Climate forcing of *C. finmarchicus* populations of the North Atlantic

WHOI

McGillicuddy

Smith

Wiebe

Copley

UConn

Bucklin

Unal

Rutgers

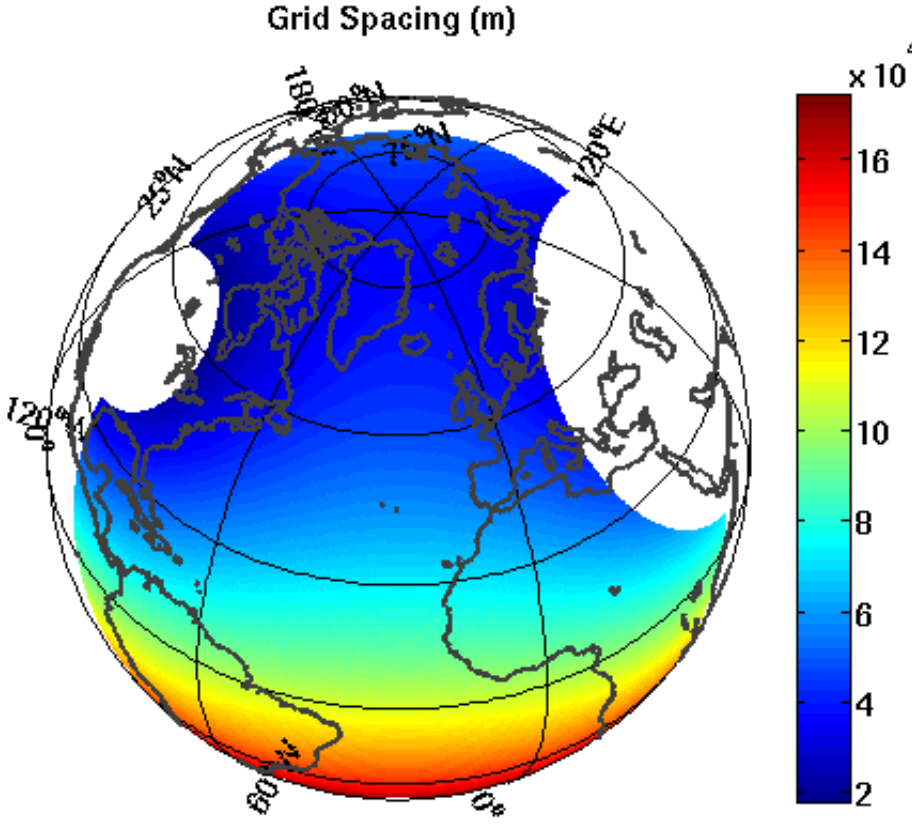
Haidvogel

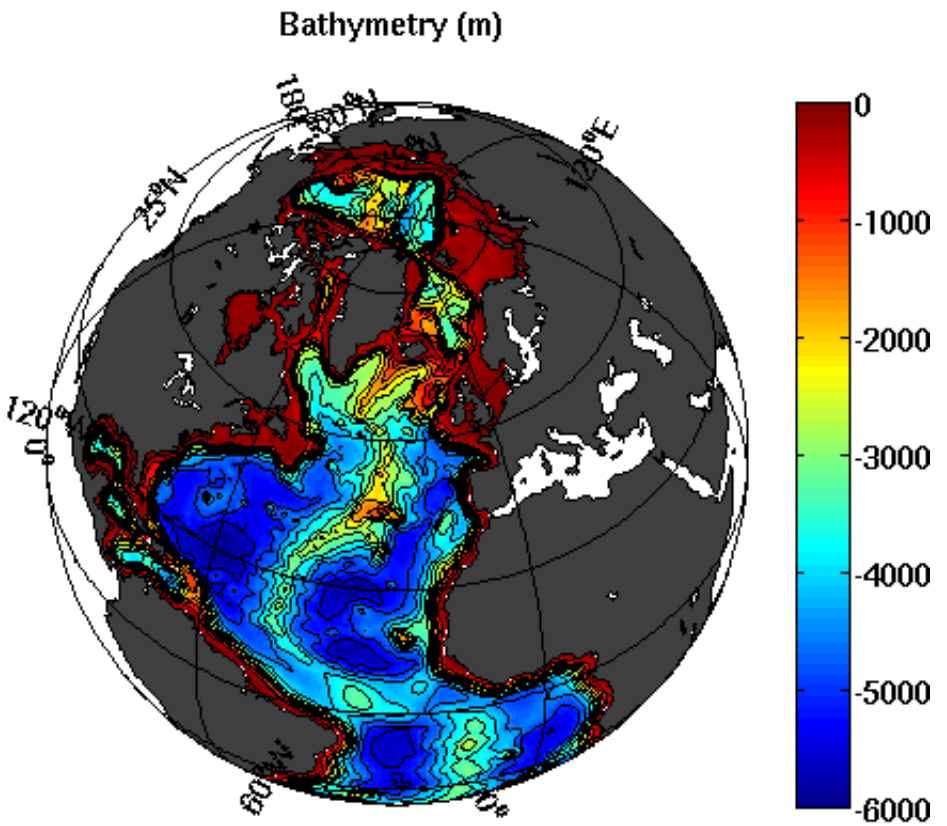
Levin

Overall Objectives

- Inversions of the “mean state”
  - Climatological mean seasonal forcing
  - Diapause entry hypotheses: food, photoperiod
  - Diapause exit hypotheses: development, photoperiod
  - Climatological CPR data
  - Control parameter: mortality (spatially variable, stage dependent
  - Skill assessment: cross-validation
- Use the genetic data to estimate the rate of population exchange between gyres, and compare with model predictions of same
- Investigate interannual to decadal variability
  - High-NAO state vs. low-NAO state
  - Hindcast 1950s-present

Climatological low-resolution North Atlantic ROMS (NATL-LR) simulation





The grid is a modification the grid designed by Paul Budgell. The grid has 20 to 170 km resolution, region of interest has resolution within 40 km, 42 vertical leyers.

Inverse solution for Jan-Feb (surface)