

FISHES OF MALIBU LAGOON

Species observed in 2005 seine survey

- Tidewater goby - *Eucyclogobius newberryi*
- Mosquitofish - *Gambusia affinis*
- California killifish - *Fundulus parvipinnis*
- Smelt - *Atherinops* sp.
- Opaleye - *Girella nigricans*
- Longjaw mudsucker - *Gillichthys mirabilis*
- Carp - *Cyprinus carpio*

Marine/estuarine species documented in Malibu Lagoon include:

- California killifish (*Fundulus parvipinnis*)
- Pipefish (*Syngnathus* sp.)
- Striped mullet (*Mugil cephalus*)
- Staghorn sculpin (*Leptocottus armatus*)
- Long jaw mudsucker (*Gillichthys mirabilis*)
- Arrow goby (*Clevelandia ios*)
- Starry flounder (*Plaichthys stellatus*)
- California halibut (*Paralichthys californicus*)
- Diamond turbot (*Hypsopsetta guttulata*)
- Spotted turbot (*Pleuronichthys ritteri*)
- Shiner perch (*Cymatogaster aggregata*)
- Dwarf perch (*Micrometrus minimus*)
- Northern anchovy (*Engravilis mordax*)
- Striped kelpfish (*Gibbonsia metzi*)
- Crevice kelpfish (*Gibbonsia montereyensis*)
- Opaleye (*Girella nigricans*)
- Queenfish (*Seriphus politus*)
- Jacksmelt (*Atherinops californiensis*)
- Topsmelt (*Atherinops affinis*)
- Grunion (*Leuresthes tenuis*)
- Barred sand bass (*Paralabrax nebulifer*)
- Serranid juveniles (*Paralabrax* sp.)
- Bay blenny (*Hypsoblennius gentiles*)

Sensitive species known from Malibu Lagoon, either historically or presently as of June 2005:

- Tidewater goby (*Eucyclogobius newberryi*) – disappeared from lagoon in 1955 and were absent until their re-introduction into the lagoon in 1991
- Steelhead trout (*Oncorhynchus mykiss*)
- Arroyo chub (*Gila orcutti*)
- Coho or silver salmon (*Oncorhynchus kisutch*)
- Pacific lamprey (*Entospenus tridentatus*)

Introduced freshwater species include:

- Green sunfish (*Lepomis cyanellus*)
- Bluegill (*Lepomis macrochirus*)
- Largemouth bass (*Micropterus salmoides*)
- Mosquitofish (*Gambusia affinis*)
- Black bullhead (*Ictalurus melas*)
- Carp (*Cyprinus carpio*)

Tidewater Goby

Eucyclogobius newberryi

Animalia, Chordata, Actinopterygii, Perciformes, Gobiidae

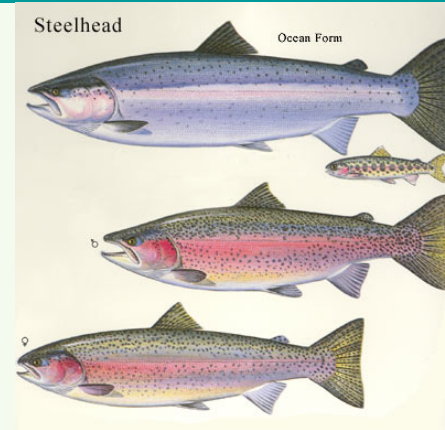


- Listed as Federally Endangered as of 1994
- Distribution: CA coast
- Habitat preferences:
 - Cool (16-25°C)
 - Brackish (<10 up to 40 ppt)
 - Shallow
 - Emergent vegetation
- Home range: ≤ 12 km (juv.)
- Predators: fish, birds
- Prey: opportunistic
 - Aquatic insects
 - Small crustaceans
- Life History
 - Life span: ≈ 1 year
 - Max. size: 50 mm SL
 - Time of spawning: year round, more frequent April to November
 - Fecundity: 15 - 1,100 eggs per spawn (up to 12 spawning events/year)
 - Planktonic larval stage
 - Settlement size: 16 - 18 mm SL
 - Egg-layers

Steelhead Trout

Oncorhynchus mykiss

Animalia, Chordata, Actinopterygii, Salmoniformes, Salmonidae



- Listed as Federally Endangered as of 1998
- Distribution:
- Habitat preferences:
 - Cool, clean, oxygenated water
 - Gravel-bottom (spawning)
 - Large rocks & boulders (shelter)
 - Emergent vegetation (cover)
 - Riffles and pools
 - Open passage to ocean
- Migratory
- Predators: fish, birds
- Prey: opportunistic
 - Aquatic insects
 - Small crustaceans
- Life History
 - Max. age: 11 years
 - Max. size: 120 cm TL
 - Age of maturation:
 - Males: 2 years
 - Females: 3 years
 - Time of spawning: Spring
 - Egg-layers



Arroyo Chub

Gila orcutti

Animalia, Chordata, Actinopterygii, Cypriniformes, Cyprinidae



- Species of special concern/threatened
- Distribution: Southern California
 - Introduced north and east to Chorro Creek (San Luis Obispo County) and Mojave River
- Habitat preferences:
 - Freshwater
 - Sandy & muddy bottoms creeks & small-medium rivers
 - Intermittent streams
- Predators: fish, birds
- Prey: omnivores
 - Aquatic insects
 - Small crustaceans
 - Algae
- Life History
 - Max. age: 4 years
 - Max. size: 12 cm TL
 - Age of maturation: 1 year
 - Time of breeding: Spring
 - Egg-layers



Mosquitofish

Gambusia affinis



Animalia, Chordata, Actinopterygii, Cyprinodontiformes, Poeciliidae

- Invasive to Malibu Creek
- Native to the Gulf of Mexico
 - Introduced to tropical and temperate countries as a **biocontrol**
- Habitat preferences:
 - Can survive:
 - Very low oxygen
 - High salinities
 - High temperatures
- Predators: fish, birds
- Prey:
 - Aquatic larval and pupal stages of mosquitoes
- Life History
 - Max. age: 3 years
 - Max. size (sexual dimorphism):
 - Females - 7 cm
 - Males - 4 cm
 - Age of maturation:
 - Females: 6-8 weeks
 - Time of breeding: Spring
 - Live-bearers
 - Fecundity:
 - 12 - 100 offspring per brood
 - Up to 4 broods per season

California killifish

Fundulus parvipinnis

Animalia, Chordata, Actinopterygii, Cyprinodontiformes, Fundulidae



Fun Facts:

- Benthic egg-layers
- Brackish/Marine
 - Common in bays and estuaries
- Distribution: Morro Bay, CA to Baja California, MEX
- Max. Length: 10.8 cm TL
- Max. Age: 3 years



Smelts

Atherinops sp.

Animalia, Chordata, Actinopterygii, Atheriniformes, Atherinopsidae

Topsmelt - *Atherinops affinis*

Jacksmelt - *Atherinopsis californiensis*

Grunion - *Leuresthes tenuis*

Fun Facts (smelts):

- Demersal egg-layers
- Brackish/Marine
 - Common in bays and estuaries
- Distribution: Eastern Pacific

School of
topsmelt
with señorita
(cleaning)



Topsmelt



Jacksmelt

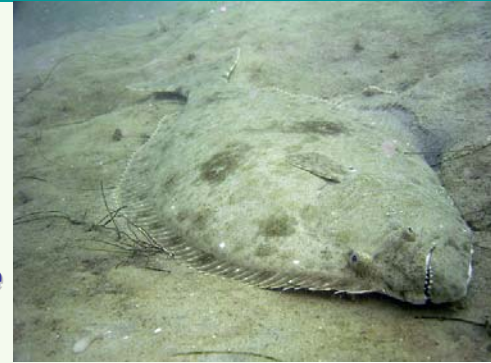


Grunion spawning

California halibut

Paralichthys californicus

Animalia, Chordata, Actinopterygii, Pleuronectiformes, Paralichthyidae



Fun Facts:

- Spawn in shallow waters
- Brackish/Marine
 - Common in bays and estuaries
 - Use them as nursery grounds
- Distribution: northern WA to southern Baja California, MEX & in northern Gulf of California
- Depth range: 0 - 183 meters!
- Max. Length: 152 cm TL
- Max. Weight: 33 kg
- Max. Age: 30 years
- Feeds during the day on fishes (anchovies) and squids
- Important sport and commercial fish

