



STARRY FLOUNDER (*Platichthys stellatus*)



Starry Flounder are flatfish that are in the family called “right-eyed flounders” (Pleuronectidae), but this species can be either right-eyed or left-eyed. The eyed side is typically dark colored and the blind side is white to creamy white. Starry Flounder, like most flatfish, can change the colored side of their body to blend in with their background. When it isn’t blending into the background, the Starry Flounder is generally olive to dark brownish or even black. The dorsal and anal fins as well as its tail have a series of alternating dark and light bars with the light bars varying in color from white to orange. The tail is squared off or fan shaped. Scales are very rough to the touch on the eyed side.

OVERVIEW

- **Oregon Conservation Strategy Species**
- **Size:** Up to 37 inches long
- **Weight:** Up to about 20 pounds
- **Lifespan:** Up to at least 42 years
- **Key Strategy Habitats:** Nearshore, Estuaries
- **Similar Species:** Flatfish species somewhat similar in appearance to the Starry Flounder found off Oregon include Butter Sole, Rock Sole, English Sole, Flathead Sole, Pacific Halibut, Petrale Sole, Rex Sole, Sand Sole.

FISHING TIPS

- Start in the morning.
- Target sandy or muddy areas.
- Drop your hook to the bottom.
- A variety of lures and bait work well, small hooks are best.
- Remember to check the fishing regulations for the area before you go and be sure you have your fishing license.

FUN FACTS

Favorite Food: Worms and small clams

- Starry Flounder can tolerate fresh water and temperatures down to 29° F.
- Females grow larger than males.
- Although Starry Flounder are members of the “right-eyed flounder” family of fish, but approximately 50-60% are left-eyed individuals along the US west coast.
- Starry Flounder can “crawl” along the bottom either forward or backward by moving their fins in wave-like motions and camouflage themselves by changing the pigment concentrations in their skin to blend in with the bottom sediment.
- Young Starry Flounder have been found 75 miles up the Columbia River.
- Starry Flounder were an important food source for many native peoples.



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RANGE AND DISTRIBUTION

In Oregon: Starry Flounder can be found throughout the state's marine waters and in estuaries. Young of the year and a few older fish are sometimes found further upstream in the freshwater portions of some rivers.

Everywhere Else: Starry Flounder range from Korea up into Arctic waters off the northern coasts of Russia, Alaska, and Canada, and along the Pacific coast of North America down to southern California. They are more common in the Pacific Ocean and Bering Sea than in the Arctic.

LIFE HISTORY AND ECOLOGY

Starry Flounder spawn mostly from November through February in California, but later in the year further north. For example, in the Arctic waters of Beaufort Sea north of Alaska spawning occurs in June and July. Fertilized eggs and larval fish are planktonic. Hatching occurs in just under 3 days at 55° F and almost 5 days at 51° F. Larval fish hatch with an eye on each side of their head. One eye starts to migrate to the other side of the head around 24 days after hatching. Even though Starry Flounder are member of the right-eyed flounder family of fish, almost all of them are left-eyed in Japan and as many as 50-60% are left-eyed in the waters off the continental U.S. Larval fish settle to the bottom often in estuaries after about 2-3 months as plankton. By 1 year of age they are about 4.3 inches long and still mostly found in estuaries, but by the time they are 2 years old many Starry Flounder have moved into ocean habitats not far from the estuary. Males reach maturity at about 2 years and females at about 3 years when they are about 11 to 13.8 inches long, respectively. Adult Starry Flounder are generally found in waters less that about 260 feet but have been found at depths over 1,150 feet off the US west coast. They appear to move seasonally into shallower waters to spawn, possibly near estuaries, but other than these seasonal movements they appear mostly to stay put and move little during their adult lives.

Known predators of Starry Flounder include birds, marine mammals, and sharks. Humans are also predators of Starry Flounder. They have been food for coastal Native Americans for centuries. Starry Flounder are also caught by both commercial and recreational fisheries.

DIET AND FORAGING

Larval Starry Flounder eat plankton. Their diet changes as they metamorphose and settle to the bottom and grow. Once the settle to the bottom Starry Flounder forage mainly on worms and small clams found in the gravelly, muddy or sandy bottom habitat in which they live They also eat crabs, shrimp, clam siphons, and brittle stars. Large Starry Flounder occasionally eat small fish.



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HABITAT CHARACTERISTICS

Starry Flounder eggs and larvae live in the water column in marine waters then settle to the bottom often in estuaries. The bottom types utilized by Starry Flounder are mud, sand, and gravel both in estuaries and when they move to the ocean. Starry Flounder can live in waters that range from freshwater to typical ocean salinity.

CONSERVATION AND MANAGEMENT

Threats: Their nearshore lifestyle and extensive use of estuaries puts Starry Flounder in habitats that can be heavily influenced by human activities. Exposure to toxic chemicals.

Conservation and management: Starry Flounder are included in the federal Pacific Coast Groundfish Fishery Management Plan administered by the Pacific Fishery Management Council (PFMC). The Oregon Department of Fish and Wildlife works in concert with PFMC and manages fisheries within state waters. The PFMC conducts stock assessments to ensure that fisheries for this species are sustainably managed.

REFERENCES

- Love, M. S. 2011. Certainly more than you want to know about the fishes of the Pacific Coast. A postmodern experience. Really Big Press, Santa Barbary, CA.
- Orcutt, H. G. 1950. The life history of the Starry Flounder *Platichthys stellatus* (Pallas). Fish Bulletin No. 78, California Department of Fish and Game. <https://escholarship.org/uc/item/3c74b3bj>
- Ralston, S. 2005. An assessment of Starry Flounder off California, Oregon, and Washington. <https://www.pcouncil.org/documents/2005/11/an-assessment-of-starry-flounder-off-california-oregon-and-washington-2005.pdf/>
- Tushingham, S. and C. Christiansen, 2015. Native American fisheries of the northwestern California and southwestern Oregon Coast: A synthesis of fish-bone data and implications for Late Holocene storage and socio-economic organization. Journal of California and Great Basin Anthropology 35(2):189-215
- <https://www.pcouncil.org/groundfish/safe-documents/>
- <https://www.pcouncil.org/groundfish/stock-assessments/>
- <https://www.pcouncil.org/groundfish/fishery-management-plan/>
- https://www.dfw.state.or.us/MRP/finfish/groundfish_sport/index.asp
- <https://www.dfw.state.or.us/MRP/finfish/sp/flatfish.asp>