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List of Fish Species Present in Galápagos, Ecuador, and California, U.S.A., With Notes on Their Commercial Importance and Conservation Status

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Introduction

The purpose of this literature review was to identify fish species that are native to California and the Galápagos Archipelago, and therefore encourage research collaborations between these two important areas.

Methods

The source for the list of Galápagos fish list for this literature review was McCosker and Rosenblatt (2010). Each Galápagos species listed was cross referenced using the Fishbase website (Froese and Pauly 2019) to determine if their native range extended to the California coast. Species that were present in both locations were recorded, as well as their range in California (Southern, Central, and Northern). Existence of fisheries (and type of fishery), IUCN, federal and state protection status was determined from IUCN, US Fish and Wildlife Service and California Department of Fish and Wildlife websites. Regions within California were defined as

follows: Southern California, (U.S./Mexico border to Point Conception), Central California (from Point Conception to Pigeon Point), and Northern California, (Pigeon Point to the California/Oregon border).

Results

Of the 550 species of fish found in Galápagos, 100 are also found in California, and 77 of these 100 are the subject of a commercial and/or recreational fishery. These species belong to 52 families, of which the Scombridae (8 species) and Carangidae (7 species) had the most representatives. All 100 species are found in Southern California, but only 58 in Central California and 53 in Northern California. Only one species, *Rhincodon typus*, is fully protected from all forms of fishing by federal or state action in the U.S. However, according to the IUCN red list of threatened species, two are critically endangered, four are endangered, seven are vulnerable, and four are near-threatened. For the remaining species, 70 are of least concern, eight are data deficient, and five were not included in the IUCN list.

Table 1. List of fish species present in Galápagos and California. If the species is present in Southern, Central or Northern California, existence and type of fishery and IUCN status, and presence or absence of full protection from fishing via the State or Federal Government. Fishery types are described as follows: Small (artisanal fisheries), Large (Commercial), Subsistence, and Recreational. ICUN statuses are listed as follows: CR = Critically Endangered, EN = Endangered, VU = Vulnerable, NT = Near Threatened, LC = Least Concern, DD = Data deficient, NI = Not included in IUCN list.

Common Name	Family	Present up to	Fishery	IUCN
Oceanic whitetip shark	Carcharhinidae	Northern	Large, Recreational	CR
Scalloped hammerhead	Sphyrnidae	Northern	Large, Recreational	CR
Diamond stingray	Dasyatidae	Southern	None	DD
Whiptail stingray	Dasyatidae	Southern	Small	DD
Prickly shark	Echinorhinidae	Northern	Small	DD
Machete	Elopidae	Southern	Small, Recreational	DD
Black marlin	Istiophoridae	Northern	Large, Recreational	DD
Shortbill spearfish	Istiophoridae	Northern	Small, Recreational	DD
Longnose catshark	Pentanchidae	Central	Subsistence	DD
Broomtail grouper	Serranidae	Southern	Small, Recreational	DD
Pelagic thresher	Alopiidae	Southern	Recreational	EN
Shortfin mako	Lamnidae	Northern	Small, Recreational	EN
Chilean devil ray	Mobulidae	Northern	Subsistence	EN
Whale shark	Rhincodontidae	Northern	Large, Small, Subsistence	EN
Longsnouted lancetfish	Alepisauridae	Northern	None	LC
Spiny skate	Arhynchobatidae	Northern	None	LC
Finescale triggerfish	Balistidae	Southern	Large	LC
Redtail triggerfish	Balistidae	Southern	Large	LC
Oceanic pufferfish	Balistidae	Southern	Large, Recreational	LC
Californian needlefish	Belonidae	Southern	Small	LC
N/A	Bythitidae	Northern	None	LC
Purple brotula	Bythitidae	Southern	None	LC
Green jack	Carangidae	Central	Large	LC
Amberstripe scad	Carangidae	Northern	Large	LC
Pacific crevalle jack	Carangidae	Central	Large, Recreational	LC
Peruvian moonfish	Carangidae	Southern	Small	LC
Gafftopsail pomapno	Carangidae	Southern	Small, Recreational	LC
Yellowtail amberjack	Carangidae	Northern	Small, Subsistence, Recreational	LC
Scythedmarked butterflyfish	Chaetodontidae	Southern	Small	LC
Milkfish	Chanidae	Southern	Large, Small, Recreational	LC
South American pichard	Clupeidae	Northern	Large	LC
Deepwater conger	Congridae	Northern	None	LC
Common dolphinfish	Coryphaeidae	Northern	Large, Small, Recreational	LC

Common Name	Family	Present up to	Fishery	IUCN
Pompano dolphinfish	Coryphaeidae	Northern	Small, Recreational	LC
Hardtail conger	Crongridae	Southern	None	LC
Pelagic stingray	Dasyatidae	Northern	Small	LC
Slender suckerfish	Echeneidae	Northern	None	LC
Speafish ramora	Echeneidae	Northern	None	LC
Marlin sucker	Echeneidae	Southern	None	LC
Shark sucker	Echeneidae	Southern	None	LC
White suckerfish	Echeneidae	Southern	None	LC
Sharpchin flyingfish	Exocoetidae	Northern	Large	LC
Black wing flyingfish	Exocoetidae	Northern	Large	LC
Spotfin flyingfish	Exocoetidae	Northern	None	LC
Pacific cornetfish	Fistulariidae	Southern	Subsistence	LC
Snake mackerel	Gempylidae	Northern	Small	LC
Black snake mackerel	Gempylidae	Northern	Subsistence	LC
Graceful mojarra	Gerreidae	Southern	Small	LC
Longfin halfbeak	Hemiramphidae	Southern	Large	LC
Pacific silverstripe halfbeak	Hemiramphidae	Southern	None	LC
Indo-Pacific swordfish	Istiophoridae	Northern	Large, Recreational	LC
Yellow snapper	Lutjanidae	Southern	Large, Small	LC
Luvar	Luvaridae	Northern	Small	LC
Abyssal grenadier	Macrouridae	Northern	None	LC
Ocean whitefish	Malacanthidae	Central	Large, Recreational	LC
Slender sunfish	Molidae	Northern	None	LC
Shaprtail mola	Molidae	Northern	Subsistence	LC
Flathead grey mullet	Mugilidae	Northern	Large, Small, Subsistence, Recreational	LC
Mexican goatfish	Mullidae	Southern	Small	LC
N/A	Ogcocephalidae	Northern	None	LC
N/A	Ophidiidae	Northern	None	LC
N/A	Ophidiidae	Northern	None	LC
Longfin bullseye	Priacanthidae	Central	Large	LC
Popeye catalufa	Priacanthidae	Southern	None	LC
Wahoo	Scombridae	Northern	Large, Recreational	LC
Frigate tuna	Scombridae	Northern	Large, Recreational	LC
Skipjack tuna	Scombridae	Northern	Large, Recreational	LC
Black skipjack	Scombridae	Southern	Small, Recreational	LC
Pacific sierra	Scombridae	Southern	Small, Recreational	LC
N/A	Scorpaenidae	Southern	None	LC
N/A	Scorpaenidae	Southern	Subsistence, Recreational	LC
Rainbowbass	Serranide	Southern	None	LC
Threadfin base	Serranide	Southern	None	LC

Common Name	Family	Present up to	Fishery	IUCN
Spotted grouper	Serranide	Southern	Small, Recreational	LC
Star studded grouper	Serranide	Southern	Subsistence	LC
Midwater scorpionfish	Setarchidae	Northern	Small	LC
Pacific porgy	Sparidae	Southern	Large	LC
Bonnethead	Sphyrnidae	Southern	Large, Recreational	LC
Longspined porcupinefish	Tetraodontidae	Southern	Small	LC
Scalloped ribbonfish	Trachiperidae	Northern	None	LC
Lumptail searobin	Triglidae	Southern	Small, Recreational	LC
Smooth stargazer	Uranoscopidae	Southern	Small	LC
Swordfish	Xiphiidae	Northern	Large, Recreational	LC
Paloma pompano	Carangidae	Southern	Small	LC
Ribbon halfbeak	Hemiramphidae	Southern	Small	NI
Striped marlin	Istiophoridae	Northern	Large, Recreational	NI
California grenadier	Macrouridae	Northern	None	NI
Roosterfish	Nematistiidae	Southern	Small, Recreational	NI
Dogface witch eel	Nettastomatidae	Northern	None	NI
Tiger shark	Carcharhinidae	Southern	Large, Recreational	NT
Blue shark	Carcharhinidae	Northern	Large, Small, Recreational	NT
Albacore	Scombridae	Northern	Large, Recreational	NT
Yellowfin tuna	Scombridae	Northern	Large, Recreational	NT
Bigeye thresher	Alopiidae	Northern	Recreational	VU
Silky shark	Carcharhinidae	Northern	Large	VU
Sandbar shark	Carcharhinidae	Northern	Large, Recreational	VU
Oceansunfish	Molidae	Northern	Small	VU
Smalltooth sand tiger	Odontaspidae	Northern	Large	VU
Bigeye tuna	Scombridae	Northern	Large, Recreational	VU
Smooth hammerhead	Sphyrnidae	Northern	Large, Recreational	VU

References

- Froese, R., and D. Pauly. 2019. FishBase. World Wide Web electronic publication. Accessed on 7/10/2019
- McCosker, J. E., and R. H. Rosenblatt. 2010. The Fishes of the Galápagos Archipelago: An Update. *Proceedings of the California Academy of Sciences* 61(11):167–195.

Websites

- Fishbase: www.fishbase.se
- IUCN: www.iucnredlist.org
- USFW: <https://ecos.fws.gov/ecp/listedSpecies/speciesListingsByTaxGroupPage?statusCategory=Listed&groupName=Vertebrate%20Animals&total=400>
- CDFW: <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109405&inline>