

Hand-written MOC-1 'flyer' notes, screen captures of tows, and taxonomic composition notes from R/V Endeavor, R/V Connecticut EN484, EN487, CT2010 in the Gulf of Maine, Georges Bank, Shelf and Slope Water from 2010-2010 (Krill GoME project)

Website: <https://www.bco-dmo.org/dataset/3462>

Version: 7 April 2011

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Project

» [Biological and Physical Determinants of Euphausiid Aggregation, Behavior, and Interaction with Higher Predators at an Abrupt Topographical Feature in the Gulf of Maine](#) (Krill GoME)

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Dataset Description

All the log sheets from all the 1m2 MOC tows from the 2011 Endeavor cruises have been scanned into pdfs. These are an important addition for getting the full picture on the MOC tows and also those data sets that are based on the tows.

Each file includes note from the 'flyer', the screen capture of the depth, salinity and temperature plots, the statistics from each tow with averages, and the very valuable first look at net contents.

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Data Files

File
mocness_logs.csv (Comma Separated Values (.csv), 292 bytes) MD5:82c9afb5327fe564cd830d723b1975d0
Primary data file for dataset ID 3462

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Parameters

Parameter	Description	Units
cruiseid	Cruise identifier (e.g. EN484 = R/V Endeavor cruise number 484).	text

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Instruments

Dataset-specific Instrument Name	MOCNESS1
Generic Instrument Name	MOCNESS1
Generic Instrument Description	The Multiple Opening/Closing Net and Environmental Sensing System or MOCNESS is a family of net systems based on the Tucker Trawl principle. The MOCNESS-1 carries nine 1-m ² nets usually of 335 micrometer mesh and is intended for use with the macrozooplankton. All nets are black to reduce contrast with the background. A motor/toggle release assembly is mounted on the top portion of the frame and stainless steel cables with swaged fittings are used to attach the net bar to the toggle release. A stepping motor in a pressure compensated case filled with oil turns the escapement crankshaft of the toggle release which sequentially releases the nets to an open then closed position on command from the surface. -- from the MOCNESS Operations Manual (1999 + 2003).

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Deployments

EN484

Website	https://www.bco-dmo.org/deployment/58140
Platform	R/V Endeavor
Report	http://bcodata.whoi.edu/Krill_GoME/EN484_Cruise_Report_FINAL.pdf
Start Date	2010-09-22
End Date	2010-09-30
Description	Cruise EN484, Chief Scientist Gareth Lawson's September 2010 Krill cruise to the northern flank of Georges Bank and the southern portion of the Gulf of Maine region (42 North 67.5 West), is the first of two cruises in Fall 2010 doing the same work in the same study location. The cruise was scheduled to allow an examination of the impact of herring predation on euphausiid aggregations. The first cruise each year (two similar cruises are planned for 2011) is timed to begin one week after the NOAA Ship Delaware II will have commenced its herring survey. Real-time data collected during that survey will be used to define the exact survey grid for our project. During EN484, the first 2010 cruise, the herring were expected to be pre-spawning and therefore not feeding on euphausiids (the target species for this project). The second cruise each year is timed to begin in the last week of October (EN487 in 2010). At this time, herring and euphausiids will still be present in the study region, but the herring will be post-spawning and will have resumed feeding on euphausiids. Cruise information and original data are available from the NSF R2R data catalog.

EN487

Website	https://www.bco-dmo.org/deployment/58141
Platform	R/V Endeavor
Report	http://bcodata.whoi.edu/Krill_GoME/EN487_Cruise_Report_FINAL.pdf
Start Date	2010-10-27
End Date	2010-11-06
Description	Cruise EN487, Chief Scientist Gareth Lawson's October-November 2010 Krill cruise to the northern flank of Georges Bank and the southern portion of the Gulf of Maine region (42 North 67.5 West), is the second of two cruises completed for the Gulf of Maine Krill project in Fall 2010. The cruises were designed to conduct the same work in the same study location. The timing of the cruises was selected to allow an examination of the impact of herring predation on euphausiid aggregations. The first cruise (cruise EN484 in 2010) each year (two similar cruises are planned for 2011) is timed to begin one week after the NOAA Ship Delaware II will have commenced its herring survey. Real-time data collected during that survey will be used to define the exact survey grid for our project. During the first cruise, EN484, the herring were expected to be pre-spawning and therefore not feeding on euphausiids (the target species for this project). The second cruise each year (EN487 in 2010) is timed to begin in the last week of October. At this time, herring and euphausiids will still be present in the study region, but the herring will be post-spawning and will have resumed feeding on euphausiids. EN487 cruise track JPEG image from URI (vessel operator) Cruise information and original data are available from the NSF R2R data catalog.

CT2010

Website	https://www.bco-dmo.org/deployment/58661
Platform	R/V Connecticut
Start Date	2010-07-08
End Date	2010-07-16
Description	The CT2010 cruise was supported by funds from Woods Hole Sea Grant, and field work was done on the southern New England Shelf and in nearby slope waters. This is a different study area from the sites visited by the other Krill project cruises that sampled in the Gulf of Maine.

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Project Information

Biological and Physical Determinants of Euphausiid Aggregation, Behavior, and Interaction with Higher Predators at an Abrupt Topographical Feature in the Gulf of Maine (Krill GoME)

Coverage: Gulf of Maine; Georges Bank

from the NSF award abstract:

Distribution, Aggregation, and Ecological Importance of Euphausiids in the Gulf of Maine Region

Zooplankton are key members of marine ecosystems, but the biological and physical factors governing their distribution and aggregation are not fully understood, especially at the continental shelf break and margins of the deep basins of the shelf. Euphausiids are an important group of crustacean zooplankton in North Atlantic pelagic food webs and represent an interesting model species for the study of zooplankton aggregation due to their strong swimming capabilities and active aggregative behaviors. This project will address the hypotheses that the formation and variability of euphausiid aggregations along the northern flank of Georges Bank and the southern portion of the Gulf of Maine during fall relate to the interaction of physical concentration mechanisms

with local topography and with plasticity in diel vertical migration and active aggregative behaviors, and that this plasticity arises from variability in food availability and predation by herring. These hypotheses will be addressed through a field program employing a comprehensive array of sensors, including both conventional narrowband and recently-developed broadband acoustic systems to sample the euphausiids, and a variety of other acoustic, optical, net, and other sampling devices to quantify their physical and biological environment. These sensors will be used in an inventive combination of (1) coarse-scale grid surveys to characterize along- and across-slope variability in the distribution of euphausiids, their predators, other zooplankton, phytoplankton, and physical conditions (e.g., the flow field), and (2) fine-scale adaptive surveys used to track individual euphausiid aggregations and observe how their three-dimensional structure and vertical position vary with changing environmental conditions. Repeat surveys will be timed to capitalize on known or likely variations in the flow field, food availability, light levels, and predation.

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Funding

Funding Source	Award
NSF Division of Ocean Sciences (NSF OCE)	OCE-0928801

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