NExUS Ongoing Projects and Activities Thu Feb 21 21:03:20 EST 2019

Name	Zooplankton Population Dynamics on Georges Bank: Model and Data Synthesis
Description	Project description: "This work will gain a mechanistic understanding of the influences of climate variation on the population dynamics and production of target zooplankton species on Georges Bank (Calanus finmarchicus, Pseudocalanus moultoni, P. newmani, and Oithona similis) through its effects on advective transport, temperature, food availability, and predator fields. Using data analysis and models as tools, results acquired during the first three phases of GLOBEC will be incorporated into a new synthesis of the physical and biological processes regulating zooplankton abundance on the Bank. Physical models will be forced with measured daily, interannually variable data, and coupled to biological models synthesizing the detailed observations collected during the GLOBEC program. Specific issues to be investigated include: wind control of the advective supply of the target zooplankton species to Georges Bank during January-April; interannual and/or event-level variations in the advective flux of Calanus finmarchicus to Gulf of Maine basin diapausing populations during June-April; interannual and/or event-level variations in advective losses of copepods from Georges Bank and bank subregions; the influence of stratification on the planktonic ecosystem, and how this affects the population dynamics of the target zooplankton species through food and predation. As a link to Phase IV synthesis studies on target ichthyoplankton, our investigation will provide mechanistic insight into the factors determining production of copepod prey for larval cod and haddock on the Bank."
Category	- Climate-change Specific Projects - Research
Sector	- Managed Ecosystems - Natural Ecosystems - Biota
Focus Area	- Sustainability of Marine Ecosystems - Coasts and Climate Resilience (including sea-level rise)
Region	- Regional Or State -- New England
Status	- Ongoing
Lead Agencies	NOAA Center for Sponsored Coastal Ocean Research (CSCOR), National Science Foundation, Scripps Institution of Oceanography, University of New Hampshire, University of Massachusetts, University of Rhode Island, University of Washington
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