300	27-160
Roundfish Species					
Cabezon	<i>Scorpaenichthys marmoratus</i>	Coastwide	Coastwide	0-42	0-27
Kelp greenling	<i>Hexagrammos decagrammus</i>	Coastwide	N. 40° N lat.	0-25	0-10
Lingcod	<i>Ophiodon elongatus</i>	Coastwide	Coastwide	0-233	0-40
Pacific cod	<i>Gadus macrocephalus</i>	N. 34° N lat.	N. 40° N lat.	7-300	27-160
Pacific whiting	<i>Merluccius productus</i>	Coastwide	Coastwide	20-500	27-270
Sablefish	<i>Anoplopoma fimbria</i>	Coastwide	Coastwide	27->1,000	110-550
Shark and Skate Species					
Big skate	<i>Raja binoculata</i>	Coastwide	S. 46° N lat.	2-110	27-110
California skate	<i>Raja inornata</i>	Coastwide	S. 39° N lat.	0-367	0-10
Leopard shark	<i>Triakis semifasciata</i>	S. 46° N lat.	S. 46° N lat.	0-50	0-2
Longnose skate	<i>Raja rhina</i>	Coastwide	N. 46° N lat.	30-410	30-340
Soupin shark	<i>Galeorhinus zyopterus</i>	Coastwide	Coastwide	0-225	0-225
Spiny dogfish	<i>Squalus acanthias</i>	Coastwide	Coastwide	0->640	0-190

Table 1-1. Latitudinal and depth distributions of groundfish species (adults) managed under the Pacific Coast Groundfish Fishery Management Plan (continued). ^{a/} (Page 4 of 4)

Common name	Scientific name	Latitudinal Distribution		Depth Distribution (fm)	
		Overall	Highest Density	Overall	Highest Density
Other Species					
Finescale codling	<i>Antimora microlepis</i>	Coastwide	N. 38° N lat.	190-1,588	190-470
Pacific rattail	<i>Coryphaenoides acrolepis</i>	Coastwide	N. 38° N lat. Coastwide	85-1,350	500-1,350
Ratfish	<i>Hydrolagus coliei</i>	Coastwide	Coastwide	0-499	55-82

a/ Data from (Casillas, *et al.* 1998), (Eschmeyer, *et al.* 1983), (Hart 1988), (Miller and Lea 1972), (Love, *et al.* 2002), and NMFS survey data. Depth distributions refer to offshore distributions, not vertical distributions in the water column.

b/ The category “rockfish” includes all genera and species of the family Scorpaenidae, even if not listed, that occur in the Washington, Oregon, and California area.

c/ Only the southern stock of bocaccio south of 40°10' N. lat. is listed as depleted.

d/ Dusky rockfish do not occur on the U.S. West Coast south of 49° N. lat. The species needs to be removed from the FMP.

e/ Only two occurrences of harlequin rockfish south of 51° N. lat. (off Newport, OR and La Push, WA; (Casillas, *et al.* 1998)).