

# Marine Life in Whatcom County

## 🐟 Fish Series 🐟

### Flounder and sole

#### Description:

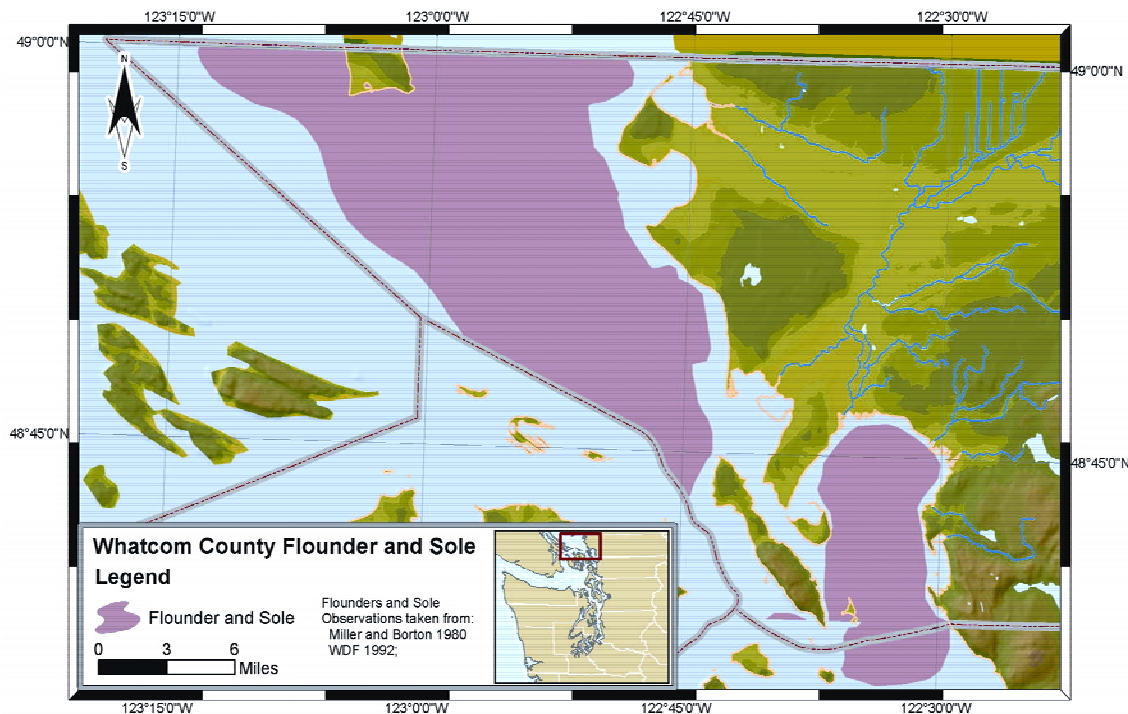
Starry flounder (*Platichthys stellatus*), English sole (*Parophrys vetulus*), and Dover sole (*Microstomus pacificus*) are flattened demersal (bottom dwelling) fish. Young flatfish look like other fish until one of their eyes migrates to the other side of their body and they begin swimming on their sides near the bottom with their eyeless side down. Flatfish vary greatly in color but their "blind" side is pale and without scales.



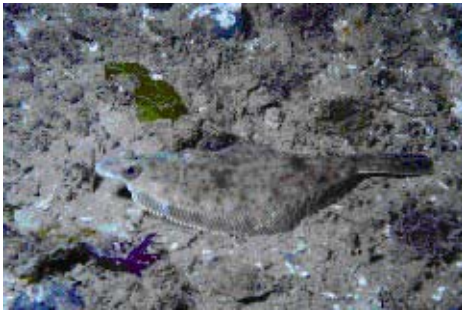
Starry flounder / Wayne Palsson, WDFW

#### Distribution:

Flounder and sole are found from the Bering Sea to southern California in sandy or muddy substrate. Juveniles are found in shallow water near rivers and in estuaries in eelgrass beds. Adults generally are found in deeper waters in the winter and migrate to shallower water in the spring. In Whatcom County waters, surveys show wide distribution of English sole in north county waters with overlapping distribution of starry flounder and Dover, rock, and sand soles.



This Whatcom County map shows areas where flounder and sole have been found. This map is based on data compiled by Miller and Borton, *Geographical distribution of Puget Sound fishes* (1980), and Washington Department of Fisheries, *Technical Report 79* (1992). The map was created by People For Puget Sound.



English sole / Wayne Palsson, WDFW

**Reproduction:**

Spawning takes place in shallow water from winter to early spring, with females releasing up to a million eggs that float near the surface and are carried along by currents.

**Ecology:**

Adult flatfish are carnivorous, feeding on worms, clams, shrimps and other small bottom-dwelling organisms. Juvenile flatfish are found in shallow bays and estuaries and are preyed upon by herons, gulls, otters, and other fish. These fish are dependent on clean habitats in shallow bays and estuaries when growing up. In contaminated habitats, high levels of toxic chemicals accumulate in their tissues, and they develop disease, tumors, and reduced reproductive success.

**Economic Value:**

Flatfish have been harvested by native tribes for subsistence and cultural purposes and are harvested commercially in Whatcom waters by trawling. The commercial catch of starry flounder in Bellingham Bay and the Strait of Georgia has declined from an annual catch of over half a million pounds in 1988 and 1992 to 80,000 pounds in 2001. Commercial harvest of sole species in the Strait of Georgia has averaged about half a million pounds annually since 1983 and has increased to over 900,000 pounds in 2001. Some flatfish, such as rock sole which inhabit shallow waters and take bait readily are caught on hook and line by sport fishers, sometimes inadvertently when fishing for salmon.

**Current Status**

- Populations of Strait of Georgia and San Juan Islands flatfish like English sole, rock sole, starry flounder, sand sole, and Pacific halibut are estimated to be in above average condition when compared to historic abundance by state fisheries managers.
- The population of Dover sole, however, is in critically depressed condition and could be as low as 25% of historic abundance.
- Toxic chemical contamination in shallow bays and estuaries where flatfish live, spawn and grow accumulate in their tissues, impair growth, resistance to disease and reproductive capability. Disrupting eelgrass and kelp beds in bays and inlets where young fish find shelter and grow takes away important nursery areas.

**Sources:**

*Status of Puget Sound Bottomfish Stocks (1995),* Washington Department of Fish & Wildlife

*Marine Wildlife of Puget Sound, the San Juans, and the Strait of Georgia,* Steve Yates

*2002 Puget Sound Update,* Puget Sound Ambient Monitoring Program

*Marine Resources of Whatcom County,* Anchor Environmental

**For more information:**

Whatcom County Marine Resources Committee  
(360) 676-6876  
<http://whatcom-mrc.wsu.edu/MRC/index.htm>



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