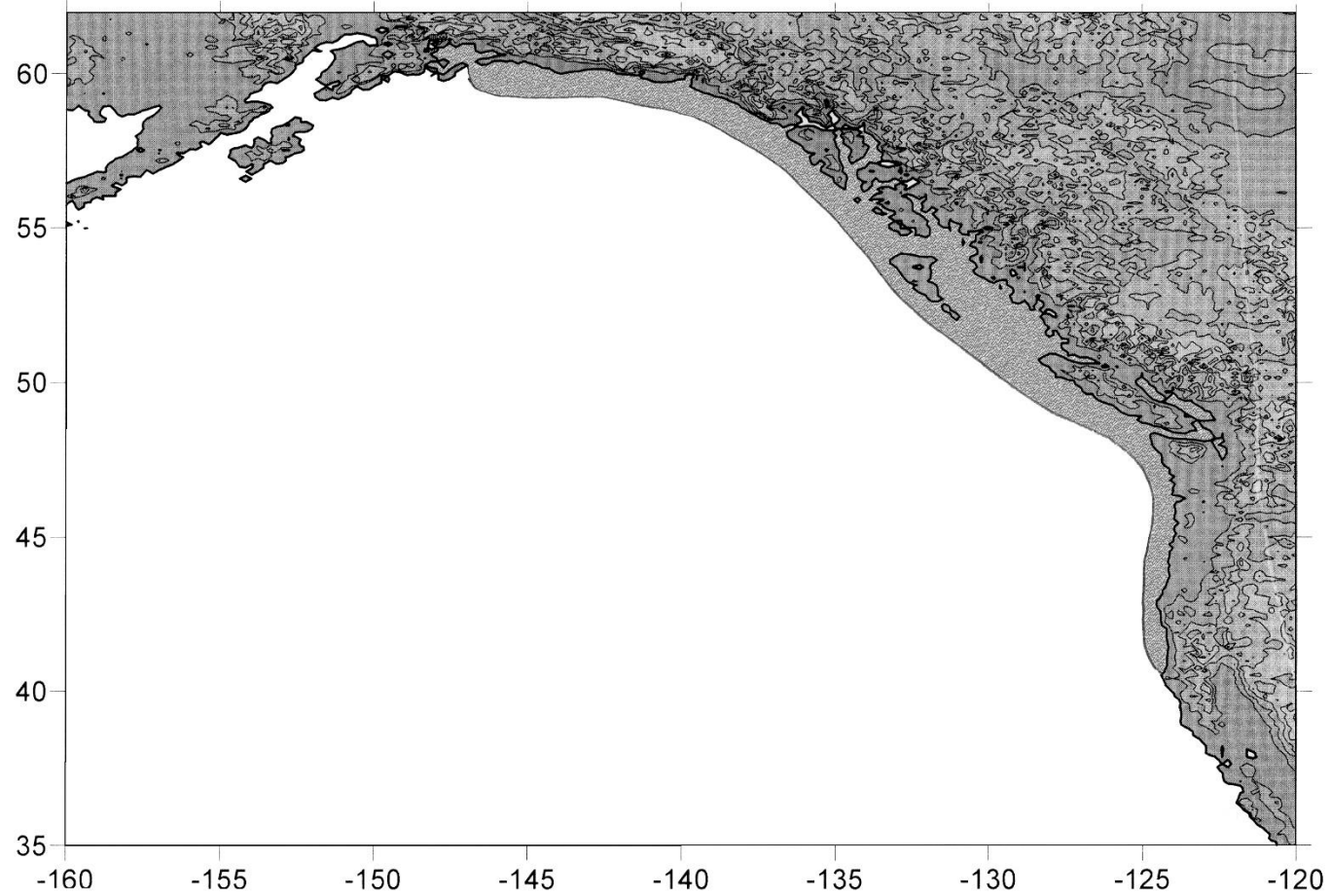
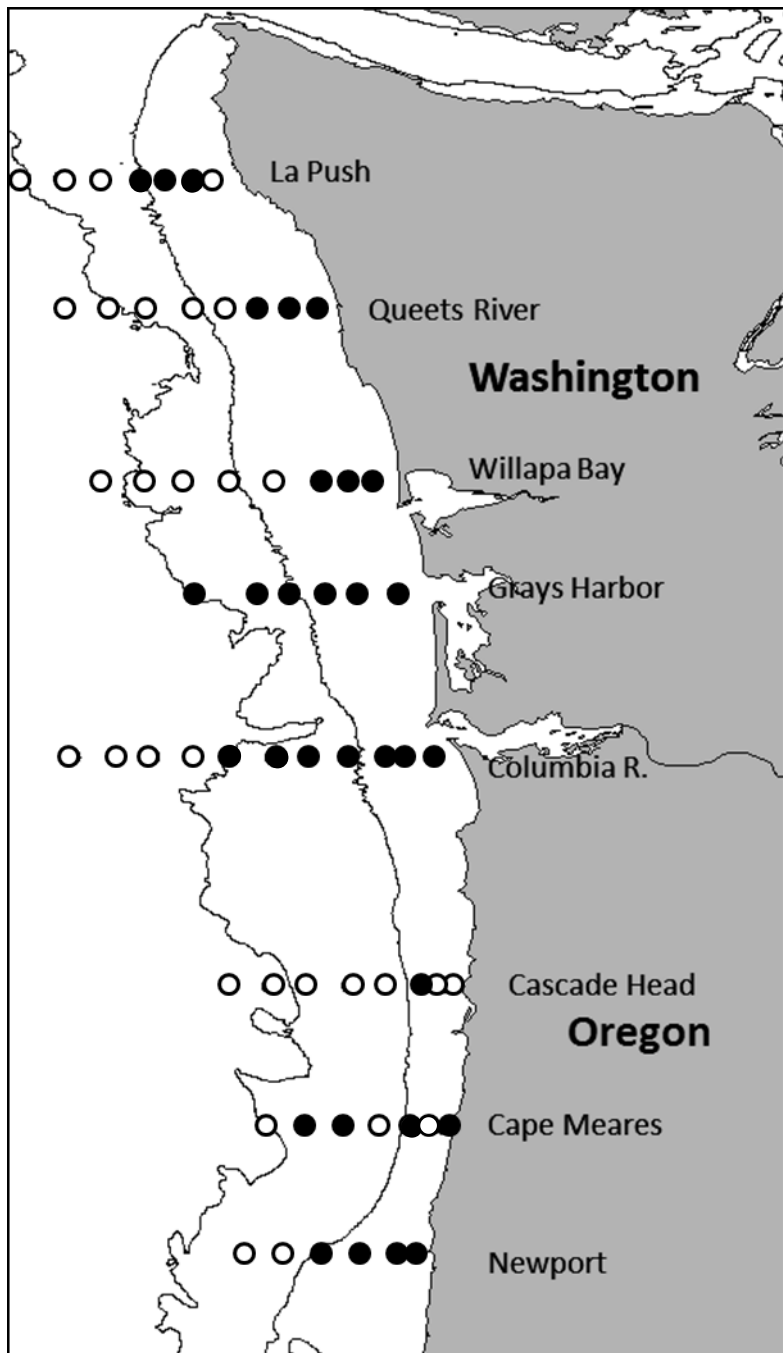


Geographic range of coastal rivers supporting populations of anadromous Cutthroat Trout from the Eel River, California to Prince William Sound, Alaska.





Station locations where purse seine and trawls hauls were made (open circles) and where they were caught (closed circles) along eight transect lines off Washington and Oregon.







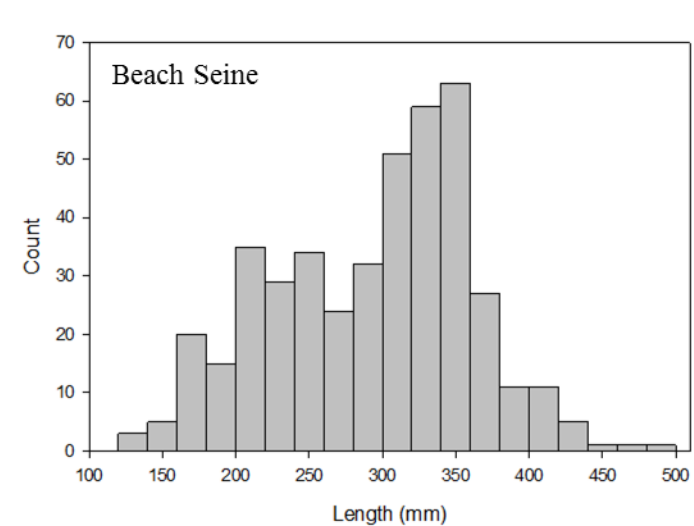
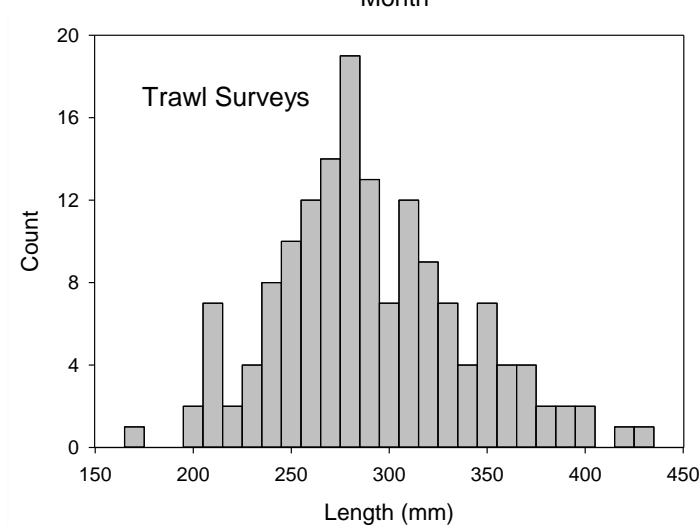
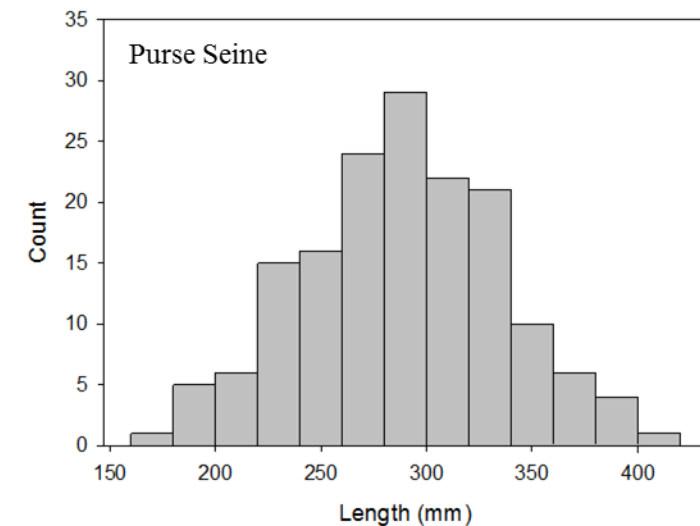
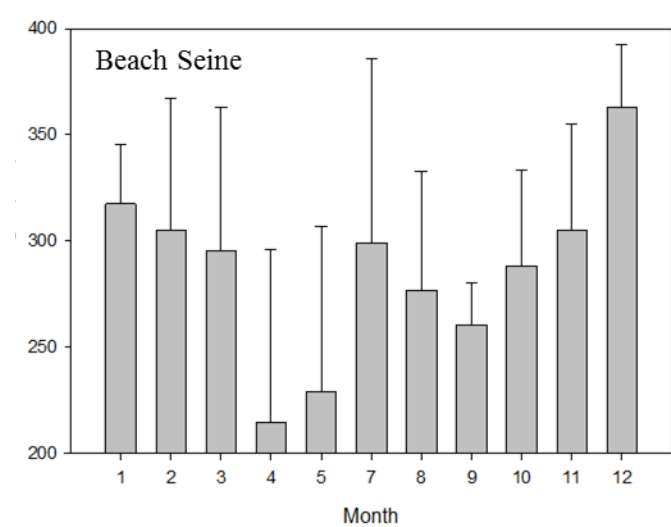
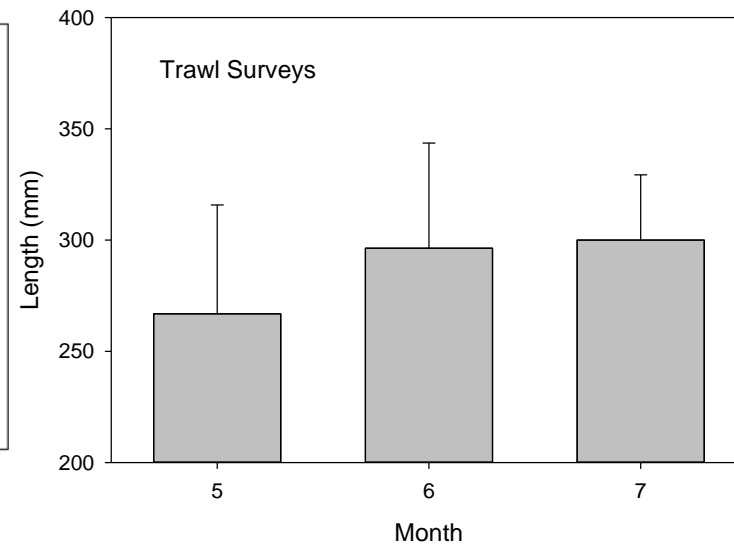
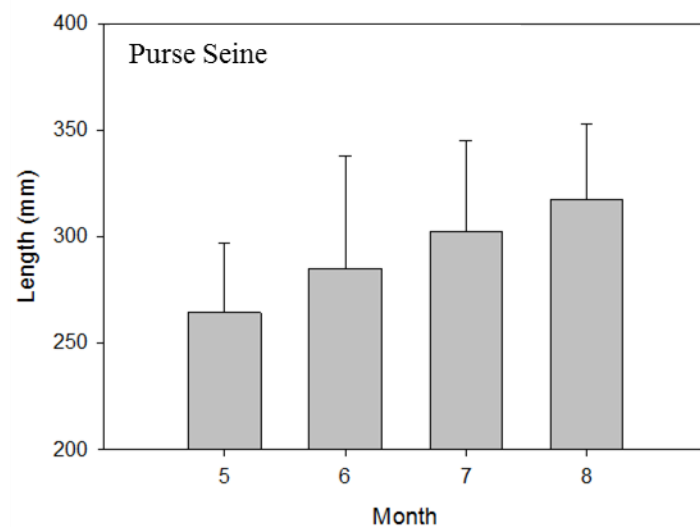
Pacific Drone





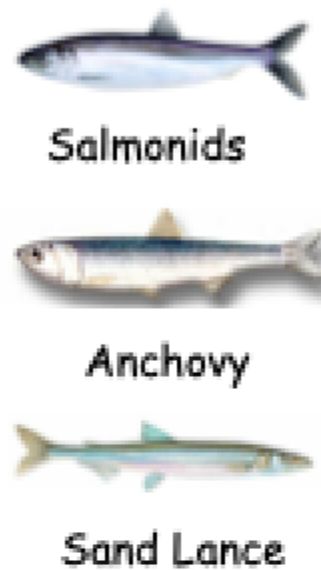
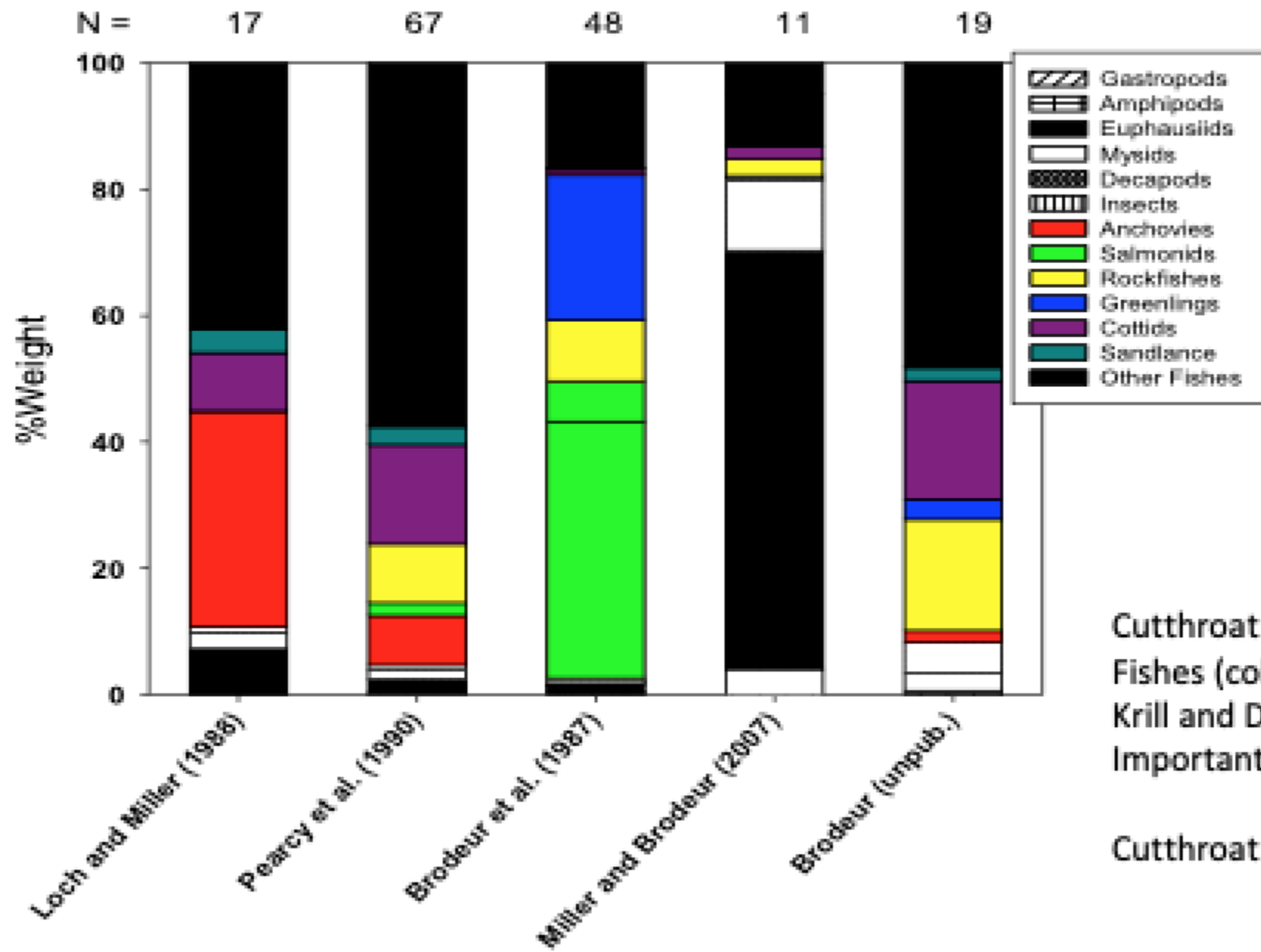






Purse seine, midwater trawl and beach seine catches of Cutthroat Trout by months (upper panel), and fork lengths composite length frequencies caught during spring and summer purse seine surveys (left: 1981–1985) and trawl surveys (right: 1998–2011) off the west coast of Washington and Oregon, and beach seine sampling in the Columbia River estuary in the fall.

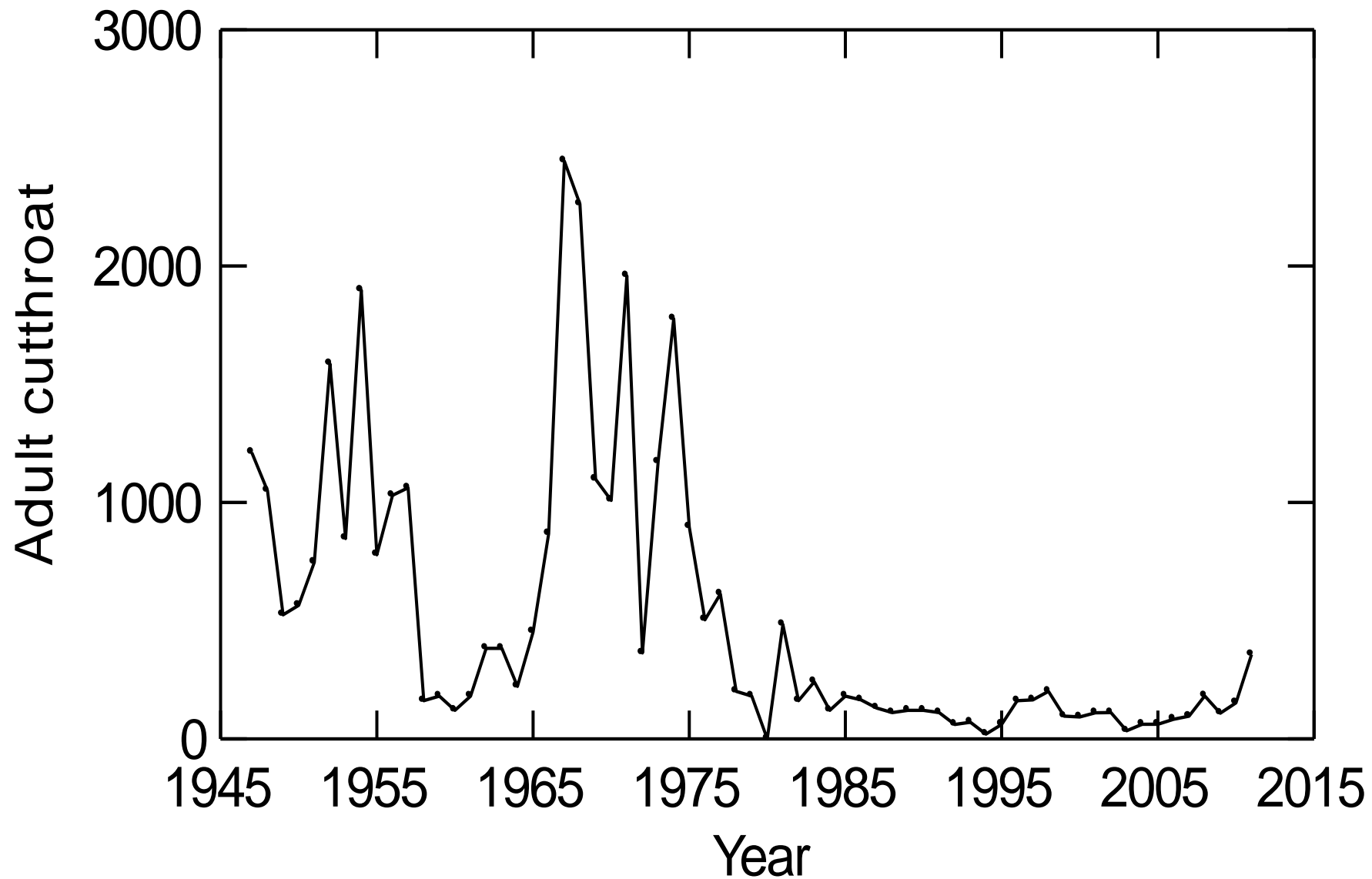
Cutthroat Diet Studies off Oregon and Washington



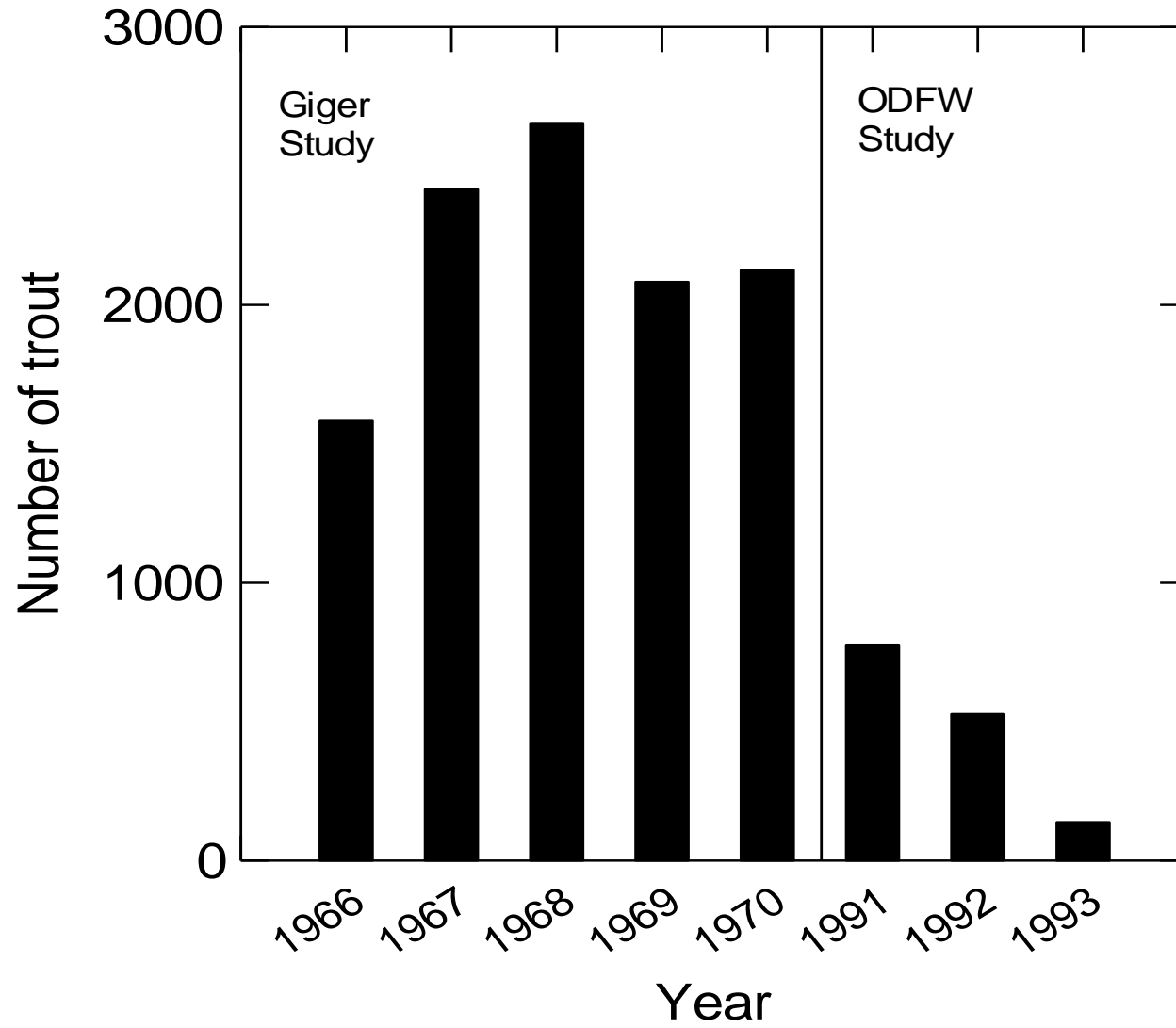
Cutthroat consume mostly Fishes (colored bars) but Krill and Decapods also Important in some studies

Cutthroat eat other salmon!



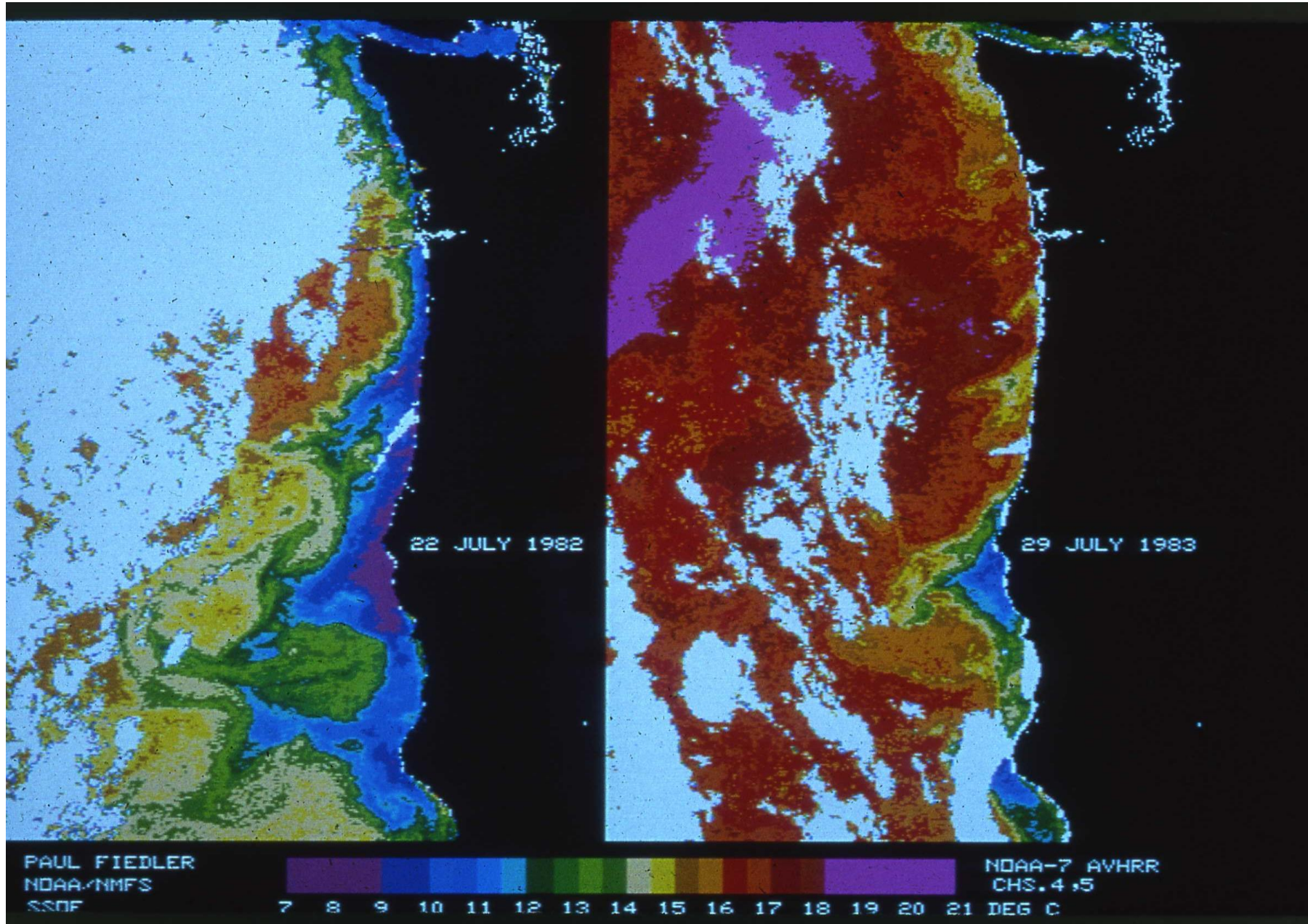


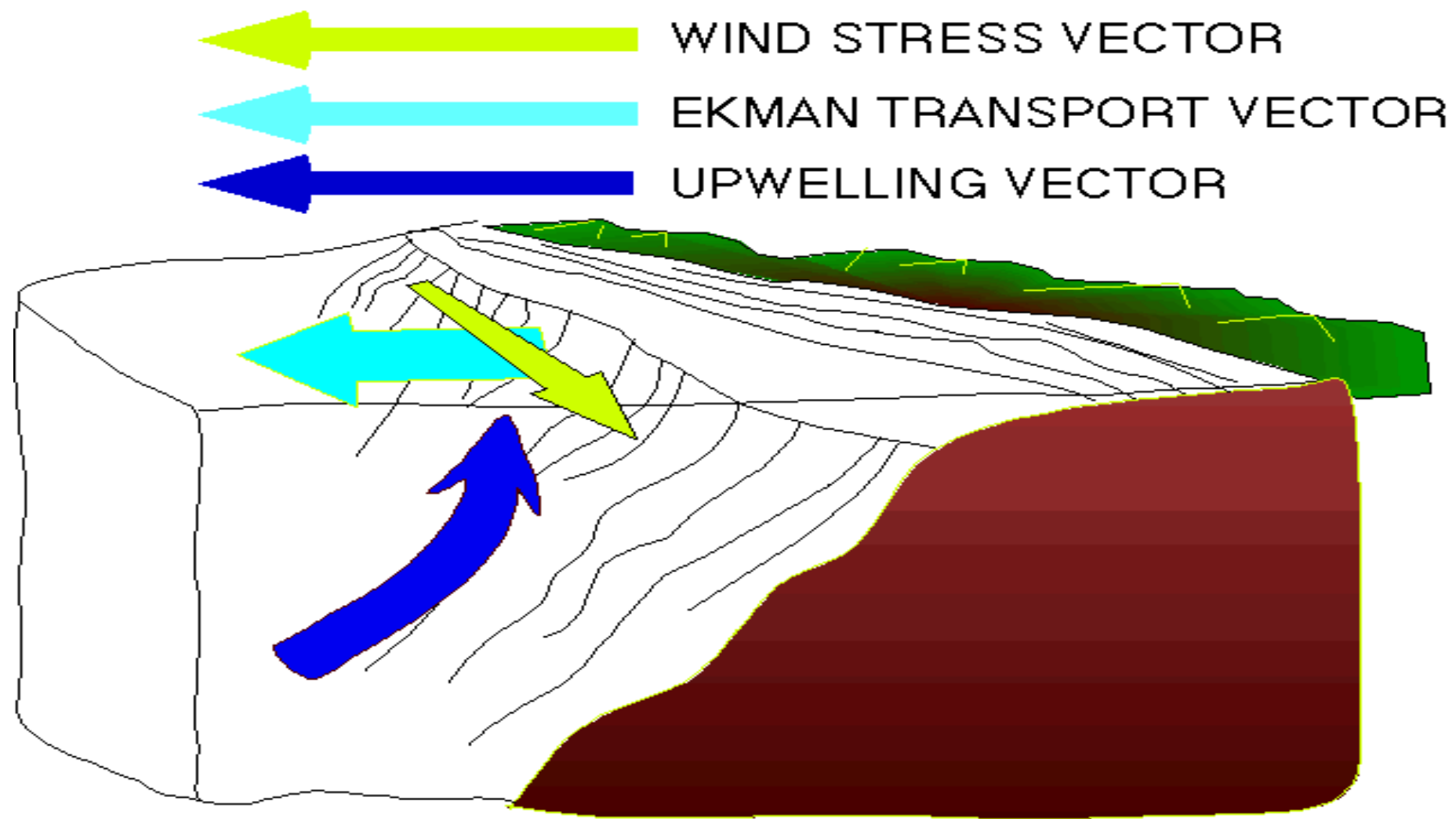
Numbers of large Cutthroat Trout (over 38 cm) counted at the Winchester Dam of the Umpqua River.



Wild sea-run Cutthroat Trout caught in the Alsea R. (Oregon) fishery from 1966–1970 (Giger 1972) and from 1991–1993 (ODFW 1994, 1995).

1983 El Nino

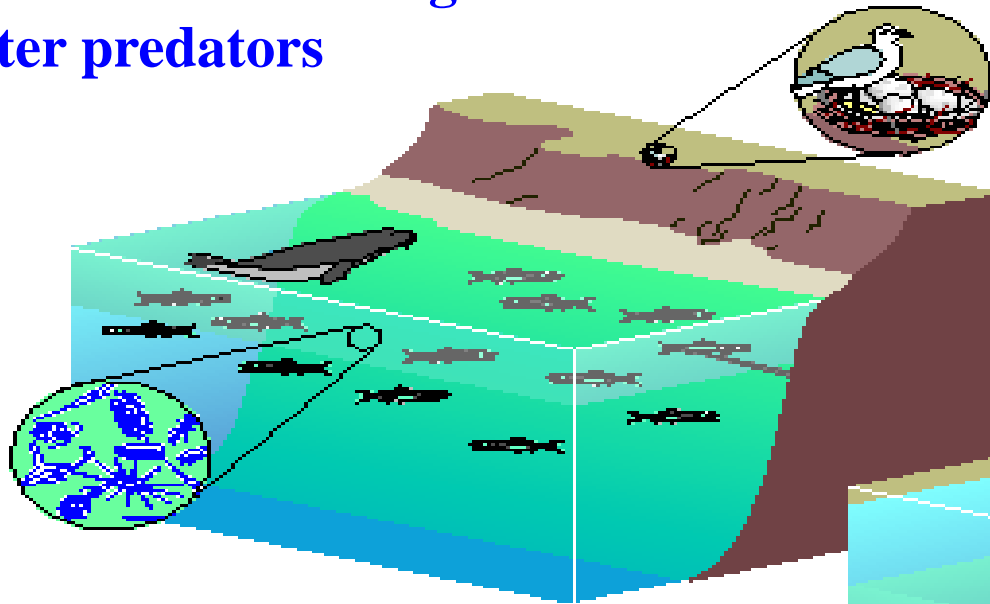




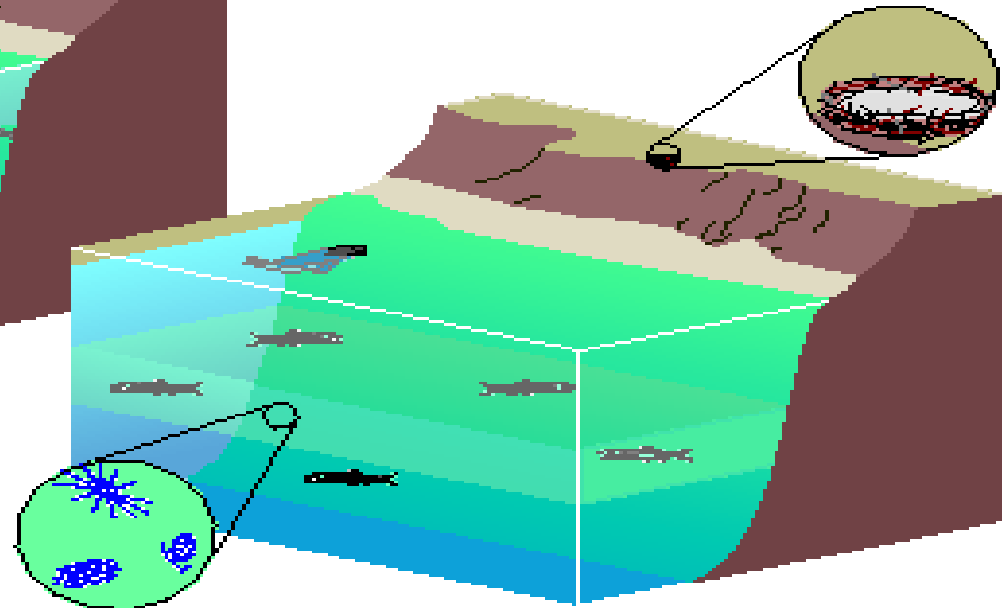
COASTAL UPWELLING

upwelling food webs in our coastal ocean

Cool water, weak stratification
high nutrients, a productive “subarctic”
food-chain with abundant forage fish and
few warm water predators



Warm stratified ocean, few
nutrients, low productivity
“subtropical” food web, a lack of
forage fish and abundant predators



Ocean carrying capacity

- It varies
 - Seasonally—Coastal Upwelling
 - Interannually—El Niño/La Niña
 - Interdecadally—Pacific Decadal Oscillation
 - Intercentennially