



Reading Handout: Bony Fish Scientific Classification

The information below shows the scientific classification of bony fishes that still exist today.

KINGDOM Animalia

PHYLUM Chordata

SUBPHYLUM Vertebrata

CLASS Actinopterygii (old name = Osteichthyes)

Class Actinopterygii includes all the bony fishes that are ray-finned (vs. lobed-finned, Class Sarcopterygii). Bony fishes are ectothermic (cold-blooded) and are vertebrates (have a spine/backbone). Most bony fishes have scales, breathe with gills, have fins (lacking in some), and have a two-chambered heart. Most bony fishes lay eggs.

Actinopterygians are the dominant class of vertebrates, comprising nearly 99% of the over 30,000 species of fishes.

They are found in both freshwater and marine environments and from the deep sea to the highest mountain streams. Extant species can range in size from a minnow, at 8 mm (0.3 in), to the massive ocean sunfish, at 2,300 kg (5,070 lb), and the long-bodied oarfish, at 11 m (36 ft).

INFRACLASS Teleostei

Teleostei is one of three infraclasses in Class Actinopterygii, the ray-finned fishes. This diverse group, which arose in the Triassic period, includes 26,840 extant species in about 40 orders and 448 families; most living fishes are members of this group.

ORDER (approximately 40)

FAMILY (approximately 448)

GENUS and SPECIES (approximately 26,840)





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Some fishy facts:

Did you know...

the garibaldi is the California State Marine Fish and is protected by law? It is one of only a few species of damselfishes found in California and can be found from Monterey Bay to southern Baja California.

Did you know...

that there are over 200 species of moray eels in the world? The California moray is our resident species found from Point Conception to southern Baja California. How do you tell if an eel is a moray...they have no pelvic or pectoral fins!

Did you know...

the largest species of bony fish in California is the giant sea bass reaching 8.9 feet (2.7 meters) total length (TL), the smallest species is likely southern tidewater goby and the northern tidewater goby reaching only 2.2 in (5.5 cm) total length (TL).

Did you know...

the California scorpionfish has venom in its spines? The effects of the sting are said to feel similar to a rattlesnake bite. Their bright red spotting is a warning coloration often found in venomous animals.

Did you know...

the California halibut is a flatfish with both eyes on one side of its head? 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.

Did you know...

the California sheephead are all born as females? They all begins life as a female, but depending on the number of males present, may become a male later in life.

Did you know...

the giant kelpfish can quickly change color during courtship or territorial displays? The giant kelpfish is a type of bony fish that lives in the kelp forest, eelgrass beds, and at times in tidepools.



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