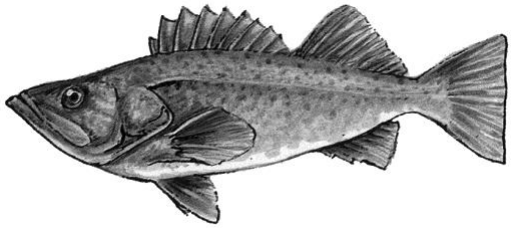
All About Bony Fishes

Chordata: Actinopterygii (bony fishes)

BOCACCIO
Sebastes paucispinis



The bocaccio is a type of rockfish that lives in kelp forests and along rocky reefs. Bocaccio occur from the Gulf of Alaska to central Baja Mexico. The body is uniform dark or dusky-red on back, pinkish below. Juveniles have dark brown spotting on sides. This species grows to at least 3 feet (98 cm) in length. Bocaccio feed on a variety of marine species, such as shrimp and crabs, anchovies, sardines, other small rockfishes, and squid. They are viviparous rockfish (have live birth); in Southern California they release the larvae in 2 or more batches and spawning occurs almost all year. One female can produce over 2 million eggs per season. The bocaccio can live up to 45 years.

CALIFORNIA GRUNION
Leuresthes tenuis

California grunion are small silvery fish found on the coast of southern California and northern Baja California. They have bluish-green backs with the rest of the body a shiny-silver color. Their average length is between 5 and 6 inches. This fish belongs to the family Atherinidae, commonly known as silversides. Other common atherinids found in California are the jacksmelt, *Atherinopsis californiensis* and the topsmelt, *Atherinops affinis*. Along southern California's sandy beaches, from March through September, one of the most remarkable life cycles in the ocean is completed; the California grunion comes ashore to spawn. The curious fact is that 1 to 3 hours after the high tide, female grunion and their male suitors wash up on the shore en masse. The females wriggle tail first into the sand laying some 300 to 3,000 eggs while the males encircle them depositing milt along her body fertilizing the eggs below the sand surface. In this protected pod, the eggs develop for some 10 days until the next high tide agitates and triggers the baby grunion to hatch. They will mature in approximately one year and will complete the cycle. Grunion live for 3 to 4 years and females may spawn 4 to 8 times per season. Grunion may be eaten by many kinds of fish including California halibut and croakers; and probing shorebirds, sand worms, beetles and beach hoppers eat their eggs.

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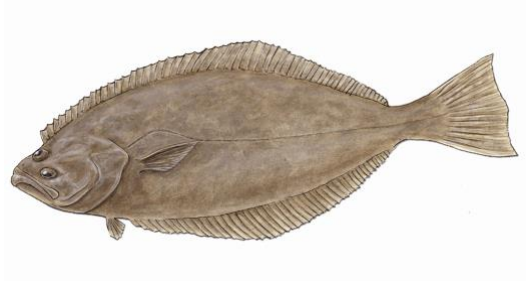
CALIFORNIA HALIBUT
Paralichthys californicus



The California halibut is a type of flatfish that lives in shallow sandy habitats. The body is dark brown to black on the eyed side and white on the blind side. This species of flatfish can be either right- or left-eyed. Their numerous teeth, very large mouth and a high arch in the lateral line on the eyed-side above the pectoral fin make them easily distinguishable from other flatfish. California halibut occur from Magdalena Bay, Baja California, to the Quillayute River, British Columbia. California halibut feed on anchovies, sardines, other small fishes, crustaceans and mollusks. Males first mature about 2 or 3 years of age, but females do not mature until 4 or 5. Female California halibut grow faster than male California halibut. A 22 inch female is about 5 years old and a 22 inch male is about 7 years old. Spawning takes place in relatively shallow water during April through July. Larval fish hatch with eyes on each side of the head, but one eye migrates to the other side as the young mature and the fish settle near the sea floor.

CALIFORNIA SCORPIONFISH
Scorpaena guttata

California scorpionfish are relatively large (19 inches) thick bodied fish. Their coloration is highly variable, frequently blotchy browns, oranges and reds, with dark brown spots. They range on all types of ocean bottoms from central California to the Gulf of California. The name scorpionfish comes from the venomous spines on their dorsal, anal and pelvic fins. While not fatal, a sting is extremely painful, with nausea and weakness common. Scorpionfish are sexually dimorphic, with females larger than males and living over 20 years, with males living about 15 years. They are sexually mature by 4 years old, and spawn mainly between May and August. They eat all types of small crustaceans (crabs, shrimp, amphipods and isopods), octopuses and other fish. Not many animals are known to eat them, except humans.

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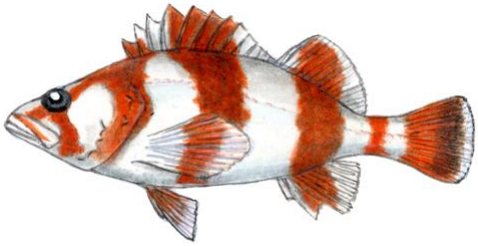
CALIFORNIA SHEEPHEAD
Semicossyphus pulcher

The California sheephead is a type of wrasse that lives in kelp beds and rocky reef areas. California sheephead occur from Central California to Baja Mexico. This species is one of very few sexually dimorphic species in Southern California. Males are identified by their black tail and head, while females are all pinkish-red. They can grow up to 3 feet in length. California sheephead feed on sea urchins, mollusks, lobsters and crabs using their prominent canine teeth to pry and crush. Their pharyngeal teeth continue crushing as they swallow. Considered very good eating, their numbers have declined drastically off Southern California. This fish can change sex from female to male during maturation (at about 1 foot in length or 8 years of age) and can live up to 50 years. They are all born as females, but may become a male later in life. Males are very territorial and are often observed chasing away smaller males. Large males often have 10 to 15 females within their territory.

FLAG ROCKFISH
Sebastes rubrivinctus



Flag rockfish are one of the many species of rockfish found off the California coast. Adults can be found well over 500 feet deep, while young and juveniles can be found near the surface, especially near structures like floating kelp paddies. They have bright orange/red bands that alternate with white bands. While this is very striking looking in surface waters, at the depths that most adults live, red actually looks black (red light does not penetrate deeply in water), which actually helps them camouflage. Adults will reach a length of 16 inches and can live as long as 40 years. Like most other rockfish, they tend to like to be near some kind of structure, either man-made (like oil rigs) or natural (like rocky outcrops).

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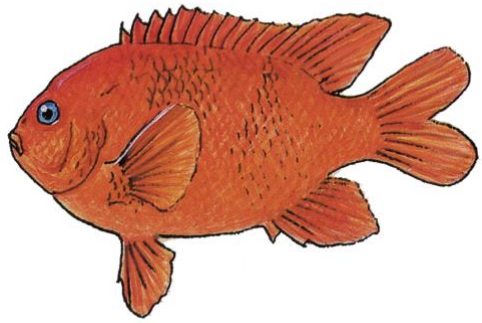
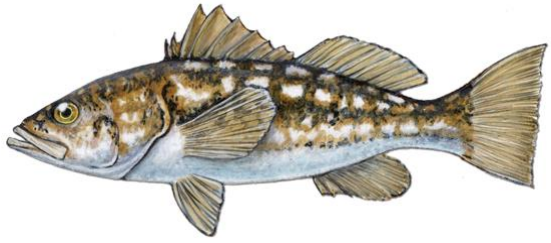
GARIBALDI
Hypsypops rubicundus



The Garibaldi, a damselfish, is one of the most colorful fish in Southern California waters. A spectacular bright orange, it is easily visible as it "sculls" in and around the holes and crevices of the kelp forest floor where it is usually found. It is in an almost constant state of activity as it defends its territory against potential "land grabbers" or as it searches for the small, sessile sponges and bryozoans that make up a good portion of its diet. During the springtime, the activity level climbs even higher as the male begins the all-important task of nest building. Carefully, he clears everything but the most stubborn calcareous material and a small, elliptical patch of red algae. Once the nest is completed, the amorous male begins searching for one or more females. Rushing about his territory, he charges and challenges any of his kind. Challenges consist of loud, thumping noises made by the grinding together of teeth far back in his throat called pharyngeal teeth. Eventually, a female will dart past him as he charges her and will hover above the nest. In an increasingly high state of excitement, he will join her to fertilize the 15,000 - 80,000 eggs she lays. Her job is done and he drives her off to guard the nest during the two to three week period it takes the yellowish, capsule-like eggs to develop.

KELP BASS
Paralabrax clathratus



The kelp bass is a type of bony fish that lives in the kelp forest and on rocky and artificial reefs (such as piers and jetties). Kelp bass occur from Baja California, Mexico to Washington, USA. The body is elongate and is brown to olive-green, with light blotches, becoming lighter below. Kelp bass feed on small fishes, crustaceans, and squid. These fish grow very slowly, at 5 years of age they are about 10.5 inches long and are capable of spawning. They can reach a length of 28.5 inches and live for about 34 years. They are also commonly known as calico bass.

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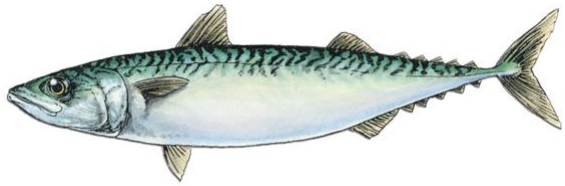
NORTHERN ANCHOVY
Engraulis mordax

Northern anchovies are small, short-lived fish, most surviving to about 7 years old. They are somewhat round in body with blue-green coloring on top and silvery on the bottom. They live in very large schools mostly close to shore. They are highly migratory, moving up and down the Pacific coast. They are an import prey species for many animals, from fish to birds to jellies to seal to humans. They have very large mouths, which help them feed on plankton. Though short–lived, they maintain very large schools by having large numbers of eggs, about 130,000 per year. Most females become sexually mature in 2 years and all fish are mature by 4 years old. Spawning peaks around January- May. Anchovy reach a length of about 10 inches.

PACIFIC HAKE
Merluccius productus

The Pacific hake is a type of bony fish that live offshore. They occur from the Gulf of Alaska to Baja Mexico. They occur from the surface to depths of over 3,000 feet (1,000 meters). The body is uniform gray to dusky brown with brassy overtones. This species grows to about 3 feet (98 cm) in length. Pacific hake are nocturnal feeders that undergo diel vertical migrations off the bottom to feed on a variety of fishes and invertebrates. They typically feed on shrimp and smaller fishes. This species spawns (release egg and sperm into the water column) from January to June and may spawn more than once per season. The Pacific hake can live up to 15 years.

PACIFIC MACKEREL
Scomber japonicas



The body of the Pacific mackerel tapers at both ends, is rather elongate, and is somewhat compressed. The head is pointed and is dark blue, and the mouth is large. The back is also dark blue with about 30 dark wavy lines, and the underside is silvery-green. The first and second dorsal fins are widely spaced. They feed mainly on larval, juvenile or small fishes, but there are times when they feed on small crustaceans and squid. The Pacific mackerel is found worldwide in temperate seas; in the eastern Pacific from Chile to the Gulf of Alaska. A female mackerel can release about one million eggs at a time. Many species of marine birds, marine mammals, tunas, sharks, and humans may hunt and eat mackerel. Mackerel are prized and are harvested for their meat, which is often very oily. They are known for their fighting ability, and are an important recreational and commercial fishery.

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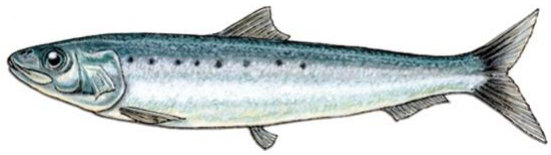
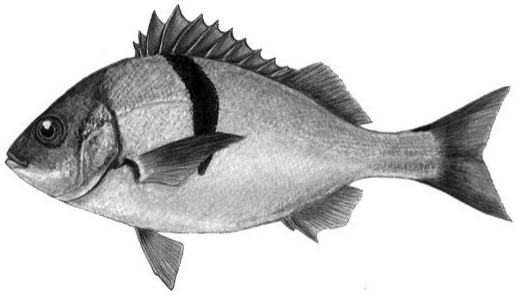
PACIFIC SARDINE
Sardinops sagax



The Pacific sardine is a coastal fish that grows to just over 1 foot in length and may live up to 25 years. It is a schooling species that is often associated with anchovy, hake, and mackerel. Sardines are filter feeders, eating mostly small crustaceans. This is an ecologically important species because a large variety of marine birds, large fishes, and marine mammals feed on sardines. During the 1930s, the Pacific sardine was one of the largest volume fisheries in the United States with catches often over 200,000 metric tons. The fishery extended from Southern California into Canada with an active sardine fishery in Oregon from 1935-1940. There was a collapse of the fishery in the late 1940s which many people attributed to overfishing. However, recent evidence has shown that sardine populations show multi-decadal fluctuations and are sensitive to climate changes known as regime shifts. Pacific sardines have made a strong comeback over the past decade. Currently, populations of Pacific sardine are assessed annually to provide a scientific basis for the annual harvest guidelines or quota.

SARGO
Anisotremus davidsoni



The sargo is a type of grunt that lives in kelp forests and along rocky reefs. Sargo occur from Central California to southern Baja Mexico. This species is now established in the Salton Sea. The body is brassy, gray, or silvery above, with a silver belly and sides. A prominent dark, vertical bar occurs from the dorsal fin to pectoral area. The upper gill cover and part of pectoral fin base is edged in black. Juveniles have several dark stripes and bars. They grow to about 24 inches (60 cm) long. Sargo feed on a variety of crustaceans, mollusks, and bryozoans. This species reproduces by spawning (release of egg and sperm into the water column).

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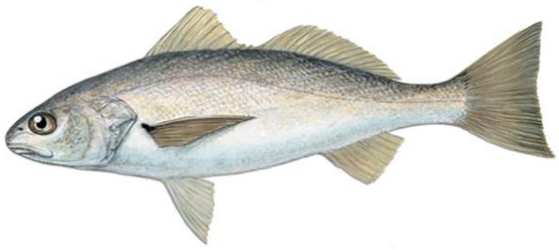
WHITE CROAKER
Genyonemus lineatus



White croaker are an inshore fish, found from the surf zone to about 800 feet deep. They are a silvery white fish, with yellowish backs and fins. They are also called tomcod and kingfish. The name "croaker" comes from the rumble or croaking sound they make with their swim bladders. They live to about 15 years old and grow to almost 16 inches. They feed on worms, shrimp, crabs and mollusks that live in and on the mud or sand bottom. In turn, they are eaten by larger fish, birds, seals and sea lions. They can be found from Baja California up to Canada, although they are rare north of California. White croaker is a species of concern in southern California. As they feed on prey found on the bottom close to shore, they are very strongly impacted by human activities along the coast. Off the Palos Verdes Peninsula, in particular, they can be highly contaminated by a pesticide called DDT, which has accumulated in large quantities in the sediments there. While the DDT does not appear to cause serious issues to the croakers themselves, they concentrate that contamination and pass it up the food chain, which has caused problems for pelicans and bald eagles, and may even affect humans.

WHITE SEABASS
Atractoscion nobilis

The white seabass is a type of croaker that lives in kelp forests and along rocky reefs. Juveniles often live in eel grass beds. White seabass occur from Alaska to Baja Mexico. The body is gray-blue, bronze, or yellowish above, sometimes with dark speckling, silvery below. Newly settled juveniles have large brown midline stripes and heavy vertical dark bars. Older juveniles are silvery, brown, golden, or reddish, with dark bars. This species can grow to 5 feet (166 cm) long. The white seabass is the largest species of croaker in California. White seabass mostly feed on fishes, such as anchovies and sardines, but may also eat squid. They are broadcast spawners (release egg and sperm in water column), with multiple males (about 2 to 7) simultaneously releasing gametes to fertilize the eggs of a spawning female. The reproduction season occurs from March through July and peaks in May, with the majority of spawning events occurring over a 2-hour period. In addition to being a popular sport fish, white seabass is also targeted by a commercial fishery. In California, there is a minimum 28 inch size limit.

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YELLOWTAIL
Seriola lalandi

Yellowtail are a very large (98 inches) predatory fish that ranges, on our coast, from British Columbia to Chile. They are found in other parts of the ocean, too. They are very streamlined with a deeply forked yellow tail. They are metallic blue-green on the back and silvery on the bottom, with dark bars at each eye and a yellow stripe along the side. They do tend to migrate from Baja to Southern California in the spring, although there are some that can be found off Southern California all year round. They feed mostly on other fish and squid. Yellowtail like to school near floating structures or even fixed structures, such as oil rigs. They live to about 12 years, and are sexually mature by three years old. Spawning peaks around July-September. They are batch spawners, with females producing over 3 million eggs a year.

For more information on fishes and other marine life, be sure to visit our the "Marine Life" page of CMA's website:
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