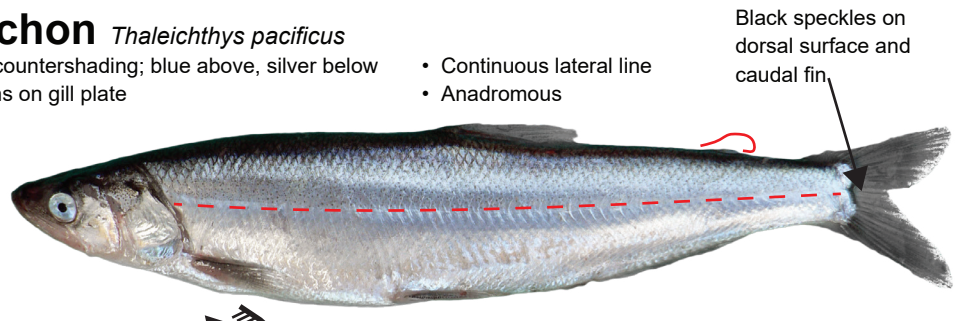
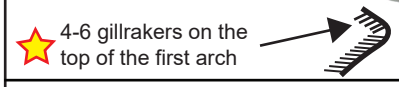
Smelts have adipose fins

Osmeridae

Eulachon *Thaleichthys pacificus*

- Strong countershading; blue above, silver below
- Striations on gill plate
- Continuous lateral line
- Anadromous





Also known as Candlefish and Hooligan. Mistakenly called Nightsmelt.

Whitebait Smelt *Allosmerus elongatus*

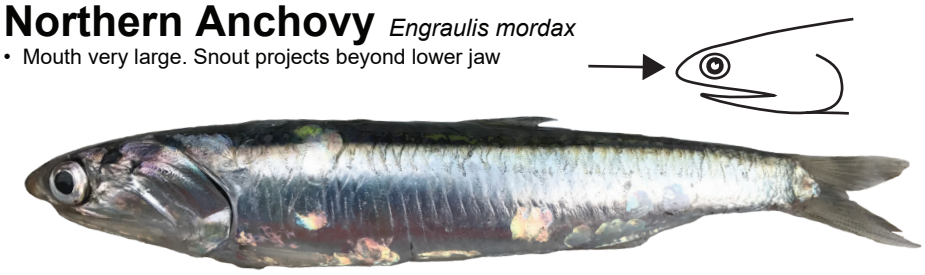
- 10-13 gillrakers on the top of the first arch
- Strong countershading, clear/white on top, silver below

Species below (anchovy and herring) lack adipose fins

Engraulidae

Northern Anchovy *Engraulis mordax*

- Mouth very large. Snout projects beyond lower jaw

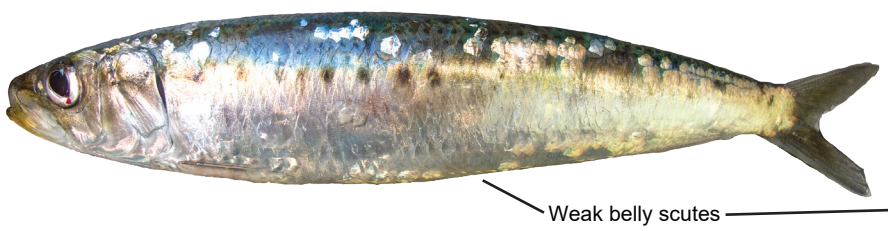


Clupeidae

Herring species have unique scales on the keel of their belly called scutes

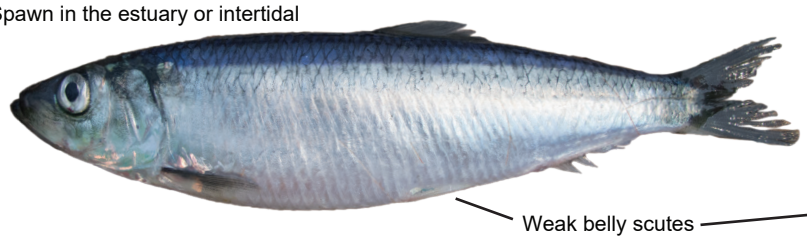
Pacific Sardine *Sardinops sagax*

- Row of 9-10 dark spots on side
- Striations on gill plate



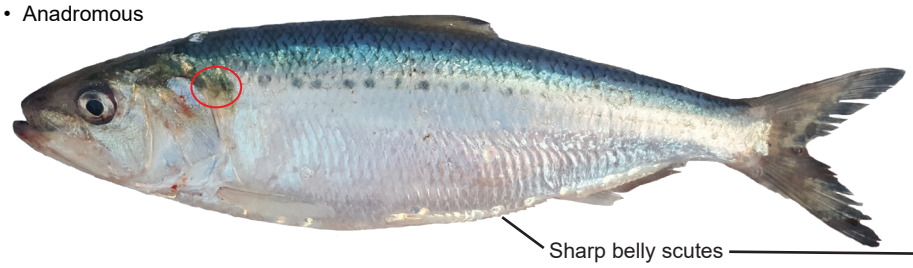
Pacific Herring *Clupea pallasii*

- Lacks spots along side of body
- Very large mouth
- Spawn in the estuary or intertidal



American Shad *Alosa sapidissima*

- Sometimes has black spots
- Dark spot behind operculum
- Anadromous



Introduced to Pacific coast rivers in 1871

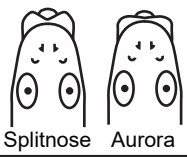
Darkblotched Rockfish *Sebastes crameri*

- 5 vertical black bars along whole body extend below lateral line
- Most commonly bycaught rockfish

Splitnose Rockfish *Sebastes diploproa*

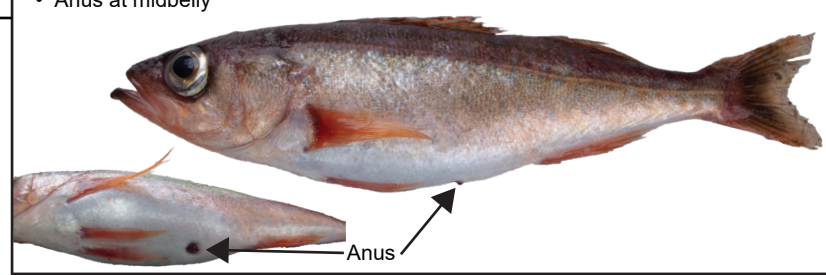
- Upper lip prominently split
- 32-37 gillrakers on first arch
- Peritoneum (stomach lining) black

Aurora Rockfish 24-28 rakers on 1st arch. Inside of mouth red



Shortbelly Rockfish *Sebastes jordani*

- Slender; cigar-shaped fish
- Anus at midbelly



Greenstriped Rockfish *Sebastes elongatus*

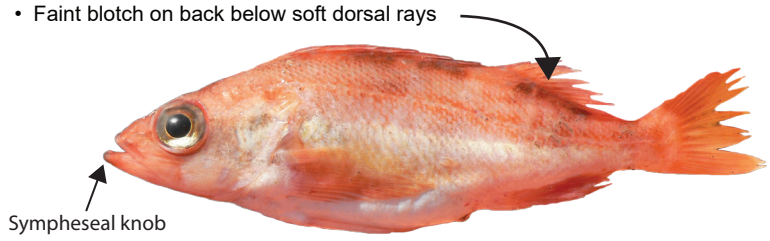
- Horizontal 4-5 green stripes

Stripetail Rockfish *Sebastes saxicola*

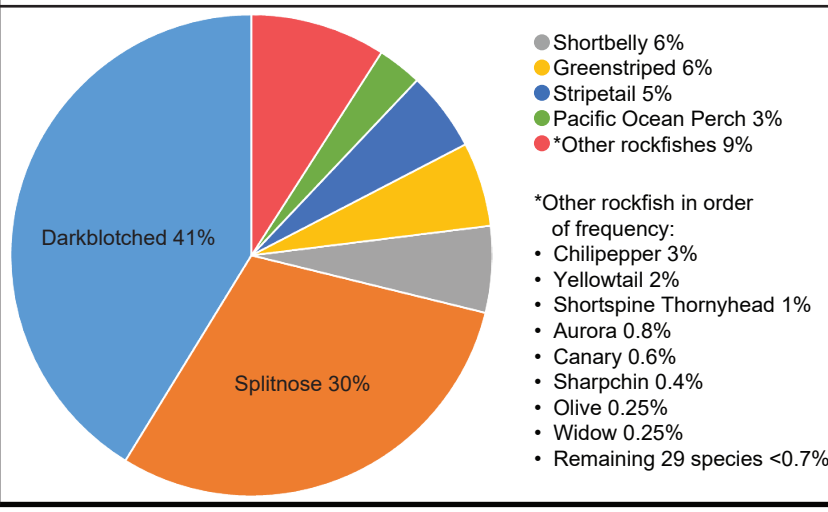
- Stripes on caudal fin (often faint)
- Faint, dark blotches on back

Pacific Ocean Perch *Sebastes alutus*

- Strong sympheseal knob, large lower jaw
- Faint blotch on back below soft dorsal rays



Rockfish bycatch frequency



*Other rockfish in order of frequency:

- Chilipepper 3%
- Yellowtail 2%
- Shortspine Thornyhead 1%
- Aurora 0.8%
- Canary 0.6%
- Sharpchin 0.4%
- Olive 0.25%
- Widow 0.25%
- Remaining 29 species <0.7%

The National Oceanic and Atmospheric Administration (NOAA) administers Section 6 grants to assist states in conservation of Endangered Species Act (ESA) listed species. This project made possible by a Section 6 Grant (NA18NMF4720098), for the direct conservation of Eulachon.

Fish identification is difficult, but critical to the management of fisheries. Flatfishes (reverse side), forage fishes (left) and juvenile rockfishes (right) often have subtle differences, which can only be detected with skill and experience. This identification sheet was developed by shrimp biologists (and former fishery observers) for use by fishery observers and fishermen, to aide in the identification of bycatch occurring in pink shrimp fisheries along the US West Coast. The species shown here are the most likely encountered, however many others are seen. Observer data (2004-2016) was used to identify the most appropriate species to highlight here, and we thank NOAA's West Coast Groundfish Observer Program and the biologists who collected these data.

Design and photographs by Mo Bancroft & Scott Groth (printed 2019)