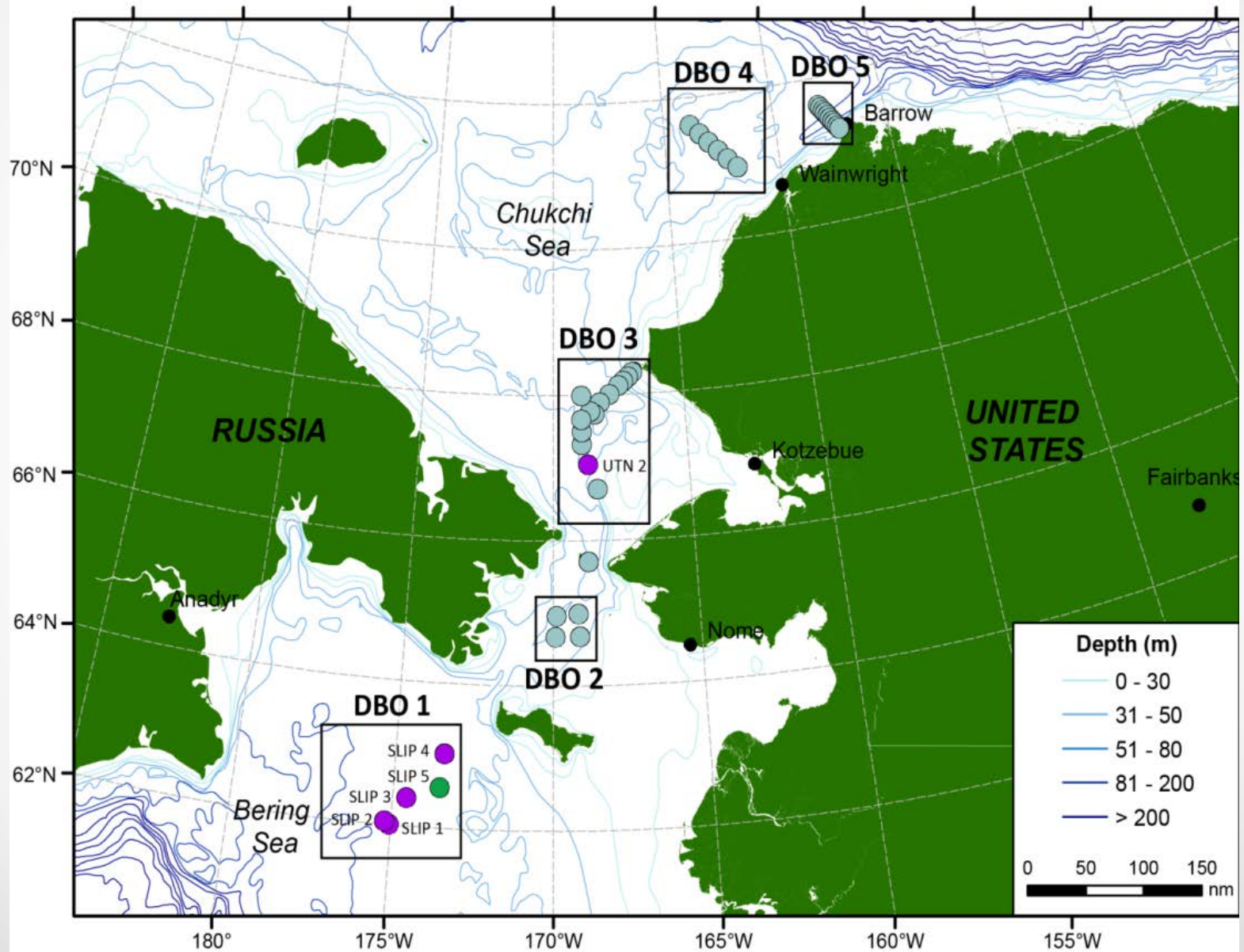


Bivalve Abundance and Biomass in DBO Region 1 and 3 from 1998-2012

Christina Goethel
University of Maryland Center for Environmental
Science

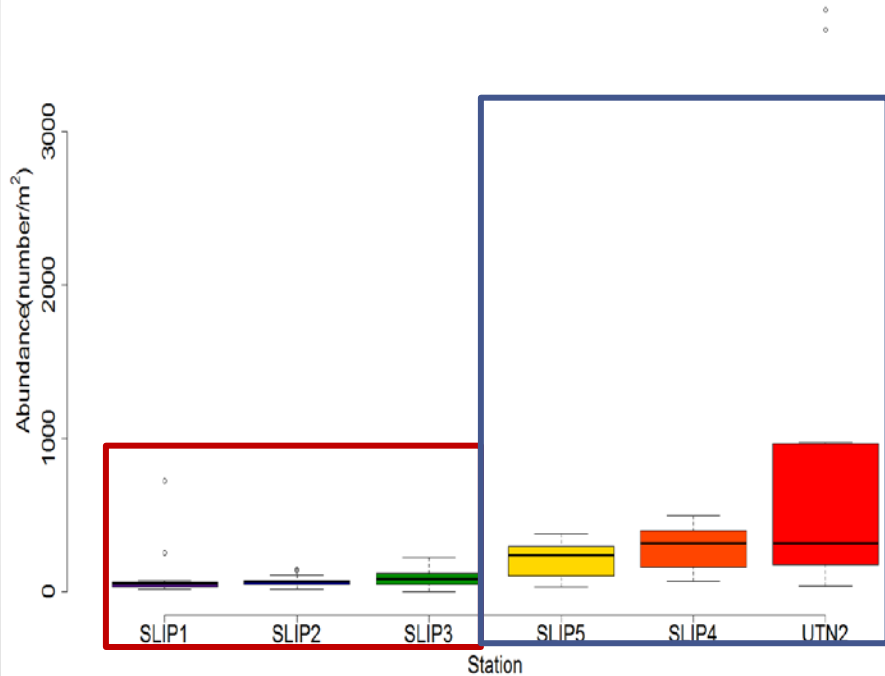
DBO 4th Data Workshop
November 8, 2017
Seattle, Washington

DBO: 1 and 3

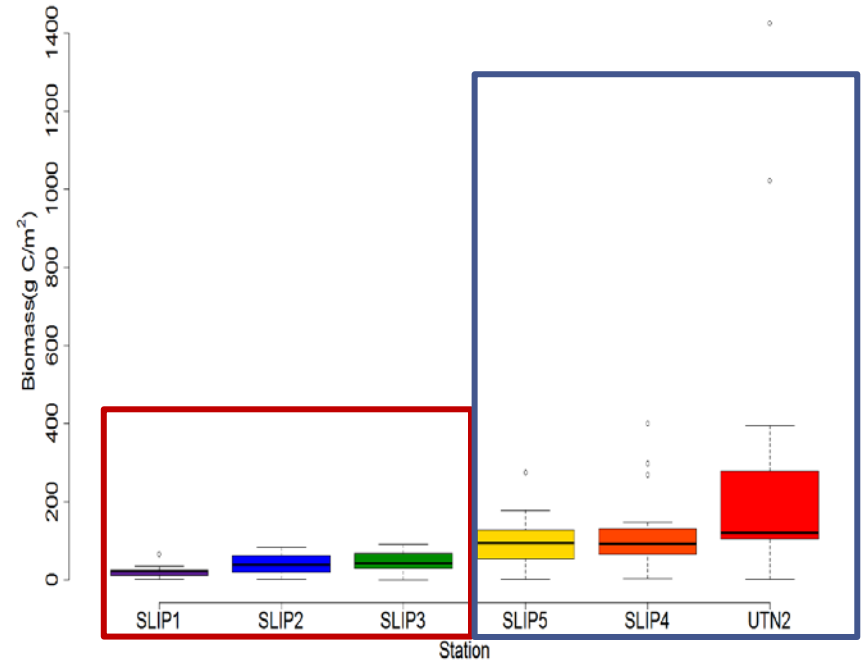


Northward Shift of *Macoma calcaria*

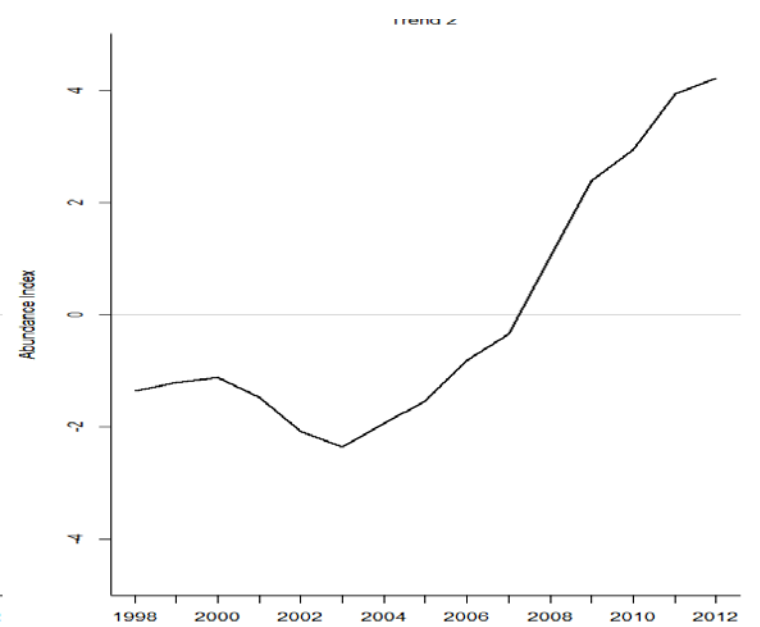
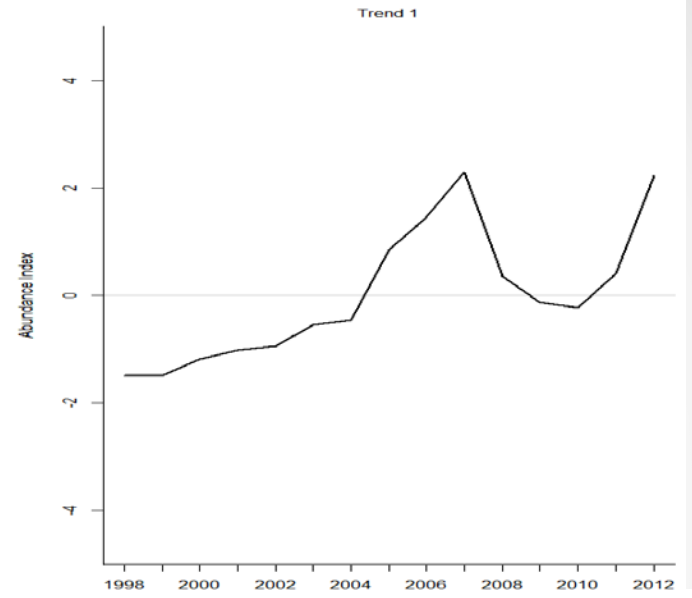
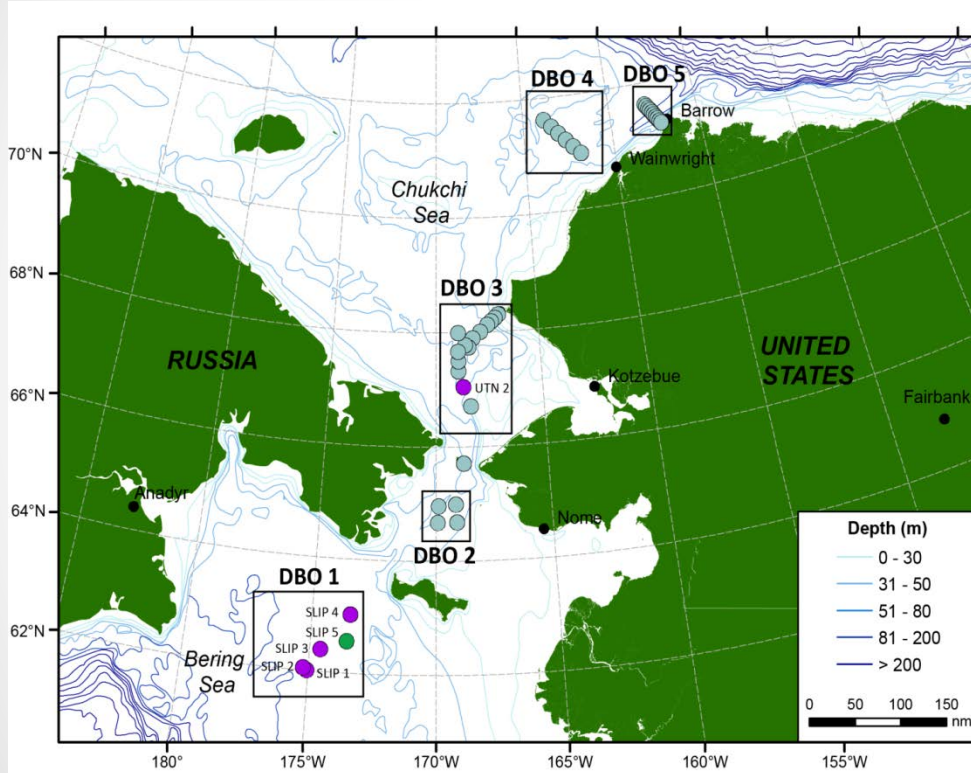
Northward Increases of *M. calcaria*
Abundance from 1998-2012



Northward Increases of *M. calcaria*
Biomass from 1998-2012



SLIP 5: Transition Point?



Future Work

- Continue with Dynamic Factor Analysis
- Run the model for *Serripies groenlandicus* - increase in abundance seen during field sampling 2014-2017
- Add 2013-2015 data
- Add co-variates
 - Sea ice extent
 - Bottom water temperature
 - Integrated water column chlorophyll-a concentrations
 - Sediment chlorophyll-a concentrations
 - Total organic carbon
 - Sediment grain size

DBO Publications

- *Macoma calcarea* abundance and biomass work under review for DBO special issue
- Work in DBO 4 regions- Ocean Acidification Response of Bivalves
 - **Goethel, C.L.**, Grebmeier, J.M., Cooper, L.W., Miller, T.J., 2017. "Implications of ocean acidification in the Pacific Arctic: Experimental responses of three Arctic bivalves to decreased pH and food availability". *Deep Sea Research Part II*. 144: 112-124.
<https://doi.org/10.1016/j.dsr2.2017.08.013>