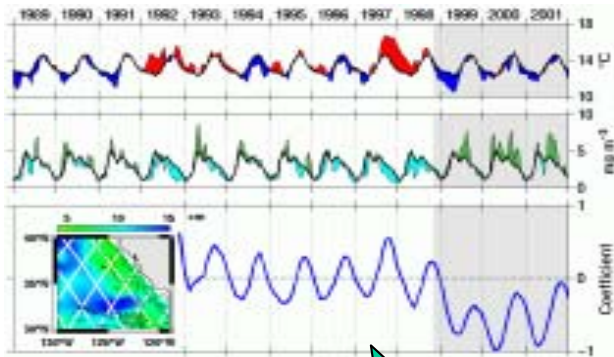


Biological response to the 1997-1998 regime shift in the North Pacific Eastern Boundary Current

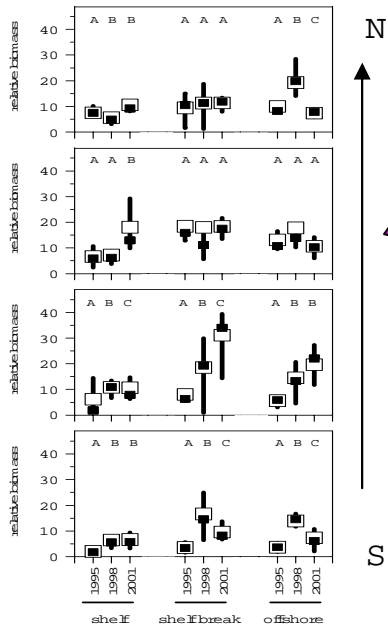
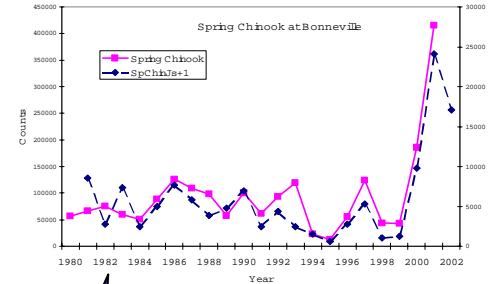
Gordie Swartzman



Some causal links:

Stronger surface equatorward winds → stronger upwelling → more south or less north transport of zooplankton

Stronger upwelling → more nutrients → more primary production



Lower trophic levels	Prediction after regime shift
primary production	higher
euphausiids	higher S of Cape Blanco more nearshore N of Cape Blanco
copepods	more boreal copepods fewer subtropical copepods
Higher trophic levels	
salmon	higher
rockfish	higher
anchovy	higher
sardine	lower and more southward
Pacific hake	lower and more southward
other small pelagic fish	higher
seabirds	higher

