Event logs from Krill Gulf of Maine cruises, R/V Endeavor EN487, EN484 in the Gulf of Maine, Georges Bank from 2010-2010 (Krill GoME project)

Website: https://www.bco-dmo.org/dataset/3378
Version: 10 November 2010
Version Date: 2010-11-10

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

Scientific sampling event logs from Gulf of Maine Krill project cruises on R/V Endeavor (EN484 and EN487).

Methods & Sampling

These scientific sampling event logs from the Gulf of Maine Krill project cruises were created using an early implementation of the Rolling Deck to Repository (R2R) event log application (ELOG with cruise-specific custom configuration files). The log includes a record of all scientific sampling events from the cruise.

Data Processing Description

Post-cruise processing for 2010 cruise logs was done by Tobias Work (an EN484 cruise participant) and Cyndy Chandler, both members of BCO-DMO. Missing events were added, times were corrected and missing latitude and longitude were added using the along track data as a source. Duplicate event numbers were modified so all event numbers are unique. Text was modified in the free text comment field to make the comments shorter. The R2R event number and original date and time in UTC are not displayed (those columns have been hidden), but could be added if desired.

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Data Files

File
event_log.csv(Comma Separated Values (.csv), 94.79 KB) MD5:a0393d18a56d30b2ff3a308ae9528244 Primary data file for dataset ID 3378

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Parameters

Parameter	Description	Units
Cruise_ID	Cruise_ID	dimensionless
event	unique sampling event number derived from local YYYYMMDD.HHMM	dimensionless
timeLocal	local time (close to EDT) as 2400 clock HHMM format	dimensionless
date	date (UTC) as YYYYMMDD	dimensionless
time	time (UTC) using 24 hour clock HHMM format	dimensionless
latitude	latitude (North is positive; South is negative)	decimal degrees
longitude	longitude (East is positive; West is negative)	decimal degrees
instrument_activity	name of sampling device or activity	dimensionless
action	activity performed with the instrument	dimensionless
transect	transect number	dimensionless
station	station number	dimensionless
cast	cast number	dimensionless
seafloor	depth of water; seafloor depth from the shipboard 12 kHz Knudsen echosounder	meters
author	name of person entering the event	dimensionless
comment	free text comment	dimensionless
PI_name	name of investigator responsible for the data from a sampling device	dimensionless
year	year that sampling was done	dimensionless
cruise_description	brief description of the type of cruise; indicates whether the cruise was planned for before or after the Herring spawning season	dimensionless

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Deployments

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. **Methods & Sampling** This scientific sampling event log from the EN487 Krill cruise was created using an early implementation of the R2R event log application (eLog with custom configuration file). It includes a record of all scientific sampling events from the cruise. **Processing Description** BCO-DMO did some post-cruise QC work: renumbered a few duplicate event ID numbers (and changed local time to match) these were most often the End/Start of a Transect, and one event ID of the pair was adjusted by one minute to make it unique; replace comma with semi-colon in comment field; replace Ship instrument with Cruise or Transect and make all Action entries either Start | End (per PI P. Wiebe request); verified that all instrument events had start/end pairs and all Transect numbers entered where appropriate (some had been NaN) for all events between the Start and End of a Transect.

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.

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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 Euphausids 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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