### Why should we care?

STREET ASTRE

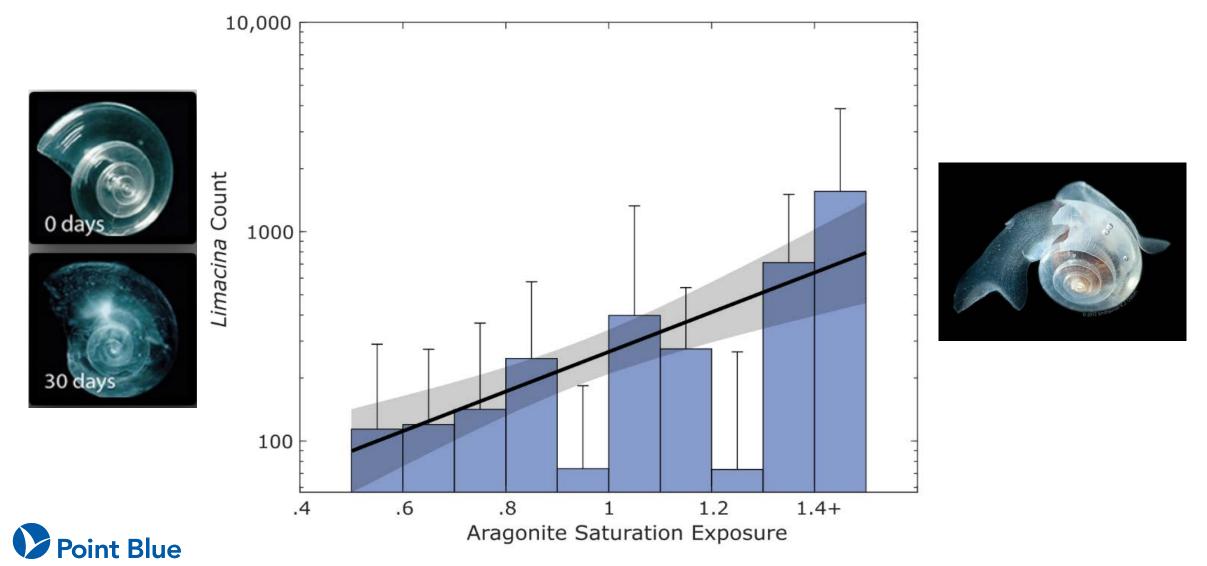
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#### **ACCESS data includes:**

Dataset	Years	Description	Collaborations
CONTINUOUS DATA			
Water properties (TSG)	2004 – present	Surface temperature, salinity, and fluorescence	NASA
Hydro acoustics	2004 - present	Acoustic abundance of krill and fish	
Bird and mammals	2004 - present	Strip and line transect counts of birds and mammals	EOS
STATION DATA Water properties (CTD)	2004 – present	Temperature, salinity, dissolved oxygen, fluorescence, etc.	BML, CeNCOOS, EOS, NASA
Nutrients	2005 – present	Surface nitrates, phosphates, and silicates	CeNCOOS, EOS
Acidification	2010 – present	pH and total alkalinity	BML, EOS
Phytoplankton	2010 – present	Phytoplankton species in surface waters	SFEI
Zooplankton (hoop nets)	2004 - present	Zooplankton species in surface waters (<50 m)	BML, CeNCOOS, EOS
Krill (Tucker trawls)	2004 - present	Krill species and age classes in deep waters	BML, CeNCOOS, EOS

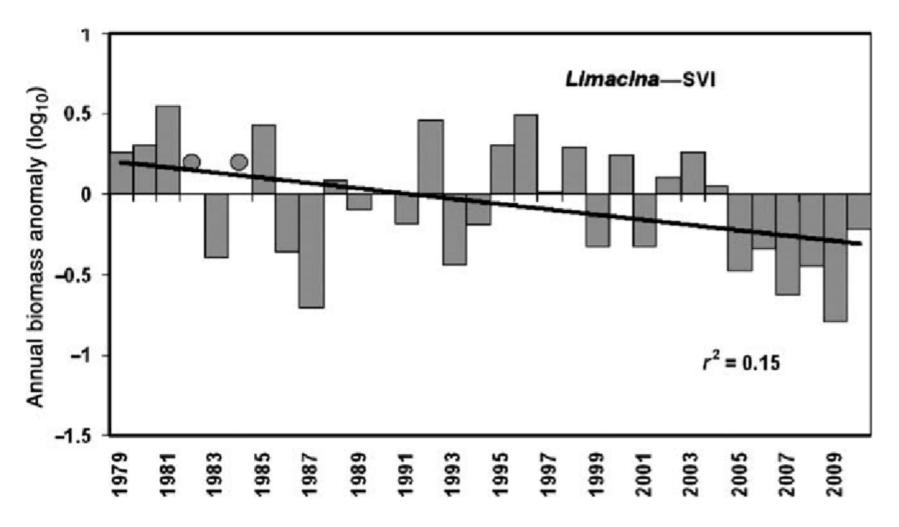


#### Acidic waters in the GOF have fewer pteropods



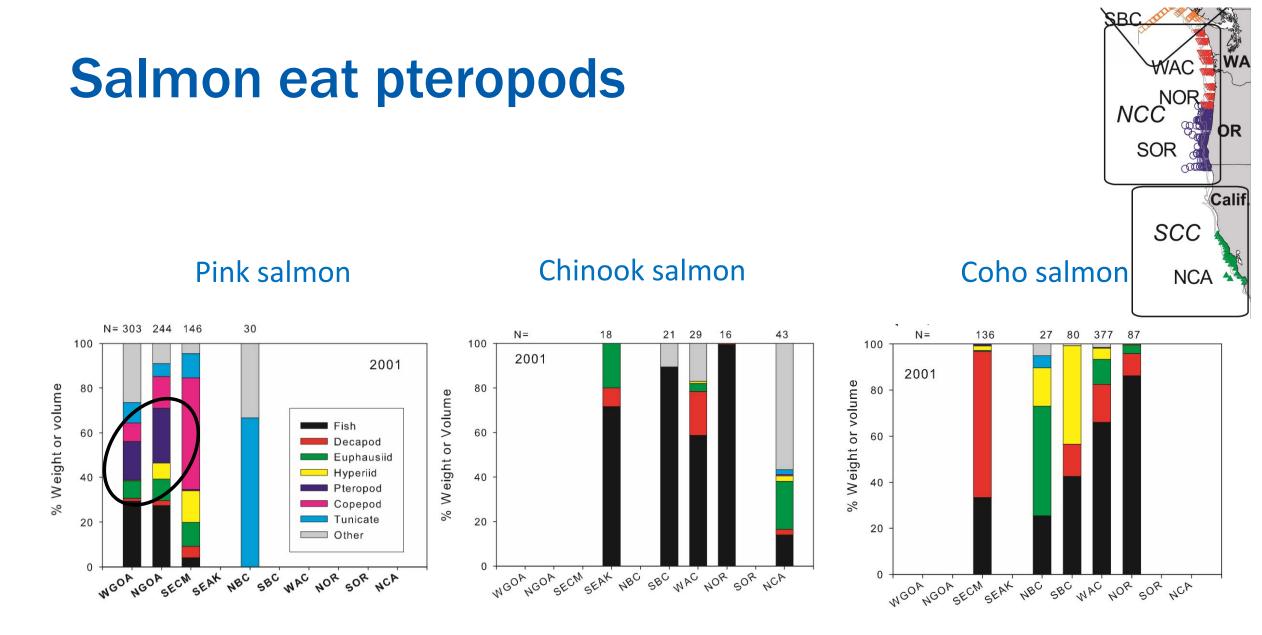
Anderson et al. 2020 (in preparation)

#### **Pteropods are declining in the North Pacific**



Point Blue

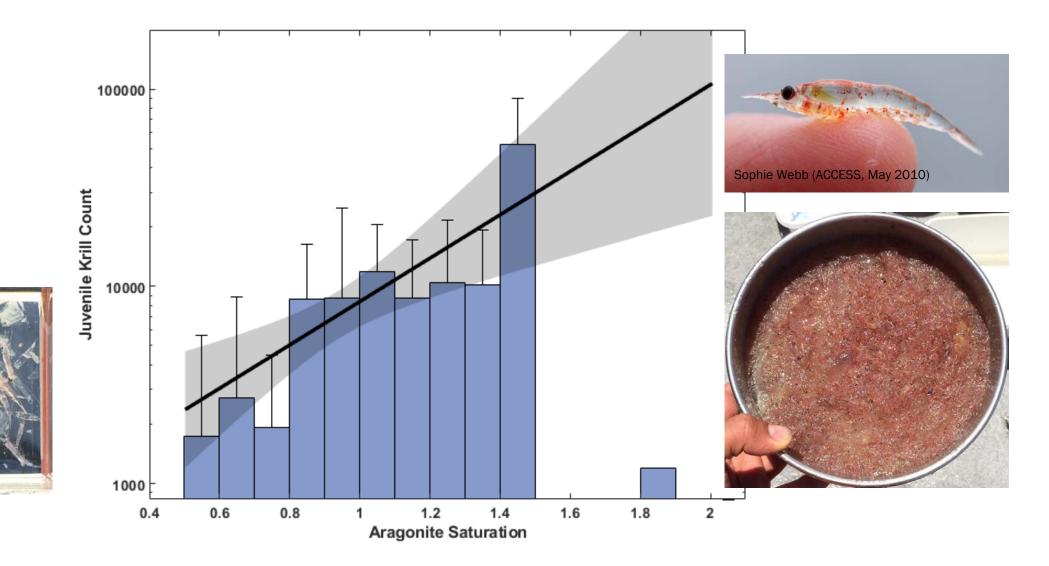
Mackas and Galbraith 2012





Brodeur et al. 2007

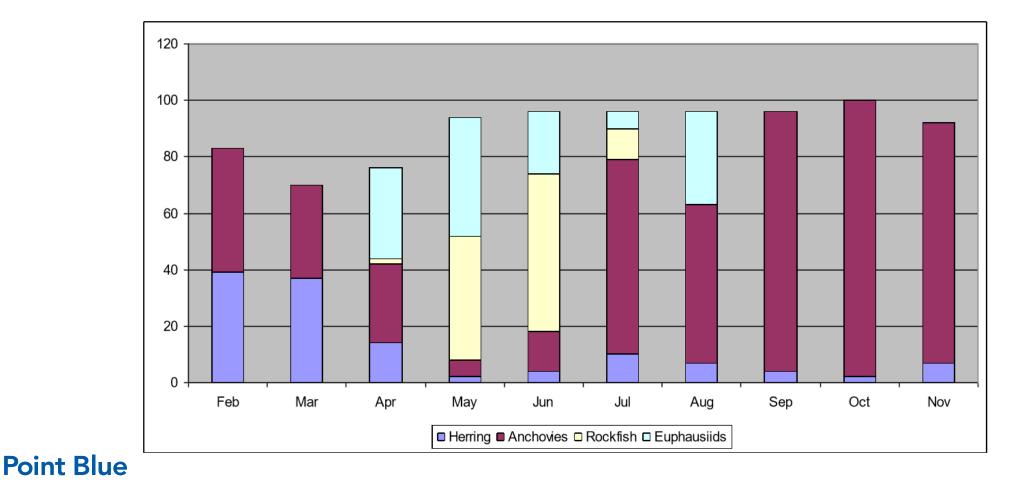
#### Acidic waters in the GOF have fewer juvenile krill



Point Blue

### Salmon eat krill

#### Chinook salmon diet in the Gulf of the Farallones



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## Krill is important for the food web, the ecosystem, and the local economy





# Thank You