

Acknowledgements

The Humboldt Bay Harbor District would like to offer our sincere thanks and appreciation to the authors and photographers who have allowed us to use their work in this report.

Photography and Illustrations

We would like to thank the photographers and illustrators who have so graciously donated the use of their images for this publication.

Andrey Dolgor
Polar Research Institute of Marine
Fisheries And Oceanography
dolgor@inro.ru

Dan Gotshall
Sea Challengers, Inc.
seachall@aol.com

Michael Lanboeuf
Michel.Lamboeuf@fao.org

Milton Love
Marine Science Institute
love@lifesci.ucsb.edu

Stephen Metherell
metherells@seafood.co.nz

Jacques Moreau
moreau@ensat.Fr

Bernd Ueberschaer
bueberschaer@ifm.uni-kiel.de

Clinton Bauder
gecko1@metridium.com

Fish descriptions contained in this report are from:

Froese, R. and Pauly, D. Editors. 2003 FishBase. Worldwide Web electronic publication. <http://www.fishbase.org/>
13 August 2003

Photographer

Bauder, Clinton
Bauder, Clinton
Bauder, Clinton
Bauder, Clinton

Flescher, Don
Flescher, Don

Garcia-Franco, Mauricio

Gjernes, Michael
Gjernes, Michael
Gjernes, Michael
Gjernes, Michael
Gjernes, Michael
Gjernes, Michael

Gotshall, Daniel W
Gotshall, Daniel W
Gotshall, Daniel W
Gotshall, Daniel W
Gotshall, Daniel W
Gotshall, Daniel W
Gotshall, Daniel W
Gotshall, Daniel W
Gotshall, Daniel W
Gotshall, Daniel W
Gotshall, Daniel W
Gotshall, Daniel W

Fish

wolf-eel
blackeye goby
spotted cusk-eel
tube-snout

american shad
stripped bass

louvar

curlfin sole
bocaccio 1
buttersole
lingcod
black rockfish
copper rockfish

white croaker
bay pipefish
giant sea bass
green sturgeon
bat ray
pile perch
round stingray
white seaperch
pygmy poacher
red irish lord
buffalo sculpin
monkeyface prickleback
medusafish

Photographer

Gotshall, Daniel W
Gotshall, Daniel W
Gotshall, Daniel W.
Gotshall, Daniel W.
Gotshall, Daniel W.
Gotshall, Daniel W.
Gotshall, Daniel W.
Gotshall, Daniel W.

Jensen, Johnny
Jensen, Johnny

Keeley, Ernest

Kirata, John A.

Lamboeuf, Michel
Lamboeuf, Michel
Lamboeuf, Michel
Lamboeuf, Michel
Lamboeuf, Michel
Lamboeuf, Michel
Lamboeuf, Michel
Lamboeuf, Michel
Lamboeuf, Michel
Lamboeuf, Michel
Lamboeuf, Michel
Lamboeuf, Michel
Lamboeuf, Michel

scalyhead sculpin
speckled sanddab
bocaccio
brown rockfish
yellowtail rockfish
dover sole
pacific sanddab
kelp greenling

striped seaperch
cutthroat trout


coho salmon

ocean sunfish

soupin shark illustration
jacksmelt illustration
topsmelt illustration
sevengill shark illustration
pacific tomcod illustration
yellow snake eel illustration
giant sea bass illustration
ocean sunfish illustration
california halibut illustration
california tonguefish illustration
theadfin shad illustration
spiny dogfish illustration
white sea bass illustration
bat ray illustration

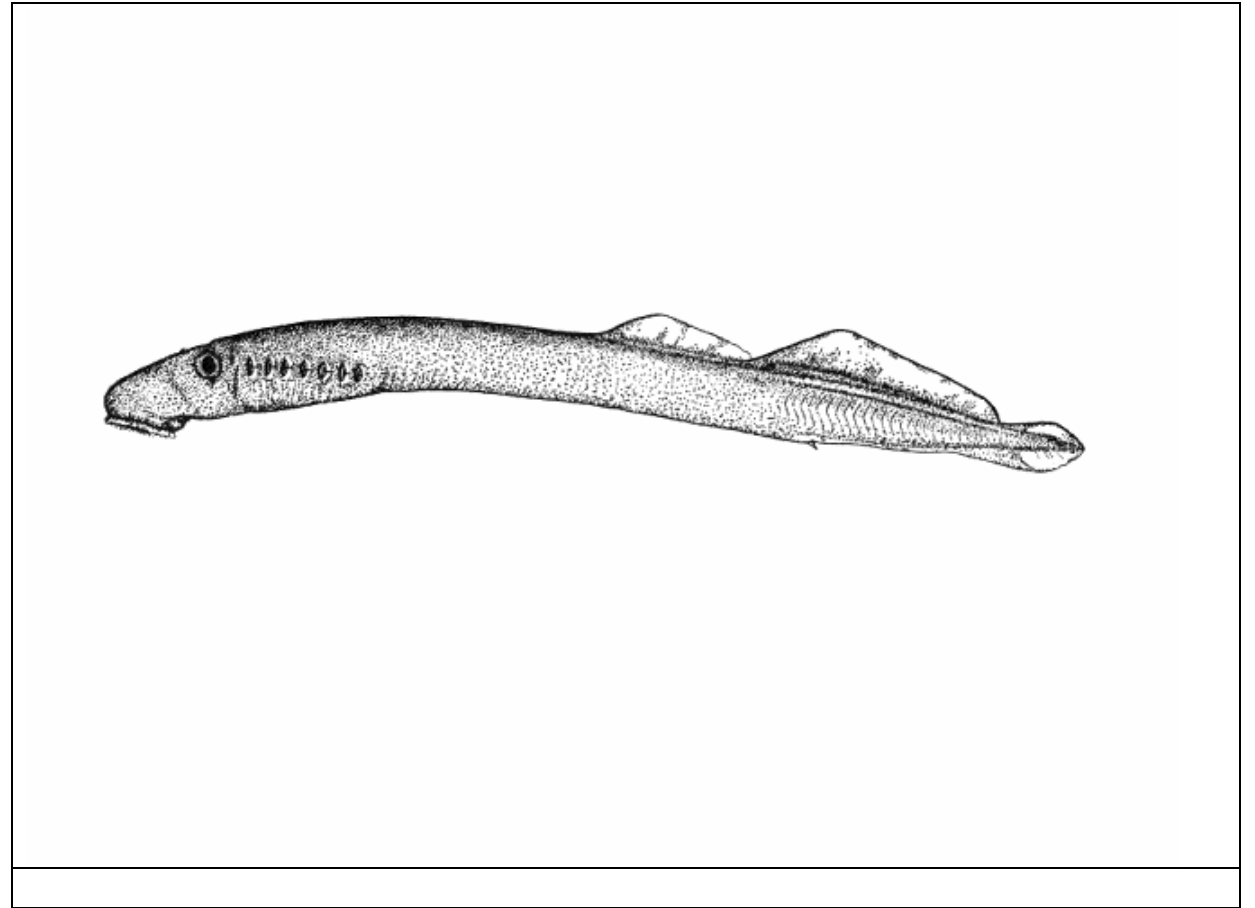
Photographer


Lamboeuf, Michel	spotted ratfish illustration
Lamboeuf, Michel	pacific pompano illustration
Lamboeuf, Michel	round stingray illustration
Lane, Jodie	coastrange sculpin illustration
Lane, Jodie	padded sculpin illustration
Lane, Jodie	pacific sandfish illustration
Lane, Jodie	louvar illustration
Lane, Jodie	blue lanternfish illustration
Lane, Jodie	white croaker illustration
Lane, Jodie	pacific sand lance illustration
Lane, Jodie	showy snailfish illustrated
Lorenzoni, Massimo	threespine stickleback
Love, Milton	calico surfperch
Love, Milton	northern anchovy
Love, Milton	high cockscomb
Love, Milton	walleye surfperch
Love, Milton	sailfin sculpin
Love, Milton	cabezon
Love, Milton	silverspotted sculpin
Love, Milton	blue rockfish
Love, Milton	grass rockfish
Love, Milton	painted greenling
Matarese, A.C., A.W. Kendall, D.M. Blood and M.V. Vinter,	sand sole illustration
McDowall, R.M.,	chinook salmon1
McDowall, R.M.,	chinook salmon illustration
McDowall, Robert M.	rainbow trout

Humboldt Bay Fishes	
<p>Lampetra tridentata Pacific lamprey</p>	
<p>Lampetra tridentata (Richardson, 1836)</p>	<p>by The Native Fish Conservancy</p> 
<p>Family: Petromyzontidae (Lampreys) , subfamily: Petromyzontinae</p> <p>Order: Petromyzontiformes (lampreys)</p> <p>Class: Cephalaspidomorphi (lampreys)</p> <p>FishBase name: Pacific lamprey</p> <p>Max. size: 76.0 cm TL (male/unsexed; Ref. 2850); max. published weight: 500 g (Ref. 27436); max. reported age: 8 years</p> <p>Environment: demersal; anadromous; freshwater; brackish; marine ; depth range - 250 m</p> <p>Climate: temperate; 65°N - 32°N</p> <p>Importance: fisheries: subsistence fisheries</p> <p>Resilience:</p> <p>Distribution: North Pacific: Bering Sea coasts of Asia and Alaska southward to the Yuhutu River, Hokkaido, northern</p> <p>Gazetteer Japan and Punta Canoas, central Baja California, Mexico. The populations were, at one time, split into two groups (Ref. 10015) as <i>Entosphenus tridentatus tridentatus</i> which ranged from the Columbia River to Alaska, and <i>E. t. ciliatus</i> which ranged from Klamath River southwards (Ref. 1998). This division no longer holds (Ref. 1998). Freshwater resident populations exist in Culrus Lake and</p>	

<p>Diagnosis:</p>	<p>Characterized by the presence of 3 (rarely 2) large sharp teeth on the supraoral bar and three sharp points on each of the central lateral tooth plates (Ref. 27547). Dorsal fins arise far back on the body, the anterior fin lower and shorter, higher in males; lower lobe of caudal fin larger than upper, the lobes joined to dorsal and anal fins; anal fin rudimentary, virtually absent in males (Ref. 27547). Adults from the sea blue-black to greenish above, silvery to white below; spawning adults become reddish brown (Ref. 27547).</p>
<p>Biology:</p>	<p>Spawning adults are found in gravel riffles and runs of clear coastal streams; feeding adults usually in the ocean, but landlocked populations occur (Ref. 998); ammocoetes in silt, mud, and sand of shallow eddies and backwaters of streams (Ref. 5723). Parasitic adults attach themselves to the side or undersurface of its prey, from which it draws blood and body fluids as food. Preys on fishes and sperm whales (Ref. 6885). Stops feeding once upstream spawning migration is underway (Ref. 1998). Rarely consumed as food; prepared fresh or smoked (Ref. 6885). Sometimes processed into meal (Ref. 27436). The effects of Pacific lamprey attacks on commercial species needs further studies (Ref. 6885)</p>
<p>Red List Status:</p>	<p>Not in IUCN Red List , (Ref. 36508)</p>
<p>Dangerous:</p>	<p>harmless</p>
<p>Coordinator:</p>	

Main Ref: Page, L.M. and B.M. Burr. 1991. (Ref. 5723)



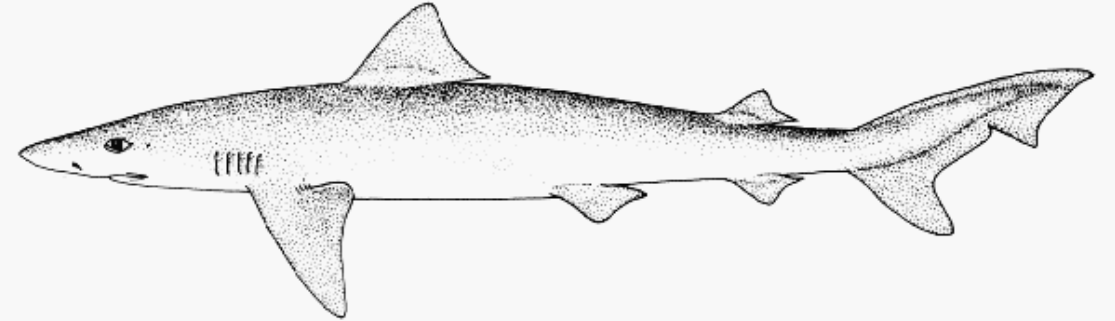
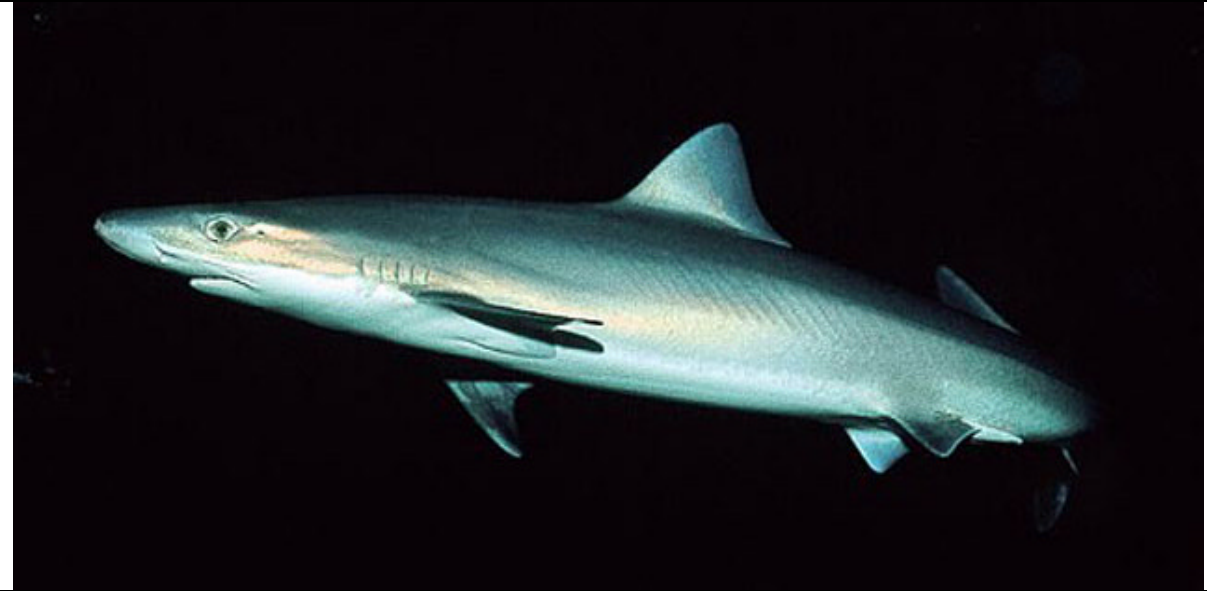
Squalus acanthias Piked dogfish	
Squalus acanthias Linnaeus, 1758	
Family: Squalidae (Dogfish sharks)	by Meneses, P.D.
Order: Squaliformes	
Class: Elasmobranchii (sharks and rays)	
FishBase name: Piked dogfish	
Max. size: 160 cm TL (male/unsexed; Ref. 247); 120.0 cm TL (female); max. published weight: 9,100 g (Ref. 11389); max. reported age: 75 years	
Environment: benthopelagic; oceanodromous; brackish; marine ; depth range 0 - 1460 m	
Climate: temperate; 7 - 15°C; 72°N - 55°S	
Importance: fisheries: commercial; gamefish: yes; aquarium: show aquarium	
Resilience: Very low, minimum population doubling time more than 14 years (rm=0.034; K=0.03-0.07; tm= 10-30; tmax= 75; Fec=1)	
Distribution: Antitropical. Western Atlantic: Greenland to Argentina. Eastern Atlantic: Iceland and Murmansk Coast (Russia) to South Africa, including the Mediterranean and Black Seas. Western Pacific: Bering Sea to New Zealand. Reports from off New Guinea are doubtful (Ref. 6871). Eastern Pacific: Bering Sea to Chile.	
Gazetteer	
Diagnosis: Dorsal spines (total): 2-2; Anal spines: 0-0. A slim dogfish	

Biology:	Possibly the most abundant living shark (Ref. 247). An inshore and offshore dogfish of the continental and insular shelf and upper slopes (Ref. 247, 11230). Usually near the bottom, but also in midwater and at the surface (Ref. 26346). Often found in enclosed bays and estuaries (Ref. 247). Reported to enter freshwater (Ref. 11980) but cannot survive there for more than a few hours (Ref. 247). Schools mainly segregated by size and sex; mixed schools also reported (Ref. 247). Feeds primarily on bony fishes, also mollusks, crustaceans and other invertebrates (Ref. 247). The only species of horned sharks that can inflict toxins with its tail. Utilized for human consumption, liver oil, vitamins, sand paper, leather, fertilizer, etc. (Ref. 247, 27436). Eaten fried, broiled, and baked (Ref. 9988). Growth is slow. At sexual maturity, males are 60-70 cm long, females 75-90cm (Ref. 35388). Gestation period is 2 years (Ref. 36731)
Red List Status:	, Fordham, S. , (Ref. 36508) , This important and wide-ranging commercial species is particularly vulnerable to overfishing because of its late maturity, low reproductive capacity and longevity. Fished populations in the North Atlantic have a well-documented history of over-exploitation followed by near-collapse, suggesting that 'Vulnerable' might be an appropriate assessment for some regions. However, the species is still landed commercially in significant numbers from target fisheries (some of which are managed) in many parts of the world and is of high value in international trade.
Dangerous:	venomous , Halstead, B.W., P.S. Auerbach and D.R. Campbell. 1990
Coordinator:	Compagno, Leonard J.V.

Dangerous: venomous , Halstead, B.W., P.S. Auerbach and D.R. Campbell. 1990

Coordinator: Compagno, Leonard J.V.

Main Ref: Compagno, L.J.V.. 1984. (Ref. 247)



FAO

Brown Smoothhound goes here

Triakis semifasciata
Leopard shark

Triakis semifasciata Girard, 1855

Family: Triakidae (Houndsharks) , subfamily: Triakinae

Order: Carcharhiniformes

Class: Elasmobranchii (sharks and rays)

FishBase name: Leopard shark

Max. size: 198 cm TL (male/unsexed; Ref. 244); 180.0 cm TL (female); max. published weight: 18.4 kg (Ref. 40637); max. reported age: 30 years

Environment: demersal; brackish; marine ; depth range - 91 m

Climate: subtropical; 45°N - 20°N

Importance: fisheries: commercial; gamefish: yes; aquarium: commercial

Resilience: Very low, minimum population doubling time more than 14 years (K=0.07-0.09; tm=11-21; tmax=30; Fec=4-12)

Distribution: Eastern Pacific: Oregon, USA to the Gulf of California.

Gazetteer

Biology: Found in shallow water from the intertidal to deeper waters, most commonly in enclosed muddy bays; including estuaries and lagoons (S. Wilson, pers. comm.). Prefers sandy areas, mud flats, and bottoms strewn with rocks near rocky reefs and kelp beds. Feeds mainly on crabs, shrimps, bony fish, fish eggs, clam necks and innkeeper worms among a large variety of food in its diet. Forms mixed schools. Ovoviviparous (aplacenta), with 4 to

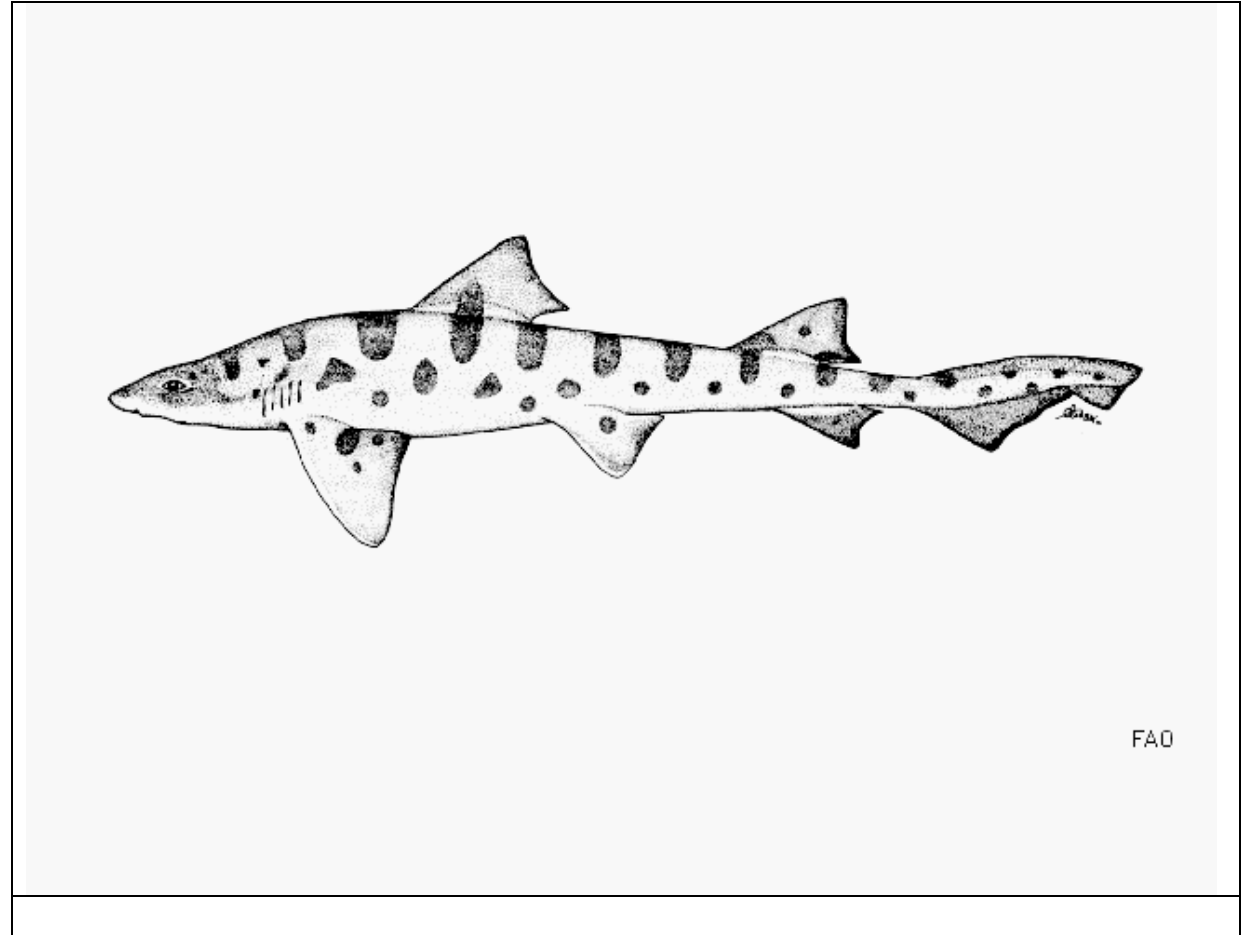
Red List Status:

Smith, S.E. , (Ref. 36508) , This mid-sized coastal shark is fairly common in bays and estuaries of the eastern North Pacific from California, USA, to the northern Gulf of California, Mexico. It is taken both commercially and by recreational anglers. Although a slow-growing, late-maturing shark with low productivity, management introduced in recent decades has protected the core of the population in California and Oregon waters from excessive harvesting. Little is known of the stock status in Mexico.

Dangerous: harmless

Coordinator: Compagno, Leonard J.V.

Main Ref: Compagno, L.J.V.. 1984. (Ref. 244)



Notorynchus cepedianus
Broadnose sevengill shark

Notorynchus cepedianus (Péron, 1807)

Family: Hexanchidae (Cow sharks)

Order: Hexanchiformes (frill and cow sharks)

Class: Elasmobranchii (sharks and rays)

FishBase name: Broadnose sevengill shark

Max. size: 300 cm TL (male/unsexed; Ref. 5578); max. published weight: 107.0 kg (Ref. 9987); max. reported age: 49 years

Environment: demersal; marine ; depth range 0 - 570 m

Climate: subtropical; 60°N - 56°S

Importance: fisheries: commercial; gamefish: yes; aquarium: public aquariums

Resilience: Very low, minimum population doubling time more than 14 years (rm=0.026; K=0.25; tm=16; tmax=32; Fec=82-95)

Distribution: All oceans (except North Atlantic and Mediterranean Sea). Southwest Atlantic: southern Brazil to northern

Gazetteer Argentina. Southeast Atlantic: Namibia to East London, South Africa (Ref. 5578). Western Pacific: southern Japan to New Zealand. Eastern Pacific: British Columbia, Canada to Chile. Record from India maybe erroneous.

Diagnosis: Dorsal spines (total): 0-0; Anal spines: 0-0; Vertebrae: 123-157. A large seven-gilled cowshark (Ref. 5578) with

by Zsilavec, G.



Biology:

Found on the continental shelf, often in shallow water (Ref. 247). Occurs close inshore, in bays and estuaries (Ref. 6871), with larger individuals ranging into deeper waters offshore and deep channels in bays (Ref. 247). Usually cruising steadily and slowly near the bottom (sometimes in water as shallow as a meter), but sometimes at the surface (Ref. 247). Can dash at speed when attacking prey (Ref. 247). Feeds on anything, including other sharks, rays, chimaeras, bony fish, hagfish, dolphin and porpoise meat, seals, shark egg cases, sea snails and mammalian carrion, including rats and humans (Ref. 5578). Aggressive when provoked, and regarded as potentially dangerous to people in open waters (Ref. 247). It has attacked divers in captivity and may be involved in a few shark attacks off California and South Africa (Ref. 247). Often caught by anglers from the shore (Ref. 6574). Utilized for human consumption, its skin for leather, and its liver as a source of oil (Ref. 247)

Red List Status: Data deficient, see IUCN Red List , Compagno, L.J.V. , (Ref. 36508) , Although wide-ranging and moderately common (where not heavily exploited), this shark is restricted to a limited inshore depth range in heavily fished temperate waters and is exposed to intensive inshore fisheries over most of its range. The central California stock in the San Francisco Bay area is thought to have been depleted in the early 1980s, but lack of fisheries data elsewhere make it impossible to determine whether this pattern of depletion occurs throughout its range.

Dangerous: traumatogenic , Compagno, L.J.V.. 1984

Coordinator: Compagno, Leonard J.V.

Dangerous: traumatogenic , Compagno, L.J.V.. 1984

Coordinator: Compagno, Leonard J.V.

Main Ref: Compagno, L.J.V.. 1984. (Ref. 247)



FAO

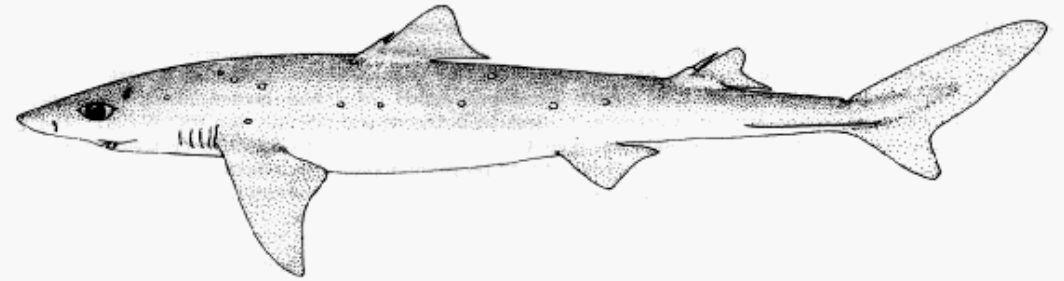
Squalus acanthias Piked dogfish	
Squalus acanthias Linnaeus, 1758	
Family:	Squalidae (Dogfish sharks) by Meneses, P.D.
Order:	Squaliformes
Class:	Elasmobranchii (sharks and rays)
FishBase name:	Piked dogfish
Max. size:	160 cm TL (male/unsexed; Ref. 247); 120.0 cm TL (female); max. published weight: 9,100 g (Ref. 11389); max. reported age: 75 years
Environment:	benthopelagic; oceanodromous; brackish; marine ; depth range 0 - 1460 m
Climate:	temperate; 7 - 15°C; 72°N - 55°S
Importance:	fisheries: commercial; gamefish: yes; aquarium: show aquarium
Resilience:	Very low, minimum population doubling time more than 14 years (rm=0.034; K=0.03-0.07; tm=10-30; tmax=75; Fec=1)
Distribution:	Antitropical. Western Atlantic: Greenland to Argentina. Eastern Atlantic: Iceland and Murmansk Coast (Russia) to South Africa, including the Mediterranean and Black Seas. Western Pacific: Bering Sea to New Zealand. Reports from off New Guinea are doubtful (Ref. 6871). Eastern Pacific: Bering Sea to Chile.
Gazetteer	
Diagnosis:	Dorsal spines (total): 2-2; Anal spines: 0-0. A slim dogfish with a narrow, pointed snout and characteristic white spots(Ref. 5578); two dorsal fins with ungrooved large



Biology:	Possibly the most abundant living shark (Ref. 247). An inshore and offshore dogfish of the continental and insular shelf and upper slopes (Ref. 247, 11230). Usually near the bottom, but also in midwater and at the surface (Ref. 26346). Often found in enclosed bays and estuaries (Ref. 247). Reported to enter freshwater (Ref. 11980) but cannot survive there for more than a few hours (Ref. 247). Schools mainly segregated by size and sex; mixed schools also reported (Ref. 247). Feeds primarily on bony fishes, also mollusks, crustaceans and other invertebrates (Ref. 247). The only species of horned sharks that can inflict toxins with its tail. Utilized for human consumption, liver oil, vitamins, sand paper, leather, fertilizer, etc. (Ref. 247, 27436). Eaten fried, broiled, and baked (Ref. 9988).Growth is slow. At sexual maturity, males are 60-70 cm long, females 75-90cm (Ref. 35388). Gestation period is 2 years (Ref. 36731) , Fordham, S. , (Ref. 36508) , This important and wide-ranging commercial species is particularly vulnerable to overfishing because of its late maturity, low reproductive capacity and longevity. Fished populations in the North Atlantic have a well-documented history of over-exploitation followed by near-collapse, suggesting that 'Vulnerable' might be an appropriate assessment for some regions. However, the species is still landed commercially in significant numbers from target fisheries (some of which are managed) in many parts of the world and is of high value in international trade.
Red List Status:	
Dangerous:	venomous , Halstead, B.W., P.S. Auerbach and D.R. Campbell. 1990
Coordinator:	Compagno, Leonard

Coordinator: Compagno,
Leonard
J.V.

Main Ref: Compagno, L.J.V.. 1984. (Ref. 247)



FAO

Raja binoculata
Big skate

Raja binoculata Girard, 1855

Family: Rajidae (Skates)

Order: Rajiformes (skates and rays)

Class: Elasmobranchii (sharks and rays)

FishBase name: Big skate

Max. size: 244 cm TL (male/unsexed; Ref. 2850); max. published weight: 91.0 kg (Ref. 2850)

Environment: demersal; marine ; depth range 3 - 800 m

Climate: temperate; 63°N - 28°N

Importance: fisheries: commercial; aquarium: public aquariums

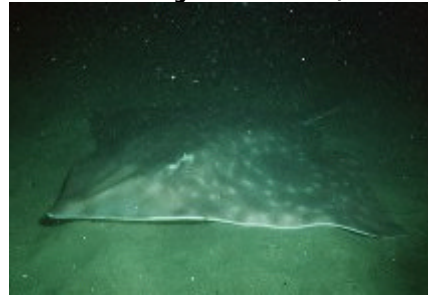
Resilience:

Distribution: North Pacific: Glubokaya Bay, Cape Navarin, and Stalemate Bank to Cedros I., Baja California, Mexico.

Gazetteer

Diagnosis: Dorsal spines (total): 0-0; Anal spines: 0-0. Dorsal fins well back on tail, small; caudal and anal fins absent; pectorals broad, attached to snout and incorporated with body; pelvics large, moderately concave on free margins (Ref. 6885). Posterior sides of tail with a small fleshy keel on either side (Ref. 6885).

by Gotshall, D.W.



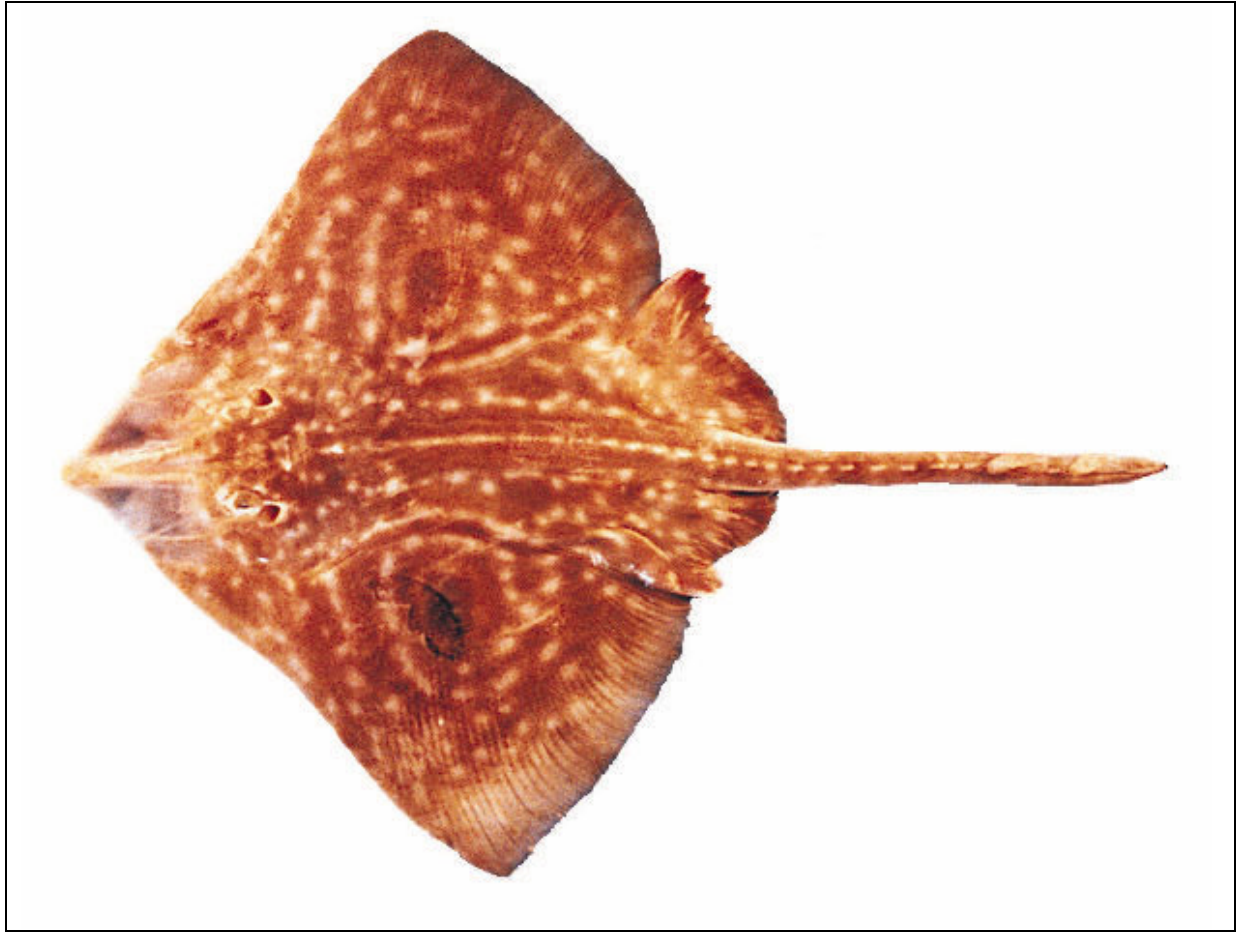
Biology: Largest skate in North America (Ref. 2850). Feed on crustaceans and fishes (Ref. 6885). Oviparous. Distinct pairing with embrace. Young may tend to follow large objects, such as their mother (Ref. 205). Eggs are oblong capsules with stiff pointed horns at the corners deposited in sandy or muddy flats (Ref. 205). Egg capsules are 22.8-30.5 cm long and 11.0-19.4 cm wide (Ref. 41249, 41300, 41357). Pectoral fins utilized for human consumption (Ref. 2850). Marketed fresh and frozen; eaten fried and baked (Ref. 9988)

Red List Status: , Ellis, J. & Dulvey, N. , (Ref. 36508) , This large-bodied demersal skate occurs in the north-eastern Pacific, from California to Alaska, and is one of the three most important rajids fished in the southern part of its range. Population data are inadequate to determine its precise exploitation status. It is, however, one of the larger, slow maturing species of skate and its biological characteristics likely make it as susceptible to over-fishing of D.batis and D. laevis.

Dangerous: harmless

Coordinator: McEachran, John

Main Ref: McEachran, J.D. and K.A. Dunn. 1998. (Ref. 27314)



Urobatis halleri
Haller's round ray

Urobatis halleri (Cooper, 1863)

Family: Urolophidae (Round rays)

Order: Rajiformes (skates and rays)

Class: Elasmobranchii (sharks and rays)

FishBase name: Haller's round ray

Max. size: 58.0 cm TL (male/unsexed; Ref. 40637); max. published weight: 1,360 g (Ref. 4699)

Environment: demersal; marine ; depth range - 91 m

Climate: subtropical; 41°N - 5°N

Importance: fisheries: minor commercial; gamefish: yes; aquarium: public aquariums

Resilience: Low, minimum population doubling time 4.5 - 14 years (K=0.15)

Distribution: Eastern Pacific: Eureka in northern California, USA to Panama.

Gazetteer

Biology: Occurs in sand or mud bottom off beaches and in bays and sloughs (Ref. 2850), sometimes around rocky reefs (Ref. 12951). Feeds on benthic invertebrates and small fishes

Red List Status: Not in IUCN Red List , (Ref. 36508)

by Gotshall, D.W.

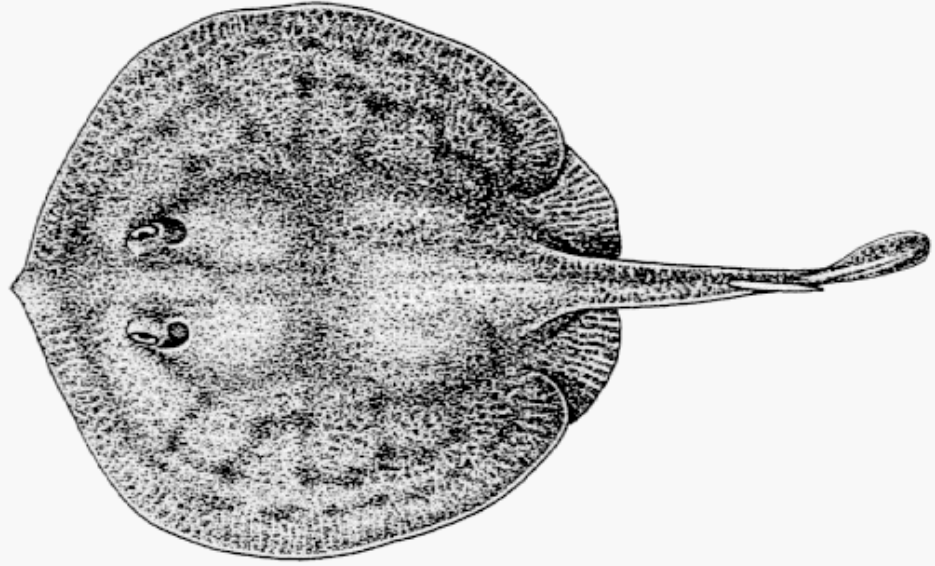


Dangerous: traumatogenic , Halstead, B.W., P.S. Auerbach and D.R. Campbell. 1990

Coordinator:

Main Ref: McEachran, J.D.. 1995. (Ref. 9265)





FAO

Myliobatis californica
Bat eagle ray

Myliobatis californica Gill, 1865

Family: Myliobatidae (Eagle and manta rays) , subfamily: Myliobatinae

Order: Rajiformes (skates and rays)

Class: Elasmobranchii (sharks and rays)

FishBase name: Bat eagle ray

Max. size: 180 cm WD (male/unsexed; Ref. 2850); max. published weight: 82.1 kg (Ref. 40637)

Environment: demersal; marine ; depth range 1 - 46 m

Climate: subtropical; 45°N - 25°N

Importance: aquarium: public aquariums

Resilience:

Distribution: Eastern Pacific: Oregon, USA to Gulf of California (Ref. 2850) and the Galapagos Is. (Ref. 28023).

Gazetteer

Biology: Commonly found in sandy and muddy bays and sloughs, also on rocky bottom and in kelp beds (Ref. 2850). Sometimes buries itself in sand (Ref. 2850). Found singly or in schools (Ref. 12951). Feeds on bivalves, snails, polychaetes, shrimps, and crabs

by Gotshall, D.W.



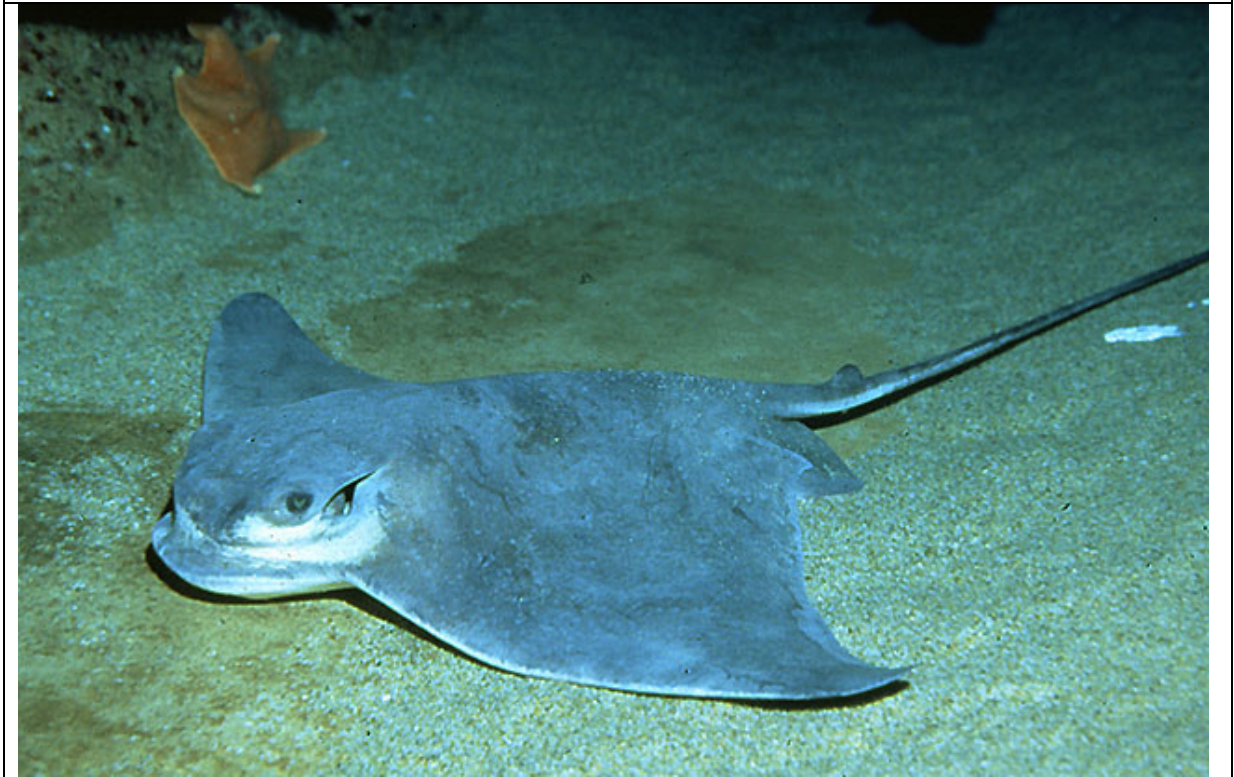
Red List Not in IUCN Red List , (Ref. 36508)

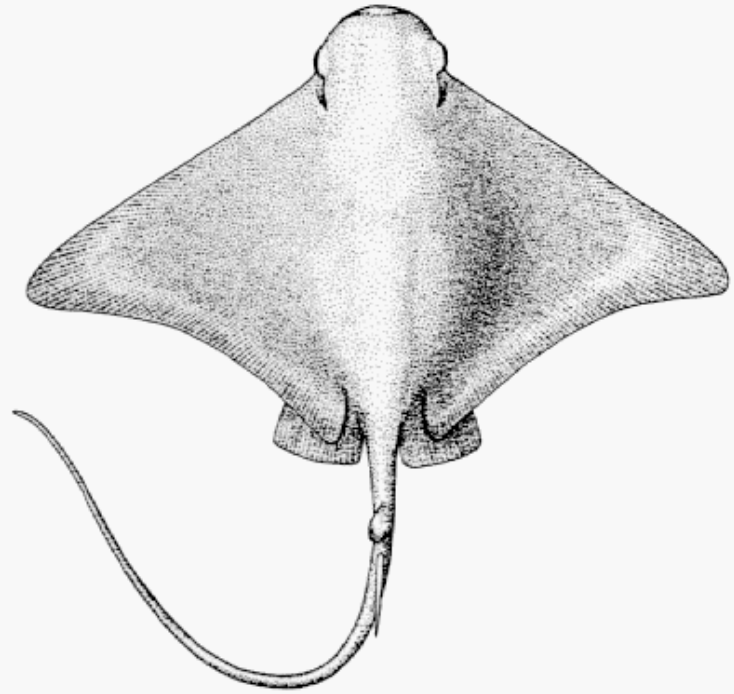
Status:

Dangerous: venomous , Halstead, B.W., P.S. Auerbach and D.R. Campbell. 1990

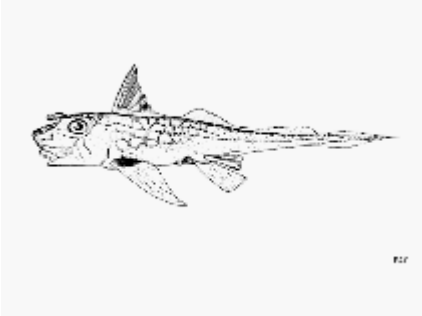
Coordinator: McEachran, John

Main Ref: McEachran, J.D. and G. Notarbartolo di Sciara. 1995. (Ref. 9257)

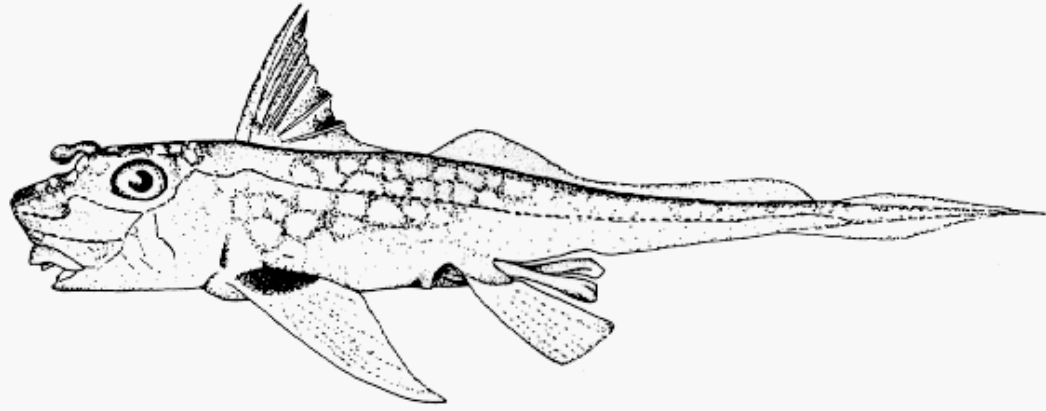




FAO

Hydrolagus colliei Spotted ratfish	
Hydrolagus colliei (Lay & Bennett, 1839)	
Family:	Chimaeridae (Shortnose chimaeras or ratfishes) by FAO
Order:	Chimaeriformes (chimaeras)
Class:	Holocephali (chimaeras)
FishBase name:	Spotted ratfish
Max. size:	97.0 cm TL (male/unsexed; Ref. 9015)
	
Environment:	demersal; marine ; depth range 0 - 913 m
Climate:	temperate; 58°N - 28°N
Importance:	fisheries: of no interest; aquarium: public aquariums
Resilience:	Medium, minimum population doubling time 1.4 - 4.4 years (K=0.2-0.22)
Distribution:	Eastern Pacific: Cape Spencer, Alaska to Bahía Sebastian Vizcaíno, Baja California (Mexico). Isolated population in the northern Gulf of California.
Gazetteer	
Diagnosis:	Dorsal spines (total): 1-1; Dorsal soft rays (total): 10-10
Biology:	Found near the bottom, from close inshore to about 913 m (Ref. 2850). Abundant in cold waters at moderate depths. Feeds on mollusks, crustaceans and fishes (Ref. 37955); also echinoderms and and worms (Ref. 28499). The spine can be dangerous and cause a painful wound (Ref. 2850). Fishers are reputed to fear the jaws of the ratfish more

Red List	Not in IUCN Red List , (Ref. 36508)
Status:	
Dangerous:	traumatogenic , Halstead, B.W., P.S. Auerbach and D.R. Campbell. 1990
Coordinator:	
Main Ref:	Allen, M.J. and G.B. Smith. 1988. (Ref. 6793)



FAO

Acipenser medirostris
Green sturgeon

Acipenser medirostris Ayres, 1854

Family: Acipenseridae (Sturgeons) , by Gotshall, D.W.
subfamily: Acipenserinae

Order: Acipenseriformes
(sturgeons and
paddlefishes)

Class: Actinopterygii (ray-finned
fishes)

FishBase Green sturgeon

name:

Max. size: 213 cm TL (male/unsexed;
Ref. 2850); max. published
weight: 159.0 kg (Ref.
2850)

Environment: demersal; anadromous; freshwater; brackish; marine

Climate: temperate; 10 - 20°C; 59°N - 30°N

Importance: fisheries: minor commercial; gamefish: yes

Resilience: Low, minimum population doubling time 4.5 - 14
years (K=0.05-0.09)

Distribution: North America: Aleutian Is. and the Gulf of Alaska to
Ensenada, Mexico. Considered vulnerable in Canada.

Gazetteer The Asian population is now considered to be a
separate species *A. mikadoi* (Ref. 6866). International
trade restricted (CITES II, since 1.4.98).

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 33-
35; Anal spines: 0-0; Anal soft rays: 22-28.
Characterized by a single row of 1 to 4 bony plates



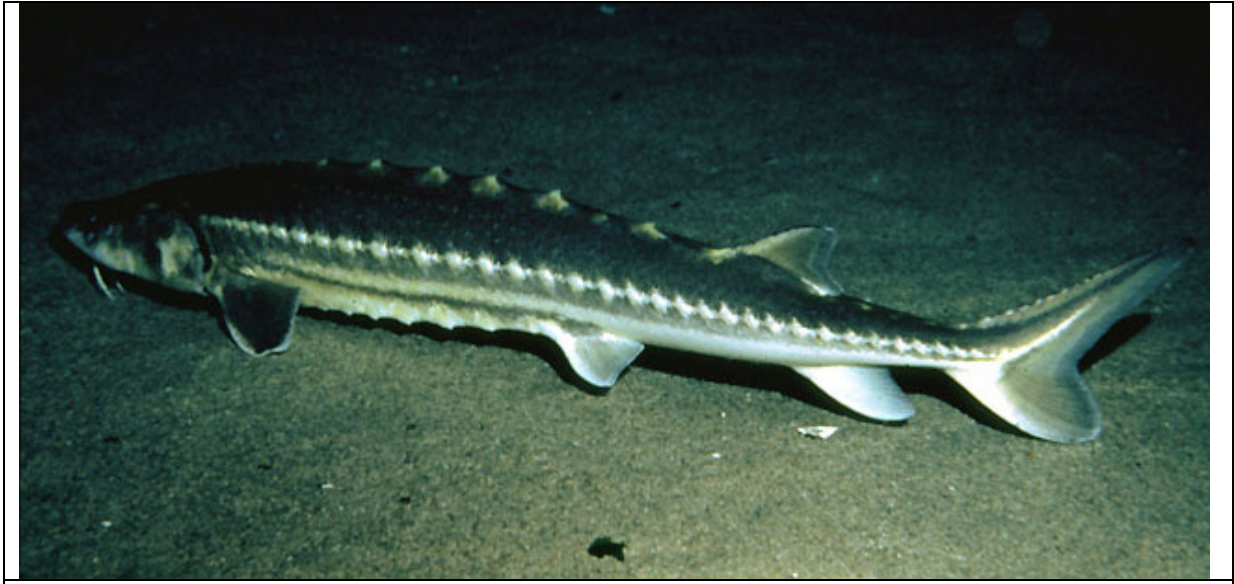
Biology: Found in estuaries, lower reaches of large rivers, and
in salt or brackish water off river mouths (Ref. 5723).
Probably spawns in fresh water (Ref. 27547). May
cover considerable distances in the ocean (Ref.
27547). Edible but with a disagreeable taste and
unpleasant odor (Ref. 1998)

Red List Vulnerable, see IUCN Red List (A1ac) , Sturgeon
Status: Specialist Group , (Ref. 36508)

Dangerous: harmless

Coordinator:


Main Ref: Page, L.M. and B.M. Burr. 1991. (Ref. 5723)



Acipenser transmontanus

White sturgeon

[Acipenser transmontanus](#) Richardson, 1836

Family:	<u>Acipenseridae</u> (Sturgeons) , subfamily: Acipenserinae	by Helias, J.-F.
Order:	<u>Acipenseriformes</u> (sturgeons and paddlefishes)	
Class:	Actinopterygii (ray-finned fishes)	
FishBase name:	White sturgeon	
Max. size:	610 cm TL (male/unsexed; Ref. 1998); max. published weight: 816.0 kg (Ref. 27436); max. reported age: 104 years	
Environment:	demersal; anadromous; freshwater; brackish; marine ; depth range 1 - 122 m	
Climate:	temperate; 0 - 24°C; 60°N - 36°N	
Importance:	fisheries: commercial; aquaculture: commercial; gamefish: yes	
Resilience:	Very low, minimum population doubling time more than 14 years (tm=11-34; tmax=104)	
Distribution:	Pacific Coast of North America: Alaska Bay to Monterey, California, USA. Landlocked in Columbia River drainage, Montana, and perhaps Lake Shasta in California, USA. Translocated to lower Colorado River, Arizona in USA. Reported from northern Baja	
Gazetteer		

Diagnosis:	California, Mexico (Ref. 2850, 27436). Considered vulnerable in Canada (Ref. 6866). International trade restricted (CITES II, since 1.4.98). <u>Dorsal spines</u> (total): 0-0; <u>Dorsal soft rays</u> (total): 44- 48; <u>Anal soft rays</u> : 28-31. Distinguished by the 2 rows of 4 to 8 bony plates on a midventral line between the anus and anal fin, and about 45 rays in the dorsal fin (Ref. 27547). Gray or brownish above, paler below; fins gray (Ref. 27547).
Biology:	Spends most of its time in the sea, usually close to shore (Ref. 27547). Enters estuaries of large rivers and moves far inland to spawn (Ref. 5723). Individuals larger than 48.3 cm feed mainly on fishes; smaller ones feed mainly on chironomids, but also takes small crustaceans, other insects and mollusks (Ref. 1998). Feeding ceases just before spawning (Ref. 1998). Excellent food fish that is sold fresh, smoked or frozen (Ref. 9988). Eggs marketed as caviar (Ref. 1998). In the past, the airbladder was made into isinglass (Ref. 27547)
Red List Status:	Lower Risk: near threatened, see IUCN Red List , (Ref. 36508)
Dangerous:	harmless
Coordinator:	
Main Ref:	Page, L.M. and B.M. Burr. 1991. (Ref. 5723)



Ophichthus zophochir

Yellow snake-eel

Ophichthus zophochir Jordan & Gilbert, 1882

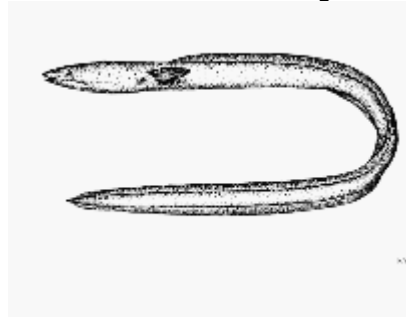
Family: Ophichthidae (Snake eels) , by FAO
subfamily: Ophichthinae

Order: Anguilliformes

Class: Actinopterygii (ray-finned fishes)

FishBase name: Yellow snake-eel

Max. size: 88.0 cm TL (male/unsexed; Ref. 2850)



Environment : demersal; marine ; depth range 1 - 110 m

Climate: subtropical

Importance:

Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (K=0.30)

Distribution: Eastern Pacific: from Eureka in northern California, USA to Peru; uncommon in north of Baja California, Mexico.

Gazetteer

Diagnosis: Vertebrae: 149-162

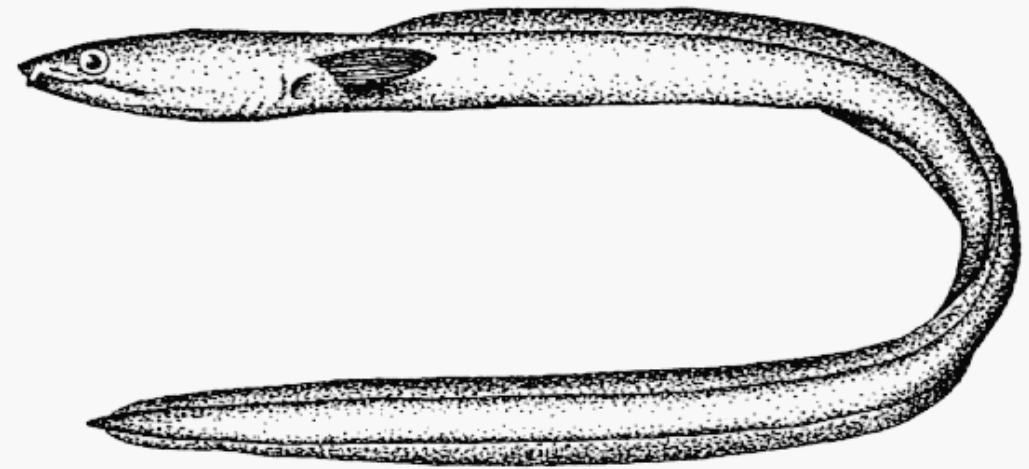
Biology: Inhabits rocky and sandy areas. A burrowing species. Feeds on clams and fish (Ref. 4525)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator: McCosker, John

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



FAO

Alosa sapidissima
American shad

Alosa sapidissima (Wilson, 1811)

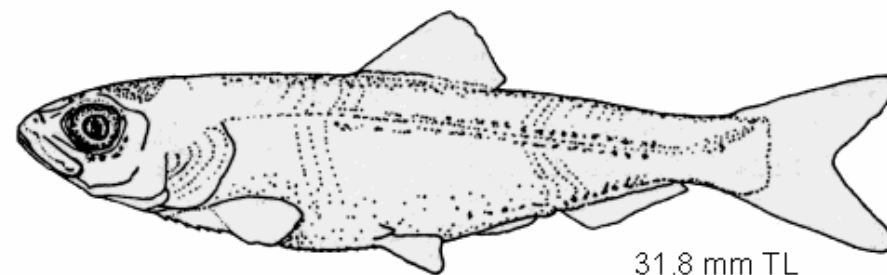
Family: Clupeidae (Herrings, shads, sardines,

by Flescher, D.

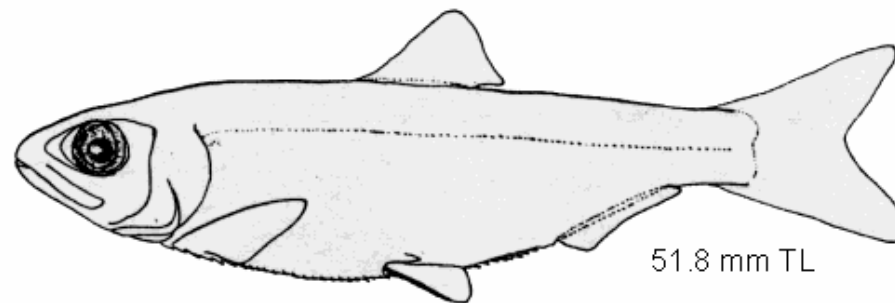
Order:	Clupeiformes (herrings)
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	American shad
Max. size:	76.0 cm TL (male/unsexed; Ref. 6885); max. published weight: 5,500 g (Ref. 7251); max. reported age: 11 years
Environment:	pelagic; anadromous; freshwater; brackish; marine ; depth range 0 - 250 m
Climate:	temperate; 60°N - 22°N
Importance:	fisheries: commercial; gamefish: yes
Resilience:	Low, minimum population doubling time 4.5 - 14 years (K=0.14; tm=4.7)
Distribution:	North America: New Foundland (Ref. 1998), the St. Lawrence River, and Nova Scotia southward to central Florida. Due to introductions into the Sacramento and Columbia Rivers, this species is now found from Cook Inlet, Alaska (Ref. 1998) to Baja California in Mexico and the Kamchatka Peninsula.
Gazetteer	
Diagnosis:	Dorsal spines (total): 0-0; Dorsal soft rays (total): 15-19; Anal spines: 0-0; Anal soft rays: 18-24; Vertebrae: 51-60. Moderately compressed, belly with a distinct keel. Lower jaw not rising steeply within mouth. gill rakers long and slender (fewer in young). Silvery in color with blue or blue-green metallic luster on back (Ref. 1998). A dark spot on shoulder, sometimes followed by several more, or even a

Order:	Clupeiformes (herrings)
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	American shad
Max. size:	76.0 cm TL (male/unsexed; Ref. 6885); max. published weight: 5,500 g (Ref. 7251); max. reported age: 11 years
Environment:	pelagic; anadromous; freshwater; brackish; marine ; depth range 0 - 250 m
Climate:	temperate; 60°N - 22°N
Importance:	fisheries: commercial; gamefish: yes
Resilience:	Low, minimum population doubling time 4.5 - 14 years (K=0.14; tm=4.7)
Distribution:	North America: New Foundland (Ref. 1998), the St. Lawrence River, and Nova Scotia southward to central Florida. Due to introductions into the Sacramento and Columbia Rivers, this species is now found from Cook Inlet, Alaska (Ref. 1998) to Baja California in Mexico and the Kamchatka Peninsula.
Gazetteer	
Diagnosis:	Dorsal spines (total): 0-0; Dorsal soft rays (total): 15-19; Anal spines: 0-0; Anal soft rays: 18-24; Vertebrae: 51-60. Moderately compressed, belly with a distinct keel. Lower jaw not rising steeply within mouth. gill rakers long and slender (fewer in young). Silvery in color with blue or blue-green metallic luster on back (Ref. 1998). A dark spot on shoulder, sometimes followed by several more, or even a

Main Ref: Whitehead, P.J.P.. 1985. (Ref. 188)



31.8 mm TL



51.8 mm TL

Clupea pallasii
Pacific herring

Clupea pallasii Valenciennes, 1847

Family: Clupeidae (Herrings,
shads, sardines,
menhadens)

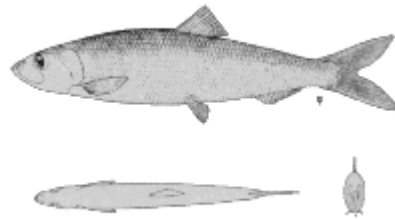
Order: Clupeiformes

Class: Actinopterygii (ray-
finned fishes)

FB name: Pacific herring

Distribution: Arctic Sea: White Sea
eastward to Ob inlet.
Western Pacific: Anadyr
Bay, eastern coasts of
Kamchatka, possibly the
Aleutian Islands
southward to Japan and
west coast of Korea.
Eastern Pacific: Kent
Peninsula at 107°W and
Beaufort Sea southward
to northern Baja
California, Mexico.

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft-rays (total):
13-21; Anal spines: 0-0; Anal soft-rays: 12-23;
Vertebrae: 46-58. Without prominent keel; no
median notch in upper jaw. Gill cover without
radiating bony striae. No distinctive dark spots on
body or fins. Overlaps *C. harengus* in White Sea,
but distinguished by fewer vertebrae (usually 52 to



Biology: Neritic species (Ref. 11230). A coastal and schooling species (Ref. 188). Landlocked populations exist. Mature adults migrate inshore, entering estuaries to breed. During the summer of their first year, young form schools in shallow bays, inlets and channels that appear at the surface; these schools disappear in the fall and remain in deep water for the next 2-3 years (Ref. 6885, 27547). Young feed mainly on crustaceans, but also take decapod and mollusk larvae; adults prey mainly on large crustaceans and small fishes (Ref. 6885, 27547). Because it does not undertake extensive coastal migrations, the mixing of local populations is relatively rare (Ref. 27547). In the eastern Pacific, the fish is mainly caught for roe markets in Asia (Ref. 9988). There is a fishery for eggs laid on kelp, which when salted, is called kazunoko-kombu, and is considered a delicacy in Japan (Ref. 27547). Used in Chinese medicine (Ref. 12166). Utilized fresh, dried/salted, smoked, canned, and frozen; eaten pan-fried, broiled, and baked (Ref. 9988). Possibly to 475 m depth (Ref. 6793).

Max. size: 46 cm TL (male/unsexed); max. reported age: 19 years

Environment: pelagic; freshwater; brackish; marine; depth range 0 - 150 m

Climate: temperate; 73°N - 28°N

Importance: fisheries: highly commercial; gamefish: yes; bait: usually

Climate: 0 - 150 m
temperate; 73°N - 28°N

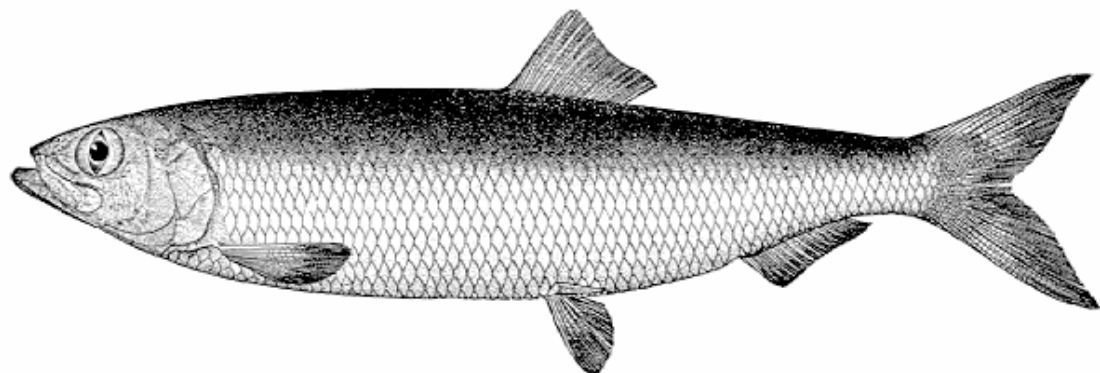
Importance: fisheries: highly commercial; gamefish: yes; bait: usually

Threatened: Not in IUCN Red List (), (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Whitehead, P.J.P.. 1985 (Ref. 188)



Dorosoma petenense

Threadfin shad

Dorosoma petenense (Günther, 1867)

Family: Clupeidae (Herrings, shads, sardines, menhadens)

Order: Clupeiformes

Class: Actinopterygii (ray-finned fishes)

FB name: Threadfin shad

Distribution: North and Central America: Gulf of Mexico drainage, Mississippi system, from the Ohio River of Kentucky and southern Indiana southwest to Oklahoma, and south to Texas and Florida, also rivers around the Gulf to northern Guatemala; also Belize River, British Honduras.

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft-rays (total): 11-15; Anal spines: 0-0; Anal soft-rays: 17-27; Vertebrae: 43-44. Body moderately deep; belly with 15 to 18 + 8 to 12 scutes. Mouth small. Last dorsal finray long, about equal to distance from snout tip to mid-pectoral fin or beyond; anal fin relatively short. Scales relatively large, regularly arranged. A



Biology: Often schooling, occurring mainly in freshwater in large rivers, reservoirs, lakes, and swamps. Prefer the presence of smooth, steep-sided surfaces such as dams, cement-lined pools and riprapped streams (Ref. 39049). But adults also found in brackish or saline water of estuaries and bays (up to 32.3 ppt salinity (Ref. 39050); juveniles to about 15 ppt). Larvae are pelagic probably found only in freshwater (Ref. 39046). Filter-feeders, but not entirely herbivorous since recorded food items include copepods, cladocerans and fish fry. Also feed on organic material of sand and detritus bottoms (Ref. 9114). Breed in the spring and in autumn, in freshwater, near or over plants or other objects. Eggs adhere to aquatic vegetation (Ref. 4639). Caught exclusively in fresh waters and sometimes in mouths of rivers (Ref. 9291).

Max. size: 22 cm SL (male/unsexed); max. reported age: 4 years

Environment: pelagic; freshwater; brackish; marine; pH range: 0 - 32.3; depth range 0 - 15 m

Climate: subtropical; 1.1 - 34.9°C; 42°N - 15°N

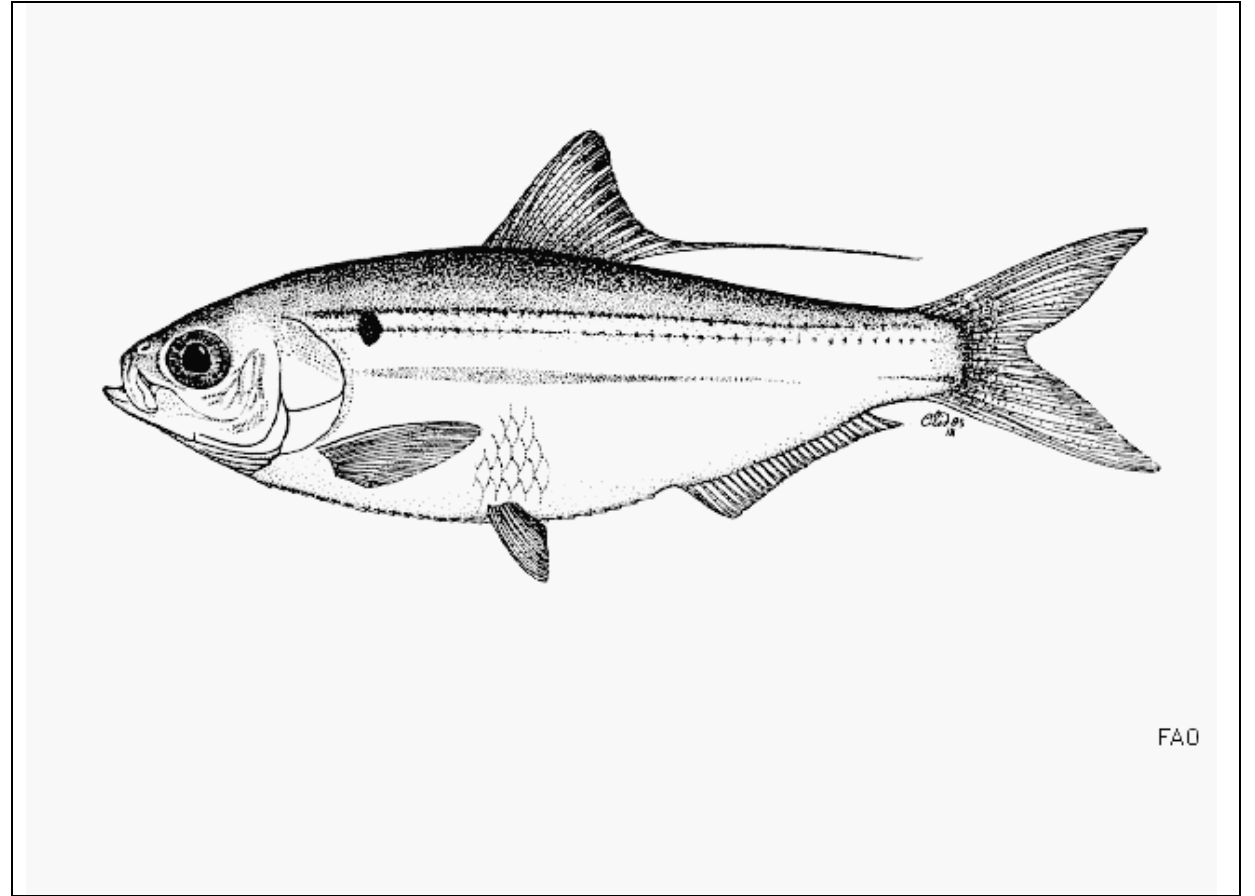
Importance: fisheries: minor commercial; bait: usually

Threatened: Not in IUCN Red List (), (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Whitehead, P.J.P.. 1985 (Ref. 188)



FAO

Engraulis mordax
Californian anchovy

Engraulis mordax Girard, 1854

Family: Engraulidae (Anchovies)
Order: Clupeiformes (herrings)
Class: Actinopterygii (ray-finned fishes)

by Love, M.



FishBase name: Californian anchovy

Max. size: 24.8 cm SL (male/unsexed; Ref. 27436); max. reported age: 7 years

Environment: pelagic; marine ; depth range 0 - 300 m

Climate: subtropical; 55°N - 21°N

Importance: fisheries: commercial; aquarium: public aquariums; bait: usually

Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (rm=0.36; K=0.2-0.6; tm=1-4; tmax=7; Fec=4000)

Distribution: Northeast Pacific: northern Vancouver Island south to Cape San Lucas, Baja California, Mexico. Two subspecies recognized: *E. mordax mordax* from British Columbia to Baja California and *E. mordax nanus* in Bays of California.

Gazetteer

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 14-19; Anal spines: 0-0; Anal soft rays: 19-26; Vertebrae: 43-47. Snout quite sharply pointed; maxilla moderate, tip sharply pointed, reaching to or almost to hind border of pre-operculum, projecting well beyond tip of second supra-maxilla;

Biology: Usually found in coastal waters within about 30 km from shore, but as far out as 480 km, forming large, tightly packed schools. Enters bays and inlets. Feeds on euphausiids, copepods and decapod larvae, both by random filter-feeding and by 'pecking' at prey. Processed into fishmeal, used as bait for tuna, occasionally canned (Ref. 9298)

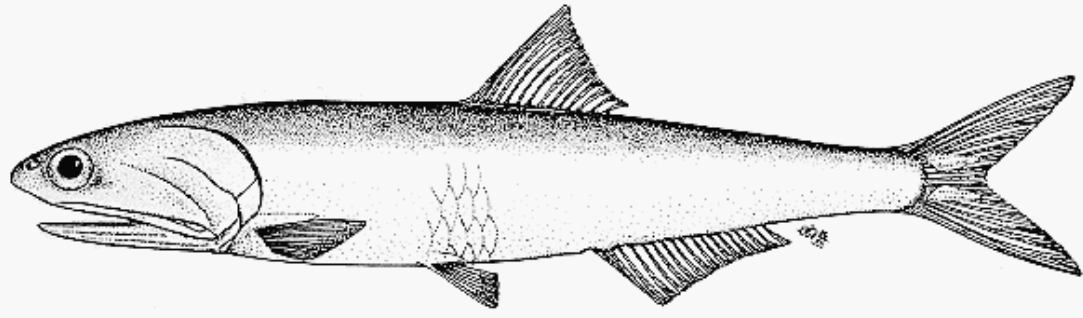
Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Whitehead, P.J.P., G.J. Nelson and T. Wongratana. 1988. (Ref. 189)





FAO

Oncorhynchus clarki clarki
Cutthroat trout

Oncorhynchus clarki clarki (Richardson, 1836)

Family: Salmonidae (Salmonids) ,
subfamily: Salmoninae

Order: Salmoniformes

Class: Actinopterygii (ray-finned
fishes)

FB name: Cutthroat trout

Distribution: Eastern Pacific: northern parts of
Prince William Sound, Alaska,
south to the Eel River in
northern California, USA and is
found in most streams emptying
into the Pacific. Widely
introduced into various streams
and lakes within its natural
range, as well as into a few lakes
in eastern North America. In
some streams it may be the
most numerous sport fish
present, while other streams
support only small populations.
At least 14 subspecies have been
historically recognized (Ref.
5723).

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft-rays (total):
8-11; Anal spines: 0-0; Anal soft-rays: 8-12. Color is
variable. Generally dark green to greenish-blue on
back, olive-green on upper flank, silvery on lower



Biology: Prefers relatively small streams, with gravel
bottoms and gentle gradients. Spawning adults
migrate from the sea into streams to spawn (Ref.
27547). The young fish usually stay in the stream
for a year or two before entering the sea, but some
populations never get to sea at all. In rare cases,
some individuals of sea-going populations, may
remain in fresh water for as long as eight years
(Ref. 28866, 28869). Feeds on small fishes,
crustaceans, and insects (Ref. 4925). The flesh is
orange-red and of excellent flavor (Ref. 27547).
Utilized fresh and eaten fried, broiled, and baked
(Ref. 9988). This species does not compete well
with other fish, tends to hybridize, and is unable to
withstand fishing pressure = depletion of stocks.

Max. size: 99 cm TL (male/unsexed); max.weight: 18.6 kg;
max. reported age: 10 years

Environment: demersal; freshwater; brackish; marine

Climate: temperate; 23.2°C; 61°N - 40°N

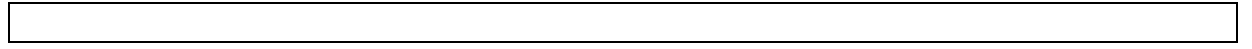
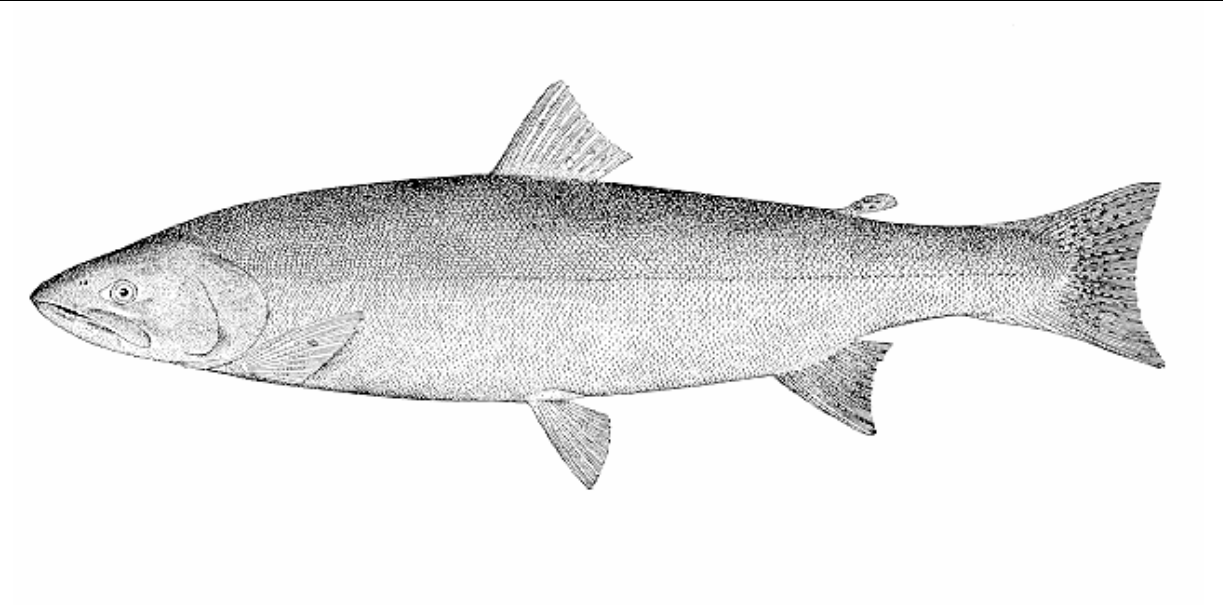
Importance: fisheries: commercial; aquaculture: commercial;
gamefish: yes; aquarium: public aquariums

Threatened: Not in IUCN Red List (), (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Coad, B.W.. 1995 (Ref. 12204)



Oncorhynchus kisutch
Coho salmon

Oncorhynchus kisutch (Walbaum, 1792)

Family: Salmonidae (Salmonids) ,
subfamily: Salmoninae

Order: Salmoniformes

Class: Actinopterygii (ray-finned
fishes)

**FishBase
name:** Coho salmon

Max. size: 108 cm TL (male/unsexed; Ref.
40637); 65.5 cm (female); max.
published weight: 15.2 kg (Ref.
40637); max. reported age: 5
years

Environment: demersal; anadromous; freshwater; brackish; marine ;
depth range 0 - 250 m

Climate: polar; 0 - 25°C; 72°N - 37°N

Importance: fisheries: highly commercial; aquaculture: commercial;
gamefish: yes; aquarium: show aquarium

Resilience: Medium, minimum population doubling time 1.4 - 4.4 years
(K=0.98(?); tm=2-4; Fec=1,400)

Distribution: North Pacific: Anadyr River, Russia south to Hokkaido,
Japan; Point Hope, Alaska south to Chamalu Bay, Baja

Gazetteer California, Mexico.

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 9-13;
Anal spines: 0-0; Anal soft rays: 12-17; Vertebrae: 61-69.
Characterized by the presence of small black spots on the
back and on the upper lobe of the caudal fin, and by the
lack of dark pigment along the gum line of the lower jaw
(Ref. 27547). Gill rakers rough, widely spaced; lateral line

by Keeley, E.R.



Biology:

Occurs in the ocean or in lakes, returning to streams they utilized as the time of smoltation to spawn (Ref. 27547). Young emerge in the spring and usually live in fresh water for 1-2 years (sometimes up to 4 years, Ref. 27547), after which they migrate at night to freshwater lakes or to the sea (Ref. 1998). Individuals that stay more than two years in fresh water and become sexually mature without ever going to sea are called residuals; they never spawn (Ref. 27547). Young in freshwater streams feed mainly on insects and stay almost entirely in pools and soon become strongly territorial (Ref. 27547). Upon reaching the sea, the smolts remain inshore for a time, feeding on planktonic crustacea (Ref. 27547). As they grow larger, they move farther out and feed on larger organisms (Ref. 27547). Preyed upon by various fishes, birds (mergansers, loons and kingfishers), mammals, and lamprey (Ref. 1998). Marketed fresh, dried/salted, smoked, canned, cured, and frozen. Eaten steamed, fried, broiled, boiled, microwaved, and baked (Ref. 9988). The Alaska Salmon fishery of this species has been certified by the Marine Stewardship Council (<http://www.msc.org/>) as well-managed and sustainable

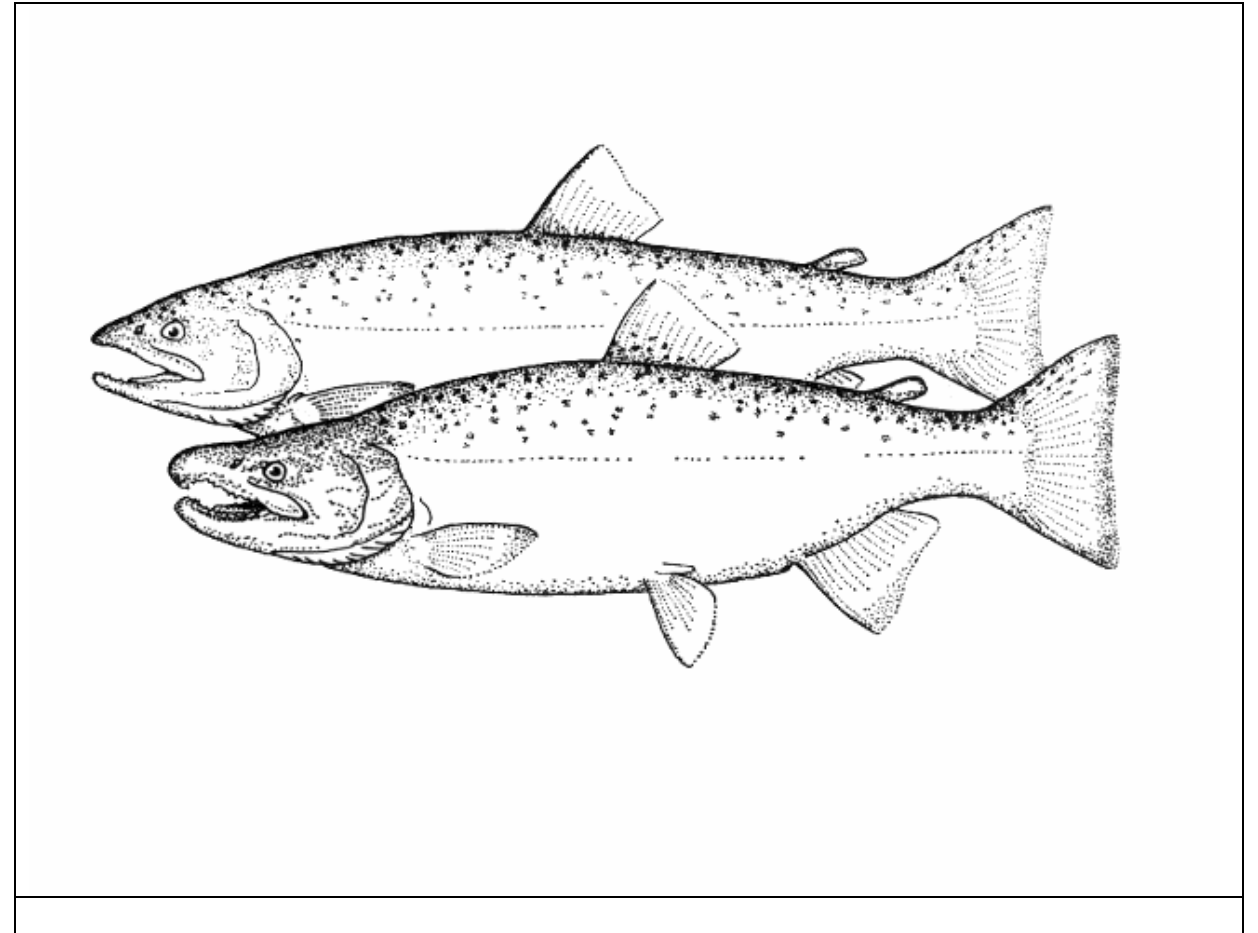
Red List Not in IUCN Red List , (Ref. 36508)

Status:

Dangerous: harmless

Coordinator:

Main Ref: Page, L.M. and B.M. Burr. 1991. (Ref. 5723)



Oncorhynchus mykiss

Rainbow trout

Oncorhynchus mykiss (Walbaum, 1792)

Salmonidae (Salmonids)

Family:

subfamily: **Salmoninae**

Order:

Salmoniformes

Class:

Actinopterygii (ray-finned fishes)

FB name:

Rainbow trout

Distribution:

Eastern Pacific: Alaska to Baja California, Mexico.

One of the most widely introduced fishes, may be regarded as global in its present distribution.

In the tropics restricted to areas above 1,200 m. Several countries report adverse ecological impact after introduction.

Diagnosis:

Dorsal spines (total): 3-4; Dorsal soft-rays (total): 10-12; Anal spines: 3-4; Anal soft-rays: 8-12; Vertebrae: 60-66. Body elongate, somewhat compressed especially in larger fish. No nuptial tubercles but minor changes to head, mouth and color occur especially in spawning males. Coloration varies with habitat, size, and sexual condition. Stream residents and spawners darker,



Biology:

The natural habitat of the species is fresh water with about 12°C in summer. It is unclear whether its anadromy is a truly genetic adaptation or simply an opportunistic behavior. It seems that any stock of rainbow trout is capable of migrating, or at least adapting to sea water, if the need or opportunity arises. They require moderate to fast flowing, well oxygenated waters for breeding, but they also live in cold lakes (Ref. 6390). Rainbow trout survive better in lakes than in streams (Ref. 26519). Generally feeds close to the bottom (Ref. 13337). Adults feed on aquatic and terrestrial insects, molluscs, crustaceans, fish eggs, minnows, and other small fishes (including other trout); young feed predominantly on zooplankton (Ref. 26523). Utilized fresh, smoked, canned, and frozen; eaten steamed, fried, broiled, boiled, microwaved and baked (Ref. 9988). Rainbow trout is cultured in many countries and is often hatched and stocked into rivers and lakes especially to attract recreational fishers (Ref. 9988).

Max. size:

120 cm TL (male/unsexed); max.weight: 25.4 kg; max. reported age: 11 years

Environment:

benthopelagic; freshwater; brackish; marine; depth range - 10 m

Climate:

temperate; 10 - 24°C; 63°N - 32°N

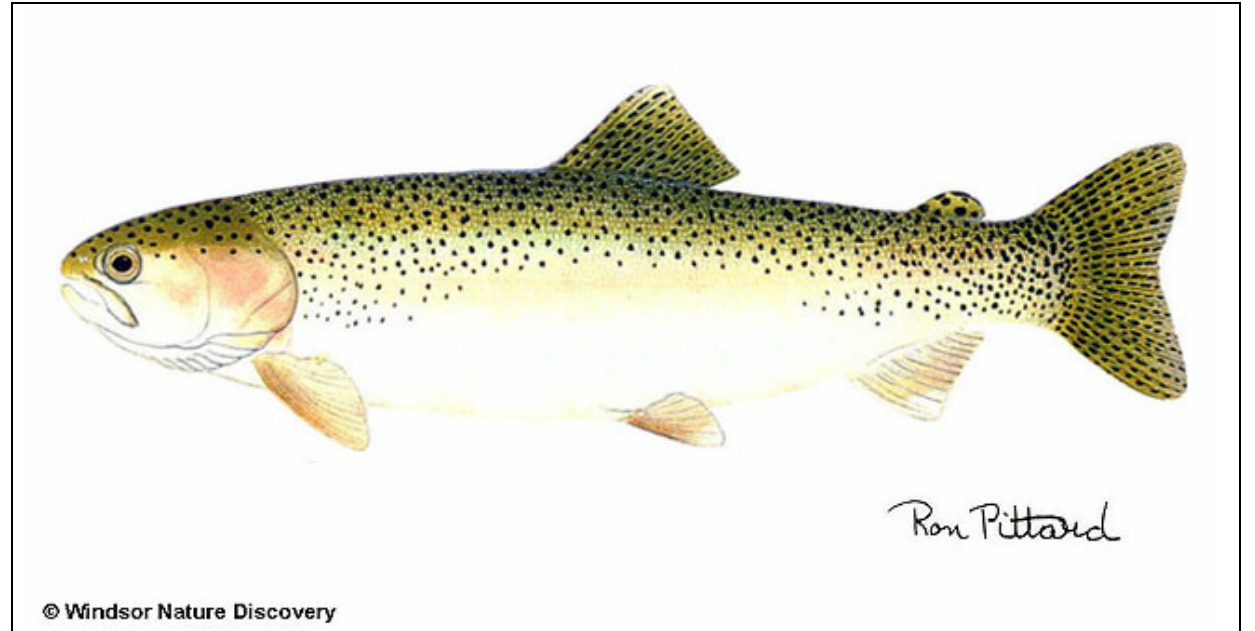
Importance:

fisheries: highly commercial; aquaculture: commercial; gamefish: yes; aquarium: public aquariums

Threatened:

Not in IUCN Red List (), (Ref. 36508)

Threatened: Not in IUCN Red List (), (Ref. 36508)
Dangerous: potential pest
Coordinator:
Main Ref: Gall, G.A.E. and P.A. Crandell. 1992 (Ref. 4706)



Oncorhynchus tshawytscha
Chinook salmon

Oncorhynchus tshawytscha (Walbaum, 1792)

Family: Salmonidae (Salmonids) ,
subfamily: Salmoninae

Order: Salmoniformes

Class: Actinopterygii (ray-finned fishes)

FishBase name: Chinook salmon

Max. size: 150 cm TL (male/unsexed; Ref. 40637); max. published weight: 61.4 kg (Ref. 27547); max. reported age: 9 years

Environment : benthopelagic; anadromous; freshwater; brackish; marine ; depth range 0 - 200 m

Climate: polar; 0 - 25°C; 72°N - 37°N

Importance: fisheries: highly commercial; aquaculture: commercial; gamefish: yes; aquarium: show aquarium

Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (tm=4; tmax=9; Fec=4,000)

Distribution: Arctic and Pacific: drainages from Point Hope, Alaska to Ventura River, California, USA; occasionally strays south to

Gazetteer San Diego in California, USA. Also in Honshu, Japan (Ref. 6793), Sea of Japan (Ref. 1998), Bering Sea (Ref. 2850) and Okhotsk Sea (Ref. 1998). Found in Coppermine River in the Arctic. Several countries report adverse ecological impact after introduction.

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 10-14; Anal spines: 0-0; Anal soft rays: 13-19; Vertebrae: 67-75. Distinguished by the small black spots on the back and on



by Keeley, E.R.

Biology: Adults return to natal streams from the sea to spawn (Ref. 27547). Fry may migrate to the sea after only 3 months in fresh water, some may stay for as long as 3 years, but generally most stay a year in the stream before migrating (Ref. 27547). Some individuals remain close inshore throughout their lives, but some make extensive migrations (Ref. 27547). Also found in lakes (Ref. 1998). Possibly up to 375 m depth (Ref. 6793). Food in streams is mainly terrestrial insects and small crustaceans; in the sea, major food items include fishes, crustaceans, and other invertebrates (Ref. 27547). Young are preyed upon by fishes and birds (such as mergansers and kingfishers); adults are prey of large mammals and large birds (Ref. 1998). Highly regarded game fish (Ref. 27547). Flesh is usually red, but some are white; the red meat commands a higher price (Ref. 27547). Marketed fresh, smoked, frozen, and canned. Eaten steamed, fried, broiled, boiled, microwaved, and baked (Ref. 9988). Viscera said to contain high vitamin A content and used successfully as food for hatchery fish (Ref. 28971, 28977). The Alaska Salmon fishery of this species has been certified by the Marine Stewardship Council (<http://www.msc.org/>) as well-managed and sustainable

Red List Status: Not in IUCN Red List , (Ref. 36508)

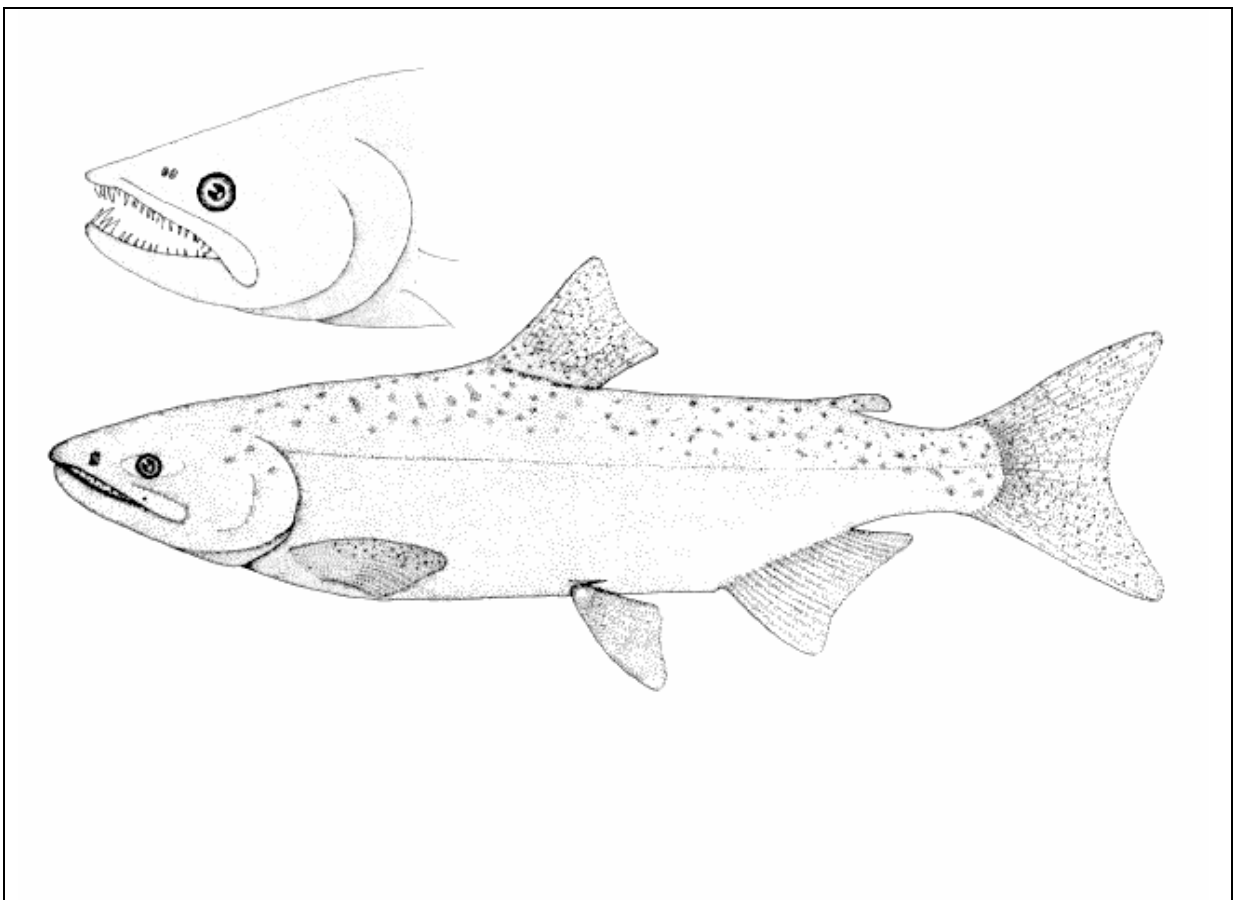
Dangerous: potential pest

Coordinator:

Main Ref: Page, L.M. and B.M. Burr. 1991. (Ref. 5723)

Red List **Not in IUCN Red List , (Ref. 36508)**
Status:
Dangerous: **potential pest**
Coordinator:

Main Ref: **Page, L.M. and B.M. Burr. 1991. (Ref. 5723)**



Allosmerus elongatus**Whitebait smelt****Allosmerus elongatus** (Ayres, 1854)**Family:** Osmeridae (Smelts)**Order:** Osmeriformes**Class:** Actinopterygii (ray-finned fishes)**FB name:** Whitebait smelt**Distribution:** Northeast Pacific: Vancouver I., Canada to San Francisco, California, USA.**Diagnosis:** Dorsal spines (total): 0-0; Dorsal soft-rays (total): 9-11; Anal spines: 0-0; Anal soft-rays: 14-17; Vertebrae: 65-67. Adipose fin small, directed backward (Ref. 6885). Color pale greenish, almost colorless, a sharply marked silvery stripe along side (Ref. 6885).**Biology:** Occurs in coastal waters (Ref. 2850). Abundant in bays (Ref. 2850). Forms schools (Ref. 2850). Important food for larger fishes (Ref. 2850). Spawns in subtidal banks (Ref. 2850).**Max. size:** 22.9 cm TL (male/unsexed)**Environment:** demersal; marine**Climate:** temperate**Importance:** gamefish: yes**Threatened:** Not in IUCN Red List (), (Ref. 36508)**Dangerous:** harmless**Coordinator:****Main Ref:** Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983 (Ref. 2850)**Hypomesus pretiosus****Surf smelt****Hypomesus pretiosus** (Girard, 1854)**Family:** Osmeridae (Smelts)**Order:** Osmeriformes (smelts)**Class:** Actinopterygii (ray-finned fishes)**FishBase name:** Surf smelt**Max. size:** 30.5 cm TL (male/unsexed; Ref. 6885); max. reported age: 3 years**Environment:** benthopelagic; brackish; marine**Climate:** temperate; 57°N - 34°N**Importance:** fisheries: commercial; gamefish: yes**Resilience:** Medium, minimum population doubling time 1.4 - 4.4 years (tm=1-2; tmax=3; Fec=1,500)**Distribution:** Eastern Pacific: Prince William Sound, Gulf of Alaska to Long Beach, southern California, USA. Reports from the western Pacific are misidentifications of *H. japonicus*.**Gazetteer**
Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 9-11; Anal spines: 0-0; Anal soft rays: 12-17; Vertebrae: 64-67. Vomer small, without posterior process; periphery of glossohyal bone with single row of blunt teeth, a few teeth located irregularly at center of distal region; base of adipose fin less than 20% of head length; eye small; adipose eyelid well developed (Ref. 33312).

Distinguished by its midlateral scale count of 66 to 73 and the presence of 4 to 7 pyloric caeca (Ref. 27547). Lateral line short and incomplete, reaching about to tip



by Bull. U.S. Bur. Fish.

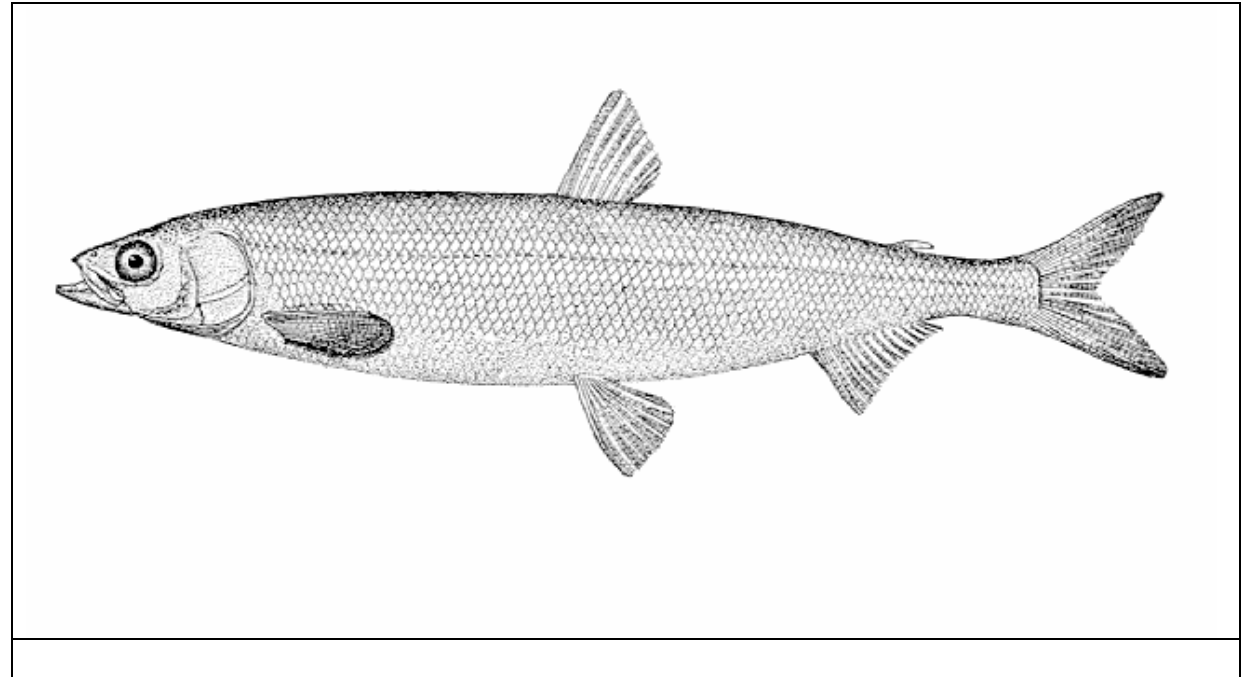
Biology: Individuals 3.5 cm may ascend rivers, presumably returning to the sea shortly after (Ref. 27547). Presumably young move offshore and reappear inshore as mature adults (Ref. 27547). At sea, they feed on small crustaceans, worms and jellyfish, as well as larval fishes (Ref. 6885, 10276). Females reach age 3, males age 2 (Ref. 27547). Oviparous, with demersal eggs and planktonic larvae (Ref. 35792). Eggs are laid on beaches with heavy surf action (Ref. 33312)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Saruwatari, T., J.A. López and T.W. Pietsch. 1997. (Ref. 33312)



Spirinchus thaleichthys
Longfin smelt

Spirinchus thaleichthys (Ayres, 1860)

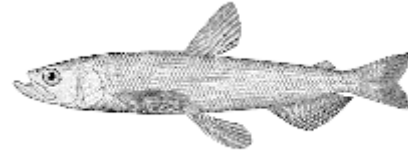
Family: Osmeridae (Smelts)

by Bull. U.S. Bur. Fish.

Order: Osmeriformes (smelts)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Longfin smelt



Max. size: 20.0 cm TL (male/unsexed; Ref. 27547); max. reported age: 3 years

Environment: benthopelagic; anadromous; freshwater; brackish; marine ; depth range - 137 m

Climate: temperate; 61°N - 38°N

Importance: fisheries: subsistence fisheries

Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (tm=2; tmax=3; Fec=535)

Distribution: North Pacific: Prince William Sound, Alaska to Monterey Bay, California, USA. Landlocked in Washington and

Gazetteer Union Lakes in Washington, USA.

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 8-10; Anal spines: 0-0; Anal soft rays: 15-19; Vertebrae: 55-61. Distinguished by its long upper jaw, which reaches at least below the middle of the eye in adults; the fine teeth in a single row on the vomer and palatine bones; and the 38 to 47 gill rakers on the 1st arch (Ref. 27547). Gill rakers long; lateral line incomplete and reaching not quite to below dorsal fin (Ref. 27547). Breeding males have tubercles on upper sides of paired fins (Ref.

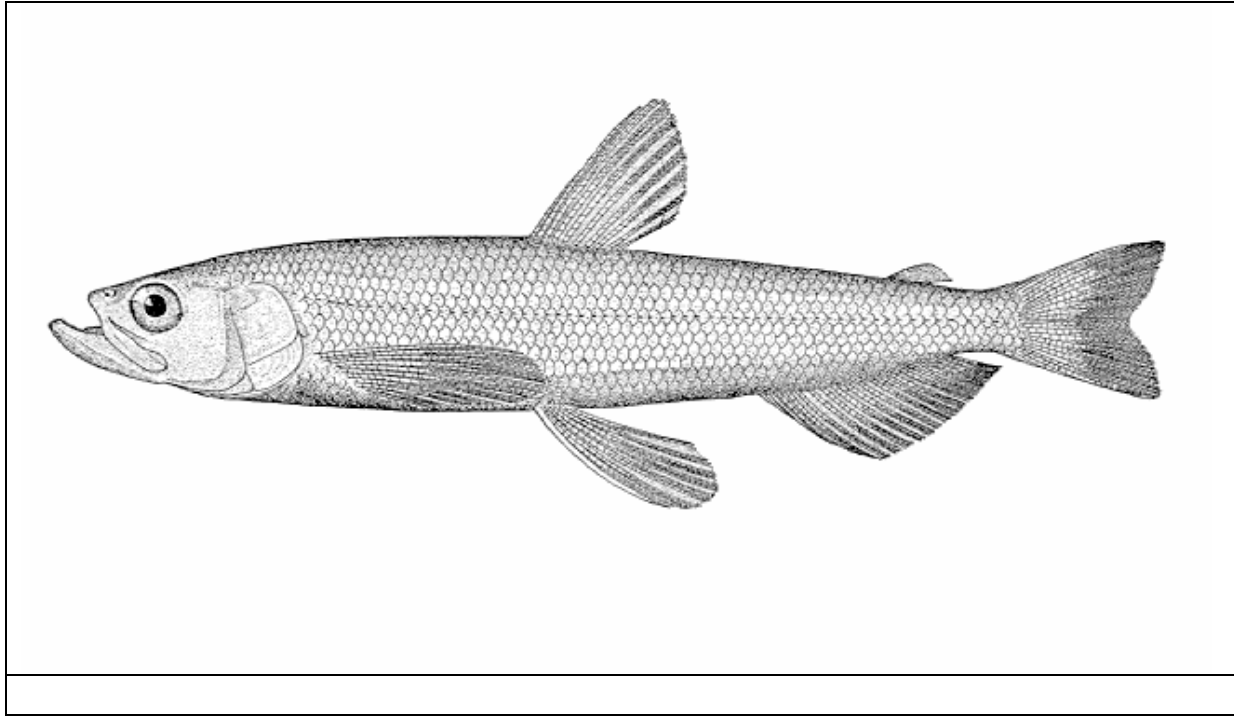
Biology: Found close to shore, in bays and estuaries and ascends coastal streams to spawn (Ref. 5723). There are landlocked populations (Ref. 5723) but these do not reach as great a size as sea-run fish (Ref. 27547). Individuals found in brackish and salt water feed on small crustaceans (Ref. 1998). Fish from the sea are reported to have good flavor, but supply is limited (Ref. 6885). Often abundant during the spawning run, but flesh reported to be soft and oily, easily spoiling (Ref. 1998)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Page, L.M. and B.M. Burr. 1991. (Ref. 5723)



Thaleichthys pacificus
Eulachon

Thaleichthys pacificus (Richardson, 1836)

Family: Osmeridae (Smelts)

by Bull. U.S. Bur. Fish.

Order: Osmeriformes (smelts)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Eulachon



Max. size: 30.0 cm TL (male/unsexed; Ref. 5723); max. reported age: 5 years

Environment : pelagic; anadromous; freshwater; brackish; marine ; depth range 0 - 300 m

Climate: temperate; 61°N - 36°N

Importance: fisheries: commercial

Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (Musick et al. 2000 (Ref. 36717))

Distribution: North Pacific: west of Saint Matthew I. and Kuskokwim Bay in the Bering Sea, and Bowers Bank in the Aleutian Is. to Monterey Bay, California, USA. Populations from northern British Columbia are separate from those in the Fraser River (Ref. 10276).

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 10-13; Anal spines: 0-0; Anal soft rays: 18-23; Vertebrae: 65-72. Distinguished by the large canine teeth on the vomer and 18 to 23 rays in the anal fin (Ref. 27547). Adipose fin sickle-shaped; paired fins longer in males than in females; all fins with well developed breeding tubercles in ripe males which are poorly developed or absent in females (Ref.

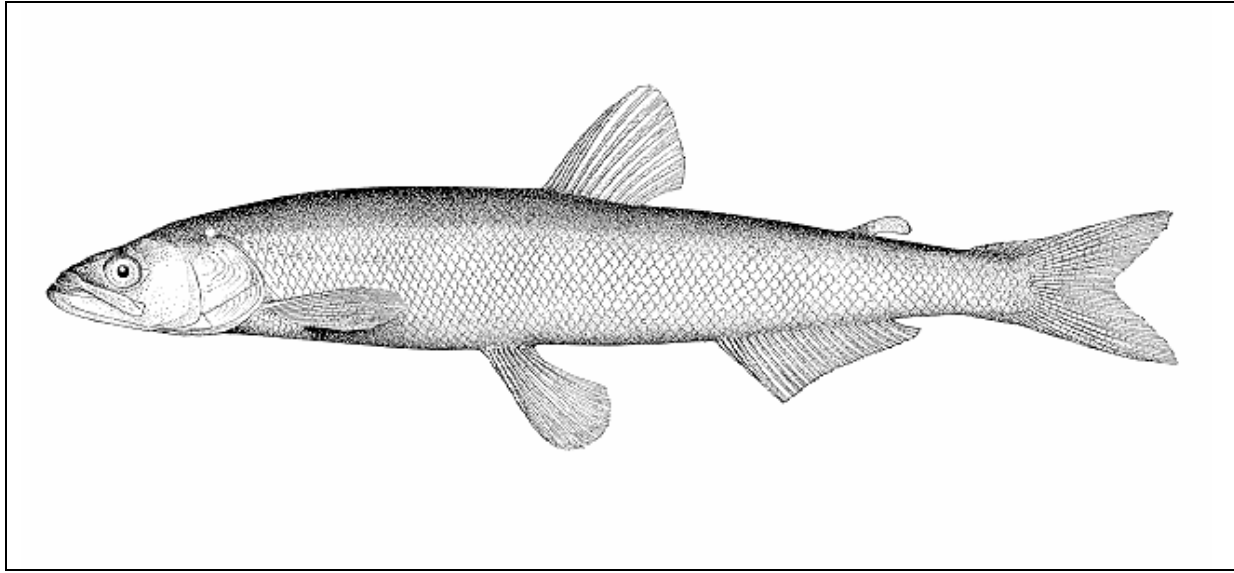
Biology: Found near shore and in coastal inlets and rivers (Ref. 2850). Possibly to 625 m depth (Ref. 6793). Spends most of its life in the sea, returning to freshwater streams to spawn (Ref. 27547). There is evidence of return to natal streams (Ref. 10276). May migrate up to 160 km upstream. Feeds on plankton and only while at sea (11699, 10276). Excellent food fish and source of oil (15% body wt.)

Red List Status: Not in IUCN Red List , (Ref. 36508)

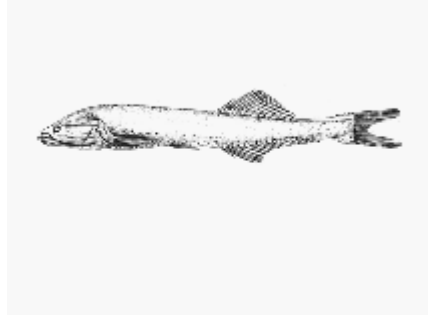
Dangerous: harmless

Coordinator:

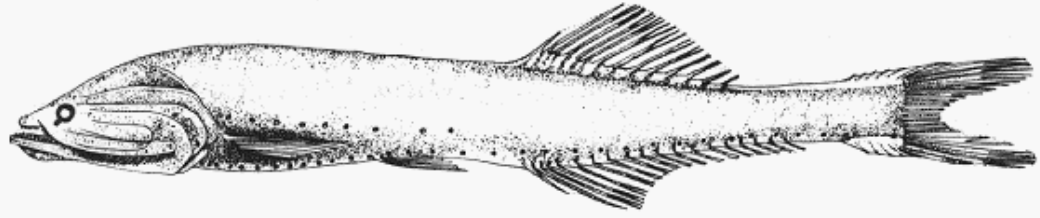
Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Cyclothone acclinidens Benttooth bristlemouth	
Cyclothone acclinidens Garman, 1899	
Family:	Gonostomatidae by SFSA (Bristlemouths)
Order:	Stomiiformes (lightfishes and dragonfishes)
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	Benttooth bristlemouth
Max. size:	3.6 cm SL (male/unsexed; Ref. 5162); 6.5 cm SL (female)
Environment:	bathypelagic; oceanodromous; marine ; depth range 50 - 1900 m
Climate:	deep-water; 65°N - 57°S
Importance:	fisheries: of no interest
Resilience:	
Distribution:	Atlantic, Indian and Pacific: in tropical and subtropical waters. Southern Ocean: a single specimen recorded near Bouvet Island (56°30'S, 14°29'E). Eastern Pacific: California Current region (Ref. 35800).
Gazetteer	
Diagnosis:	Dorsal spines (total): 0-0; Dorsal soft rays (total): 13-15; Anal spines: 0-0; Anal soft rays: 18-20; Vertebrae: 30-32. Light to dark brown or grey-brown in colour (Ref. 3991). Branchiostegal rays: 13-15 (Ref. 35800).
Biology:	Oceanic, deep-mesopelagic species (Ref. 4769). Usually vertically oriented during the day (Ref. 4769). Nocturnal feeder (Ref. 9186) on copepods (Ref. 4769). Oviparous,



Red List Status:	Not in IUCN Red List , (Ref. 36508)
Dangerous:	harmless
Coordinator:	
Main Ref:	Gon, O.. 1990. (Ref. 5162)



Stenobranchius leucopsarus Northern lampfish	Top of Form Bottom of Form
Stenobranchius leucopsarus (Eigenmann & Eigenmann, 1890)	
Family:	Myctophidae (Lanternfishes)
Order:	Myctophiformes
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	Northern lampfish
Max. size:	13.0 cm TL (male/unsexed; Ref. 2850); max. reported age: 8 years
Environment:	bathypelagic; marine ; depth range 30 - 2906 m
Climate:	deep-water; 66°N - 29°N
Importance:	
Resilience:	Medium, minimum population doubling time 1.4 - 4.4 years (K=0.24-0.34; tm=4; tmax=8)
Distribution:	North Pacific: Japan to Bering Sea and to northern Baja California, Mexico.
Gazetteer	
Diagnosis:	Dorsal spines (total): 0-0; Dorsal soft rays (total): 13-15; Anal spines: 0-0; Anal soft rays: 14-16; Vertebrae: 35-38. Adipose fin small and slender; pectorals slender and short (Ref. 6885). Gray to dark greenish blue on dorsally, lighter ventrally; black on operculum and fins; golden or claret on photophores (Ref. 6885). Branchiostegal rays: 9-10 (Ref. 31442).
Biology:	Epipelagic to mesopelagic (Ref. 31442). Adults move upward in large numbers at night (Ref.

Red List Status:	Not in IUCN Red List , (Ref. 36508)
Dangerous:	harmless
Coordinator:	Paxton, John
Main Ref:	Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)

Tarletonbeania crenularis Blue lanternfish	
Tarletonbeania crenularis (Jordan & Gilbert, 1880)	
Family:	Myctophidae (Lanternfishes) by Canadian Museum of Nature, Ottawa, Canada
Order:	Myctophiformes
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	Blue lanternfish
Max. size:	12.7 cm TL (male/unsexed; Ref. 4925)
Environment:	bathypelagic; marine ; depth range 0 - 710 m
Climate:	deep-water; 66°N - 28°N
Importance:	
Resilience:	
Distribution:	Eastern Pacific: southeastern Alaska to off Mexico, including the Gulf of Alaska and Bering Sea (Ref. 31442).
Gazetteer:	
Diagnosis:	Dorsal spines (total): 0-0; Dorsal soft rays (total): 11-14; Anal spines: 0-0; Anal soft rays: 17-20; Vertebrae: 39-42. Adipose fin small, short based, and slender; pelvics 8 or 9 rays, including rudimentary ray (Ref. 6885). Bright metallic blue dorsally, bright silvery ventrally (Ref. 6885). Branchiostegal rays: 8-9 (Ref. 31442).
Biology:	Epipelagic to mesopelagic, found at the surface at night (Ref.



Red List	Not in IUCN Red List , (Ref. 36508)	
Status:		
Dangerous:	harmless	
Coordinator	Paxton, John	
Main Ref:	Hart, J.L.. 1973. (Ref. 6885)	
Microgadus proximus Pacific tomcod		
Microgadus proximus (Girard, 1854)		
Family:	Gadidae (Cods and haddocks)	by FAO
Order:	Gadiformes	
Class:	Actinopterygii (ray-finned fishes)	

Family: Gadidae (Cods and haddocks) by FAO

Max. size: 30.5 cm SL (male/unsexed;
Ref. 27436)

Environment: demersal; non-migratory; brackish; marine ; depth range
0 - 275 m

Climate: temperate; 66°N - 34°N

Importance: fisheries: minor commercial; gamefish: yes

Resilience: Medium, minimum population doubling time 1.4 - 4.4
years (tm=2)

Distribution: Eastern Pacific: southeastern Bering Sea to central
California, USA.

Gazetteer

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 46-54;
Anal spines: 0-0; Anal soft rays: 38-46. Body olive green
dorsally, pale ventrally; fins dusky marginally.

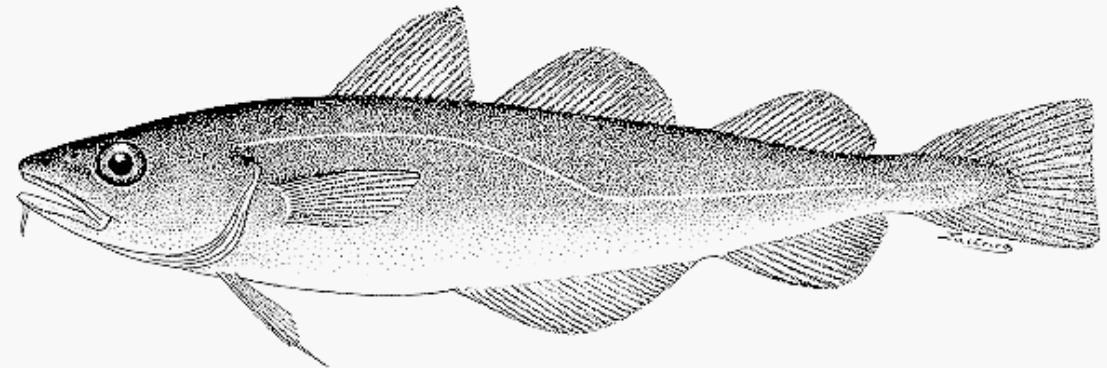
Biology: Generally found over sand (Ref. 1371). May enter
brackish water (Ref. 1371). Young move into shallow
waters in summer and fall, whereas adults usually stay
in deeper waters (Ref. 28499). Feeds on shrimps,
amphipods, isopods, gastropods, mussels and fishes
(Ref. 1371). An important prey species (Ref. 2850)

Red List

Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Max. size: 30.5 cm SL (male/unsexed;
Ref. 27436)



FAO

Atherinops affinis
Topsmelt silverside

Atherinops affinis (Ayres, 1860)

Family: Atherinidae (Silversides) ,
subfamily: Atherinopsinae

by FAO

Order: Atheriniformes
(silversides)

Class: Actinopterygii (ray-finned
fishes)

FishBase Topsmelt silverside

name:

Max. size: 37.0 cm TL
(male/unsexed; Ref.
9273); max. reported
age: 7 years

Environment: pelagic; brackish; marine

Climate: subtropical; 55°N - 23°N

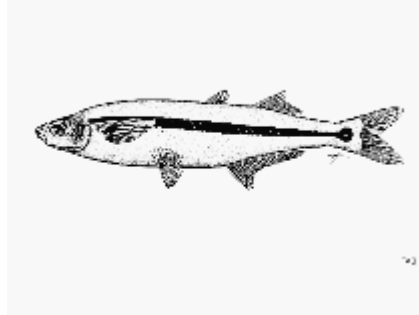
Importance: fisheries: commercial

Resilience: Medium, minimum population doubling time 1.4 - 4.4
years (tm=2; tmax=7)

Distribution: Eastern Pacific: Vancouver I. in British Columbia,
Canada to Baja California, Mexico and the Gulf of
California.

Gazetteer

Diagnosis: Dorsal spines (total): 6-10; Dorsal soft rays (total):
8-14; Anal spines: 1-1; Anal soft rays: 19-25;
Vertebrae: 44-52. Blue gray to green above, silvery
below; a striking silver band bordered above with
blue extends the full length of the body (Ref. 6885).
Branchiostegal rays: 5-6 (Ref. 36497).



Biology: Common in bays, muddy and rocky areas and kelp
beds, also in estuaries (Ref. 36497). Form schools.
Adults feed on zooplankton (Ref. 9273), while
juveniles feed on algae and kelpfly larvae (Ref.
4930). Oviparous, with planktonic, primarily
neustonic larvae (Ref. 36497). Eggs are attached to
spawning substrate and to one another by adhesive
filaments (Ref. 36497)

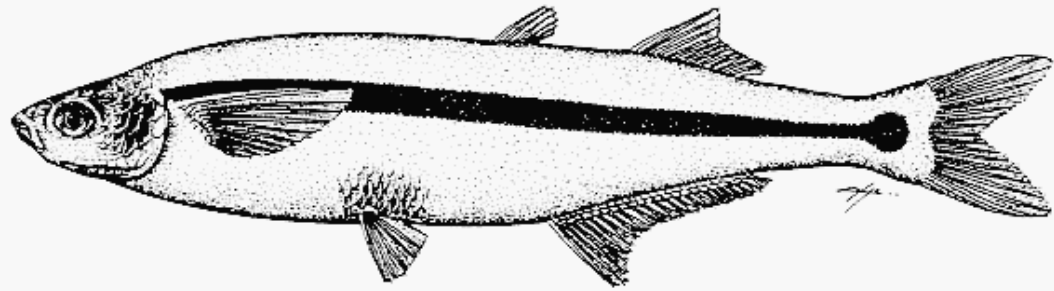
Red List Not in IUCN Red List , (Ref. 36508)

Status:

Dangerous: harmless

Coordinator: Dyer, Brian S.

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann.
1983. (Ref. 2850)

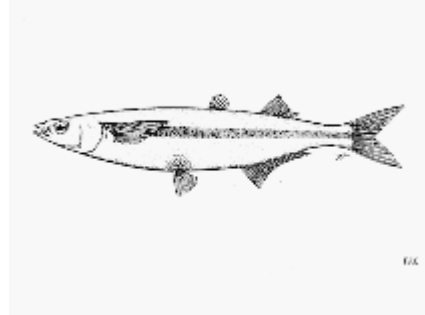


FAO

Atherinopsis californiensis
Jack silverside

Atherinopsis californiensis Girard, 1854
Family: Atherinidae (Silversides) ,
subfamily: Atherinopsinae
Order: Atheriniformes (silversides)
Class: Actinopterygii (ray-finned
fishes)
**FishBase
name:** Jack silverside
Max. size: 45.0 cm TL (male/unsexed; Ref.
9273)

by FAO



Environment: pelagic; marine

Climate: subtropical; 46°N - 24°N
Importance: fisheries: commercial

Resilience:
Distribution: Eastern Pacific: Yaquina Bay in Oregon, USA to
southwest coast of Baja California, Mexico.

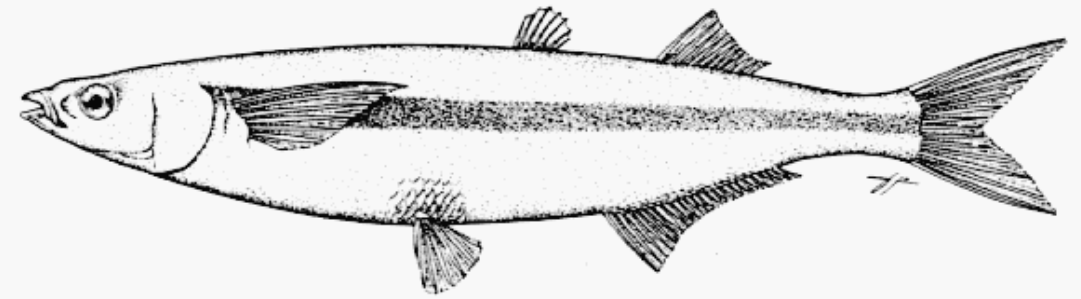
Gazetteer
Diagnosis: Dorsal spines (total): 6-10; Dorsal soft rays (total): 11-14;
Anal spines: 1-1; Anal soft rays: 21-26; Vertebrae: 50-54.
Branchiostegal rays: 5-6 (Ref. 36497).

Biology: Adults inhabit inshore areas, including bays (Ref. 2850).
Form schools (Ref. 2850). Oviparous, with planktonic,
primarily neustonic larvae (Ref. 36497). Eggs are attached
to one another by spawning substrate via adhesive
filaments (Ref. 36497). Sold fresh (Ref. 2850)

Red List Not in IUCN Red List , (Ref. 36508)

Status:
Dangerous: harmless
Coordinator: Dyer, Brian S.

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref.
2850)



FAO

Aulorhynchus flavidus

Tube-snout

Aulorhynchus flavidus Gill, 1861

Family: Aulorhynchidae (Tubesnouts)

Order: Gasterosteiformes

(sticklebacks and seamoths)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Tube-snout

Max. size: 18.0 cm TL (male/unsexed; Ref. 2850)

Environment: benthopelagic; marine ; depth range - 30 m

Climate: temperate; 59°N -

Importance: aquarium: public aquariums

Resilience:

Distribution: Eastern Pacific: Sitka, Alaska to Punta Banda, northern Baja California, Mexico.

Gazetteer

Diagnosis: Dorsal spines (total): 24-27; Dorsal soft rays (total): 9-10; Anal spines: 1-1; Anal soft rays: 9-9. Spinous dorsal represented by a series of small spines, free from membrane; soft dorsal fin triangular and placed well back on body; caudal fin small and finely forked; anal fin spine small and broad, the fin mirroring the soft dorsal fin; pectorals truncate (Ref. 6885). Pale mottled brown, varying from olive green to yellow brown dorsally; creamy white ventrally; a bright silvery patch between operculum and pectorals extending to throat and bounded

by Bauder, C.



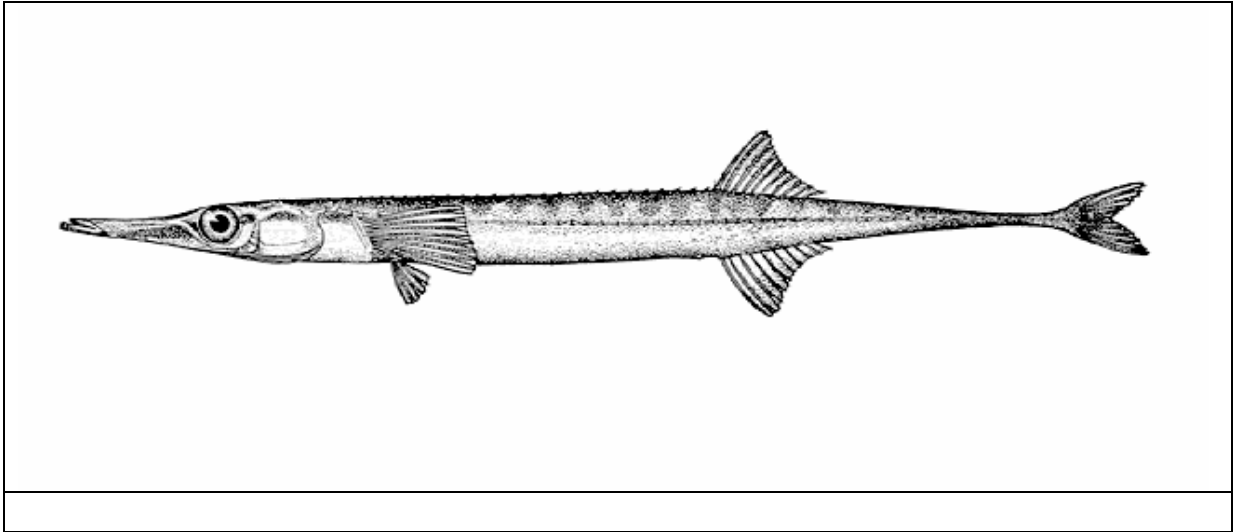
Biology: Found in kelp beds, eelgrass, rocky areas, and over sand bottoms (Ref. 2850). Usually near the surface in schools, sometimes in dense schools well offshore (Ref. 2850). Feeds on small crustaceans and fish larvae (Ref. 6885)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Gasterosteus aculeatus aculeatus
Three-spined stickleback

Gasterosteus aculeatus aculeatus Linnaeus, 1758	
Family:	Gasterosteidae (Sticklebacks and tubesnouts) , subfamily: Gasterosteinae
Order:	Gasterosteiformes (sticklebacks and seamoths)
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	Three-spined stickleback
Max. size:	11.0 cm TL (male/unsexed; Ref. 35388)
Environment :	benthopelagic; anadromous; freshwater; marine ; depth range - 27 m
Climate:	temperate; 4 - 20°C; 71°N - 20°N
Importance:	fisheries: minor commercial; aquarium: public aquariums
Resilience:	High, minimum population doubling time less than 15 months (K=0.6-1.8; tm=1; tmax=4; Fec=80)
Distribution:	Europe: occurs in most rivers except in much of the Danube system; also found in the Mediterranean and Black Seas (Ref. 1998). North Africa: reported only from Mifidja near Algiers. North Pacific: Korea to Bering Sea and to Baja California, Mexico; in sea only as far south as Monterey Bay, California, USA (Ref. 2850). North Atlantic: Chesapeake Bay to Hudson Bay and Baffin I. (Ref. 1998). Asia: Iran (Ref. 39702).
Gazetteer	
Diagnosis:	Dorsal spines (total): 2-4; Dorsal soft rays (total): 10-14; Anal spines: 1-1; Anal soft rays: 8-10; Vertebrae: 29-33.

by Zienert, S.



Biology:	Inhabits vegetated areas, usually over mud or sand (Ref. 5723). In the sea, confined to coastal waters. Forms schools. Young associated with drifting seaweed (Ref. 12114, 12115). Eggs are found in nests constructed from plant material (Ref. 41678). Feeds on worms, crustaceans, larvae and adult aquatic insects, drowned aerial insects, and small fishes; has also been reported to feed on their own fry and eggs (Ref. 1998). Length in freshwater is 8 cm while in saltwater is 11 cm (Ref. 35388). Occasionally taken commercially in Scandinavia and processed into fishmeal and oil (Ref. 28219, 28964). Commonly used as a laboratory animal (Ref. 1998), and a large bibliography is available at www.geocities.com/CapeCanaveral/Hall/1345/stickbibl.html
Red List Status:	Not in IUCN Red List , (Ref. 36508)
Dangerous:	harmless
Coordinator:	
Main Ref:	Arnoult, J.. 1986. (Ref. 4116)

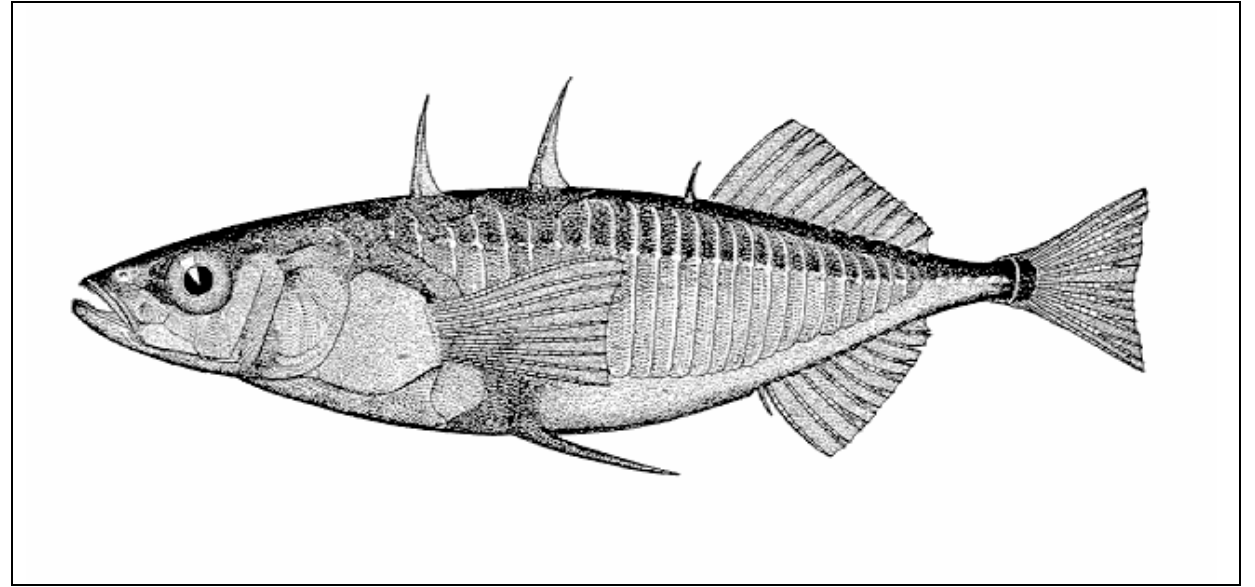
Red List **Not in IUCN Red List , (Ref. 36508)**

Status:

Dangerous: **harmless**

Coordinator:

Main Ref: **Arnoult, J.. 1986. (Ref. 4116)**



Syngnathus leptorhynchus
Bay pipefish

Syngnathus leptorhynchus Girard, 1854

Family: Syngnathidae (Pipefishes and seahorses) , subfamily: Syngnathinae

Order: Syngnathiformes (pipefishes and seahorses)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Bay pipefish

Max. size: 33.0 cm TL (female)

Environment : demersal; brackish; marine

Climate: subtropical; 66°N -

Importance: aquarium: public aquariums

Resilience:

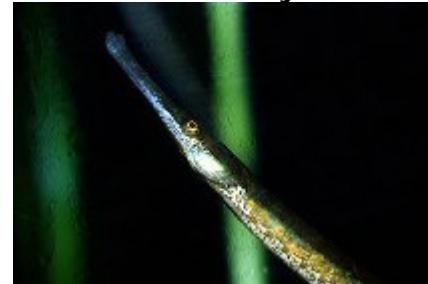
Distribution: Eastern Pacific: Sitka, Alaska to southern Baja California in Mexico; the northern population ranges from Alaska to Monterey Bay, southern population from Morro Bay southward.

Gazetteer

Biology: Common in eelgrass of bays and estuaries, sometimes taken in shallow offshore waters (Ref. 5316). Feeds on crustaceans (Ref. 6885). Females larger than males (R.C. de Graaf, pers. comm., 2001)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless



by JJPhoto

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Morone saxatilis
Striped sea-bass

Morone saxatilis (Walbaum, 1792)

Family: Moronidae (Temperate basses)

Order: Perciformes (perch-likes)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Striped sea-bass

Max. size: 200 cm TL (male/unsexed; Ref. 5723); max. published weight: 57.0 kg (Ref. 2850); max. reported age: 30 years

Environment: demersal; anadromous; freshwater; brackish; marine ; depth range - 30 m

Climate: temperate; 8 - 25°C; 60°N - 29°S

Importance: fisheries: minor commercial; aquaculture: commercial; gamefish: yes

Resilience: Low, minimum population doubling time 4.5 - 14 years (K=0.12; tm=5-7; tmax=30; Fec=14,000)

Distribution: Western Atlantic: from St. Lawrence River in Canada to St. John's River in northern Florida and northern Gulf of Mexico; from fresh and brackish tributaries of western Florida to Louisiana in the USA. Introduced to other countries. Asia: Iran (Ref. 39702).

Diagnosis: Dorsal spines (total): 9-11; Dorsal soft rays (total): 10-13; Anal spines: 3-3; Anal soft rays: 7-13

Biology: Inhabits coastal waters and are commonly found in bays but may enter rivers in the spring to spawn (Ref.

by Gotshall, D.W.



Red List Not in IUCN Red List , (Ref. 36508)

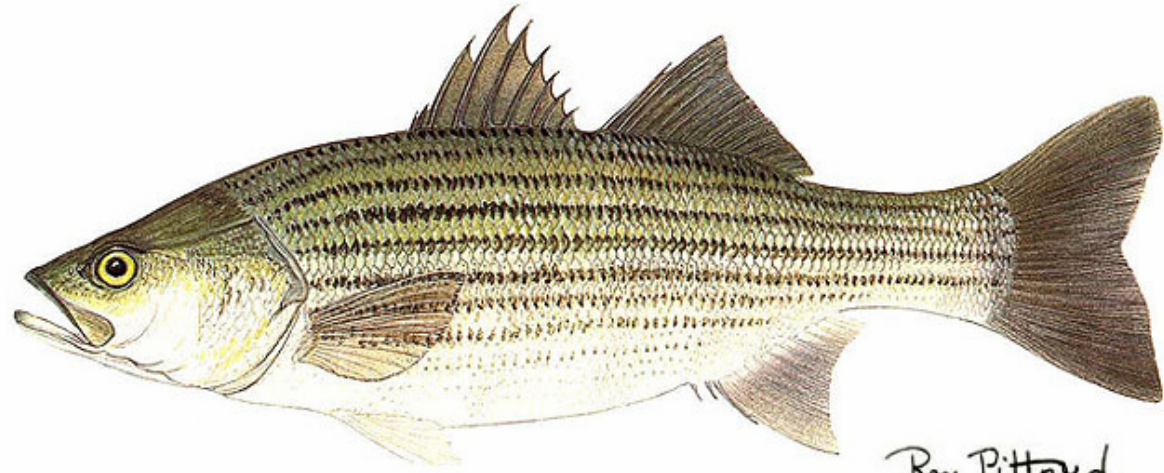
Status:

Dangerous: harmless

Coordinator: Heemstra, Phillip C.

Main Ref: Heemstra, P.C.. 1995. (Ref. 9320)





Ron Pittard

© Windsor Nature Discovery

Stereolepis gigas
Giant sea bass

Stereolepis gigas Ayres, 1859

Family: Polyprionidae (Wreckfishes)

Order: Perciformes (perch-likes)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Giant sea bass

Max. size: 250 cm TL (male/unsexed; Ref. 40637); max. published weight: 255.6 kg (Ref. 4699); max. reported age: 70 years

Environment: demersal; marine ; depth range 5 - 46 m

Climate: subtropical; 41°N - 16°N

Importance: fisheries: commercial; gamefish: yes

Resilience: Very low, minimum population doubling time more than 14 years (Musick et al. 2000 (Ref. 36717))

Distribution: Eastern Pacific: from Humboldt Bay in California, USA to Mexico. Western North Pacific: Japan (Ref. 559).

Gazetteer

Biology: Occurs on rock bottoms; near shore, outside kelp beds and along drop-offs (Ref. 2850). Large specimens usually found deeper than 30 m, small ones over sand and in kelp beds mostly from 12-21 m (Ref. 2850). Aggregates for spawning in summer (Ref. 2850). Lives to at least age 70 years (Ref. 2850)

Red List Critically Endangered, see IUCN Red List (A1bd) ,

by Gotshall, D.W.

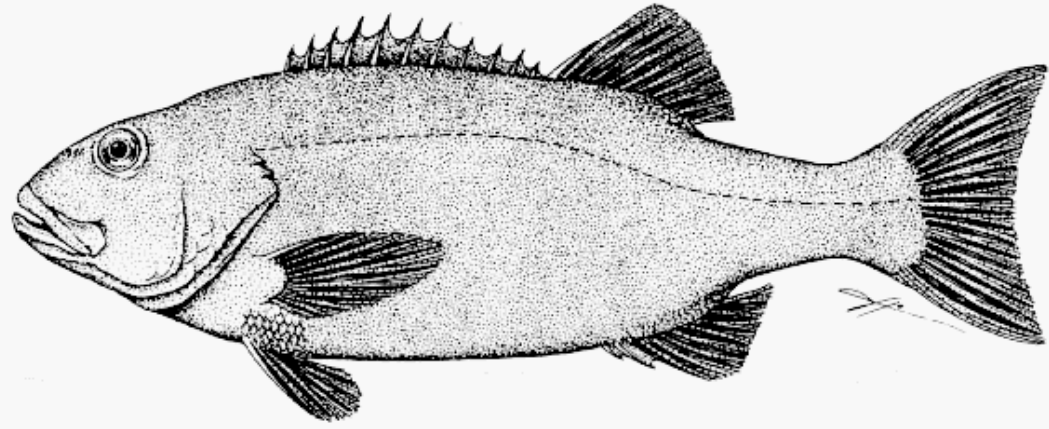


Dangerous: harmless

Coordinator: Sedberry, George

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)





FAO

Atractoscion nobilis
White weakfish

Atractoscion nobilis (Ayres, 1860)

Family: Sciaenidae (Drums or croakers)

Order: Perciformes (perch-likes)

Class: Actinopterygii (ray-finned fishes)

FishBase name: White weakfish

Max. size: 166 cm TL (male/unsexed; Ref. 40637); max. published weight: 41.0 kg (Ref. 2850)

Environment: demersal; marine ; depth range 0 - 122 m

Climate: subtropical; 65°N - 22°N

Importance: fisheries: minor commercial; gamefish: yes

Resilience: Low, minimum population doubling time 4.5 - 14 years (K=0.13)

Distribution: Eastern Pacific: Alaska to southern Baja California, Mexico and the Gulf of California.

Gazetteer

Diagnosis: Dorsal spines (total): 10-11; Dorsal soft rays (total): 20-23; Anal spines: 2-2; Anal soft rays: 8-9; Vertebrae: 24-24. Pelvic fins with fleshy appendage at base.

Biology: Often in schools over rocky bottom and in kelp beds (Ref. 2850). Also found in the surf zone (Ref. 2850). Young in bays and along sandy beaches (Ref. 2850).

by Steele, M.A.



Red List Not in IUCN Red List , (Ref. 36508)

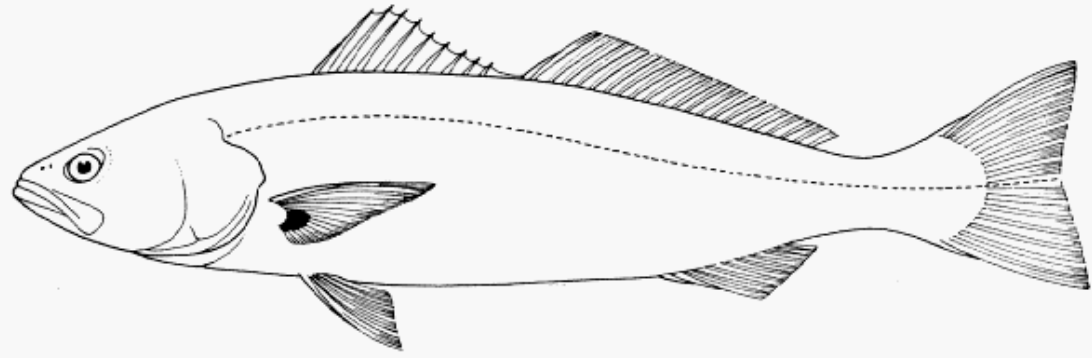
Status:

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)





FAO

Genyonemus lineatus
White croaker

Genyonemus lineatus (Ayres, 1855)

Family: Sciaenidae (Drums or croakers)

by Gotshall, D.W.



Order: Perciformes (perch-likes)

Class: Actinopterygii (ray-finned fishes)

FishBase name: White croaker

Max. size: 41.0 cm TL (male/unsexed; Ref. 2850)

Environment: benthopelagic; marine ; depth range - 183 m

Climate: subtropical; 55°N - 26°N

Importance: fisheries: minor commercial; gamefish: yes

Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (Assuming $t_m=2$)

Distribution: Eastern Pacific: Barkley Sound in British Columbia, Canada to southern Baja California, Mexico; rare north of California, USA.

Diagnosis: Dorsal spines (total): 13-16; Dorsal soft rays (total): 21-24; Anal spines: 2-2; Anal soft rays: 11-12; Vertebrae: 25-25. Pelvic fins with fleshy appendage at base, first ray with free thread-like tip.

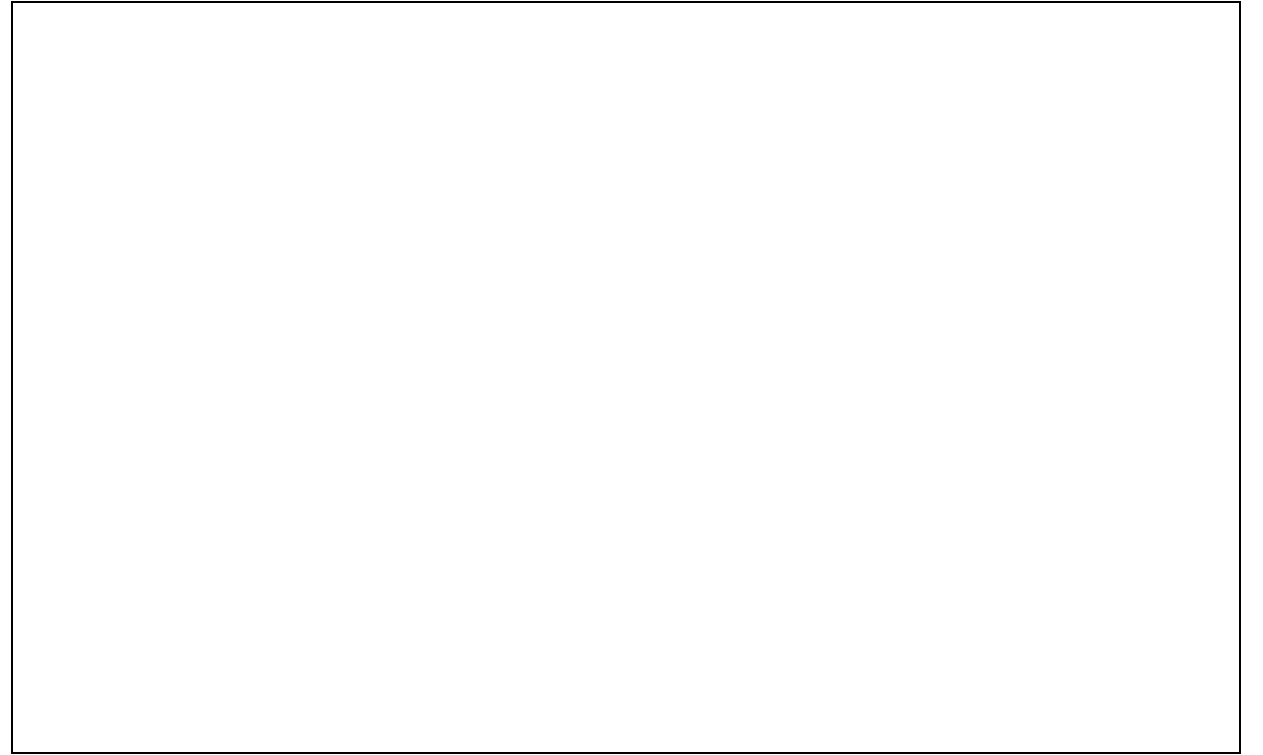
Biology: Found over sandy bottoms (Ref. 9118). Feeds on polychaetes, small shrimps, crabs and molluscs (Ref. 9118)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Amphistichus koelzi
Calico surfperch

Amphistichus koelzi (Hubbs, 1933)
Family: Embiotocidae (Surfperches)
Order: Perciformes (perch-likes)
Class: Actinopterygii (ray-finned fishes)
FishBase name: Calico surfperch



by Love, M.

Max. size: 31.0 cm TL (male/unsexed; Ref. 6885)
Environment: demersal; marine ; depth range 0 - 9 m

Climate: subtropical
Importance: gamefish: yes

Resilience:
Distribution: Eastern Pacific: from near Cape Flattery in Washington, USA to northern Baja California, Mexico. Recorded 32 km from the Canadian border (Ref. 6885).
Gazetteer

Diagnosis: Dorsal spines (total): 9-11; Dorsal soft rays (total): 24-28; Anal spines: 3-3; Anal soft rays: 26-32. Generally silvery overlaid with brassy tones; back bluish or olivaceous; lower head and lower anterior part of body tinged with red; sides with series of brown speckles which form rough narrow vertical bars; pectorals plain, other fins usually reddish (Ref. 6885).

Biology: Occurs usually in sand beaches in surf
Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless
Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Amphistichus rhodoterus
Redtail surfperch

Amphistichus rhodoterus (Agassiz, 1854)
Family: Embiotocidae (Surfperches)
Order: Perciformes (perch-likes)
Class: Actinopterygii (ray-finned fishes)
FishBase name: Redtail surfperch

Max. size: 41.0 cm TL (male/unsexed; Ref. 2850)
Environment: demersal; brackish; marine ; depth range - 7 m

Climate: temperate; 51°N - 37°N
Importance: gamefish: yes; aquarium: public aquariums

Resilience:
Distribution: Eastern Pacific: Vancouver I., British Columbia, Canada to Avila Beach, central California, USA.

Gazetteer
Diagnosis: Dorsal spines (total): 9-10; Dorsal soft rays (total): 25-28; Anal spines: 3-3; Anal soft rays: 28-31. Caudal fin broadly forked (Ref. 6885). Generally silvery overlaid lightly with a brassy cast; light green above; sides with a series of about 9 to 11 narrow vertical dark bars, posteriorly, broken and staggered along the lateral line; caudal and anal fins red (Ref. 6885).

Biology: Found in sand beaches in surf on exposed coast, sometimes in bays and backwaters

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless
Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)

Cymatogaster aggregata
Shiner perch

Cymatogaster aggregata Gibbons, 1854
Family: Embiotocidae (Surfperches)
Order: Perciformes (perch-likes)
Class: Actinopterygii (ray-finned fishes)
FishBase name: Shiner perch
Max. size: 20.3 cm TL (male/unsexed; Ref. 27547)

by Bull. U.S. Bur. Fish.



Environment : demersal; non-migratory; freshwater; brackish; marine ; depth range - 146 m
Climate: subtropical
Importance: fisheries: minor commercial; gamefish: yes; aquarium: public aquariums; bait: occasionally
Resilience: Low, minimum population doubling time 4.5 - 14 years (tm<1 (mating soon after birth); Fec=3)
Distribution: Eastern Pacific: Wrangell, southeastern Alaska to Bahia San Quintin, northern Baja California, Mexico.

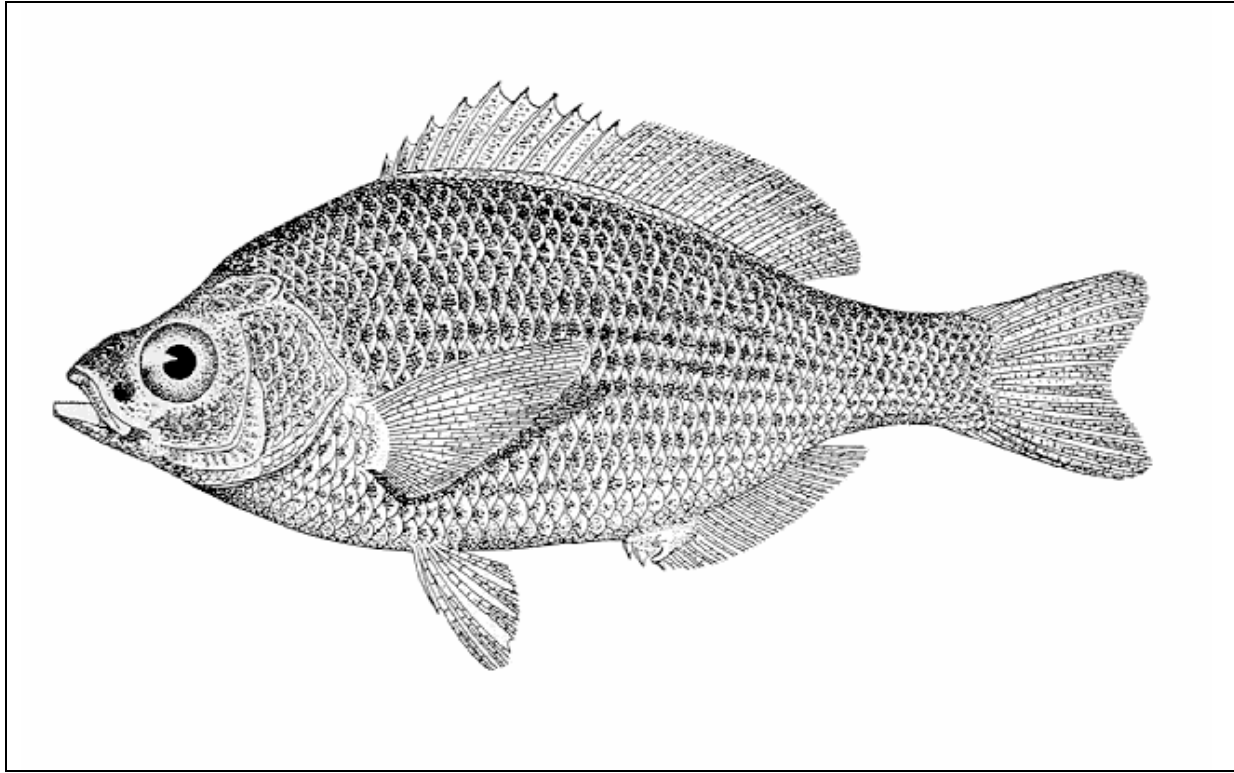
Gazetteer
Diagnosis: Dorsal spines (total): 8-11; Dorsal soft rays (total): 19-22; Anal spines: 3-3; Anal soft rays: 22-25; Vertebrae: 33-37. Distinguished by the rather deep, compressed body, the large scales, and the three spines in the anal fin (Ref. 27547). Lateral line slightly arched, complete (Ref. 27547). Generally silvery, with back dusky to greenish; middle of sides toward head are scales with groups of fine black dots

Biology: Usually in shallow water, around eelgrass beds, piers and pilings and commonly found in bays and quiet back waters (Ref. 2850). Also in calm areas of exposed coast (Ref. 2850). Enters brackish and fresh waters (Ref. 2850). Found in loose schools or aggregations (Ref. 2850). Young feed mainly on copepods, while adults eat various small crustaceans, mollusks, and algae (Ref. 27547). Exhibits seasonal onshore-offshore movements (Ref. 27547)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless
Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Embiotoca lateralis
Striped seaperch

Embiotoca lateralis Agassiz, 1854

Family: Embiotocidae
(Surfperches)

Order: Perciformes (perch-likes)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Striped seaperch

Max. size: 38.0 cm TL (male/unsexed; Ref. 2850)

by Gotshall, D.W.



Environment: demersal; marine ; depth range - 21 m

Climate: subtropical

Importance: fisheries: commercial; gamefish: yes; aquarium: public aquariums

Resilience:

Distribution: Eastern Pacific: Wrangell, southeastern Alaska to Point Cabras, northern Baja California, Mexico.

Gazetteer

Diagnosis: Dorsal spines (total): 10-11; Dorsal soft rays (total): 23-25; Anal spines: 3-3; Anal soft rays: 29-33. Copper ground color with dark brown overlay on back; a series of about 15 blue horizontal stripes below lateral line; head with several series of blue spots and stripes; fins coppery; dark areas on anterior part of rayed dorsal, base of caudal fin, anterior part of anal, and distal halves of pelvics (Ref. 6885).

Biology: Occurs in rocky coasts and kelp beds, occasionally in sandy surf near rocks (Ref. 2850). Feeds on small crustaceans, worms, and mussels; occasionally on herring eggs (Ref. 4925)

Red List Status: Not in IUCN Red List , (Ref. 36508)


Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Hyperprosopon anale Spotfin surfperch	
Hyperprosopon anale Agassiz, 1861	
Family:	Embiotocidae (Surfperches)
Order:	Perciformes (perch-likes)
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	Spotfin surfperch
Max. size:	20.0 cm TL (male/unsexed; Ref. 2850)
Environment:	demersal; marine ; depth range - 91 m
Climate:	subtropical
Importance:	
Resilience:	
Distribution:	Eastern Pacific: from Seal Rock in Oregon, USA to central Baja California, Mexico.
Gazetteer	
Biology:	Lives in surf on sand beaches and over sand at depths up to 91 m. Rarely caught from surf and piers by sport fishermen
Red List Status:	Not in IUCN Red List , (Ref. 36508)
Dangerous:	harmless
Coordinator:	
Main Ref:	Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)
Hyperprosopon argenteum Walleye surfperch	
Hyperprosopon argenteum Gibbons, 1854	

Family:	Embiotocidae (Surfperches)	
Order:	Perciformes (perch-likes)	
Class:	Actinopterygii (ray-finned fishes)	
FishBase name:	Walleye surfperch	
Max. size:	30.0 cm TL (male/unsexed; Ref. 2850)	
Environment :	demersal; marine ; depth range - 18 m	
Climate:	subtropical	
Importance:	fisheries: commercial; gamefish: yes	
Resilience:		
Distribution:	Eastern Pacific: Vancouver Island in British Columbia, Canada to central Baja California in Mexico, including Guadalupe Island (off northern central Baja California).	
Gazetteer	Guadalupe Island (off northern central Baja California).	
Diagnosis:	Dorsal spines (total): 8-10; Dorsal soft rays (total): 25-28; Anal spines: 3-3; Anal soft rays: 30-35; Vertebrae: 33-37. Dark blue dorsally, sides and belly silvery with young having narrow golden vertical bars; tips of pelvics black; dusky on edge of caudal fin (Ref. 6885).	
Biology:	Lives in surf on sand beaches and over sand near rocks, often around piers. Often occurs in dense schools. Feeds on small crustaceans. Usually bears 5-12 young. An important game species	
Red List Status:	Not in IUCN Red List , (Ref. 36508)	
Dangerous:	harmless	
Coordinator:		

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Hyperprosopon ellipticum Silver surfperch	
Hyperprosopon ellipticum (Gibbons, 1854)	
Family:	Embiotocidae (Surfperches)
Order:	Perciformes (perch-likes)
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	Silver surfperch
Max. size:	27.0 cm TL (male/unsexed; Ref. 2850)
Environment:	demersal; marine ; depth range - 110 m
Climate:	subtropical
Importance:	gamefish: yes; aquarium: public aquariums
Resilience:	
Distribution:	Eastern Pacific: southern British Columbia, Canada to Rio San Vicente, northern Baja California, Mexico.
Gazetteer	
Diagnosis:	Dorsal spines (total): 8-10; Dorsal soft rays (total): 25-28; Anal spines: 3-3; Anal soft rays: 29-34. Dark green dorsally, sides and belly silvery; a series of narrow vertical bars of pale golden pink on body wall; pectoral fins colorless (Ref. 6885). British Columbia specimens dark on end of caudal fin and free edge of spinous dorsal (Ref. 6885).
Biology:	Found inshore, in surf and sandy areas, also occurs around rocks and piers. Frequently caught, but not of much importance as a sport fish due to its small size
Red List Status:	Not in IUCN Red List , (Ref. 36508)

Dangerous:	harmless
Coordinator:	
Main Ref:	Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)
Phanerodon furcatus White seaperch	
Phanerodon furcatus Girard, 1854	
Family:	Embiotocidae (Surfperches) by Gotshall, D.W.
Order:	Perciformes (perch-likes)
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	White seaperch
Max. size:	32.0 cm TL (male/unsexed; Ref. 2850)
Environment: demersal; marine ; depth range - 43 m	
Climate:	subtropical; 51°N -
Importance:	gamefish: yes
Resilience:	
Distribution:	Eastern Pacific: Vancouver I., southern British Columbia to Punta Cabras, northern Baja California, Mexico.
Gazetteer	
Diagnosis:	Dorsal spines (total): 9-11; Dorsal soft rays (total): 20-26; Anal spines: 3-3; Anal soft rays: 29-34; Vertebrae: 38-42. Greenish above but predominately silvery; dark line at base of posterior part of dorsal;



Biology: Often occurs near piers, docks, in bays and sandy areas, but usually in quiet water and offshore areas near rocks

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Rhacochilus vacca
Pile perch

Rhacochilus vacca (Girard, 1855)

Family: Embiotocidae
(Surfperches)

Order: Perciformes (perch-likes)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Pile perch

Max. size: 44.2 cm SL
(male/unsexed; Ref. 27436)

Environment: demersal; marine ; depth range - 46 m

Climate: subtropical

Importance: fisheries: commercial; gamefish: yes; aquarium: public aquariums

Resilience:

Distribution: Eastern Pacific: Wrangell, southeastern Alaska to Guadalupe I., off north-central Baja California,

Gazetteer Mexico.

Diagnosis: Dorsal spines (total): 9-11; Dorsal soft rays (total): 21-25; Anal spines: 3-3; Anal soft rays: 27-30; Vertebrae: 33-38. Above, dark gray or brown pigment with a silvery luster which dominates the color on sides and belly; darker blotches on the back and sides, dark vertical bars on juveniles; fins dusky (Ref. 6885).

Biology: Occurs in rocky shores, often around kelp, pilings and underwater structures (Ref. 2850). Feeds on hard-shelled mollusks, crabs and barnacles (Ref. 2850)

by Gotshall, D.W.



Red List Not in IUCN Red List , (Ref. 36508)

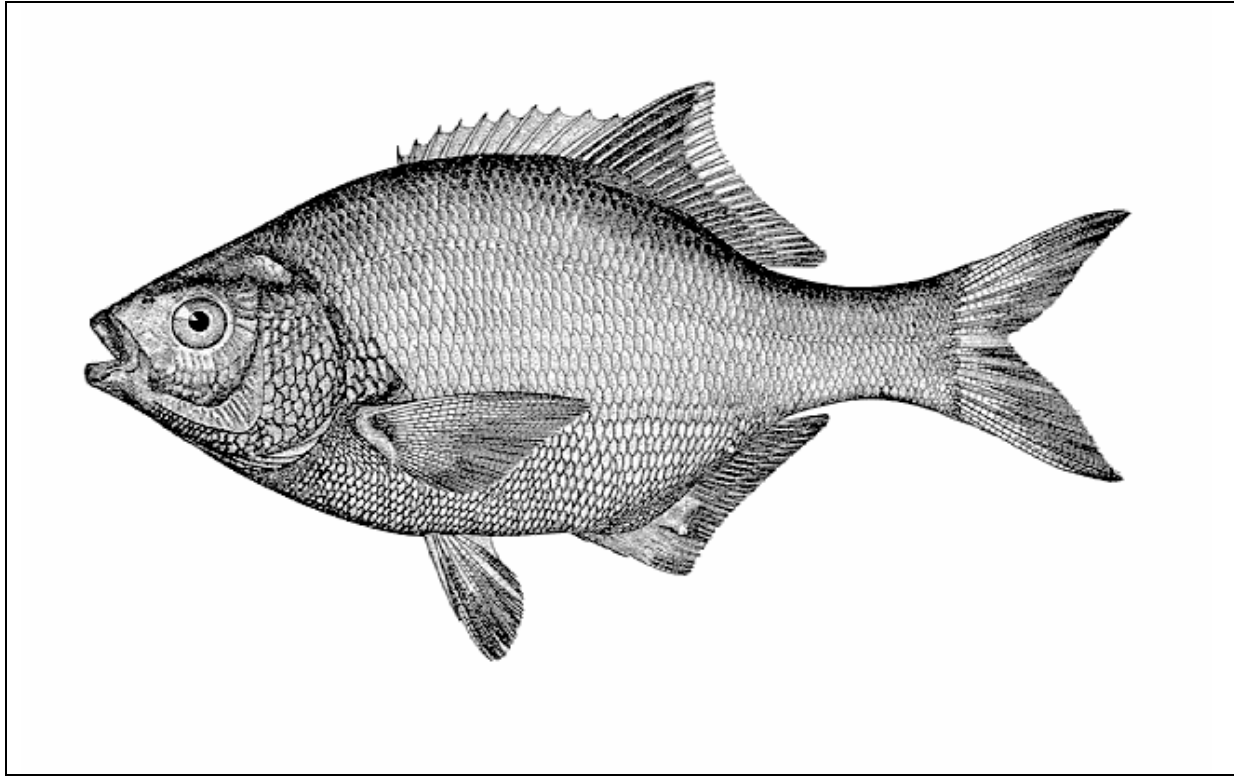
Status:

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)





Trichodon trichodon
Pacific sandfish

Trichodon trichodon (Tilesius, 1813)

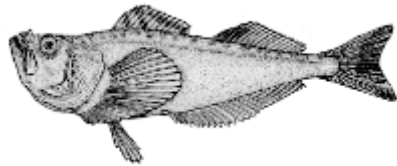
Family: Trichodontidae (Sandfishes)

Order: Perciformes (perch-likes)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Pacific sandfish

Max. size: 30.5 cm TL (male/unsexed; Ref. 6885)



by Canadian Museum of Nature, Ottawa, Canada

Environment: demersal; marine ; depth range 20 - 375 m

Climate: subtropical; 66°N - 38°N

Importance:

Resilience:

Distribution: Northwestern Pacific: Kamchatka (Ref. 27436) and the Commander Is., Russia. Northeastern Pacific: the Aleutian Is. to Nunivak I., Alaska and San Francisco, California, USA.

Gazetteer

Diagnosis: Dorsal spines (total): 9-16; Dorsal soft rays (total): 18-20; Anal spines: 1-1; Anal soft rays: 28-29. Caudal moderately forked (Ref. 6885). Light brown on dorsal surface, silvery ventrally, dark along midside, mid-dorsal line in irregular patches, and lateral line; spinous dorsal with dark streaks paralleling free edge; upper parts of pectorals and caudal with darkened edges, and vague dark blotches on rayed dorsal; anal, pelvics, and lower

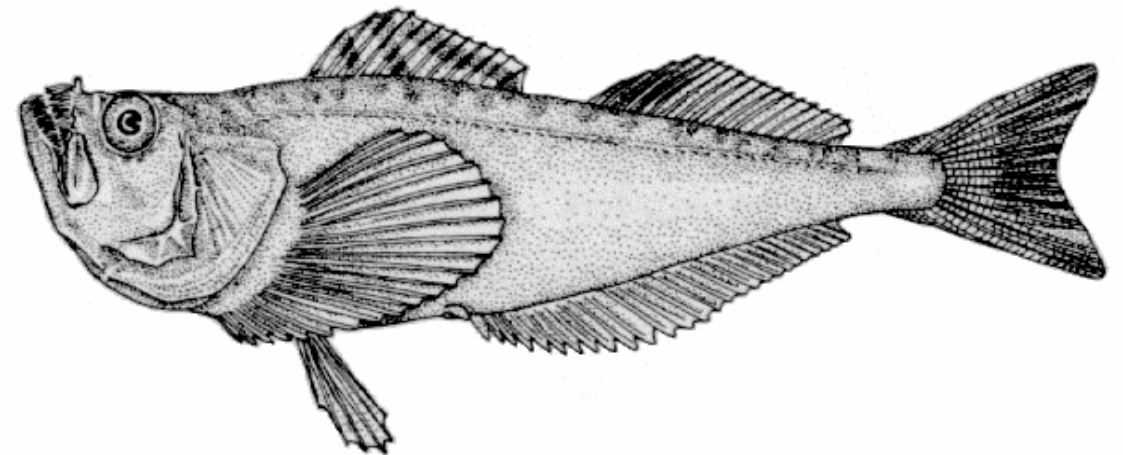
Biology: Usually buried in muddy or sandy bottoms with mouth protruding (Ref. 2850). Lays eggs in a gelatinous mass that is attached to rocks (Ref. 2850). Some have been caught by hand in shallow water (Ref. 2850)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Anoplarchus purpurescens
High cockscomb

Anoplarchus purpurescens Gill, 1861

Family: Stichaeidae (Pricklebacks)

Order: Perciformes (perch-likes)

Class: Actinopterygii (ray-finned fishes)

FishBase name: High cockscomb

Max. size: 20.0 cm TL (male/unsexed; Ref. 2850)

Environment: demersal; marine ; depth range 1 - 30 m

Climate: temperate; 66°N - 32°N

Importance: aquarium: public aquariums

Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (tm=2-3)

Distribution: Northeastern Pacific: Pribilof Is., Alaska to Santa Rosa I. and Trinidad Bay, southern California, USA.

Gazetteer

Diagnosis: Dorsal spines (total): 55-58; Dorsal soft rays (total): 0-0; Anal spines: 0-0; Anal soft rays: 39-40; Vertebrae: 58-61. Caudal with convex outer margin (Ref. 6885). Color very variable- may be light to dark gray with olivaceous overtones, brown to dark brown with or without redish overtones, or purple to almost black. Females are less varied in color, but show more pattern, usually having green grayish backgrounds with brownish reticulations, or dark brownish backgrounds with subdued reticulation.

by Love, M.



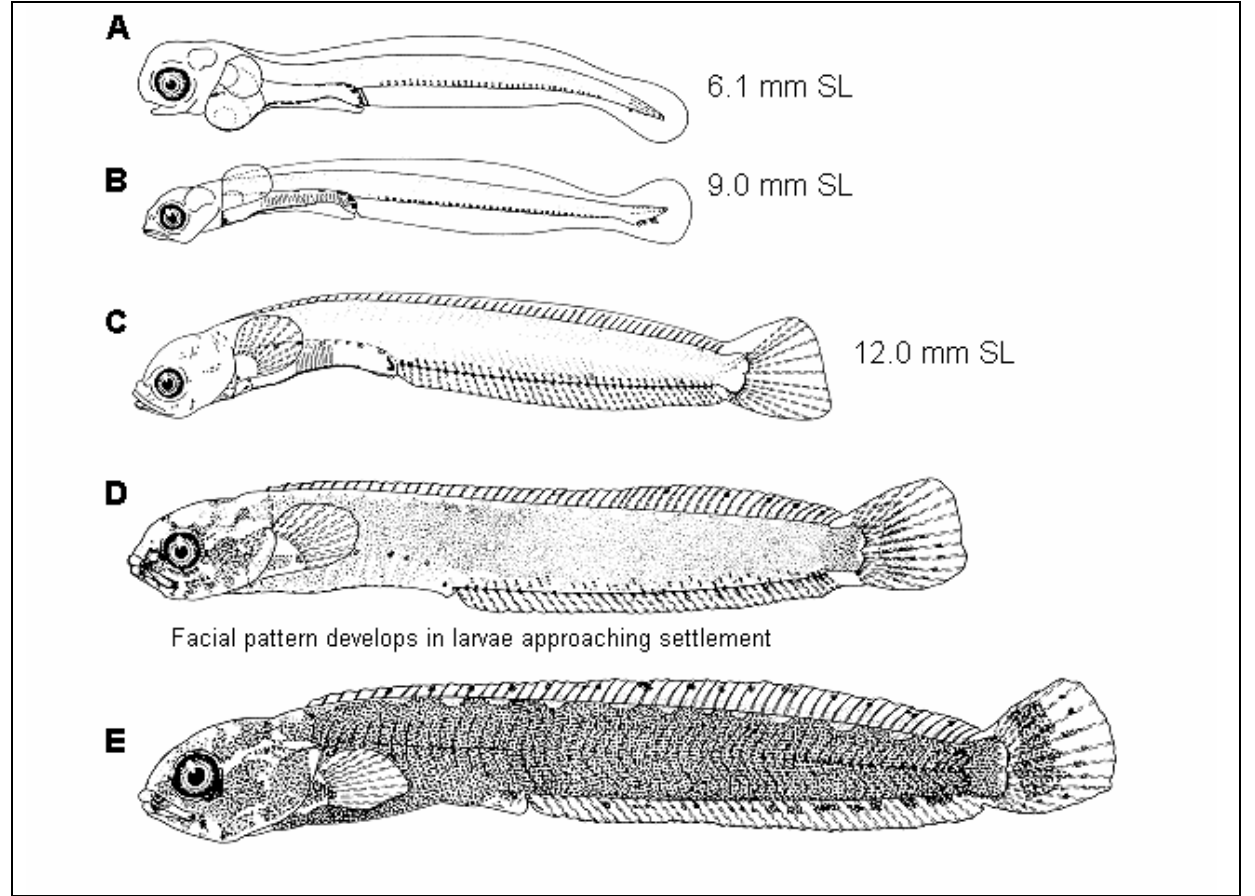
Biology: Usually found in intertidal areas under rocks (Ref. 2850). May remain out of water under rocks or seaweed (Ref. 31184). Green algae is an important food item but may also feed on polychaete worms, crustaceans and mollusks (Ref. 6885). Breathes air when out of water (Ref. 31184)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

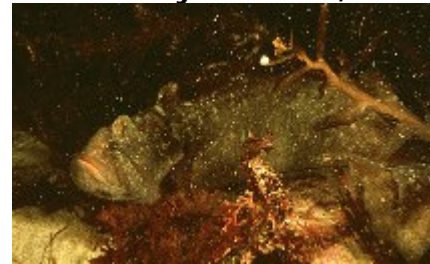
Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Cebidichthys violaceus
Monkeyface prickleback

Cebidichthys violaceus (Girard, 1854)
Family: Stichaeidae (Pricklebacks)
Order: Perciformes (perch-likes)
Class: Actinopterygii (ray-finned fishes)
FishBase name: Monkeyface prickleback
Max. size: 76.0 cm TL (male/unsexed; Ref. 2850)



by Gotshall, D.W.

Environment: demersal; marine ; depth range - 0 m

Climate: subtropical

Importance: gamefish: yes; aquarium: commercial

Resilience:

Distribution: Eastern Pacific: from southern Oregon, USA to northern central Baja California, Mexico; rare south of Point Conception, California, USA.

Gazetteer

Biology: Common inshore, in tidepools or shallow rocky areas, from the intertidal zone to 24 m depth. May remain out of water under rocks or seaweed (Ref. 31184). Feeds mainly on crustaceans and algae. Breathes air when out of water (Ref. 31184). Commonly caught by 'poke-poling', a method using a long bamboo pole with a very short wire leader and baited hook. Good eating

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Chirolophis decoratus Decorated warbonnet	
Chirolophis decoratus (Jordan & Snyder, 1902)	
Family:	Stichaeidae (Pricklebacks)
Order:	Perciformes (perch-likes)
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	Decorated warbonnet
Max. size:	42.0 cm TL (male/unsexed; Ref. 2850)
Environment:	demersal; marine ; depth range - 91 m
Climate:	temperate
Importance:	aquarium: public aquariums
Resilience:	
Distribution:	North Pacific: Kamchatka, Russia through the Aleutian chain and the Bering Sea to the Bering Strait coasts of Alaska and Humboldt Bay, California, USA.
Gazetteer	
Diagnosis:	Dorsal spines (total): 61-62; Dorsal soft rays (total): 0-0; Anal spines: 1-1; Anal soft rays: 44-51. Caudal rounded (Ref. 6885). Pale brown with white to cream markings, paler below; irregular light areas on upper part of body, and vertical light bars below; dark bars run down from eyes; prominent dark bars on the dorsal, caudal and anal fins (Ref. 6885).
Biology:	Usually among seaweed on rocky bottoms (Ref. 2850). Occurs in subtidal areas to 91 m depth (Ref. 2850)
Red List Status:	Not in IUCN Red List , (Ref. 36508)

Dangerous:	harmless
Coordinator:	
Main Ref:	Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)

Lumpenus sagitta Snake prickleback	
Lumpenus sagitta Wilimovsky, 1956	
Family:	Stichaeidae (Pricklebacks)
Order:	Perciformes (perch-likes)
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	Snake prickleback
Max. size:	51.0 cm TL (male/unsexed; Ref. 2850)
Environment:	benthopelagic; marine ; depth range 25 - 425 m
Climate:	temperate
Importance:	aquarium: public aquariums
Resilience:	
Distribution:	North Pacific: Sea of Japan and Sakhalin, Russia to St. Lawrence I. in the Bering Sea to Adak I. in the Aleutian chain and San Fransisco, California, USA.
Gazetteer	
Diagnosis:	Dorsal spines (total): 66-72; Dorsal soft rays (total): 0-0; Anal spines: 1-1; Anal soft rays: 45-50. Caudal fin narrow with oval free end; anal fin occasionally absent; pectorals large, bluntly pointed (Ref. 6885). Pale green on dorsal surface, cream ventrally; brown or green bars along midside and streaks or spots on upper part of sides; brown bars and dots on dorsal fin form bands parallel to fin margin and, on caudal fin, produce vertical bars; other fins pale; lining of mouth pale (Ref. 6885).
Biology:	Found in shallow bays and offshore waters (Ref. 2850). Sometimes takes hooks using marine worms as bait (Ref. 6885)

Red List Status:	Not in IUCN Red List , (Ref. 36508)
Dangerous:	harmless
Coordinator:	
Main Ref:	Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)

Apodichthys flavidus
Penpoint gunnel

Apodichthys flavidus Girard, 1854

Family: Pholidae (Gunnels)

by Bull. U.S. Bur. Fish.

Order: Perciformes (perch-likes)

Class: Actinopterygii (ray-finned fishes)



FishBase name: Penpoint gunnel

Max. size: 46.0 cm TL (male/unsexed; Ref. 2850)

Environment: demersal; marine

Climate: temperate

Importance: aquarium: public aquariums

Resilience:

Distribution: Eastern Pacific: Kodiak I., Alaska to Santa Barbara I., southern California, USA.

Gazetteer

Diagnosis: Dorsal spines (total): 40-44; Dorsal soft rays (total): 0-0; Anal spines: 1-1; Anal soft rays: 38-42. Caudal rounded, somewhat elevated dorsally; pectorals small and rounded (Ref. 6885). Color variable- from green through brown to red; dark dots spaced in a broken line along midside of body, sometimes also light spots; narrow dark line down and back from eye to operculum, sometimes through eye; some fresh specimens with a silvery line margined with orange and black from middle of maxillary through lower part of eye to nape and opercle (Ref. 6885).

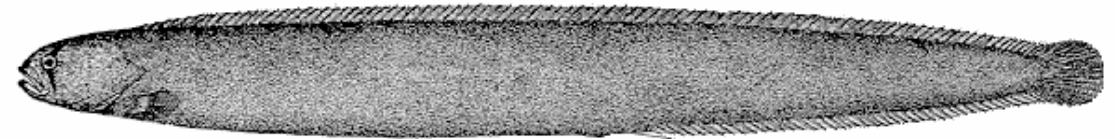
Biology: Found in intertidal areas, especially in tidepools (Ref. 2850). May remain out of the water under rocks or seaweeds (Ref. 31184). Feeds on small crustaceans and mollusks (Ref. 6885). Pairs are found coiled around egg masses (Ref. 4925). Breathes air when out of water (Ref. 31184)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Anarrhichthys ocellatus
Wolf-eel

Anarrhichthys ocellatus Ayres, 1855

Family: Anarrhichadidae (Wolffishes)

Order: Perciformes (perch-likes)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Wolf-eel

Max. size: 240 cm TL (male/unsexed; Ref. 4925); max. published weight: 18.4 kg (Ref. 27436)

Environment: demersal; marine ; depth range 1 - 226 m

Climate: subtropical; 66°N - 32°N

Importance: fisheries: minor commercial; aquarium: public aquariums

Resilience: Low, minimum population doubling time 4.5 - 14 years (tm=7; Fec=10,000)

Distribution: North Pacific: Okhotsk Sea and the Sea of Japan to the Krenitzen Is., in the Aleutian chain and Imperial

Gazetteer Beach, southern California, USA.

Diagnosis: Anal spines: 0-0; Anal soft rays: 200. Dorsal with 228-250 spines. Caudal small. Anal with up to 233 rays.

Biology: Adults seek shelter among rocks in subtidal areas (Ref. 2850) and will occupy the same shelter until driven out by larger wolf-eels or a large octopus (Ref. 28499). Juveniles are pelagic for up to two years (Ref. 28499). Feeds on hard-shelled invertebrates and fishes (Ref. 2850). Large specimens can inflict a painful bite (Ref. 28499). Its

by Bauder, C.

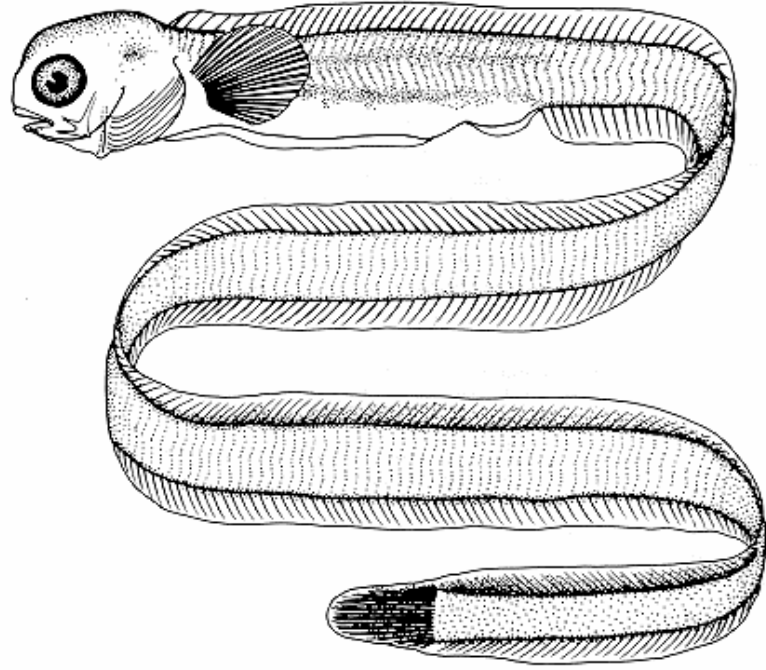


Red List Not in IUCN Red List , (Ref. 36508)

Status:

Dangerous: traumatogenic , Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983





65 mm TL

Cryptacanthodes giganteus

Cryptacanthodes giganteus (Kittlitz, 1858)

Family: Cryptacanthodidae (Wrymouths)

Order: Perciformes (perch-likes)

Class: Actinopterygii (ray-finned fishes)

FishBase

name:

Max. size: 117 cm TL (male/unsexed; Ref. 12204)

Environment: demersal; marine ; depth range 6 - 128 m

Climate: subtropical

Importance:

Resilience:

Distribution: Northeastern Pacific: SE Bering Sea to northern California, USA.

Gazetteer

Diagnosis: Dorsal spines (total): 72-77; Dorsal soft rays (total): 0-0; Anal spines: 2-2; Anal soft rays: 43-49. Pale brown in color, with touches of yellow or violet (Ref. 12204).

Biology: Found on soft bottoms (Ref. 12204). Probably spends part of its life buried (Ref. 12204)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Status:

Dangerous: harmless

Coordinator:

Main Ref: Coad, B.W.. 1995. (Ref. 12204)

Ammodytes hexapterus
Pacific sand lance

Ammodytes hexapterus Pallas, 1814

Family: Ammodytidae (Sand lances)

Order: Perciformes (perch-likes)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Pacific sand lance

Max. size: 27.0 cm TL (male/unsexed; Ref. 2850)

Environment: benthopelagic; brackish; marine ; depth range - 100 m

Climate: temperate; - 32°N

Importance: fisheries: commercial

Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (tm=2-3)

Distribution: Arctic and Pacific: Arctic Alaska to the the Sea of Japan and Balboa I., southern California, USA. Western

Gazetteer Atlantic: northern Quebec, Canada to North Carolina, USA. The Arctic and Pacific populations may be a separate species, distinct from the Atlantic populations (Ref. 7251).

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 58-63; Anal spines: 0-0; Anal soft rays: 28-31; Vertebrae: 68-72. Resembles *A. personatus* in body shape but distinguished by its numerous dorsal fin rays (58 to 63 against 55 to 59) an vertebrae (68 against 67), and larger eyes. Lateral plicae 144 to 161.

by Canadian Museum of Nature, Ottawa, Canada



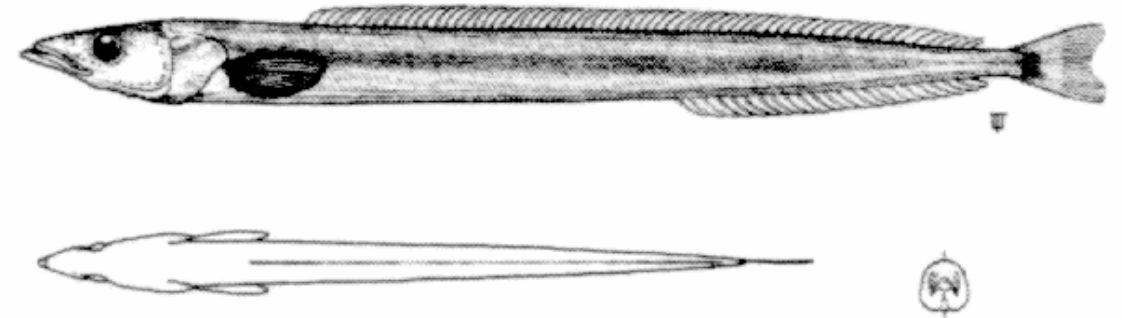
Biology: May occur in large schools near the surface both inshore and offshore, but also buries itself in sand (Ref. 2850). Inshore, found from intertidal to subtidal areas (Ref. 2850). Offshore, found near the surface over deep water (Ref. 2850). Juveniles and adults feed on zooplankton (Ref. 28499). Probably lives to age 5 (Ref. 28499). Utilized dried/salted and frozen; sometimes targeted as a raw material for fishmeal; eaten fried (Ref. 9988)


Red List Status:

Dangerous: harmless

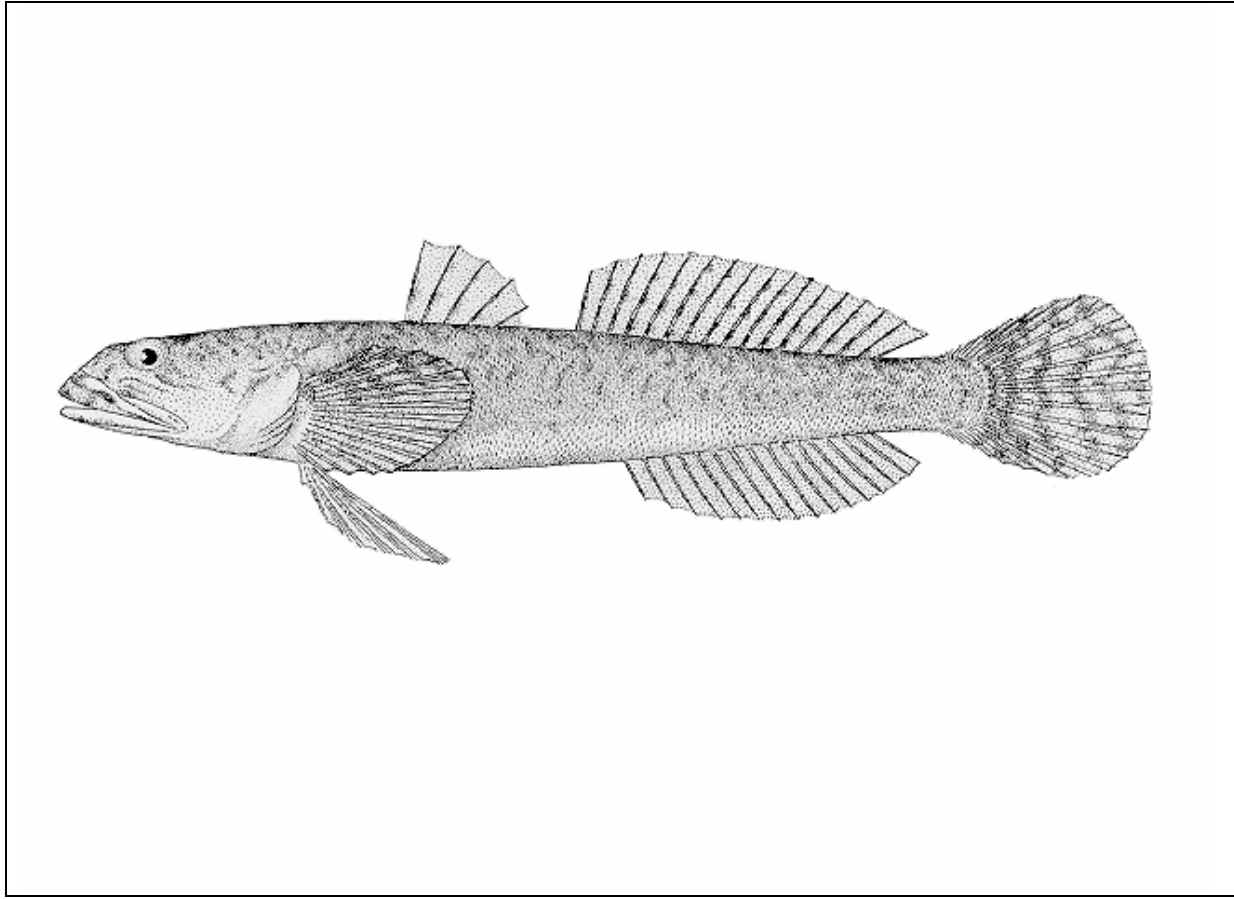
Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Clevelandia ios Arrow goby	
Clevelandia ios (Jordan & Gilbert, 1882)	by Hopkins Seaside Laboratory
Family: Gobiidae (Gobies)	
Order: Perciformes (perch-likes)	
Class: Actinopterygii (ray-finned fishes)	
FishBase name: Arrow goby	
Max. size: 6.4 cm SL (male/unsexed; Ref. 27436)	
Environment: demersal; brackish; marine	
Climate: subtropical; 55°N -	
Importance: aquarium: public aquariums	
Resilience:	
Distribution: Northeastern Pacific: Rivers Inlet, British Columbia, Canada to Baja California, Mexico.	
Gazetteer:	
Diagnosis: Dorsal spines (total): 4-5; Dorsal soft rays (total): 15-17; Anal spines: 0-0; Anal soft rays: 14-17. Caudal rounded.	
Biology: Inhabits sand or mud bottom. Retreats into shrimp burrows when threatened and at low tide (Ref. 6885). Commonly in estuaries, lagoons and tidal sloughs. Reported to occur in freshwater. Adults feeds on diatoms, green algae, tintinnids, eggs and young of their hosts (Ref. 6885).	

Red List Status:	Not in IUCN Red List , (Ref. 36508)
Dangerous:	harmless
Coordinator:	
Main Ref:	Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Eucyclogobius newberryi
Tidewater goby

Eucyclogobius newberryi (Girard, 1856)
Family: Gobiidae (Gobies)
Order: Perciformes (perch-likes)
Class: Actinopterygii (ray-finned fishes)
FishBase name: Tidewater goby
Max. size: 5.7 cm TL (male/unsexed; Ref. 2850); max. reported age: 1 years
Environment: demersal; brackish; marine

Climate: subtropical
Importance:

Resilience:
Distribution: Eastern Pacific: Del Norte County in northern California, USA to Del Mar in southern California.

Gazetteer
Biology: Inhabits coastal lagoons and brackish bays at mouth of freshwater streams (Ref. 2850). IS subjected to wide variation in salinity (1-28 ppt.) and temperature (9-25°C) both within and among habitat types. The substrate and vegetation can also differ among lagoon, creek and marsh habitats (Ref. 26474). Feeds mainly on crustaceans, dipteran larvae, gastropods, and invertebrate eggs (Ref. 26474)

Red List Status: Vulnerable, see IUCN Red List (A1c+2c) , Gimenez Dixon, M. , (Ref. 36508)
Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)

Rhinogobiops nicholsii

Blackeye goby

Rhinogobiops nicholsii (Bean, 1882)

Family: Gobiidae (Gobies)

Order: Perciformes (perch-likes)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Blackeye goby

Max. size: 15.0 cm TL (male/unsexed; Ref. 2850)

Environment: demersal; marine ; depth range - 106 m

Climate: subtropical; 55°N -

Importance: aquarium: public aquariums

Resilience:

Distribution: Northeastern Pacific: Wales I., northern British Columbia, Canada to Punta Rompiente, central Baja California, Mexico.

Gazetteer

Diagnosis: Dorsal spines (total): 5-7; Dorsal soft rays (total): 12-14; Anal spines: 0-0; Anal soft rays: 11-12. Caudal rounded.

Biology: Found usually in sandy areas near rocks. Occurs from intertidal areas to 106 m depth. Retreats to rocks or holes when approached. Young are found usually offshore among plankton

Red List Status: Not in IUCN Red List , (Ref. 36508)


Dangerous: harmless


Coordinator:

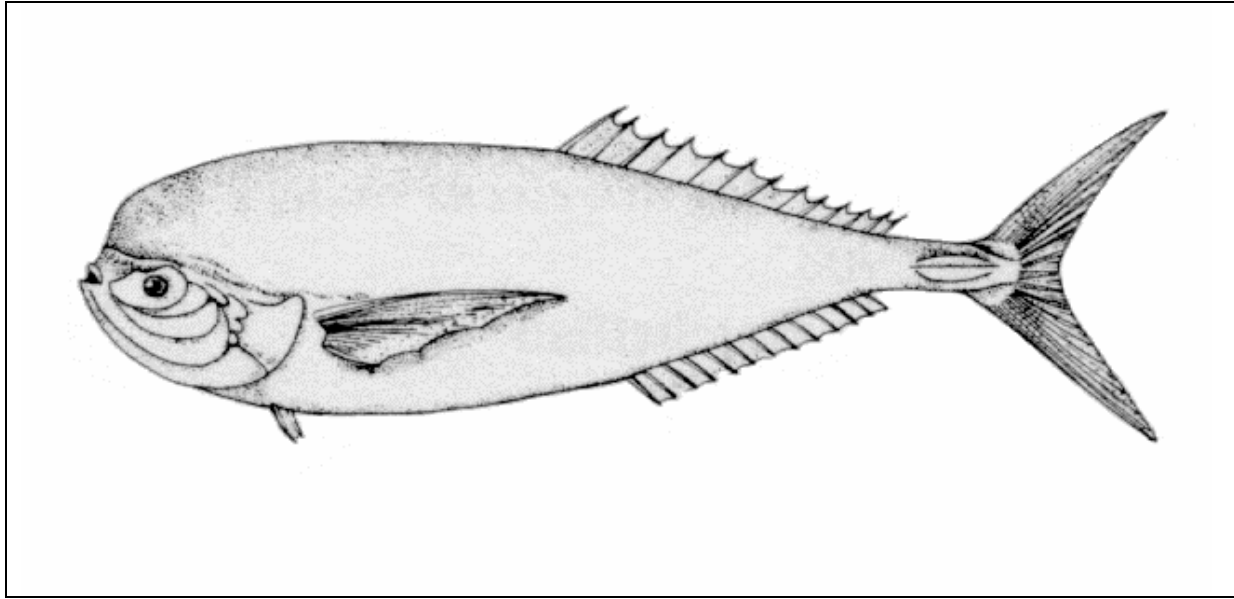
Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann.
1983. (Ref. 2850)

Lepidogobius lepidus
Bay goby

Lepidogobius lepidus (Girard, 1858)
Family: Gobiidae (Gobies)
Order: Perciformes (perch-likes)
Class: Actinopterygii (ray-finned fishes)
FishBase name: Bay goby
Max. size: 10.0 cm TL (male/unsexed; Ref. 2850); max. reported age: 7 years
Environment: demersal; marine ; depth range - 201 m
Climate: subtropical; 55°N -
Importance:
Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (K=0.13; tmax=7)
Distribution: Northeastern Pacific: Welcome Harbour, northern British Columbia, Canada to Isla Cedros, central Baja California, Mexico.
Gazetteer
Diagnosis: Dorsal spines (total): 7-7; Dorsal soft rays (total): 16-18; Anal spines: 0-0; Anal soft rays: 15-16. Caudal ovally rounded, large.
Biology: Found mostly on mud bottom; from intertidal to 201 m depth
Red List Status: Not in IUCN Red List , (Ref. 36508)
Dangerous: harmless
Coordinator:
Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann.

Luvarus imperialis Luvar	
Luvarus imperialis Rafinesque, 1810	
Family: Luvaridae (Louvar)	
Order: Perciformes (perch-likes)	by Garcia-Franco, M.
Class: Actinopterygii (ray-finned fishes)	
FishBase name: Luvar	
Max. size: 200 cm TL (male/unsexed; Ref. 9314); max. published weight: 150.0 kg (Ref. 47377)	
Environment: pelagic; oceanodromous; marine ; depth range - 200 m	
Climate: subtropical; 60°N - 25°S	
Importance: fisheries: minor commercial	
Resilience:	
Distribution: Temperate and tropical waters of all oceans (Ref. 47377)	
Gazetteer	Western Atlantic: USA and eastern Gulf of Mexico (Ref. 7251). Eastern Atlantic: Bergen, Norway to Madeira and near the Azores, including western Mediterranean; west of Cape Point, South Africa (Ref. 6657). Western Pacific: Japan, Australia, and New Zealand (Ref. 5755). Eastern Pacific: Oregon, USA to Chile (Ref. 2850).
Diagnosis:	Dorsal soft rays (total): 20-20; Anal spines: 0-0; Anal soft rays: 18-18; Vertebrae: 22-22. Absence of dorsal and anal spines and of pelvic fins contribute to streamlining of the body, as does the flat and relatively consolidated opercular spines (Ref. 11017, p. 74).

Biology:	Oceanic and epipelagic; found near surface or in deep water (Ref. 10821). Apparently solitary (Ref. 9314). Feeds mainly on jellyfishes, ctenophores, and other gelatinous planktonic animals (Ref. 2850, 6885). Spawning starts at the end of spring and during the summer (Ref. 9314). Rarely found in markets (Ref. 9314)
Red List Status:	Not in IUCN Red List , (Ref. 36508)
Dangerous:	harmless
Coordinator:	
Main Ref:	Tyler, J.C., G.D. Johnson, I. Nakamura and B.B. Collette. 1989. (Ref. 11017)
	



Icichthys lockingtoni
Medusafish

Icichthys lockingtoni Jordan & Gilbert, 1880

Family: Centrolophidae (Medusafishes)
Order: Perciformes (perch-likes)
Class: Actinopterygii (ray-finned fishes)
FishBase name: Medusafish

Max. size: 46.0 cm TL (male/unsexed; Ref. 6885)

by Gotshall, D.W.



Environment: pelagic; marine ; depth range - 91 m

Climate: subtropical; 60°N -
Importance:

Resilience:

Distribution: North Pacific: Japan and Gulf of Alaska to central Baja California, Mexico.

Gazetteer

Diagnosis: Dorsal spines (total): 3-3; Dorsal soft rays (total): 34-39; Anal spines: 3-3; Anal soft rays: 20-25. Caudal rounded with small notch, narrow; pectorals small, rounded (Ref. 6885). Bluish gray to brown, darker on scale pockets, fins dusky to black (Ref. 6885).

Biology: Found near surface and to at least 91 m depth (Ref. 2850). Young are abundant offshore, often among jellyfish (Ref.

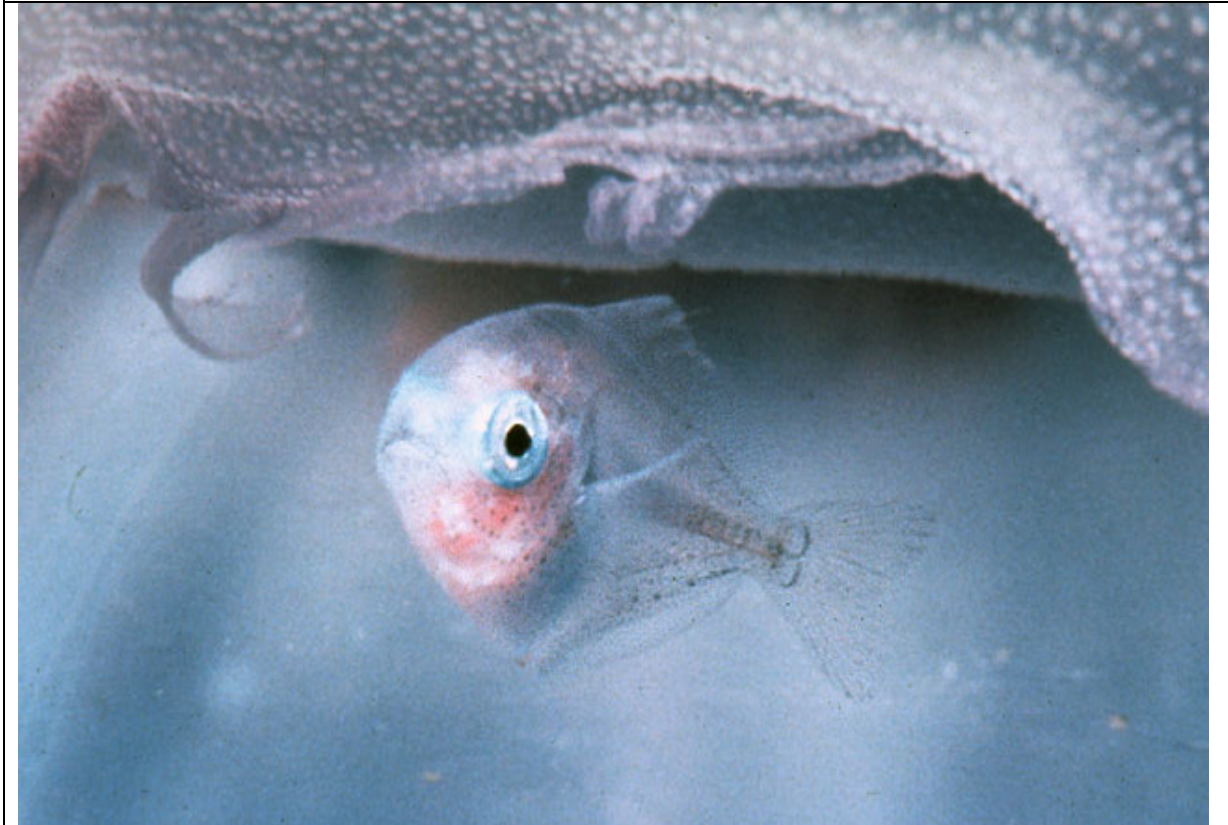
Red List Not in IUCN Red List , (Ref. 36508)

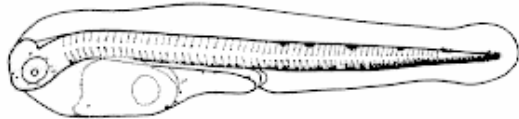
Status:

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)





4.3 mm NL

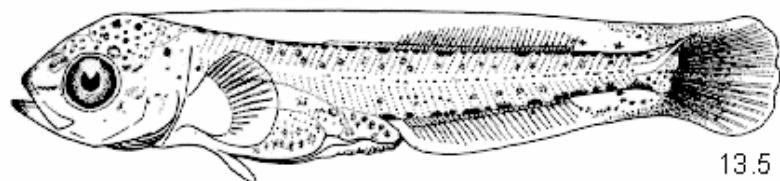


8.2 mm NL

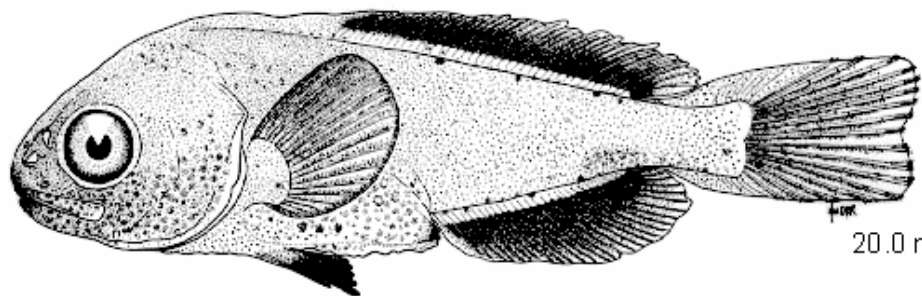
Lateral line dashes



10.4 mm NL



13.5 mm SL



20.0 mm SL

Peprilus simillimus
Pacific pompano

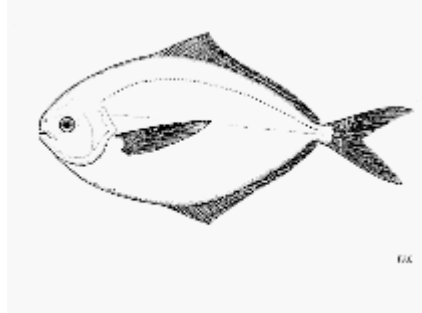
Peprilus simillimus (Ayres, 1860)

Family: Stromateidae
(Butterfishes)
Order: Perciformes (perch-likes)
Class: Actinopterygii (ray-finned fishes)

FishBase name: Pacific pompano

Max. size: 28.0 cm SL
(male/unsexed; Ref. 9346)

by FAO



Environment: benthopelagic; marine ; depth range 9 - 91 m

Climate: subtropical; 55°N - 24°N

Importance: fisheries: commercial; gamefish: yes

Resilience: High, minimum population doubling time less than 15 months (Assuming $t_m=1$)

Distribution: Northeast Pacific: Queen Charlotte Sound in British Columbia, Canada to southern Baja California and the Gulf of California. Occurrence in Nicaragua needs verification.

Gazetteer

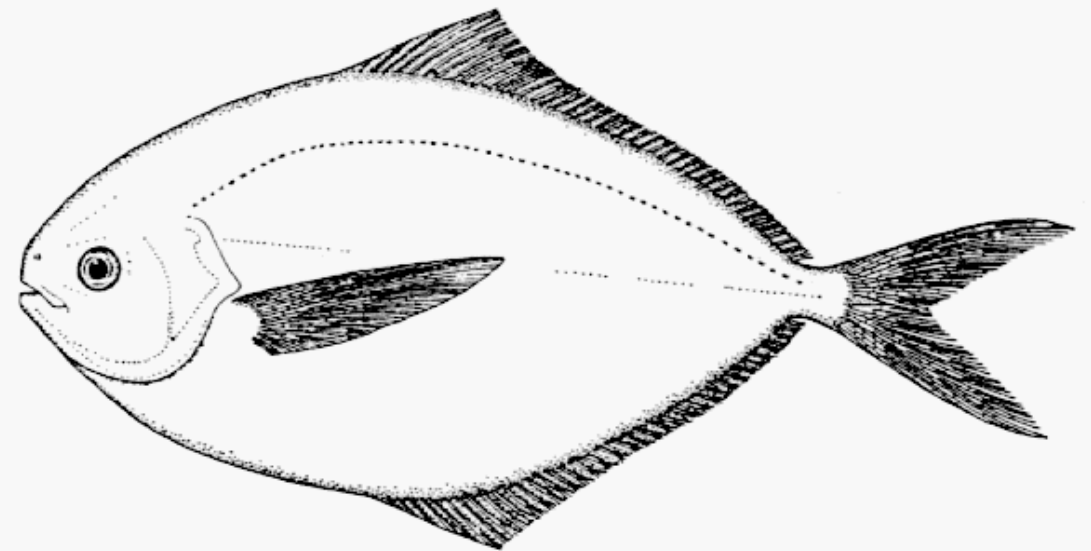
Diagnosis: Dorsal spines (total): 3-3; Dorsal soft rays (total): 45-47; Anal spines: 3-3; Anal soft rays: 39-44; Vertebrae: 29. Brilliantly iridescent, green or blue above, silvery below; dusky on fins (Ref. 6885).

Biology: Commonly found on sand bottom of exposed coasts. Usually occurs in shallow water near shore and often

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless
Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



FAO

Sebastes auriculatus
Brown rockfish

Sebastes auriculatus Girard, 1854

Family: Sebastidae (Rockfishes, rockcods and thornyheads), subfamily: Sebastinae

Order: Scorpaeniformes (scorpionfishes and flatheads)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Brown rockfish

Max. size: 56.0 cm TL (male/unsexed; Ref. 27437); max. reported age: 20 years

Environment: demersal; marine ; depth range 0 - 128 m

Climate: temperate; 61°N - 25°N

Importance: fisheries: minor commercial; gamefish: yes; aquarium: public aquariums; bait: occasionally

Resilience:

Distribution: Eastern Pacific: Prince Willian Sound, Alaska to central Baja California, Mexico.

Gazetteer

Diagnosis: Dorsal spines (total): 13-13; Dorsal soft rays (total): 12-15; Anal spines: 3-3; Anal soft rays: 5-8; Vertebrae: 26-27. Head spines strong - nasal, preocular, postocular, tympanic, coronal (may be absent), parietal, and nuchal (may be absent) spines present, supraoculars absent (Ref. 27437). Interorbital space

by Gotshall, D.W.



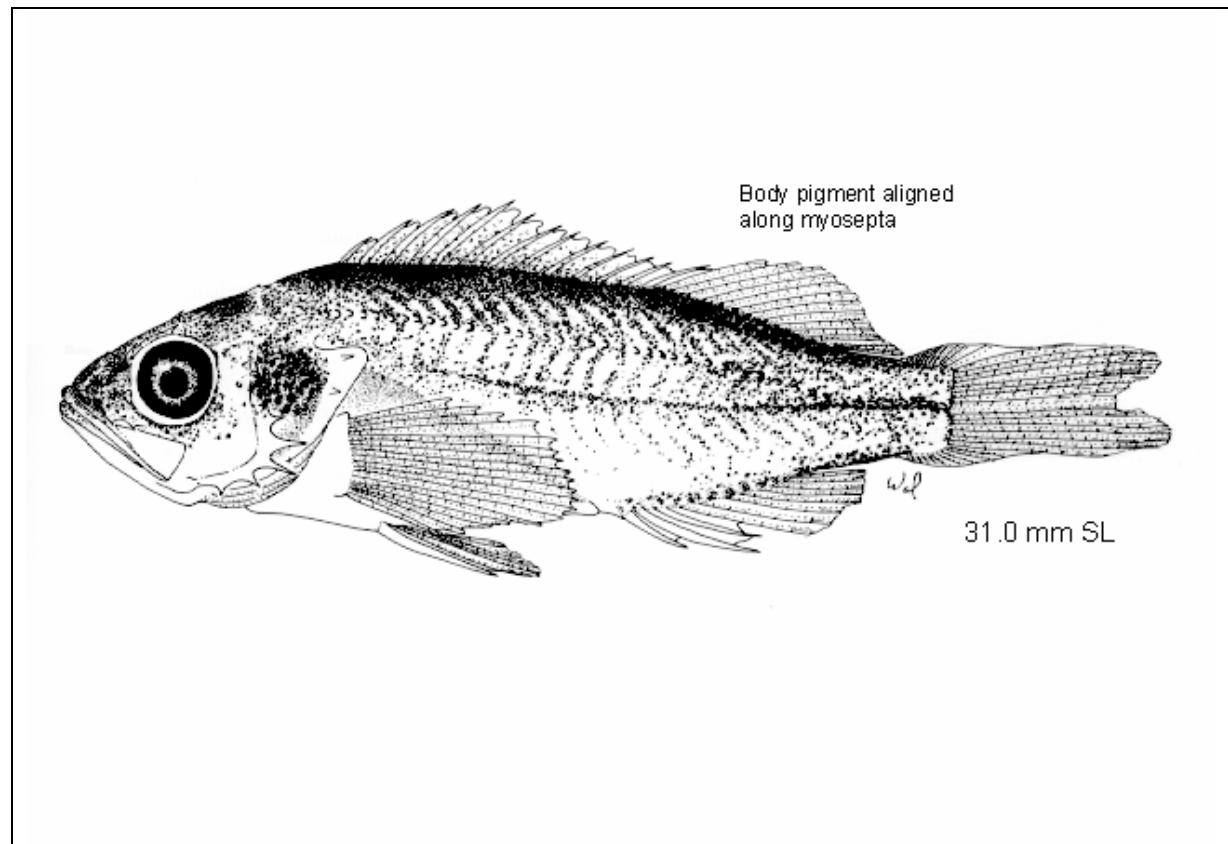
Biology: A sedentary rockfish found in shallow water and bays (Ref. 2850), among sheltering weed-covered rocks or around pilings (Ref. 27436). Viviparous, with planktonic larvae and pelagic juveniles (Ref. 36715). Fin spines are sharp and mildly venomous and can cause annoying wounds (Ref. 27436). Small live specimens make excellent bait for large lingcod (Ref. 27436). Flesh is firm and tasty, but rarely found in markets (Ref. 26346)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: venomous , Lamb, A. and P. Edgell. 1986

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Sebastes caurinus
Copper rockfish

Sebastes caurinus Richardson, 1844

Family: Sebastidae (Rockfishes, rockcods and thornyheads) ,
Order: Scorpaeniformes (scorpionfishes and flatheads)
Class: Actinopterygii (ray-finned fishes)



FishBase name: Copper rockfish

Max. size: 58.0 cm TL (male/unsexed; Ref. 27437); max. published weight: 2,740 g (Ref. 40637); max. reported age: 55 years

Environment: demersal; marine ; depth range 10 - 183 m

Climate: subtropical; 60°N -

Importance: fisheries: minor commercial; gamefish: yes; aquarium: public aquariums

Resilience: Low, minimum population doubling time 4.5 - 14 years (K=0.12; tmax=55; Fec=20,000)

Distribution: Northeastern Pacific: Kenai Peninsula, Gulf of Alaska to central Baja California, Mexico. The darker reddish phase from California may be a separate species (Ref. 27437).

Gazetteer

Diagnosis: Dorsal spines (total): 13-13; Dorsal soft rays (total): 11-14; Anal spines: 3-3; Anal soft rays: 5-7; Vertebrae: 25-26. Head spines strong - nasal, preocular, postocular, tympanic and parietal spines

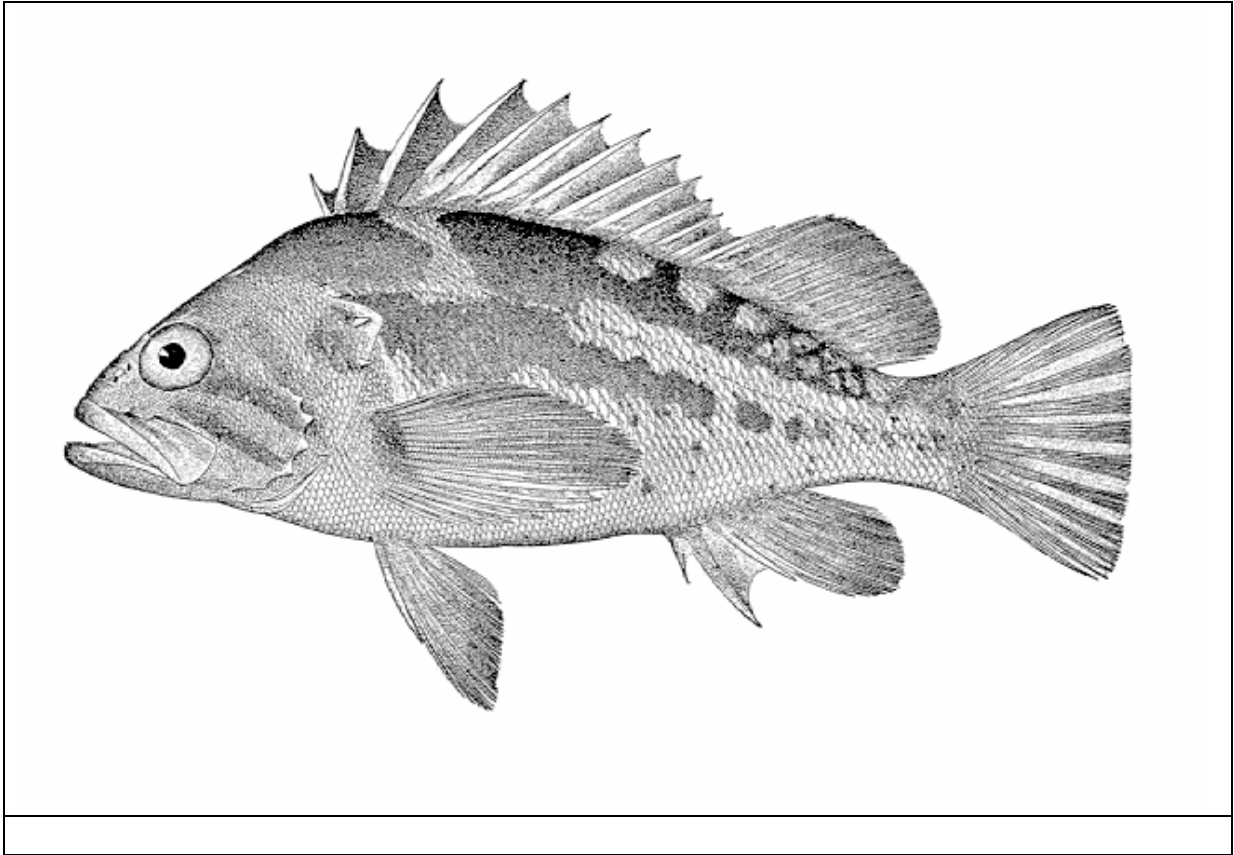
Biology: Particularly abundant in shallow, protected bays and inlets, among rocks and kelp beds; also found around pilings and jetties or under floats (Ref. 27436). Juveniles found in loose aggregations in shallow weedy bays, around wharfs, or among floating drift associated with summer tidelines (Ref. 27436). Mainly a benthic feeder, may also take pelagic fishes (Ref. 27436). Viviparous, with planktonic larvae (Ref. 36715). Flesh is tasty, firm and flaky (Ref. 27436). Sold mainly as fresh fillets or live in Chinese restaurants and fish markets; excellent for fish chips or for panfrying as fillets (Ref. 27436)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: venomous , Halstead, B.W., P.S. Auerbach and D.R. Campbell. 1990

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Sebastes flavidus
Yellowtail rockfish

Sebastes flavidus (Ayres, 1862)

Family: Sebastidae (Rockfishes, rockcods and thornyheads) , subfamily: Sebastinae by Gotshall, D.W.

Order: Scorpaeniformes

Class: Actinopterygii (ray-finned fishes)

FishBase name: Yellowtail rockfish

Max. size: 66.0 cm TL (male/unsexed; Ref. 4925); max. published weight: 2,510 g (Ref. 40637); max. reported age: 64 years

Environment: reef-associated; marine ; depth range 0 - 549 m

Climate: temperate; 60°N - 32°N

Importance: fisheries: commercial; gamefish: yes; aquarium: show aquarium

Resilience: Low, minimum population doubling time 4.5 - 14 years (K=0.16; tm=6-7; tmax=64)

Distribution: Northeast Pacific: Unalaska I., Alaska to San Diego, California, USA.

Gazetteer

Diagnosis: Dorsal spines (total): 13-13; Dorsal soft rays (total): 14-16; Anal spines: 3-3; Anal soft rays: 7-9. Head spines weak - nasals present, preocular and parietal



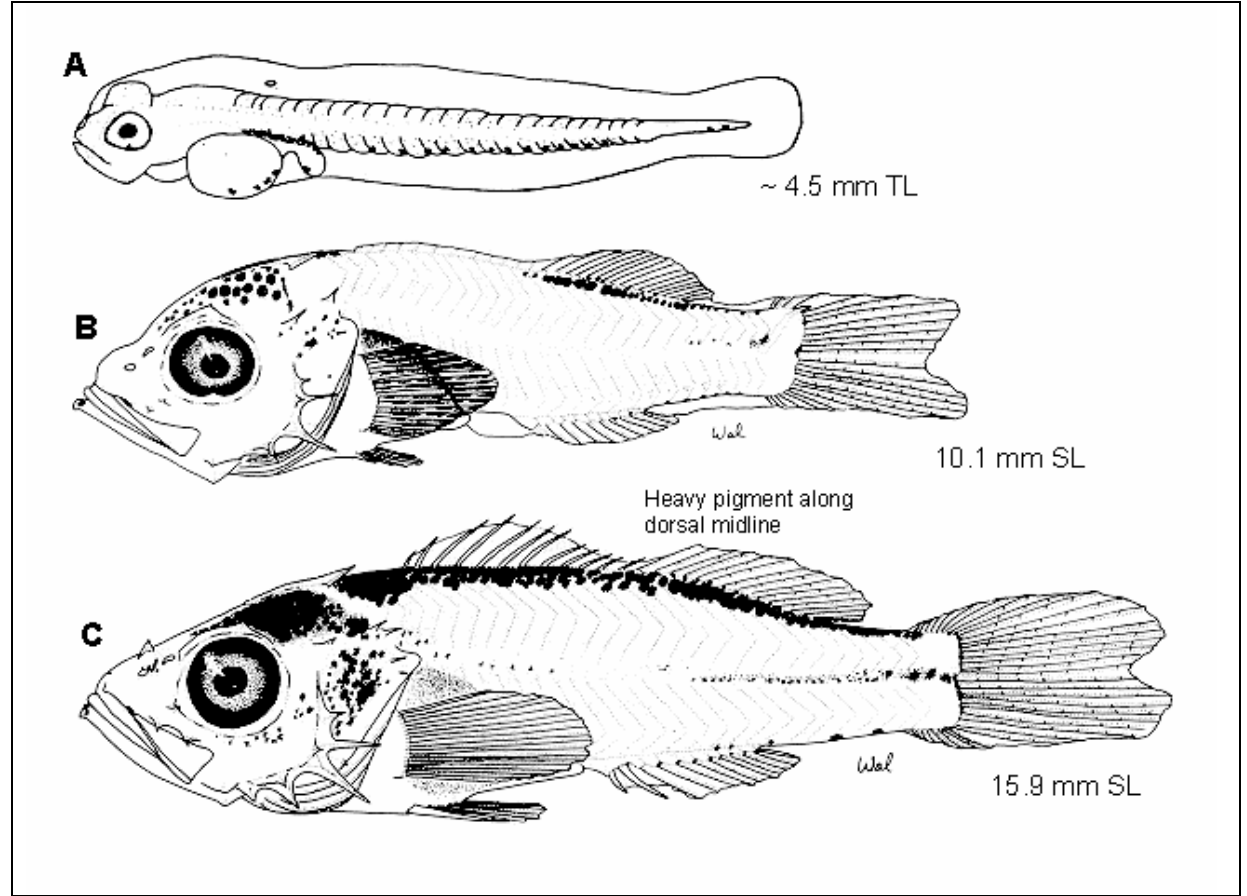
Biology: Form schools in open water along steeply sloping shores or above rocky reefs; also holes up amid cracks and crevices of the sea floor (Ref. 27436). Juveniles found around floats and pilings (Ref. 27436). Feed on pelagic crustaceans, fishes and squids (Ref. 6885). Viviparous (Ref. 34817). Filleted, then sold fresh or frozen, with other rockfishes (Ref. 27436)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Clemens, W.A. and G.V. Wilby. 1961. (Ref. 4925)



Sebastes melanops
Black rockfish

Sebastes melanops Girard, 1856

Family: Sebastidae (Rockfishes, rockcods and thornyheads) , subfamily: Sebastinae

Order: Scorpaeniformes (scorpionfishes and flatheads)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Black rockfish

Max. size: 63.0 cm TL (male/unsexed; Ref. 27437); max. published weight: 4,800 g (Ref. 2850); max. reported age: 50 years

Environment: reef-associated; marine ; depth range 0 - 366 m

Climate: temperate; 55°N - 34°N

Importance: fisheries: minor commercial; gamefish: yes; aquarium: public aquariums

Resilience: Low, minimum population doubling time 4.5 - 14 years (K=0.14; tmax=50)

Distribution: Eastern Pacific: Amchitka I., Aleutian Is., Alaska to Paradise Cove, Baja California, Mexico.

Gazetteer

by Gotshall, D.W.



Diagnosis: Dorsal spines (total): 13-14; Dorsal soft rays (total): 13-16; Anal spines: 3-3; Anal soft rays: 7-9; Vertebrae: 26-26. Head spines weak to very weak - nasals present, preocular and postocular spines usually absent, supraocular, tympanic, coronal, parietal and nuchal spines absent (Ref. 27437). Symphyseal knob very weak or absent (Ref. 27437). Eyes moderately large (Ref. 27437). Anal fin profile rounded or with greater portion slanted posteriorly (Ref. 27437). Posterior margin of caudal fin indented (Ref. 27437). Dark grey to black with light grey mottling dorsally, lighter ventrally (Ref. 27437). Branchiostegal rays: 7 (Ref. 36715).

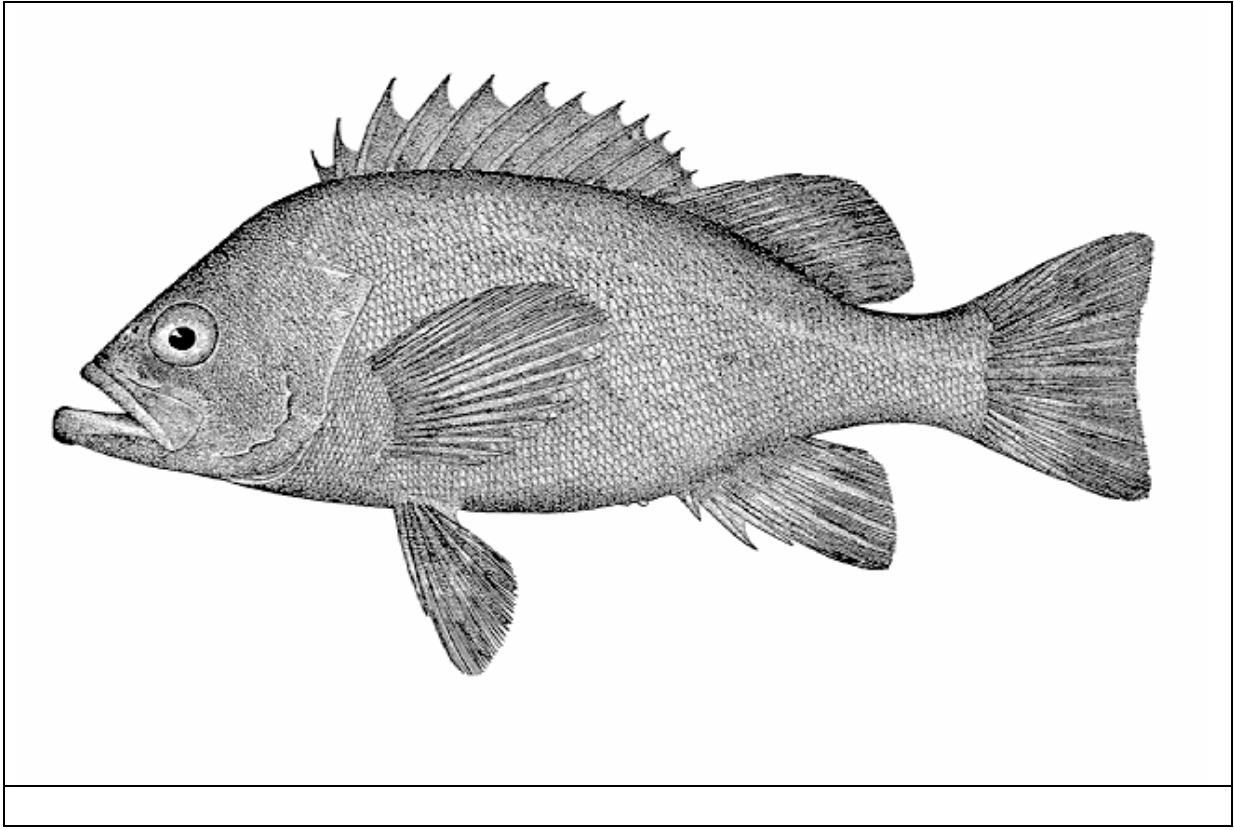
Biology: Found near rocky reefs in shallow water and in open water over deep banks (Ref. 2850). Adults live both off and on bottom (Ref. 2850). Juveniles are pelagic (Ref. 36715). Form schools (Ref. 2850). Feed on fishes (Ref. 27302). Viviparous, with planktonic larvae (Ref. 36715). Young are important prey species for other fishes, marine mammals and birds. Excellent food fish (Ref. 27436)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Sebastes mystinus
Blue rockfish

Sebastes mystinus (Jordan & Gilbert, 1881)

Family: Sebastidae (Rockfishes, rockcods and thornyheads) , subfamily: Sebastinae

Order: Scorpaeniformes (scorpionfishes and flatheads)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Blue rockfish

Max. size: 61.0 cm TL (male/unsexed; Ref. 40637); max. published weight: 3,790 g (Ref. 40637); max. reported age: 44 years

Environment : reef-associated; marine ; depth range 0 - 550 m

Climate: subtropical; 55°N -

Importance: gamefish: yes; aquarium: public aquariums

Resilience: Low, minimum population doubling time 4.5 - 14 years (K=0.17 (?); tm=3-5; tmax=44)

Distribution: Eastern Pacific: northern limit is uncertain, at least from Vancouver I. in British Columbia, Canada (possibly Aleutian Islands, Alaska) to northern Baja California, Mexico.

Gazetteer
Diagnosis: Dorsal spines (total): 13-13; Dorsal soft rays (total): 15-17; Anal spines: 3-3; Anal soft rays: 8-10; Vertebrae: 26-27. Head spines weak to very weak - nasals present, preoculars usually present, supraocular, postocular and tympanic spines usually absent, coronal, parietal and nuchal spines absent (Ref. 27437). Eye diameter and mouth small (Ref.

by Gotshall, D.W.



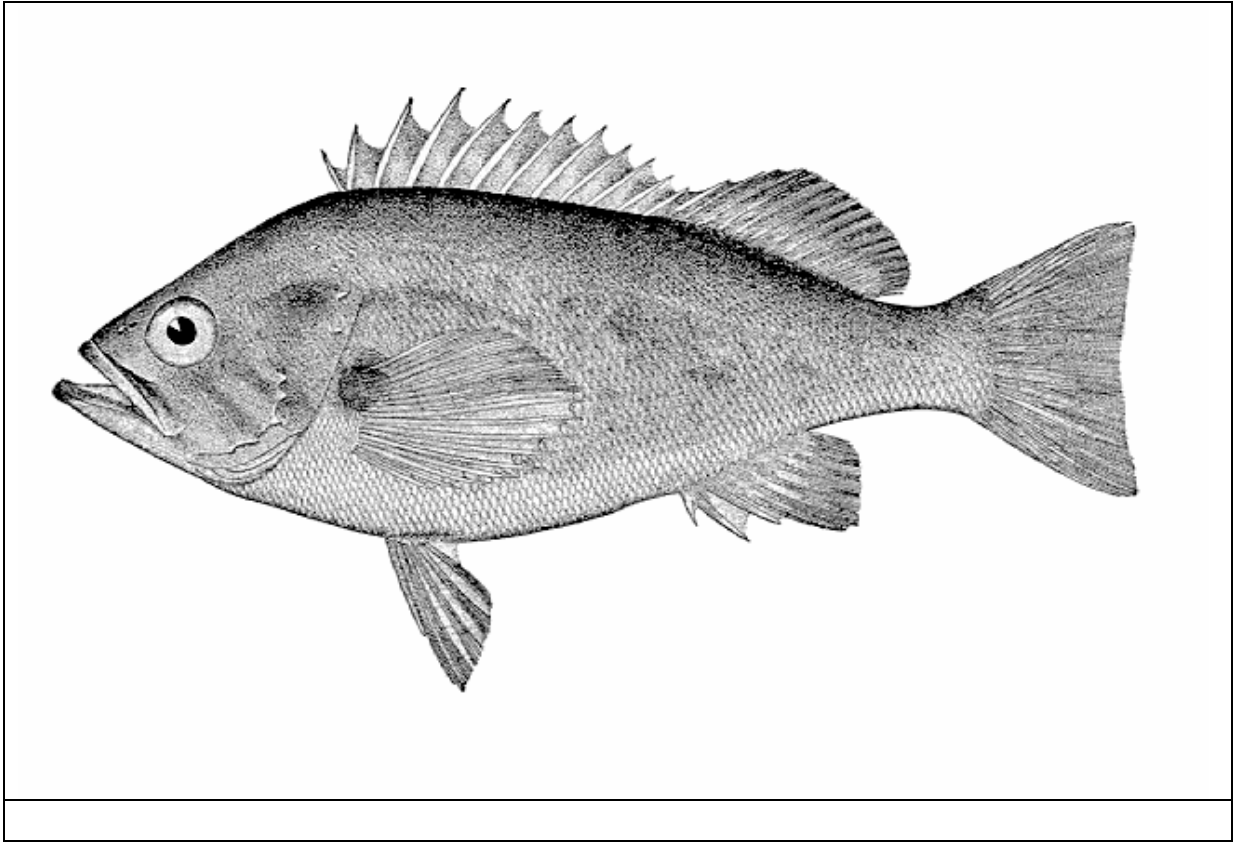
Biology: May be found near the surface or off the bottom, generally over shallow reefs, but also around kelp and over deep reefs (Ref. 2850). Juveniles are pelagic (Ref. 36715). Form schools, sometimes with other rockfishes (Ref. 2850). Feed mainly on krill (Ref. 2850), but also on tunicates, jellyfishes and fishes (Ref. 6885). Viviparous, with planktonic larvae (Ref. 36715). Young are important prey for fishes and other marine vertebrates (Ref. 2850)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Sebastes paucispinis
Bocaccio

Sebastes paucispinis Ayres, 1854

Family: Sebastidae (Rockfishes,
rockcods and thornyheads)
, subfamily: Sebastinae

Order: Scorpaeniformes
(scorpionfishes and
flatheads)

Class: Actinopterygii (ray-finned
fishes)

**FishBase
name:** Bocaccio

Max. size: 91.0 cm TL
(male/unsexed; Ref.
2850); max. published
weight: 9,630 g (Ref.
4690); max. reported age:
50 years

Environment: reef-associated; marine ; depth range 0 - 476 m

Climate: subtropical; 65°N - 31°N

Importance: fisheries: minor commercial; gamefish: yes; aquarium:
public aquariums

Resilience: Very low, minimum population doubling time more
than 14 years (Musick et al. 2000 (Ref. 36717))

Distribution: Eastern Pacific: Stepovak Bay, Alaskan Peninsula to
Punta Blanca, Baja California, Mexico.

Gazetteer

Diagnosis: Dorsal spines (total): 13-15; Dorsal soft rays (total):
13-16; Anal spines: 3-3; Anal soft rays: 8-10;



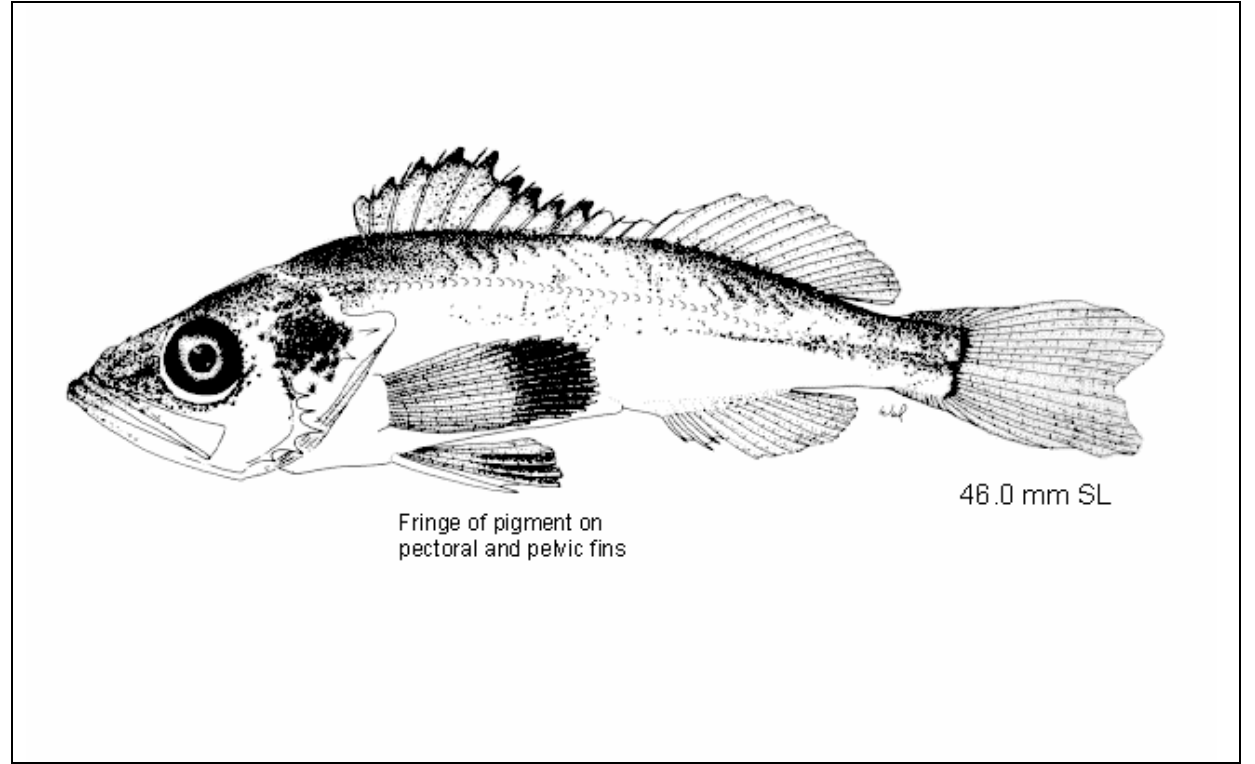
Biology: Adults found over rocky reefs, but also common on open bottoms to about 320 m (Ref. 2850). Juveniles are pelagic and settle in nearshore nursery areas, then move to deeper habitats (Ref. 36715). Young form schools (Ref. 2850). Feed mainly on fishes, including other rockfishes (Ref. 2850). Ovoviviparous, with planktonic larvae (Ref. 36715, 6885, 34817). A famous sport fish throughout its range (Ref. 2850). Flesh is of excellent quality when kept chilled (Ref. 27436). Sold with other rockfish species (Ref. 27436)

Red List Status: Critically Endangered, see IUCN Red List (A1abd+2d), Sobel, J. , (Ref. 36508)

Dangerous: venomous , Halstead, B.W., P.S. Auerbach and D.R. Campbell. 1990

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Sebastes rastrelliger
Grass rockfish

Sebastes rastrelliger (Jordan & Gilbert, 1880)

Family: Sebastidae (Rockfishes, rockcods and thornyheads) , subfamily: Sebastinae

Order: Scorpaeniformes (scorpionfishes and flatheads)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Grass rockfish

Max. size: 56.0 cm TL (male/unsexed; Ref. 2850); max. reported age: 23 years

Environment: demersal; marine ; depth range - 46 m

Climate: subtropical

Importance:

Resilience:

Distribution: Eastern Pacific: Yaquina Bay in Oregon, USA to Baja California, Mexico.

Gazetteer

Diagnosis: Dorsal spines (total): 13-13; Dorsal soft rays (total): 12-14; Anal spines: 3-3; Anal soft rays: 6-6; Vertebrae: 26-26. Branchiostegal rays: 7 (Ref. 36715).

Biology: Found commonly on rocky bottom in tidepools and near shore, also in kelp and eelgrass beds. Occur up to 46 m depth but usually at less than 15 m. Viviparous, with

by Love, M.



Red List Not in IUCN Red List , (Ref. 36508)

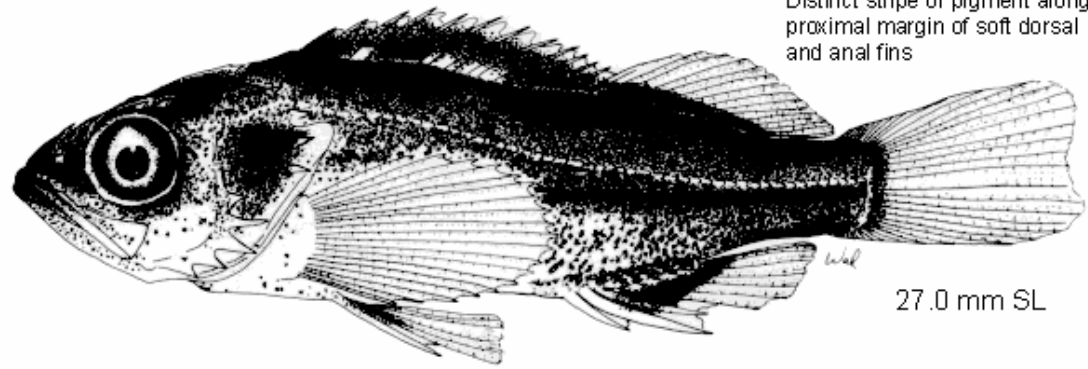
Status:

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)





Distinct stripe of pigment along proximal margin of soft dorsal and anal fins

27.0 mm SL

Hexagrammos decagrammus
Kelp greenling

Hexagrammos decagrammus (Pallas, 1810)

Family: Hexagrammidae (Greenlings) ,
subfamily: Hexagramminae

Order: Scorpaeniformes

Class: Actinopterygii (ray-finned fishes)

**FishBase
name:** Kelp greenling

Max. size: 61.0 cm TL (male/unsexed; Ref.
27436); max. published weight:
2,100 g (Ref. 27436); max.
reported age: 12 years

Environment demersal; marine ; depth range - 46 m
:

Climate: temperate; 66°N - 32°N

Importance: fisheries: minor commercial; gamefish: yes; aquarium: show
aquarium

Resilience: Low, minimum population doubling time 4.5 - 14 years
(tm=3-5; tmax=12)

Distribution: Northeastern Pacific: Amchitka I., in the Aleutian chain
(Ref. 27436) to La Jolla, southern California, USA.

Gazetteer

Diagnosis: Dorsal spines (total): 21-22; Dorsal soft rays (total): 24-24;
Anal spines: 1-1; Anal soft rays: 23-24. Caudal broadly
rounded or truncate.

Biology: Occurs in rocky inshore areas, common on kelp beds, also
on sand bottoms (Ref. 2850). Feeds on crustaceans,

by Gotshall, D.W.



Red List Not in IUCN Red List , (Ref. 36508)

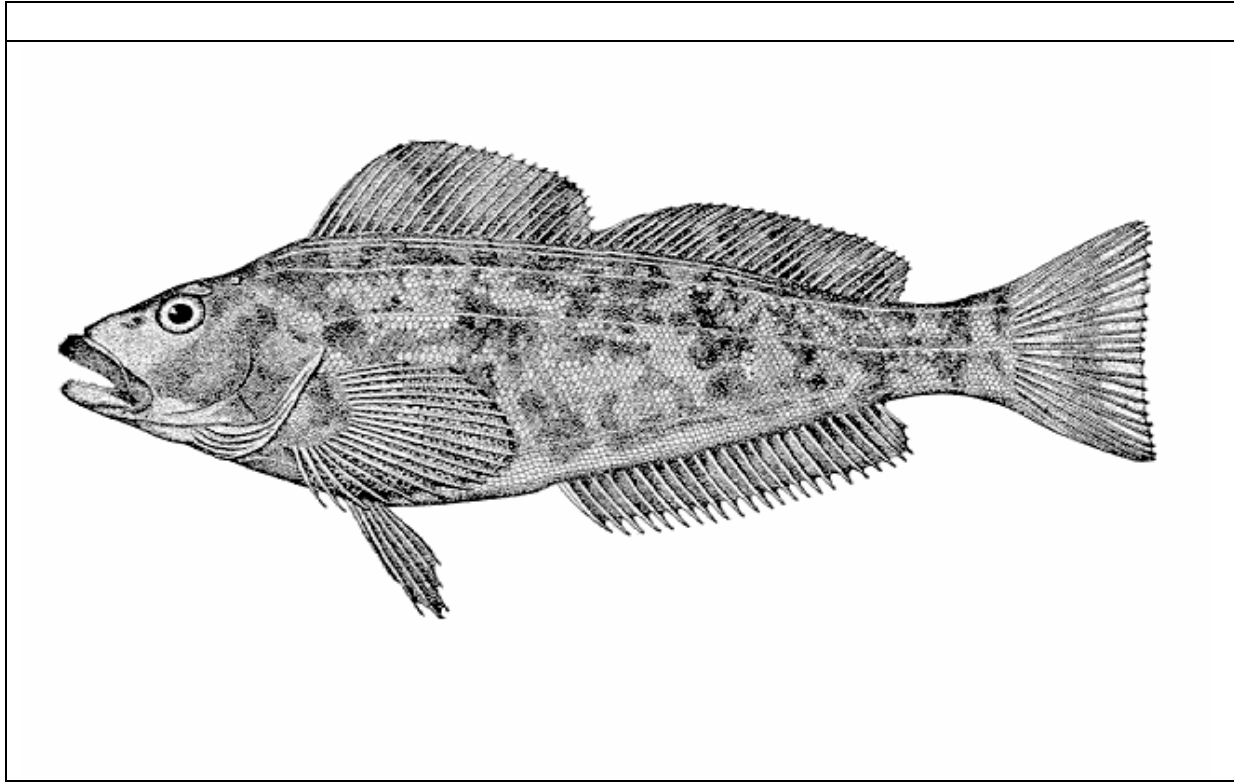
Status:

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref.
2850)

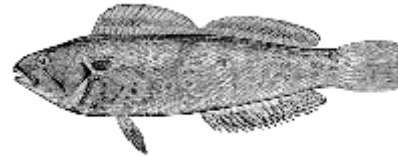




Hexagrammos lagocephalus
Rock greenling

Hexagrammos lagocephalus (Pallas, 1810)
Family: Hexagrammidae (Greenlings) ,
Order: Scorpaeniformes (scorpionfishes
and flatheads)
Class: Actinopterygii (ray-finned fishes)
**FishBase
name:** Rock greenling

by Bull. U.S. Bur. Fish.



Map

Max. size: 61.0 cm TL (male/unsexed; Ref.
2850); max. published weight:
830 g (Ref. 40637)

Environment demersal; marine

:

Climate: temperate; 66°N - 34°N

Importance: gamefish: yes; aquarium: public aquariums

Resilience:

Distribution: Northeastern Pacific: Bering Sea and the Kuril Is. to Point
Conception, central California, USA. Reported from the
Gazetteer northern Sea of Japan, Hokkaido, and the Okhotsk Sea (Ref.
559).

Diagnosis: Dorsal spines (total): 20-21; Dorsal soft rays (total): 23-24;
Anal spines: 0-0; Anal soft rays: 21-22

Biology: Commonly found in shallow rocky areas, especially on
exposed coasts (Ref. 2850). Often captured by shore fishers
(Ref. 2850)

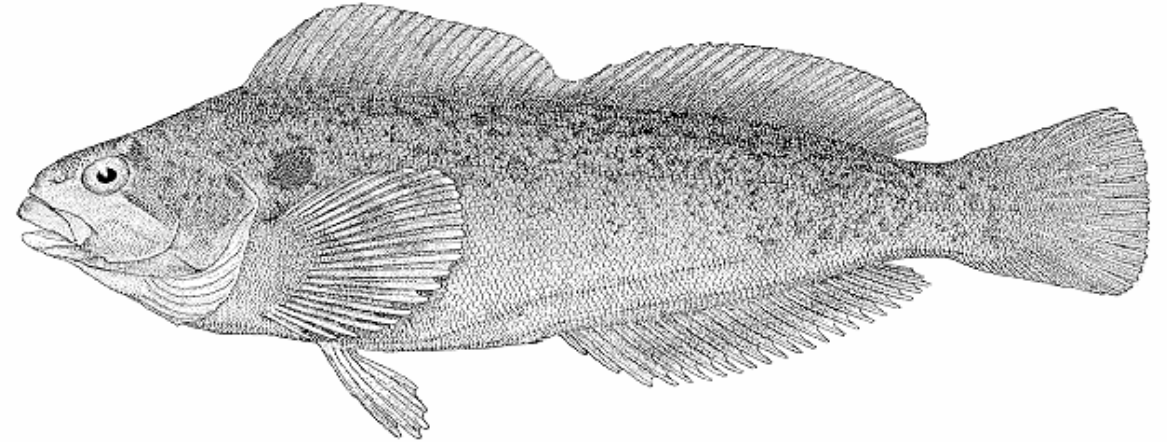
Red List Not in IUCN Red List , (Ref. 36508)

Status:

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref.
2850)



Ophiodon elongatus Lingcod	
Ophiodon elongatus Girard, 1854	
Family:	Hexagrammidae (Greenlings) , subfamily: Ophiodontinae
Order:	Scorpaeniformes (scorpionfishes and flatheads)
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	Lingcod
Max. size:	152 cm TL (male/unsexed; Ref. 2850); max. published weight: 59.1 kg (Ref. 40637)
Environment:	demersal; oceanodromous; marine ; depth range - 475 m
Climate:	subtropical; 60°N - 31°N
Importance:	fisheries: commercial; gamefish: yes
Resilience:	Low, minimum population doubling time 4.5 - 14 years (Musick et al. 2000 (Ref. 36717))
Distribution:	Northeastern Pacific: Shumagin Is., in the western Gulf of Alaska to Ensenada, Baja California, Mexico.
Gazetteer	Possibly occurring in the Bering Sea (Ref. 6793).
Diagnosis:	Dorsal spines (total): 24-27; Dorsal soft rays (total): 21-24; Anal spines: 3-3; Anal soft rays: 21-24; Vertebrae: 55-59. Anal spines of adults buried in flesh, third spine closely applied to first ray (Ref. 6885). Scaleless head; fleshy cirrus above each eye; large mouth; maxilla reaching almost to vertical from posterior margin of eye. Jaws with small pointed teeth interspersed with large fanglike teeth (Ref. 48751).
Biology:	Ranges from the intertidal to 475 m depth (Ref.

Red List Status:	Not in IUCN Red List , (Ref. 36508)
Dangerous:	traumatogenic , Parsons, C.. 1986
Coordinator:	
Main Ref:	Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)

Oxylebius pictus
Painted greenling

Oxylebius pictus Gill, 1862

Family: Hexagrammidae (Greenlings) , **by Love, M.**
subfamily: Oxylebiinae

Order: Scorpaeniformes

Class: Actinopterygii (ray-finned fishes)

FishBase name: Painted greenling

Max. size: 25.0 cm TL (male/unsexed; Ref. 4925)

Environment: demersal; marine ; depth range - 49 m

Climate: subtropical; 60°N -

Importance:

Resilience:

Distribution: Eastern Pacific: Kodiak I., Alaska to Point San Carlos, central Baja California, Mexico.

Gazetteer

Diagnosis: Dorsal spines (total): 16-16; Dorsal soft rays (total): 14-16; Anal spines: 3-4; Anal soft rays: 12-13; Vertebrae: 36-39. Dorsal rayed part higher than spinous part. Caudal gently rounded. Anal notched between spinous and rayed parts, well incised (Ref. 6885). Head with scales; one fleshy cirrus above each eye and a pair on the occiput; gill membranes joined, free of isthmus. Body with 7 dark vertical bands. Pelvic fin of moderate length, not reaching the anus (Ref. 48751).



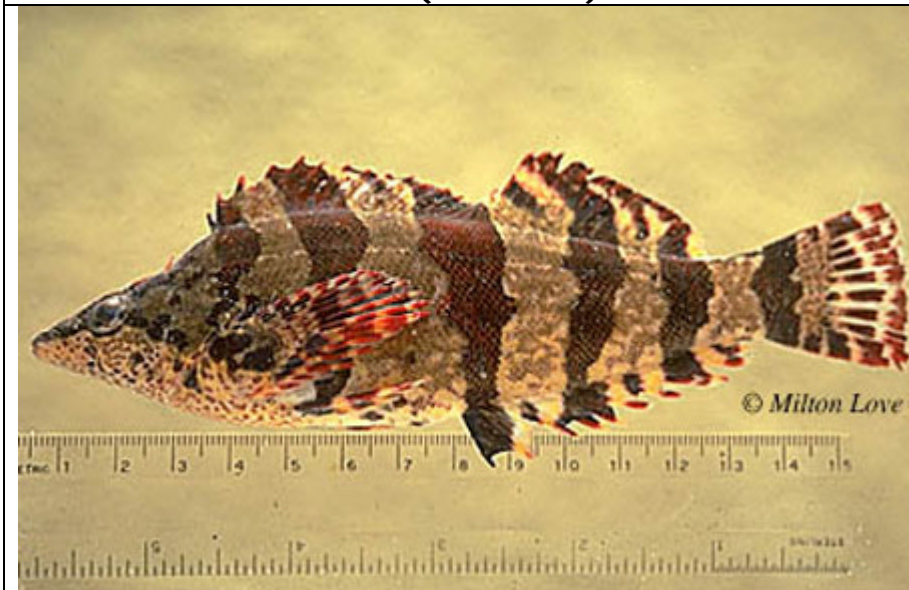
Biology: Found in rocky areas, from the intertidal to 49 m (Ref. 2850). Commonly encountered hovering motionless by divers (Ref. 2850). Feeds on crustaceans, polychaetes, small mollusks and bryozoans (Ref. 4930)

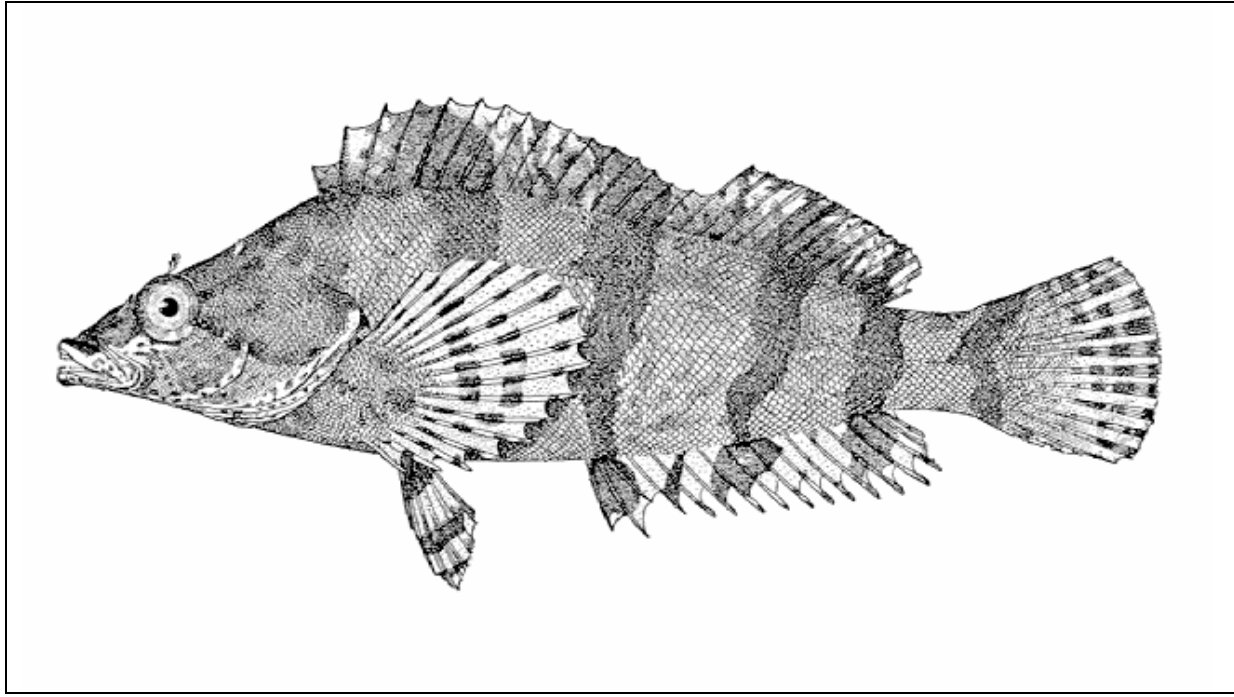
Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)





Artedius fenestralis
Padded sculpin

Artedius fenestralis Jordan & Gilbert, 1883

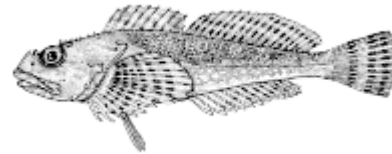
Family: Cottidae (Sculpins)

Order: Scorpaeniformes

Class: Actinopterygii (ray-finned fishes)

FishBase name: Padded sculpin

Max. size: 14.0 cm TL (male/unsexed; Ref. 2850)



by Canadian Museum of Nature, Ottawa, Canada

Environment: demersal; marine ; depth range 1 - 55 m

:

Climate: temperate; 55°N - 34°N

Importance: aquarium: show aquarium

Resilience:

Distribution: Northeastern Pacific: Unalaska I. and the Alaskan Peninsula to Diablo Cove (Ref. 2850) and San Luis Obispo

Gazetteer: Cove, southern California, USA.

Diagnosis: Dorsal spines (total): 8-9; Dorsal soft rays (total): 16-18; Anal spines: 0-0; Anal soft rays: 12-14. Pelvics small.

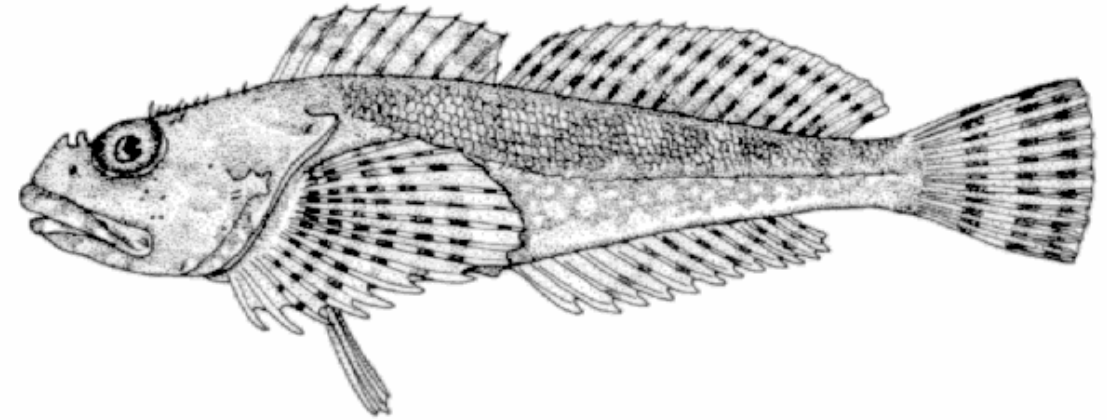
Biology: Occurs from intertidal areas to 55 m depth (Ref. 2850). Feeds on shrimps and small fishes (Ref. 4925)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Artedius harringtoni
Scalyhead sculpin

Artedius harringtoni (Starks, 1896)

Family: Cottidae (Sculpins)

Order: Scorpaeniformes
(scorpionfishes and flatheads)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Scalyhead sculpin

Max. size: 10.0 cm TL (male/unsexed; Ref. 2850)

Environment: demersal; marine ; depth range 1 - 21 m

Climate: temperate; 58°N - 32°N

Importance: aquarium: public aquariums

Resilience:

Distribution: Northeastern Pacific: Kodiak I., Alaska to San Miguel I., southern California, USA.

Gazetteer

Diagnosis: Dorsal spines (total): 9-10; Dorsal soft rays (total): 16-18; Anal spines: 0-0; Anal soft rays: 10-14. Pelvics small.

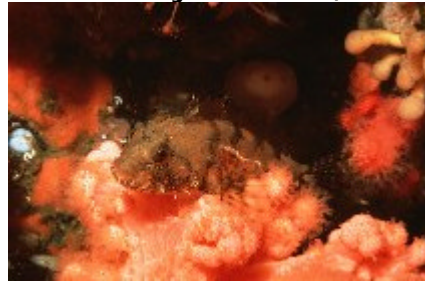
Biology: Found in intertidal and subtidal rocky areas, around pilings (Ref. 2850). Territorial (Ref. 6885)

Red List Status: Not in IUCN Red List , (Ref. 36508)

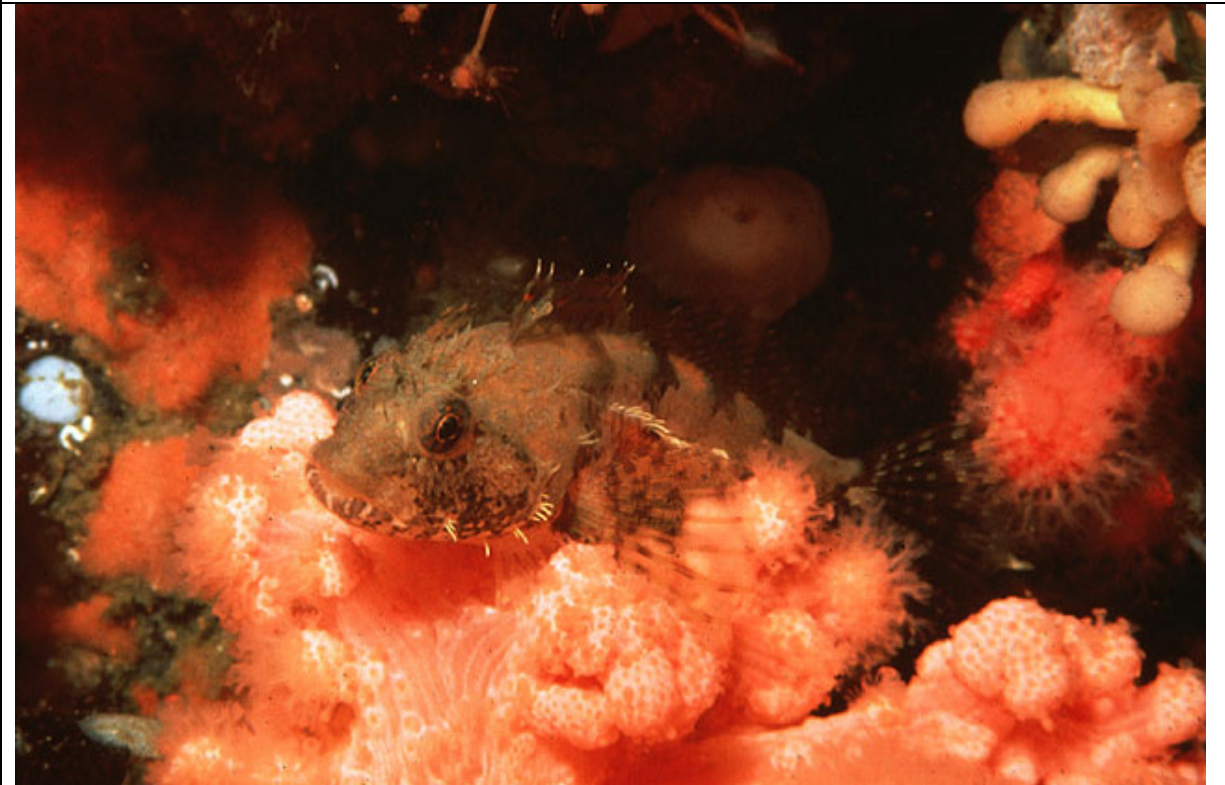
Dangerous: harmless

Coordinator:


by Gotshall, D.W.



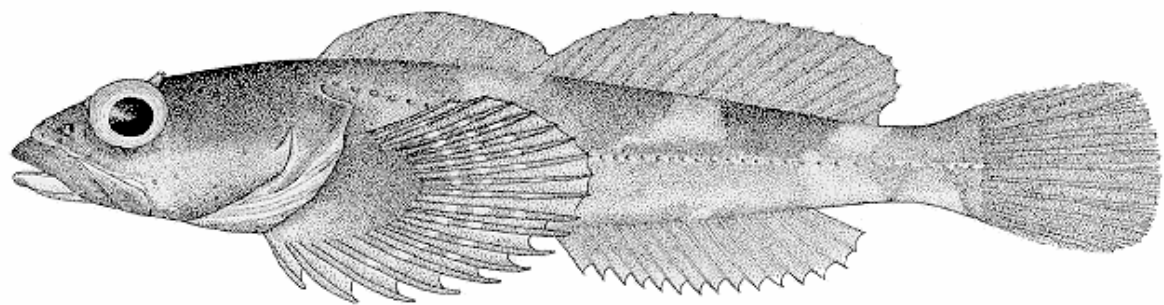
Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Artedius notospilotus Bonehead sculpin	
Artedius notospilotus Girard, 1856 Family: Cottidae (Sculpins) Order: Scorpaeniformes (scorpionfishes and flatheads) Class: Actinopterygii (ray-finned fishes) FishBase name: Bonehead sculpin Max. size: 25.0 cm TL (male/unsexed; Ref. 2850) Environment: demersal; marine Climate: subtropical; 47°N - Importance: Resilience: Distribution: Pacific: from Puget Sound in Washington, USA to northern Baja California, Mexico. Gazetteer Biology: Occurs from intertidal areas to 52 m depth. Uncommon species Red List Status: Not in IUCN Red List , (Ref. 36508) Dangerous: harmless Coordinator: Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)	
Ascelichthys rhodorus Rosylip sculpin	
Ascelichthys rhodorus Jordan & Gilbert, 1880	

Family:	Cottidae (Sculpins)	by Hopkins Seaside Laboratory
Order:	Scorpaeniformes (scorpionfishes and flatheads)	
Class:	Actinopterygii (ray-finned fishes)	
FishBase name:	Rosylip sculpin	
Max. size:	15.0 cm TL (male/unsexed; Ref. 2850)	
Environment:	demersal; marine	
Climate:	temperate; 59°N - 34°N	
Importance:		
Resilience:		
Distribution:	Northeastern Pacific: Sitka, Alaska to San Mateo, central California, USA.	
Gazetteer Diagnosis:	Dorsal spines (total): 7-10; Dorsal soft rays (total): 17-20; Anal spines: 0-0; Anal soft rays: 13-16. Caudal well rounded.	
Biology:	Intertidal (Ref. 31184) and inhabits tidepools and rocky inshore areas on exposed coasts (Ref. 2850). May remain out of water under rocks or seaweeds (Ref. 31184). Breathes air when out of water (Ref. 31184)	
Red List Status:	Not in IUCN Red List , (Ref. 36508)	
Dangerous:	harmless	
Coordinator:		

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Blepsias cirrhosus
Silverspotted sculpin

Blepsias cirrhosus (Pallas, 1811)

Family: Hemitripterae ()

Order: Scorpaeniformes

Class: Actinopterygii (ray-finned fishes)

FishBase name: Silverspotted sculpin

Max. size: 20.0 cm SL (male/unsexed; Ref. 559)

Environment: demersal; marine ; depth range - 37 m

Climate: temperate; 66°N - 34°N

Importance: gamefish: yes

Resilience:

Distribution: North Pacific: Sea of Japan to the Bering Sea and to San Simeon, central California, USA.

Gazetteer

Diagnosis: Dorsal spines (total): 6-9; Dorsal soft rays (total): 20-25; Anal spines: 0-0; Anal soft rays: 18-21. Caudal rounded. Pelvics small.

Biology: Occurs in intertidal areas and to 37 m depth, but more common subtidally (Ref. 2850). Often found among algae (Ref. 2850). Adults inject eggs into the tissue near the gastral cavity of a sponge to use as a spawning bed (Ref. 34818)

Red List Status: Not in IUCN Red List , (Ref. 36508)

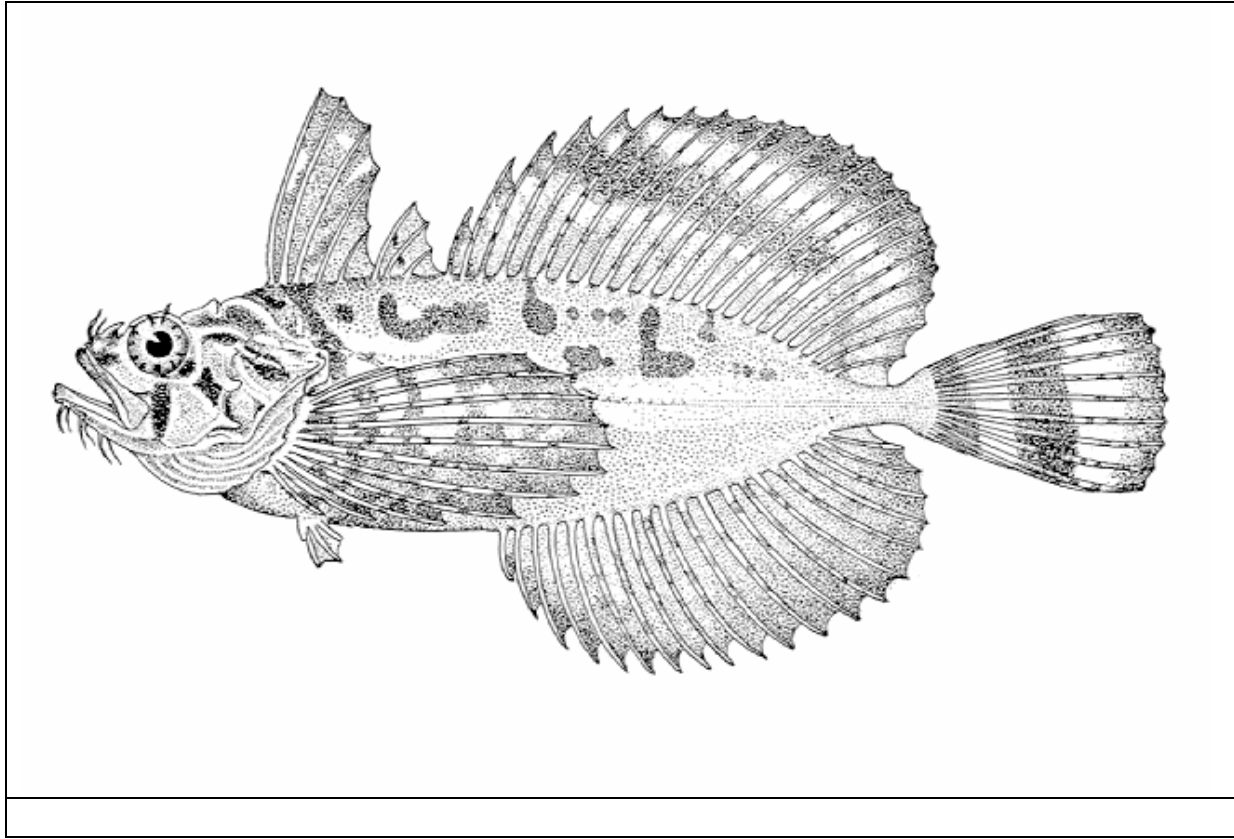
Dangerous: harmless



Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)





Clinocottus acuticeps
Sharpnose sculpin

Clinocottus acuticeps (Gilbert, 1896)

Family: Cottidae (Sculpins)
Order: Scorpaeniformes
Class: Actinopterygii (ray-finned fishes)
FishBase name: Sharpnose sculpin
Max. size: 6.4 cm TL (male/unsexed; Ref. 2850)
Environment: demersal; freshwater; brackish; marine

Climate: temperate; 66°N - 34°N
Importance: fisheries: of no interest

Resilience:

Distribution: Northeastern Pacific: Bering Sea coast of Alaska to Big Sur River, central California, USA.

Gazetteer

Diagnosis: Dorsal spines (total): 7-9; Dorsal soft rays (total): 14-16; Anal spines: 0-0; Anal soft rays: 10-13; Vertebrae: 32-33. Distinguished by the flattened tripartite anal papilla and the cirri on the eyeballs, head, lateral line and at the tip of each dorsal spine (Ref. 27547). Gill rakers reduced to low smooth mounds; lateral line high toward the head, curving downward to middle of sides, straight toward the tail, each of the anterior 15 or so pores having a slender cirrus (Ref. 27547). Next to the last anal ray longer than the rays before and behind it; pectorals reach to or just beyond front of anal fin; caudal

Biology: Commonly found in rocky intertidal and subtidal areas, but also over sand and in eelgrass and seaweeds (Ref. 2850). May leave tidepools if aquatic conditions become inhospitable (Ref. 31184). Occasionally enters fresh water (Ref. 27547). Probably feeds on small invertebrates common among seaweed and in tidepools. Breathes air when out of water (Ref. 31184)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless
Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)

Cottus aleuticus
Coastrange sculpin

Cottus aleuticus Gilbert, 1896

Family: Cottidae (Sculpins)

Order: Scorpaeniformes
(scorpionfishes and flatheads)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Coastrange sculpin

Max. size: 17.0 cm TL
(male/unsexed; Ref. 5723); max. reported age: 8 years

Environment: demersal; catadromous; freshwater; brackish; marine

Climate: temperate; 68°N - 35°N

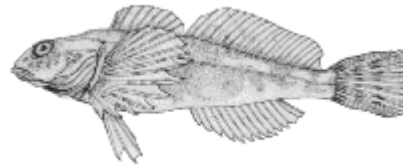
Importance: fisheries: of no interest

Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (tm=3; tmax=8; Fec=100)

Distribution: North America: Bristol Bay and Aleutian Is., Alaska to northern California, USA. Isolated populations in lower Kobuk River (Alaska), Cultus Lake (British Columbia, Canada), and Lake Washington (USA) (Ref. 27547).

Diagnosis: Dorsal spines (total): 8-10; Dorsal soft rays (total): 17-20; Anal spines: 0-0; Anal soft rays: 12-15; Vertebrae: 34-38. Distinguished by having only a single pore on the tip of the chin, no palatine teeth

by Canadian Museum of Nature, Ottawa, Canada



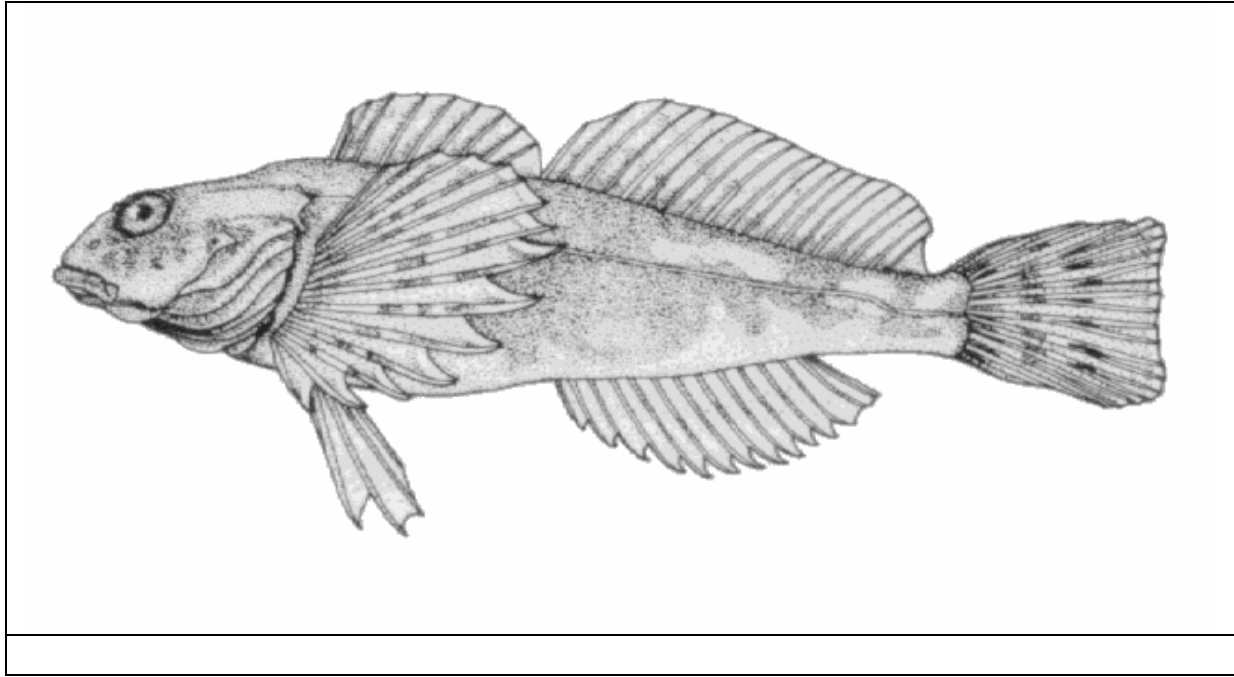
Biology: Inhabits gravel and rubble riffles of medium to large rivers and rocky shores of lakes (Ref. 5723). Occasionally enters estuaries (Ref. 5723). Feeds mostly at night and mostly on aquatic insects and benthic invertebrates (Ref. 27547). Generally solitary but large aggregations have been noted (Ref. 27547). Makes regular seasonal migrations associated with spawning (Ref. 27547). Considered a forage fish for some salmonids (Ref. 1998)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Page, L.M. and B.M. Burr. 1991. (Ref. 5723)



Cottus asper
Prickly sculpin

Cottus asper Richardson, 1836
Family: Cottidae (Sculpins)
Order: Scorpaeniformes
(scorpionfishes and flatheads)
Class: Actinopterygii (ray-finned fishes)
FishBase name: Prickly sculpin
Max. size: 30.0 cm TL (male/unsexed; Ref. 5723); max. reported age: 7 years

Environment: demersal; freshwater; brackish; marine

Climate: temperate; 60°N - 32°N

Importance: aquarium: public aquariums; bait: occasionally

Resilience:

Distribution: North America: Pacific slope drainages from Seward, Alaska to Ventura River, California, USA; also east of Continental Divide in upper Peace River in British Columbia, Canada. Exhibits coastal and inland forms that are genetically distinct (Ref. 27547).
Gazetteer

Diagnosis: Dorsal spines (total): 7-10; Dorsal soft rays (total): 18-23; Anal spines: 0-0; Anal soft rays: 15-19; Vertebrae: 34-39. Distinguished by a complete lateral line, a single pore at the tip of the chin, the presence of 15 to 19 anal rays, and well developed

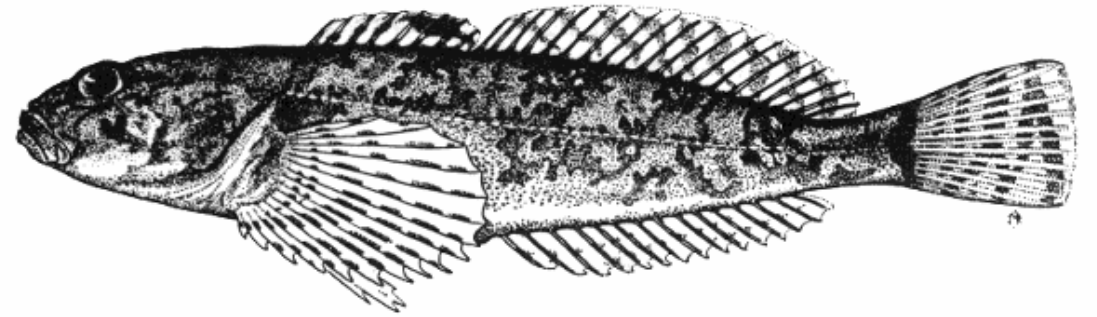
by The Native Fish
Conservancy



Biology: There appears to be two genetically distinct forms (Ref. 27547), an inland form found in sandy and rocky shores of lakes, and a coastal form usually found over sand in quiet runs of small to medium rivers; sometimes in salt water near river mouths (Ref. 2850). The coastal form moves into brackish estuaries to spawn (Ref. 27547). Oviparous with demersal, adhesive eggs and pelagic larvae (Ref. 265). Feed mainly on aquatic insect larvae and bottom invertebrates (Ref. 1998). Too small to be used as food and too difficult to capture in large numbers to be used for anything else (Ref. 27547) but large individuals are reported to be excellent eating as well as good bait fishes (Ref. 2850)
Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless
Coordinator:

Main Ref: Page, L.M. and B.M. Burr. 1991. (Ref. 5723)



Enophrys bison
Buffalo sculpin

Enophrys bison (Girard, 1854)
Family: Cottidae (Sculpins)
Order: Scorpaeniformes
Class: Actinopterygii (ray-finned fishes)
FishBase name: Buffalo sculpin
Max. size: 37.0 cm TL
(male/unsexed; Ref. 2850)

by Gotshall, D.W.



Environment: demersal; marine ; depth range - 20 m

Climate: temperate; 60°N - 34°N

Importance: gamefish: yes; aquarium: show aquarium

Resilience:

Distribution: Northeastern Pacific: Kodiak I., Alaska to Monterey Bay, California, USA.

Gazetteer

Diagnosis: Dorsal spines (total): 7-9; Dorsal soft rays (total): 10-13; Anal spines: 0-0; Anal soft rays: 8-9. Caudal broadly rounded. Pelvics small.

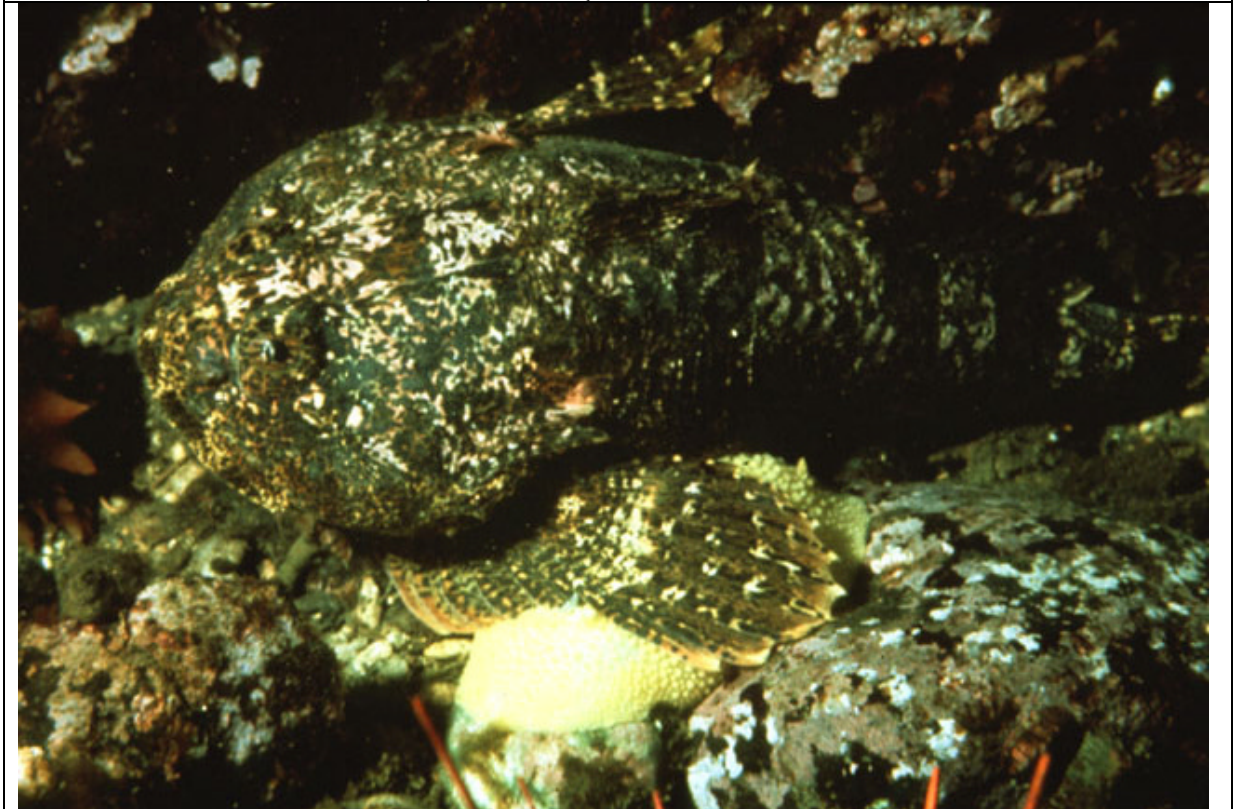
Biology: Commonly found in inshore rocky and sandy areas (Ref. 2850). Feeds mainly on algae (Ref. 2850) but also shrimps, crabs, amphipods, mussels, and small fishes (Ref. 4925)

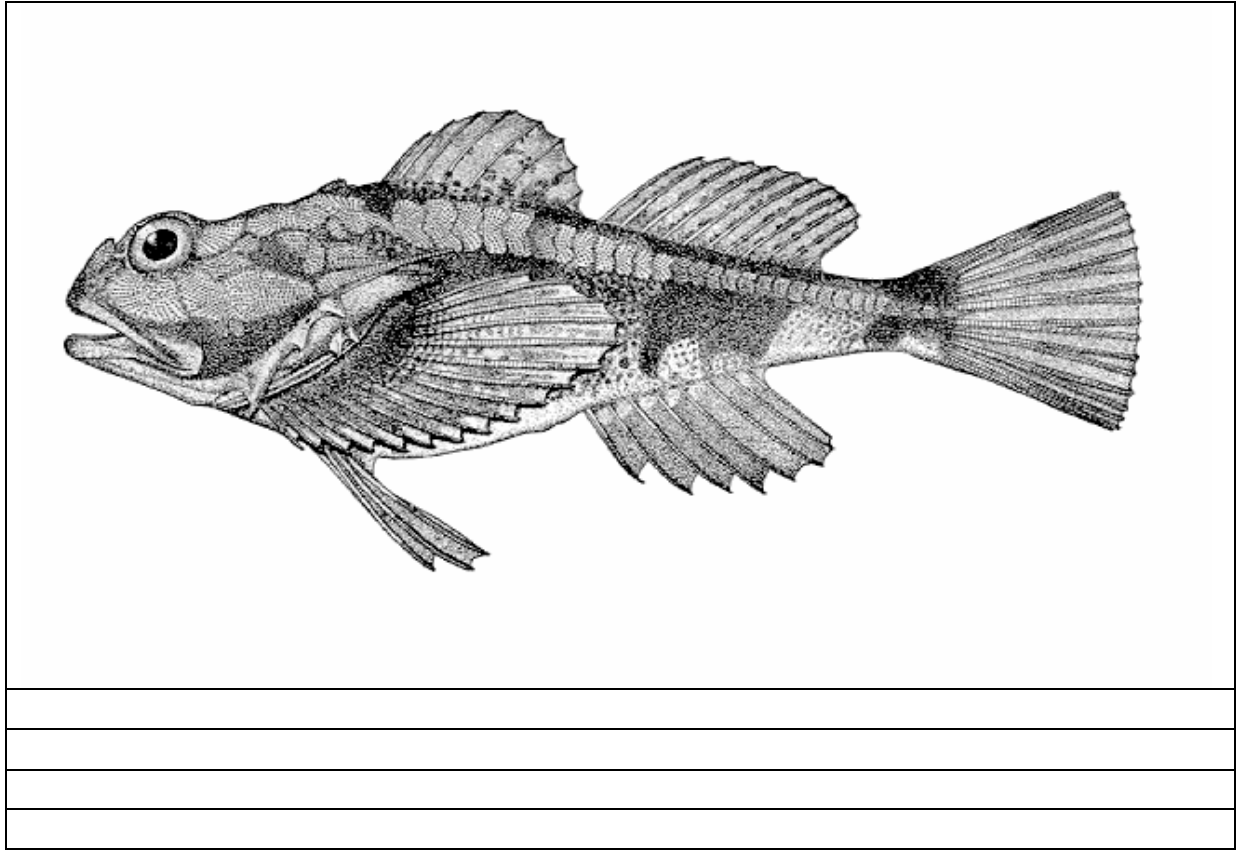
Red List Status: Not in IUCN Red List , (Ref. 36508)


Dangerous: harmless


Coordinator:

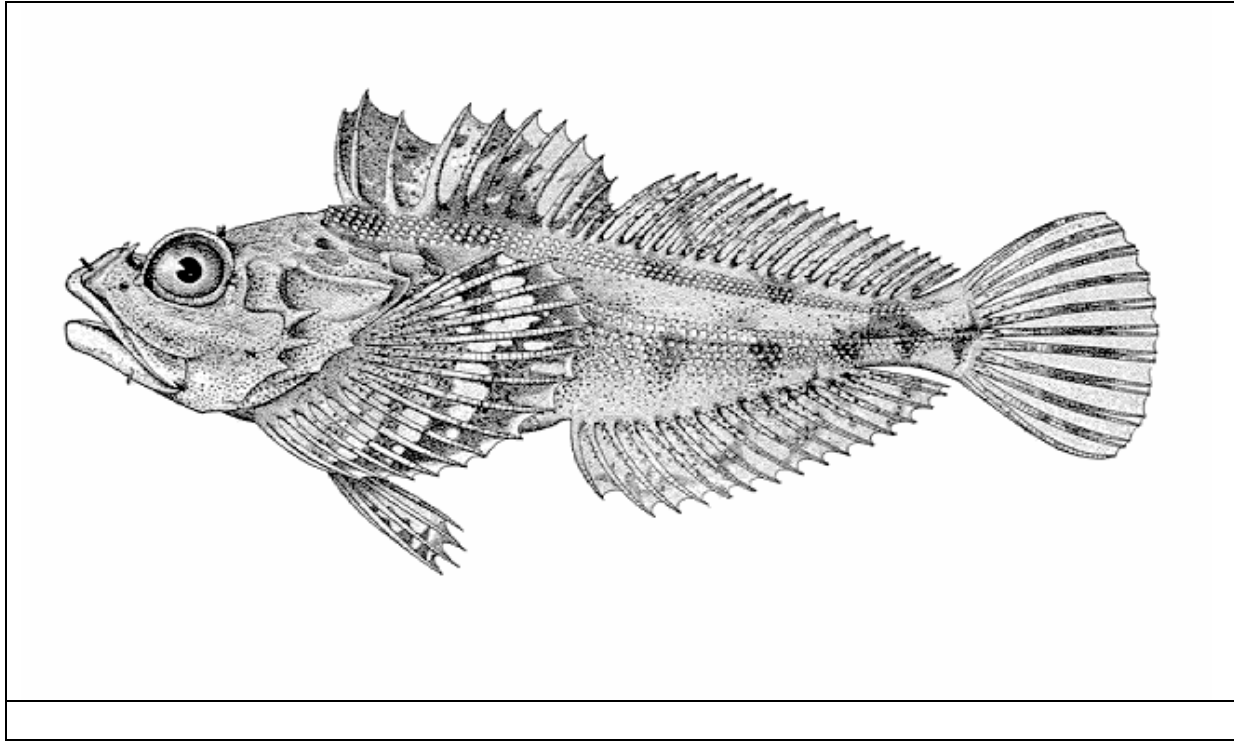
Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)





Hemilepidotus hemilepidotus Red Irish lord	
<p>Hemilepidotus hemilepidotus (Tilesius, 1811) Family: Cottidae (Sculpins) Order: Scorpaeniformes Class: Actinopterygii (ray-finned fishes) FishBase name: Red Irish lord Max. size: 51.0 cm TL (male/unsexed; Ref. 2850); max. published weight: 1,110 g (Ref. 40637)</p>	<p>by Gotshall, D.W.</p> 
<p>Environment: demersal; marine ; depth range 0 - 275 m Climate: temperate; 66°N - 34°N Importance: fisheries: commercial; gamefish: yes; aquarium: show aquarium Resilience: Distribution: North Pacific: Kamchatka, Russia and along the Commander and Aleutian Is. to St. Paul Is. in the Bering Sea and to Gazetteer: Monterey Bay, California, USA. Diagnosis: Dorsal spines (total): 10-12; Dorsal soft rays (total): 18-20; Anal spines: 0-0; Anal soft rays: 13-16; Vertebrae: 35-35. Dorsal with moderate notches in the spinous part after the third spine, and between the spinous and rayed parts; caudal bluntly rounded; pelvics larger in males (Ref. 6885). Color variable, predominately red, sometimes brilliant red, with brown, white, and black mottling and spotting all over; there are four irregular dark saddles across back; the caudal</p>	

<p>Biology: Usually near shore in rocky areas (Ref. 2850), from intertidal areas to 275 m depth (Ref. 6793). Adults feed on crabs, barnacles, and mussels (Ref. 6885). Good eating (Ref. 2850) Red List Status: Not in IUCN Red List , (Ref. 36508) Dangerous: harmless Coordinator: Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)</p>	
	



Hemilepidotus spinosus Brown Irish lord	
Hemilepidotus spinosus	Ayres, 1854
Family:	Cottidae (Sculpins)
Order:	Scorpaeniformes
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	Brown Irish lord
Max. size:	29.0 cm TL (male/unsexed; Ref. 2850)
Environment:	demersal; marine ; depth range - 97 m
Climate:	temperate; 59°N - 32°N
Importance:	
Resilience:	
Distribution:	Northeastern Pacific: Puffin Bay, southeastern Alaska to Santa Barbara I., southern California, USA.
Gazetteer:	
Diagnosis:	Dorsal spines (total): 11-11; Dorsal soft rays (total): 18-20; Anal spines: 0-0; Anal soft rays: 14-16; Vertebrae: 35-35. Dorsal deeply notched between third and and fourth spine, and between spinous and rayed portions; caudal rounded (Ref. 6885). Color brown, often tinged with red on dorsal surface, mottled and barred with 4 dark saddles over dorsal surface (Ref. 6885).
Biology:	Occurs in intertidal areas and to 97 m depth (Ref. 2850). Usually found in subtidal areas of exposed coasts (Ref. 2850). Feeds on crustaceans (Ref. 6885)
Red List	Not in IUCN Red List , (Ref. 36508)

Dangerous:	harmless
Coordinator:	
Main Ref:	Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)

Leptocottus armatus
Pacific staghorn sculpin

Leptocottus armatus Girard, 1854

Family: Cottidae (Sculpins)

Order: Scorpaeniformes

Class: Actinopterygii (ray-finned fishes)

FishBase name: Pacific staghorn sculpin

Max. size: 46.0 cm TL (male/unsexed; Ref. 2850); max. reported age: 10 years

Environment: demersal; amphidromous; brackish; marine ; depth range 0 - 156 m

Climate: temperate; 60°N - 33°N

Importance: aquarium: show aquarium

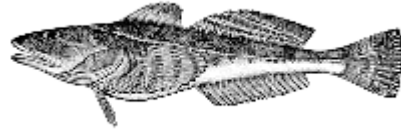
Resilience:

Distribution: Eastern Pacific: Izembek Lagoon, on the southeastern Bering Sea coast of Alaska to Bahia San Quintin, northern Baja California, Mexico.

Gazetteer

Diagnosis: Dorsal spines (total): 6-8; Dorsal soft rays (total): 15-20; Anal spines: 0-0; Anal soft rays: 15-20; Vertebrae: 37-39. Distinguished by the large upper preopercular spine ending in 3 or 4 sharp, upturned, curved spinules and by the large, dark spot on the posterior part of the spiny dorsal fin (Ref. 27547). Gill rakers reduced to flat, bony plates, each bearing a cluster of small teeth; lateral line nearly straight; each pore associated with a small subdermal cartilaginous plate (Ref. 27547). Caudal rounded (Ref. 6885). Grayish olive to rather

by Bull. U.S. Bur. Fish.



Biology:

Commonly found near shore, especially in bays and estuaries; most frequently on sandy bottom (Ref. 2850). Intertidal individuals breath air when out of water (Ref. 31184). Can leave tidepools if aquatic conditions become inhospitable (Ref. 31184). Although some individuals may spend their entire life in highly saline waters (Ref. 28693), some newly metamorphosed young move from the estuarine spawning sites to completely fresh water and may remain there for up to 6 weeks (Ref. 27547). Adults apparently tend to remain in the shallow lower estuary, or farther offshore (Ref. 27547). Feeds mostly on crabs, shrimps and amphipods, but also takes larval, juvenile and adult fishes, as well as polychaete worms, mollusks and other invertebrates (Ref. 4930). Expands its gill covers and produces a low-pitched humming sound when stressed (Ref. 6885). Considered a nuisance by anglers (Ref. 27547)

Red List

Status:

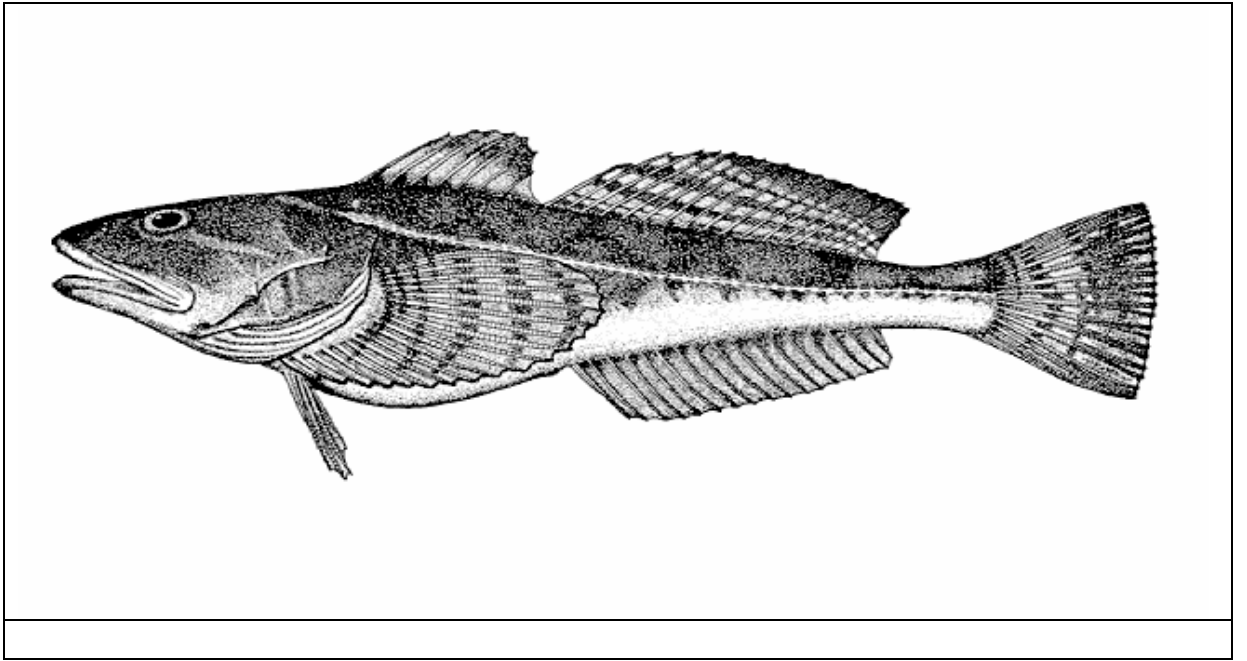
Dangerous: harmless

Coordinator:

Not in IUCN Red List , (Ref. 36508)

Main Ref:

Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Nautichthys oculofasciatus
Sailfin sculpin

Nautichthys oculofasciatus (Girard, 1858)

Family: Hemitripterae ()

Order: Scorpaeniformes

Class: Actinopterygii (ray-finned fishes)

FishBase name: Sailfin sculpin

Max. size: 20.0 cm TL (male/unsexed; Ref. 2850)

by Gotshall, D.W.



Environment: demersal; marine ; depth range - 110 m

:

Climate: temperate; 66°N - 34°N

Importance: aquarium: show aquarium

Resilience:

Distribution: Northeastern Pacific: St. Lawrence I., Alaska to San Miguel I., southern California, USA. Possibly occurring in Japan (Ref. 2850).

Gazetteer

Diagnosis: Dorsal spines (total): 8-9; Dorsal soft rays (total): 27-30; Anal spines: 0-0; Anal soft rays: 18-20. Caudal rounded, directed upward (Ref. 6885). Color variable, gray above with dark markings and obscure dusky bands, paler below; spinous dorsal darker; other fins except pelvics diagonally streaked darker; sometimes red flecks on rayed dorsal and on eyes; a very distinct black band running diagonally down and back through eye (Ref. 6885). A recognizable variant

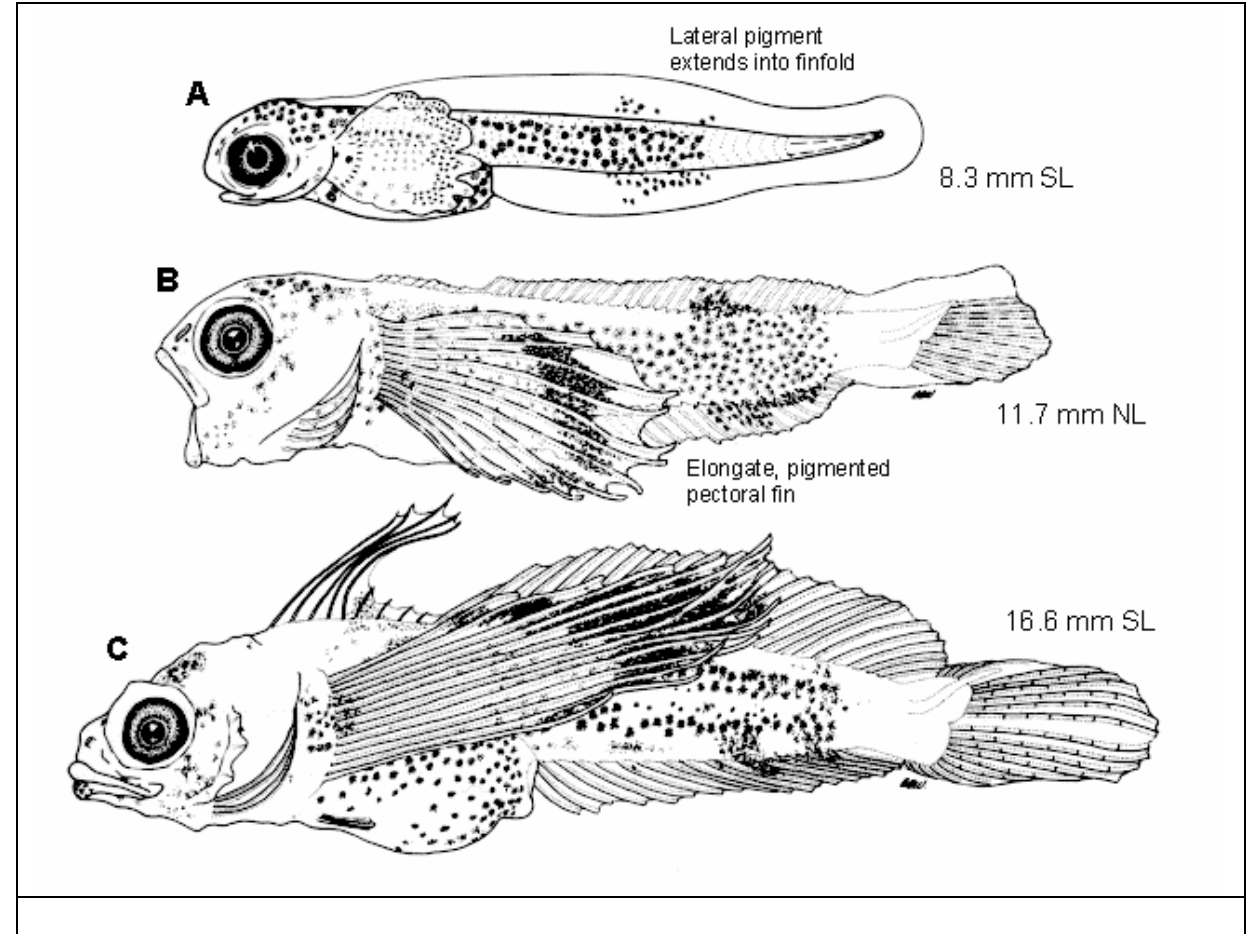
Biology: Occurs inshore and to 110 m depth, mostly on rocky bottoms and areas with algae (Ref. 2850). Nocturnal (Ref. 6885). May be found upsidedown against roofs of crevices (Ref. 6885). Swims with its dorsal fin extended in front of its head (Ref. 6885). Eggs deposited in late winter or spring (Ref. 6885)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

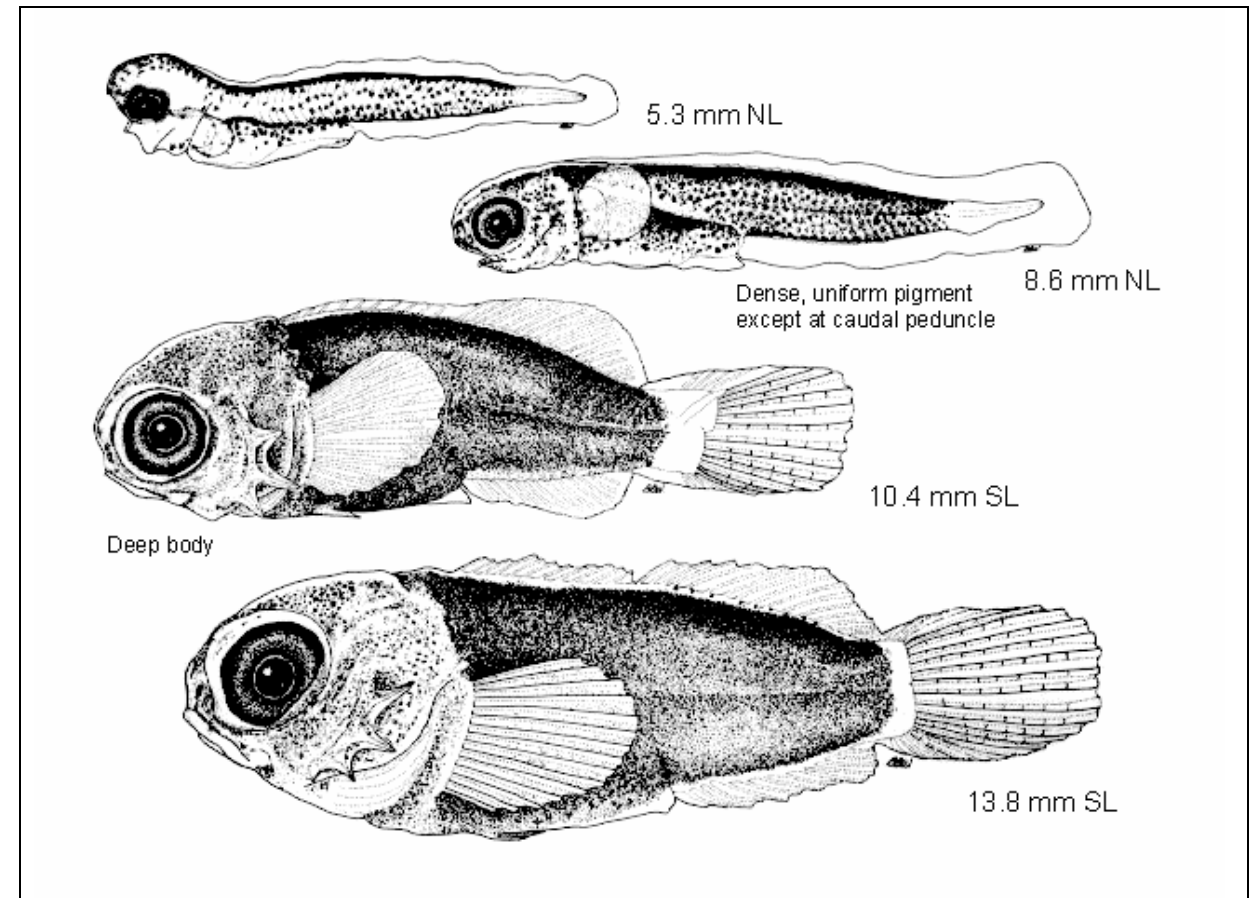
Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Oligocottus snyderi Fluffy sculpin	
Oligocottus snyderi Greeley, 1898	
Family:	Cottidae (Sculpins)
Order:	Scorpaeniformes (scorpionfishes and flatheads)
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	Fluffy sculpin
Max. size:	8.9 cm TL (male/unsexed; Ref. 2850)
Environment:	demersal; non-migratory; marine ; depth range - 0 m
Climate:	subtropical; 59°N -
Importance:	
Resilience:	
Distribution:	Northeastern Pacific: Sitka, southeastern Alaska to Rio Socorro, northern Baja California, Mexico.
Gazetteer	
Diagnosis:	Dorsal spines (total): 7-9; Dorsal soft rays (total): 17-20; Anal spines: 0-0; Anal soft rays: 12-15. Caudal rounded.
Biology:	A resident intertidal species with homing behavior (Ref. 32612) found in shallow rocky areas (Ref. 2850). Commonly found in tidepools, often in algae (Ref. 2850). Can leave tidepools when aquatic conditions become inhospitable (Ref. 31184). Breathes air when out of water (Ref. 31184)
Red List Status:	Not in IUCN Red List , (Ref. 36508)
Dangerous:	harmless
Coordinator:	

Main Ref:	Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)
Scorpaenichthys marmoratus Cabezon	
Scorpaenichthys marmoratus Girard, 1854	
Family:	Cottidae (Sculpins)
Order:	Scorpaeniformes (scorpionfishes and flatheads)
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	Cabezon
Max. size:	99.0 cm TL (male/unsexed; Ref. 2850); max. published weight: 14.0 kg (Ref. 27436)
Environment:	demersal; marine ; depth range 0 - 200 m
Climate:	subtropical; 59°N -
Importance:	fisheries: commercial; gamefish: yes; aquarium: public aquariums
Resilience:	
Distribution:	Northeastern Pacific: Sitka, southeastern Alaska to Punta Abrejos, central Baja California, Mexico.
Gazetteer	
Diagnosis:	Dorsal spines (total): 8-12; Dorsal soft rays (total): 15-18; Anal spines: 0-0; Anal soft rays: 11-13; Vertebrae: 35. Caudal barely rounded.
Biology:	Inhabits rocky, sandy and muddy bottoms as well as kelp beds (Ref. 4925). Adults and juveniles feed on crustaceans, fishes and mollusks (Ref. 6885). Commonly captured by sport fishers (from shore,

Red List Status: Not in IUCN Red List , (Ref. 36508)
Dangerous: other , Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983
Coordinator:
Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Odontopyxis trispinosa
Pygmy poacher

Odontopyxis trispinosa Lockington, 1880
Family: Agonidae (Poachers)
Order: Scorpaeniformes
(scorpionfishes and flatheads)
Class: Actinopterygii (ray-finned fishes)
FishBase name: Pygmy poacher
Max. size: 9.5 cm TL (male/unsexed; Ref. 2850)

by Gotshall, D.W.



Environment: demersal; marine ; depth range 9 - 373 m

Climate: subtropical
Importance: aquarium: public aquariums

Resilience:
Distribution: Eastern Pacific: southeastern Alaska to Isla Cedros, central Baja California, Mexico.

Gazetteer
Diagnosis: Dorsal spines (total): 3-6; Dorsal soft rays (total): 5-7; Anal spines: 0-0; Anal soft rays: 5-7. Caudal fin small and rounded; anal fin slightly in advance of second dorsal; pectorals broad, lower 5 to 7 rays free of membrane at end; pelvics reduced (Ref. 6885). Gray to olive green on the dorsal surface, lighter ventrally; 6 or more dark saddlelike markings on back and sides; dusky cross bars on dorsal, caudal and pectoral fins; anal and pelvic fins pale (Ref.

Biology: Found on soft bottoms (Ref. 2850)
Red List Not in IUCN Red List , (Ref. 36508)
Status:
Dangerous: harmless
Coordinator:
Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Pallasina barbata
Tube-nose poacher

Pallasina barbata (Steindachner, 1876)

Family: Agonidae (Poachers)

by Bull. U.S. Bur. Fish.

Order: Scorpaeniformes
(scorpionfishes and flatheads)



Class: Actinopterygii (ray-finned fishes)

FishBase name: Tube-nose poacher

Max. size: 14.0 cm TL (male/unsexed; Ref. 2850)

Environment: demersal; marine ; depth range 0 - 55 m

Climate: temperate

Importance:

Resilience:

Distribution: North Pacific: Sea of Japan to the Bering Sea and to Bodega Bay, central California, USA. Past works (eg. Hart 1973, Ref. 6885) recognized two subspecies, *Pallasina barbata barbata* occurring in the Bering Sea and along the Asian coast through the Okhotsk Sea to Japan and *P. b. aix* occurring from the Gulf of Alaska to California, USA, as well as Kamchatka and Japan. Sheiko 1993 on the other hand recognizes both *P. barbata* and *P. aix* as valid species (Ref. 26282).

Gazetteer

Diagnosis: Dorsal spines (total): 5-8; Dorsal soft rays (total): 6-9; Anal spines: 0-0; Anal soft rays: 8-13. Caudal fin rounded (Ref. 28197). Preserved specimens dark brown, darker dorsally, paler ventrally (Ref. 28197). A stripe on head, from tip of snout to, through part between temporal ridge and

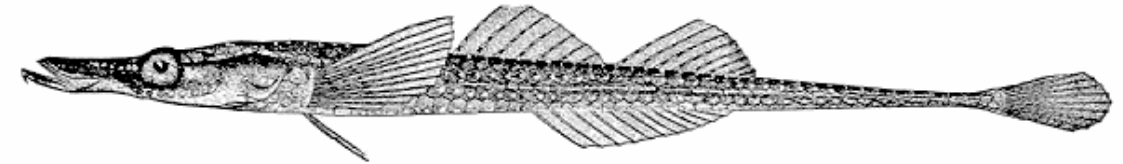
Biology: Inhabits intertidal areas and to 55 m depth, possibly to 128 m (Ref. 2850). Often found among eelgrasses or seaweeds (Ref. 2850)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Kanayama T.. 1991. (Ref. 28197)



Liparis fucensis
Slipskin snailfish

Liparis fucensis Gilbert, 1896

Family: Liparidae (Snailfishes) , subfamily: Liparinae
Order: Scorpaeniformes (scorpionfishes and flatheads)
Class: Actinopterygii (ray-finned fishes)
FishBase name: Slipskin snailfish

Max. size: 18.0 cm TL (male/unsexed; Ref. 2850)
Environment: demersal; marine ; depth range - 388 m

Climate: temperate
Importance:

Resilience:
Distribution: Eastern Pacific: Aleutian Is., Alaska to near San Simeon, central California, USA.

Gazetteer
Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 33-35; Anal spines: 0-0; Anal soft rays: 27-29. Caudal narrow, rounded. Pectorals with a rounded upper part; lower part with longer, exerted rays on the ventral edge.

Biology: Occurs near shore and to 388 m depth (Ref.2850). Feeds on shrimps and other crustaceans (Ref. 6885)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless
Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann.

Liparis pulchellus
Showy snailfish

Liparis pulchellus Ayres, 1855

Family: Liparidae (Snailfishes) , subfamily: Liparinae
Order: Scorpaeniformes (scorpionfishes and flatheads)
Class: Actinopterygii (ray-finned fishes)
FishBase name: Showy snailfish



Max. size: 25.0 cm TL (male/unsexed; Ref. 2850)
Environment: demersal; marine ; depth range 9 - 183 m

Climate: temperate; - 37°N
Importance:

Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (K=0.30; Fec=940)
Distribution: North Pacific: Peter the Great Bay, Russia through the Aleutian chain and the Bering Sea to Monterey Bay, central California, USA.

Gazetteer
Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 47-53; Anal spines: 0-0; Anal soft rays: 39-41. Caudal reduced but distinct.

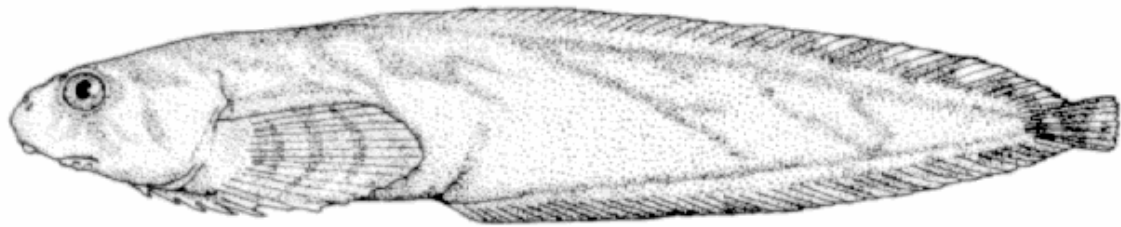
Biology: Found on soft bottoms (Ref. 2850). Feeds on crustaceans and polychaete worms (Ref. 6885). Taken by shrimp trawlers operating down to 92 m

Red List Status: (Ref. 6885)
Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator:

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann.
1983. (Ref. 2850)



Liparis rutteri
Ringtail snailfish

Liparis rutteri (Gilbert & Snyder, 1898)

Family: Liparidae (Snailfishes) ,
subfamily: Liparinae

Order: Scorpaeniformes

Class: Actinopterygii (ray-finned
fishes)

**FishBase
name:** Ringtail snailfish

Max. size: 16.0 cm TL (male/unsexed;
Ref. 2850)

Environment: demersal; marine ; depth range - 73 m

Climate: temperate; - 37°N

Importance:

Resilience:

Distribution: North Pacific: Bering Sea to San Francisco, California, USA.

Gazetteer

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 30-32;
Anal spines: 0-0; Anal soft rays: 23-27. Pectorals with
moderately expanded upper part and a partly folded lower
part with thick, exerted rays.

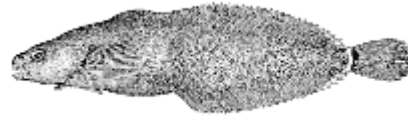
Biology: Occurs from intertidal areas to 73 m depth (Ref. 2850)

**Red List
Status:** Not in IUCN Red List , (Ref. 36508)

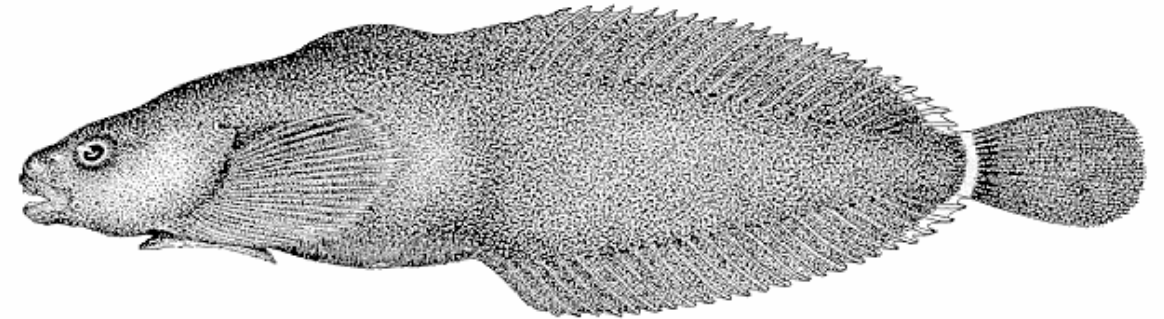
Dangerous: harmless


Coordinator:

by Bull. U.S. Bur. Fish.

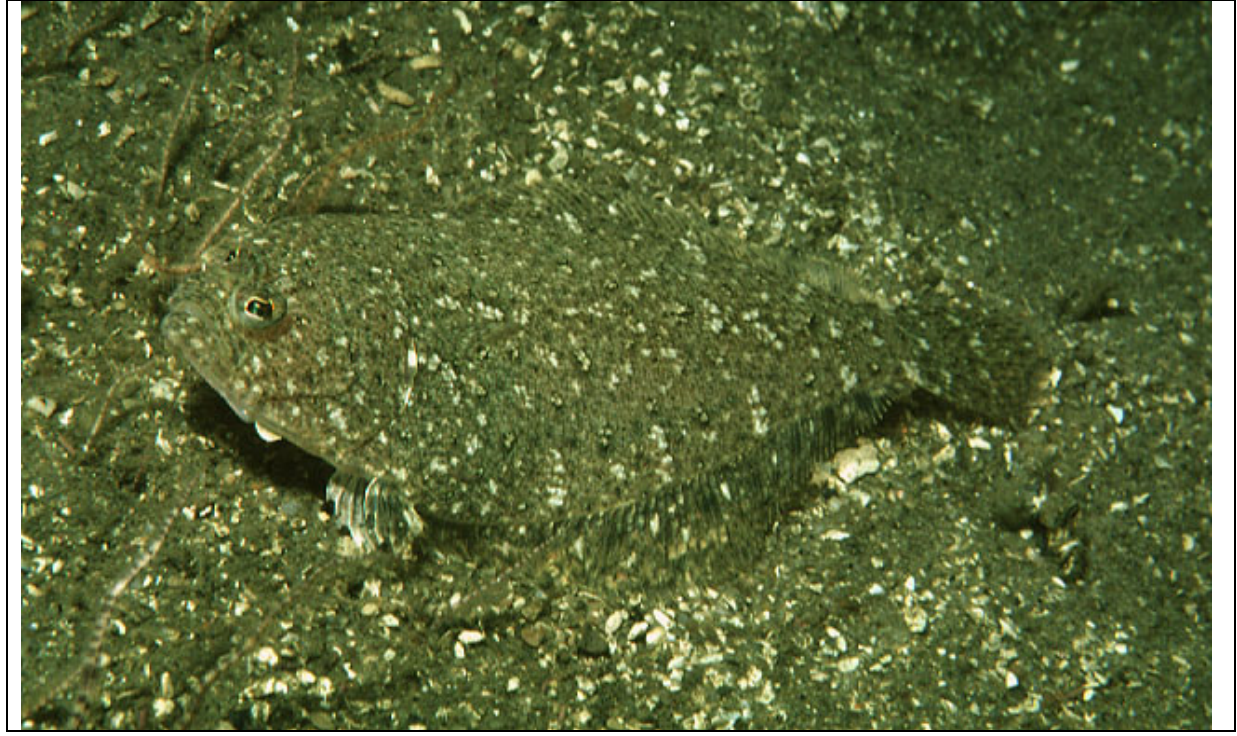


Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Citharichthys stigmaeus Speckled sanddab	
Citharichthys stigmaeus Jordan & Gilbert, 1882	
Family: Paralichthyidae (Large-tooth flounders)	
Order: Pleuronectiformes	
Class: Actinopterygii (ray-finned fishes)	
FishBase name: Speckled sanddab	
Max. size: 17.0 cm TL (male/unsexed; Ref. 2850)	
Environment: demersal; marine ; depth range - 549 m	
Climate: subtropical; 59°N -	
Importance: fisheries: minor commercial	
Resilience:	
Distribution: Northeastern Pacific: Montague I., Alaska to Bahia Magdalena, southern Baja California, Mexico.	
Gazetteer:	
Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 75-97; Anal spines: 0-0; Anal soft rays: 58-77; Vertebrae: 34-39. Caudal rounded.	
Biology: Found on sandy bottom, from near shore to 366 m (Ref. 2850). Little commercial importance because of its small size (Ref. 2850)	
Red List Status: Not in IUCN Red List , (Ref. 36508)	
Dangerous: harmless	

Coordinator Amaoka, Kunio
:
Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



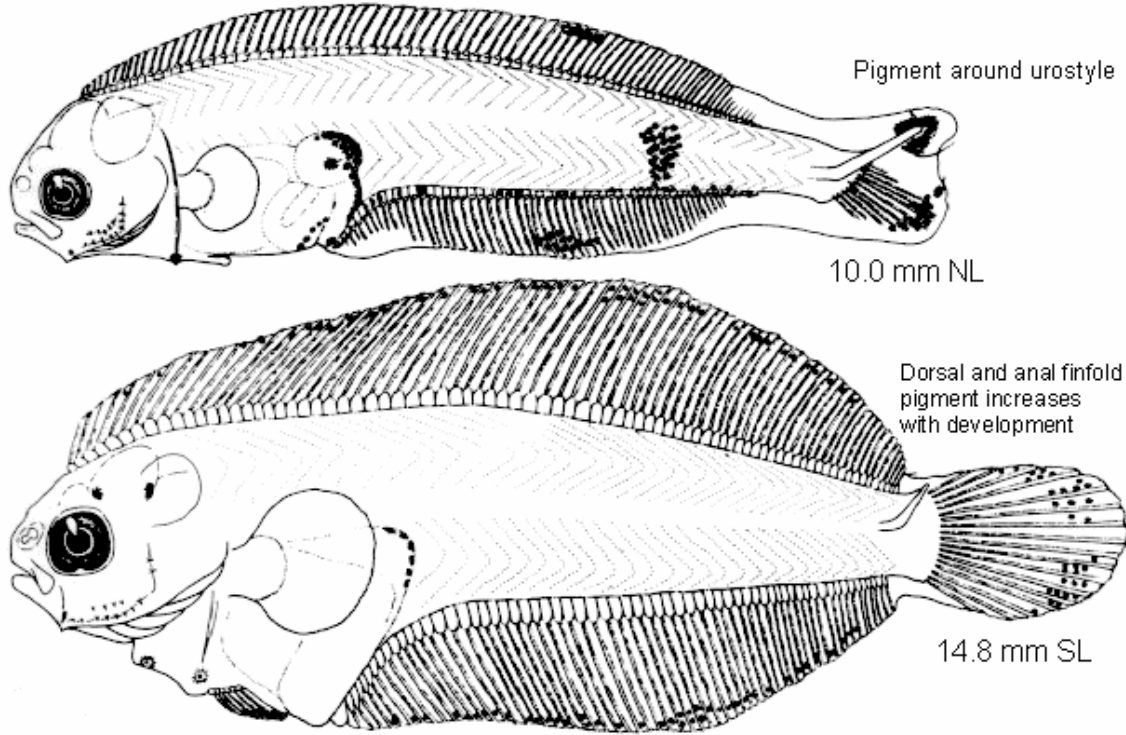
No elongate finrays

Pigment around urostyle

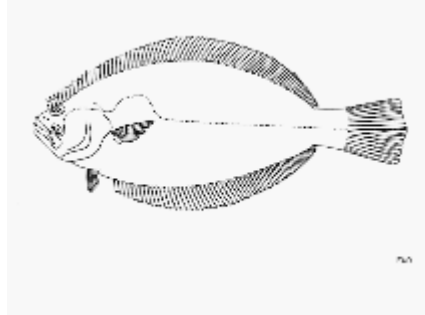
10.0 mm NL

Dorsal and anal finfold pigment increases
with development

14.8 mm SL

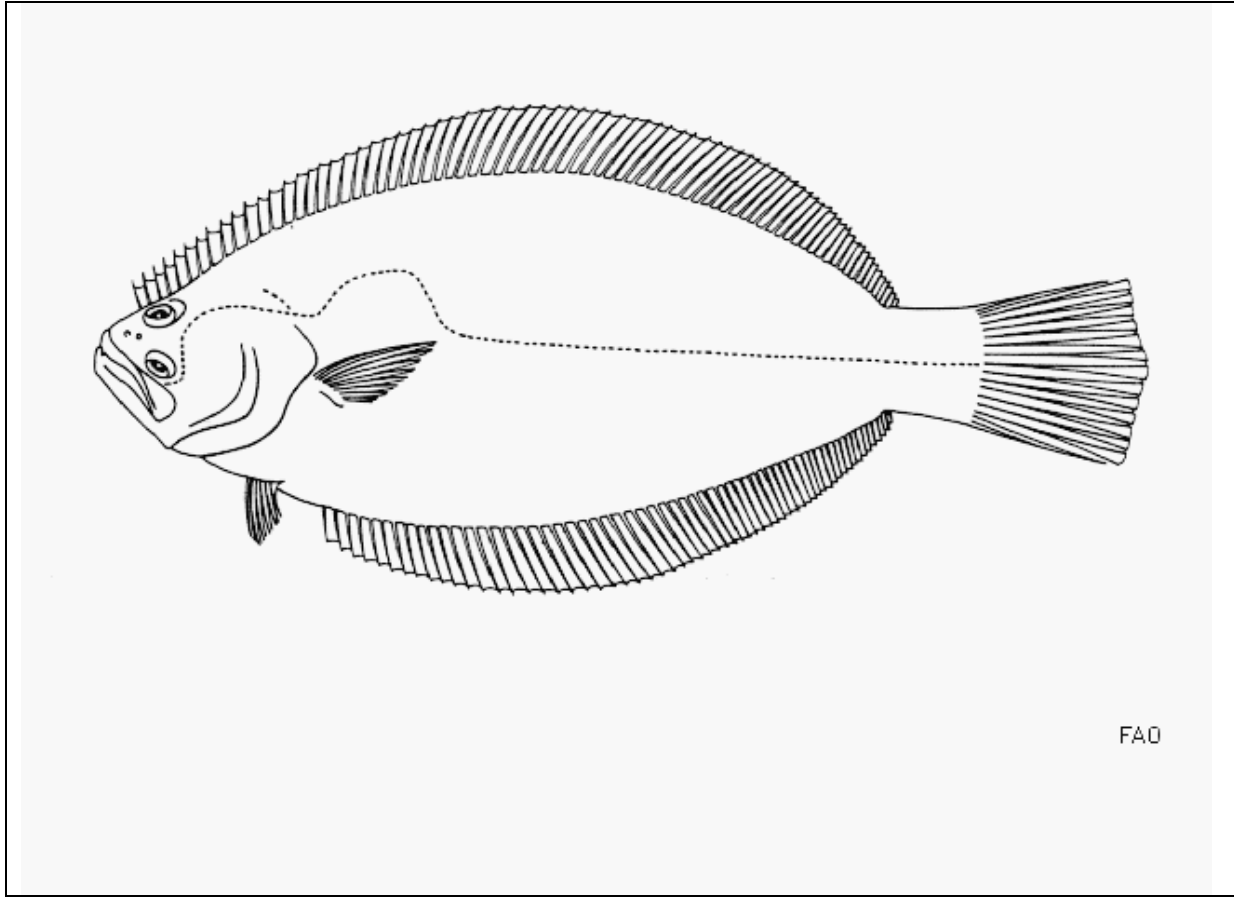


Paralichthys californicus California flounder	
Paralichthys californicus (Ayres, 1859)	by FAO
Family:	Paralichthyidae (Large-tooth flounders)
Order:	Pleuronectiformes
Class:	Actinopterygii (ray-finned fishes)
FishBase name:	California flounder
Max. size:	152 cm TL (male/unsexed; Ref. 2850); max. published weight: 33.0 kg (Ref. 9330); max. reported age: 6 years
Environment:	demersal; oceanodromous; brackish; marine ; depth range 0 - 183 m
Climate:	subtropical; 48°N - 24°N
Importance:	fisheries: commercial; gamefish: yes
Resilience:	Medium, minimum population doubling time 1.4 - 4.4 years (tmax=6)
Distribution:	Eastern Pacific: Quillayute River in northern Washington, USA to southern Baja California, Mexico. Also in northern Gulf of California, Mexico (Ref. 9330).
Gazetteer Biology:	Lives mostly on sandy bottoms. Common beyond surf line, also in bays and estuaries. Occurs from near shore to 183 m depth. Feeds during the day (Ref. 9643) on fishes and squids, often well off the bottom. An important sport and commercial fish. Also caught with trammel nets (Ref. 9330). Marketed as fresh fillet (Ref. 9330). Adults migrate to shallower waters to spawn (Ref. 9643). Has very sharp



Red List Status:	Not in IUCN Red List , (Ref. 36508)
Dangerous:	traumatogenic , Parsons, C.. 1986
Coordinator:	Amaoka, Kunio
Main Ref:	Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)

(42 days post hatch, 10.5 mm SL)



Isopsetta isolepis
Butter sole

Isopsetta isolepis (Lockington, 1880)

Family: Pleuronectidae (Righteye flounders) , subfamily: Pleuronectinae

Order: Pleuronectiformes (flatfishes)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Butter sole

Max. size: 55.0 cm TL (male/unsexed; Ref. 2850); max. reported age: 11 years

Environment: demersal; oceanodromous; marine ; depth range 20 - 425 m

Climate: subtropical; 66°N - 32°N

Importance: fisheries: minor commercial; gamefish: yes

Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (K=0.26; tmax=11)

Distribution: Northeastern Pacific: Bristol Bay in the southeastern Bering Sea and Amchitka I. (Aleutian Is.) to Ventura, California, USA.

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 78-92; Anal spines: 0-0; Anal soft rays: 58-69; Vertebrae: 39-42. Dorsal origin above eye. Caudal rounded. Pectoral small, bluntly pointed.

Biology: Common in shallow water on soft, silty bottom. Moves into shallow water in summer and to deeper water in winter (Ref. 6885). Spawning adults exhibit north-south

by Archipelago Marine Research Ltd.



Red List Not in IUCN Red List , (Ref. 36508)

Status:

Dangerous: harmless

Coordinator: Amaoka, Kunio

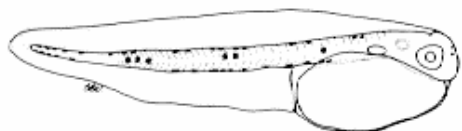
Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)





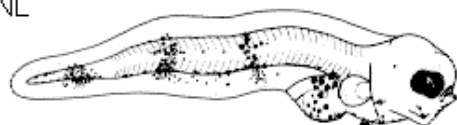
Caudal pigment band at base of fin and along urostyle

13.6 mm NL



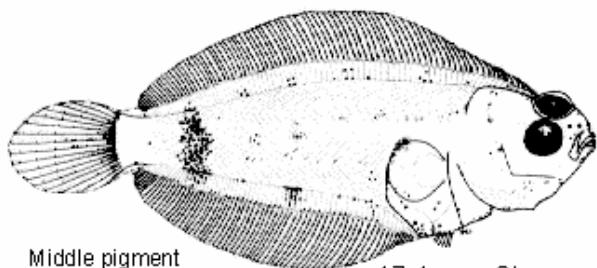
Pigment on head sparse, absent on snout

2.9 mm SL (reared)



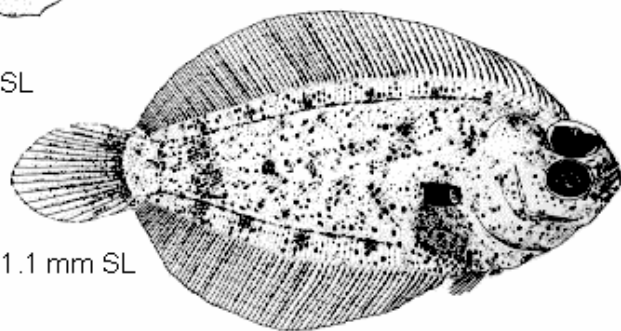
Double row of ventral midline melanophores persists to flexion (~14 mm)

6.2 mm NL



Middle pigment band persists through transformation

17.1 mm SL



21.1 mm SL

Citharichthys sordidus
Pacific sanddab

Citharichthys sordidus (Girard, 1854)

Family: Paralichthyidae (Large-tooth flounders)

Order: Pleuronectiformes (flatfishes)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Pacific sanddab

Max. size: 41.0 cm TL (male/unsexed; Ref. 2850)



Environment: demersal; marine ; depth range 0 - 549 m

Climate: subtropical; 66°N -

Importance: fisheries: commercial; gamefish: yes

Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (K=0.30; tmax=8)

Distribution: Northeastern Pacific: Bering Sea coast of Alaska to Cabo San Lucas, southern Baja California, Mexico. Occurrence in Nicaragua (Ref. 13613) needs validation.

Gazetteer
Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 86-102; Anal spines: 0-0; Anal soft rays: 67-81; Vertebrae: 38-40. Caudal rounded; pectorals rather large and pointed (Ref. 6885). Eyed side dull brown or tan irregularly mottled with dark; Dorsal, anal, caudal and anal fins black; blind side white to pale brown (Ref. 6885). Freshly caught males with dull orange spots and

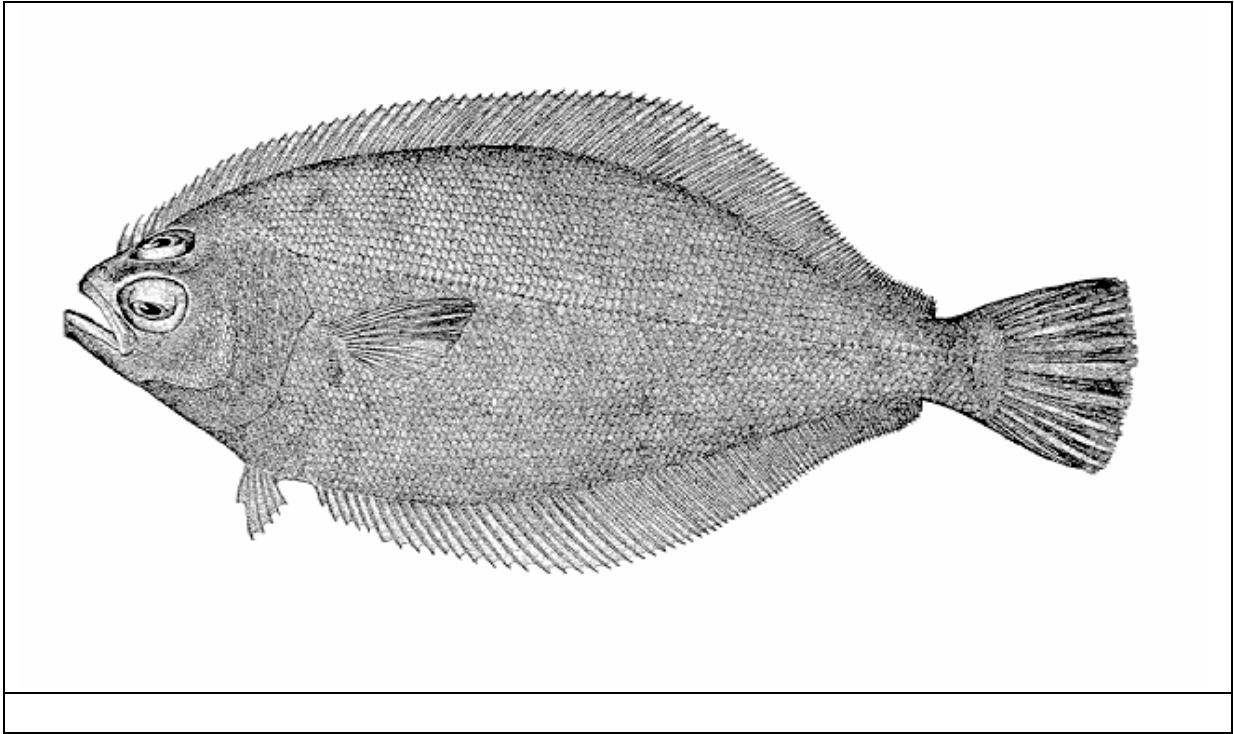
Biology: Found on sand bottoms (Ref. 2850). Young may occur at depth less than 9 m (Ref. 2850)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator: Amaoka, Kunio

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Microstomus pacificus
Dover sole

Microstomus pacificus (Lockington, 1879)
Family: Pleuronectidae (Righteye flounders) , subfamily: Pleuronectinae
Order: Pleuronectiformes (flatfishes)
Class: Actinopterygii (ray-finned fishes)
FishBase name: Dover sole
Max. size: 76.0 cm TL (male/unsexed; Ref. 2850)

by Gotshall, D.W.



Environment : demersal; marine ; depth range 10 - 1189 m
Climate: subtropical; 65°N - 31°N
Importance: fisheries: commercial; gamefish: yes; aquarium: public aquariums
Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (K=0.26; Fec=37,000)
Distribution: Northeastern Pacific: Navarin Canyon in the Bering Sea to Stalemate Bank in the Aleutian Is. and San Cristobal Bay, Baja California, Mexico.
Gazetteer
Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 90-116; Anal spines: 0-0; Anal soft rays: 80-96; Vertebrae: 50-54. Dorsal origin above middle of upper eye. Caudal imperfectly rounded.
Biology: Occurs on mud bottom (Ref. 2850). Moves into deep water in winter (Ref. 2850). Produces large amounts of slime which may cover other fishes when caught in trawls (Ref.

Red List Not in IUCN Red List , (Ref. 36508)

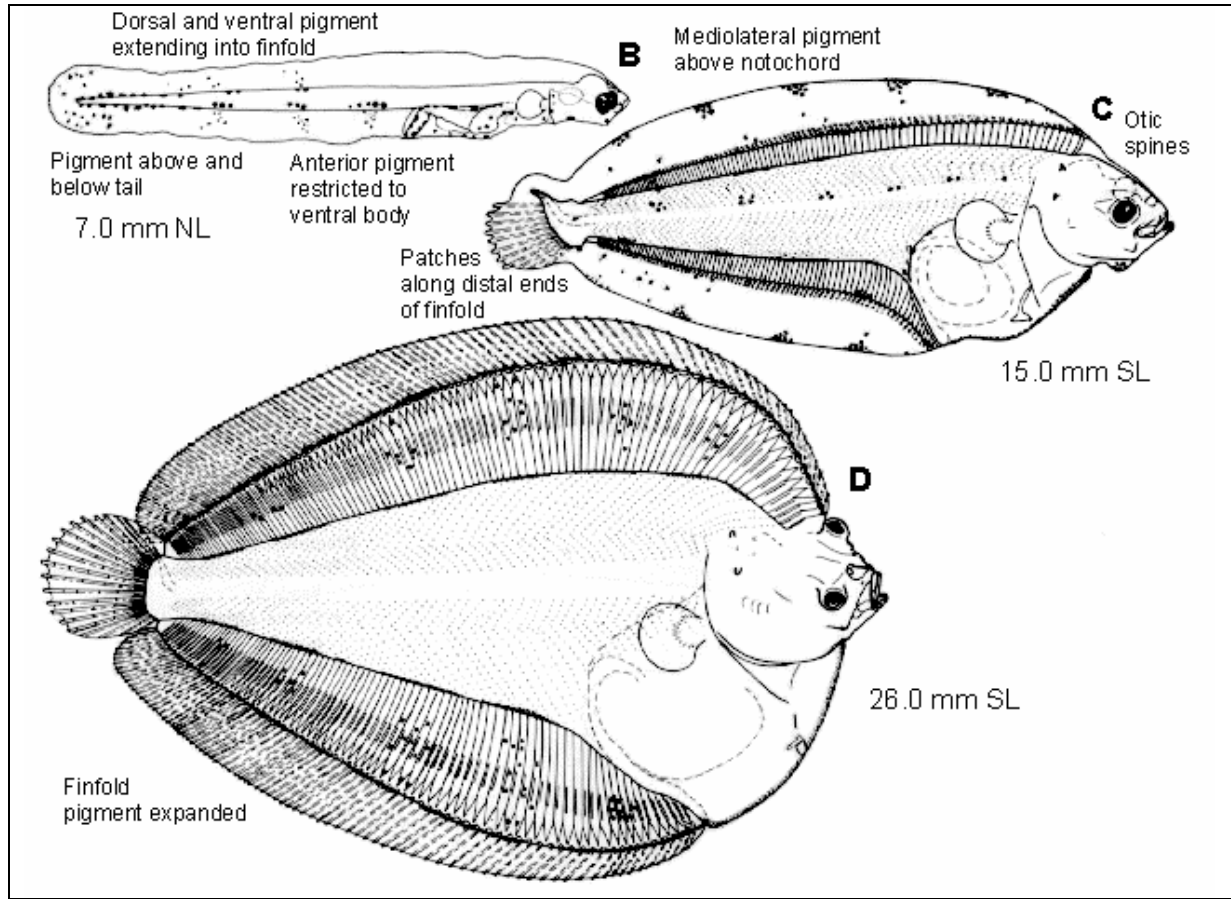
Status:

Dangerous: harmless

Coordinator: Amaoka, Kunio

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)





Platichthys stellatus
Starry flounder

Platichthys stellatus (Pallas, 1788)

Family: Pleuronectidae (Righteye flounders) , subfamily: Pleuronectinae

Order: Pleuronectiformes (flatfishes)

Class: Actinopterygii (ray-finned fishes)

FishBase name: Starry flounder

Max. size: 91.0 cm TL (male/unsexed; Ref. 2850); max. published weight: 9,100 g (Ref. 2850); max. reported age: 24 years

Environment: demersal; catadromous; freshwater; brackish; marine ; depth range 0 - 375 m

Climate: polar; 70°N - 34°N

Importance: fisheries: commercial; gamefish: yes

Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (tm=2-3; tmax=24)

Distribution: North Pacific: Korea and southern Japan through the Bering Strait and Arctic Alaska (Ref. 2850) to the

Gazetteer Coronation Gulf, Northwest Territories, Canada and Santa Barbara, southern California, USA. Hybridizes with *Parophrys vetulus* - the hybrid, called *Inopsetta ischyra*, may be found from the Bering Sea to San Francisco, California, USA. Also hybridizes with *Kareius bicoloratus* (Ref. 27547).

by Archipelago Marine Research Ltd.



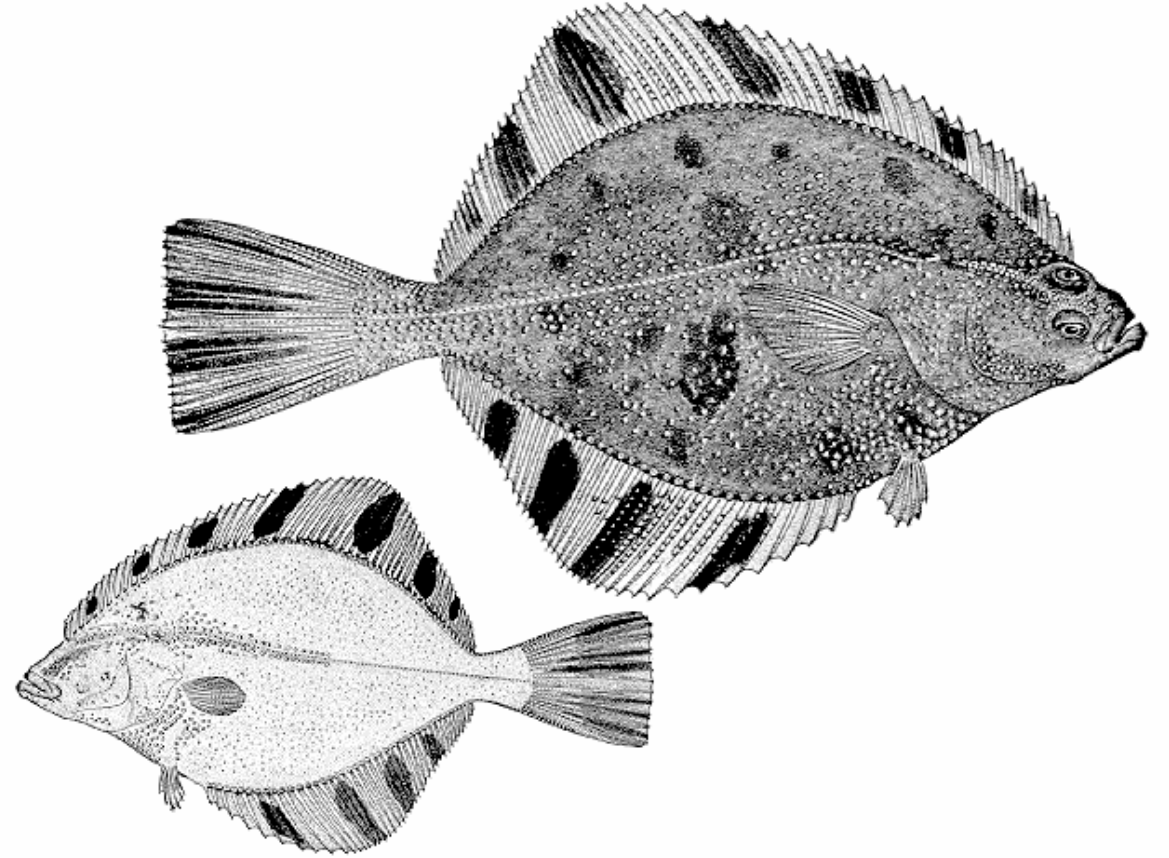
Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 52-66; Anal spines: 1-1; Anal soft rays: 38-47; Vertebrae: 34-37. Distinguished by the presence of both eyes on the same side of the head, dorsal and anal fins that are marked with dark and light (white to orange) bars, and especially, by the stellate, bony tubercles scattered over its body (Ref. 27547). Dorsal originates over middle of upper eye; anal with a sharp, forward pointing spine (often buried in skin) before first ray; pectorals are bluntly pointed; caudal slightly rounded (Ref. 27547). Eyed side dark brown to nearly black, sometimes with indefinite blotchings (Alaskans specimens sometimes with a greenish tinge); blind side white to creamy; dorsal fin with 4 to 7 dark bars with white to orange spaces between; anal fin with 4 to 6 such bars; caudal fin with 3 or 4 dark longitudinal bars on its posterior part; in rare cases, the blind side may be partly or completely colored like the eyed side, or white may be present on the eyed side, creating a piebald effect (Ref. 27547, 28897, 28898).

Biology: Found inshore, often in very shallow water and in estuaries during the summer; moving into deeper water in the winter (Ref. 27547). However, they may occur in deep water throughout the year (Ref. 27547). Does not venture into water of high salinities (Ref. 28899). Young and adults move up rivers, as much as 120 km (Ref. 27547). Feeds on crustaceans, worms, small mollusks, brittle stars, and small fishes (Ref. 6885). Important game fish (Ref. 2850). Utilized fresh and frozen; eaten steamed, fried, boiled, microwaved, and baked (Ref. 9988)

Red List Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless
Coordinator: Amaoka, Kunio

Main Ref: Cooper, J.A. and F. Chapleau. 1998. (Ref. 30193)



Pleuronichthys decurrens
Curlfin sole

Pleuronichthys decurrens Jordan & Gilbert, 1881

Family: Pleuronectidae (Righteye flounders)
, subfamily: Pleuronectinae

by Gotshall, D.W.

Order: Pleuronectiformes

Class: Actinopterygii (ray-finned fishes)

FishBase name: Curlfin sole

Max. size: 37.0 cm TL (male/unsexed; Ref. 2850)



Environment: demersal; marine ; depth range 8 - 533 m

Climate: subtropical

Importance: fisheries: minor commercial; gamefish: yes

Resilience:
Distribution: Eastern Pacific: Prince William Sound, Alaska to Bahia San Quintin, northern Baja California, Mexico.

Gazetteer:

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 67-79; Anal spines: 0-0; Anal soft rays: 46-52; Vertebrae: 37-39. Dorsal origin far forward at angle of mouth, first 9-12 rays on the blind side. Caudal deep and rounded.

Biology: Commonly found on soft bottom (Ref. 2850). Feeds on brittle stars and nudibranchs (Ref. 27436). Minimal interest to anglers, usually an incidental catch (Ref. 27436)

Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator: Amaoka, Kunio

Main Ref: Eschmeyer, W.N., E.S. Herald and H. Hammann. 1983. (Ref. 2850)



Symphurus atricaudus
California tonguefish

Symphurus atricaudus (Jordan & Gilbert, 1880)

Family: Cynoglossidae (Tonguefishes) ,
subfamily: Symphurinae

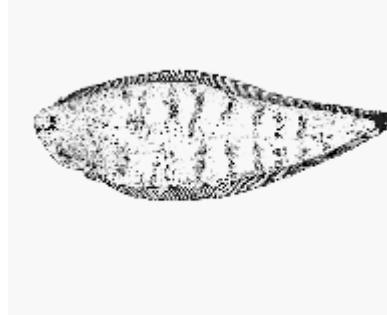
Order: Pleuronectiformes (flatfishes)

Class: Actinopterygii (ray-finned fishes)

FishBase name: California tonguefish

name:

Max. size: 21.0 cm TL (male/unsexed; Ref. 2850)



by FAO

Environment: demersal; marine ; depth range 2 - 201 m

Climate: subtropical; 46°N -

Importance: fisheries: minor commercial

Resilience:
Distribution: Eastern Central Pacific: California, USA to the Gulf of California.

Gazetteer

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total): 94-102; Anal spines: 0-0; Anal soft rays: 77-83; Vertebrae: 50-53

Biology: Found on mud or sandy-mud bottom (Ref. 2850). Feeds on small fishes (Ref. 37955) and invertebrates (Ref. 9294)

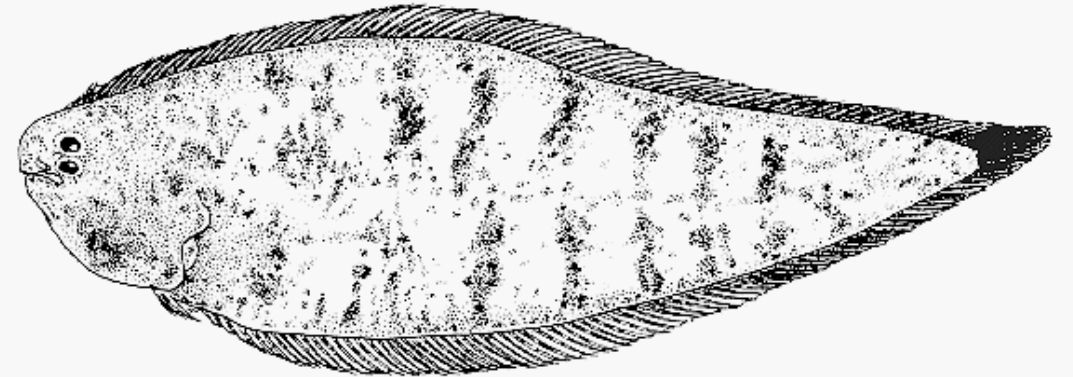
Red List Status: Not in IUCN Red List , (Ref. 36508)

Dangerous: harmless

Coordinator

:

Main Ref: Munroe, T.A., F. Krupp and M. Schneider. 1995. (Ref. 9294)



FAO

Mola mola
Ocean sunfish

Mola mola (Linnaeus, 1758)

Family: Molidae (Molas)

Order: Tetraodontiformes
(puffers and filefishes)

Class: Actinopterygii (ray-
finned fishes)

**FishBase
name:** Ocean sunfish

Max. size: 333 cm TL
(male/unsexed; Ref.
26340); max. published
weight: 2,300.0 kg
(Ref. 43760)

Environment: pelagic; oceanodromous; marine ; depth range 0 -
300 m

Climate: subtropical; 12; 65°N - 43°S

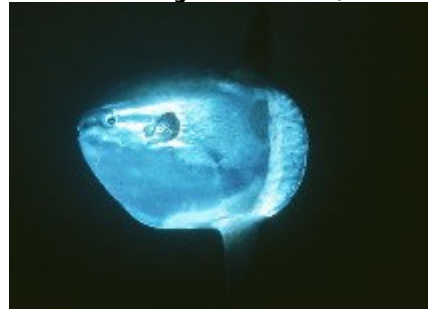
Importance: fisheries: minor commercial

Resilience:

Distribution: Warm and temperate zones of all oceans. Eastern
Pacific: British Columbia, Canada (Ref. 2850) to
Peru and Chile (Ref. 5530). Eastern Atlantic:
Scandinavia to South Africa (occasionally western
Baltic, Mediterranean). Western Atlantic:
Newfoundland, Canada (Ref. 7251) to Argentina
(Ref. 36453).

Diagnosis: Dorsal spines (total): 0-0; Dorsal soft rays (total):
15-18; Anal spines: 0-0; Anal soft rays: 14-17. The
scaleless body is covered with extremely thick,

by Gotshall, D.W.



Biology: Often drifts at the surface while lying on its side, or swims upright and close to the surface that its dorsal fin projects above the water. Feeds on fishes, mollusks, zooplankton, jellyfish, crustaceans, and brittle stars (Ref. 4925). Recorded as the heaviest bony fish and as the one with the most eggs in the Guinness Book of World Records (Ref. 6472). Generally not eaten, but considered by some as a delicacy (Ref. 30573). Utilized fresh and can be broiled (Ref. 9988). Used in Chinese medicine (Ref. 12166). Molas may contain the same toxin as puffers and porcupine fish (Ref. 13513). Does not adapt well in captivity (Ref. 12382, 37040). Juveniles are preyed upon by California sea lions in Monterey Bay (Ref. 37040)

**Red List
Status:** Not in IUCN Red List , (Ref. 36508)

Dangerous: poisonous to eat , Parsons, C.. 1986

