Drifter track data from drifters deployed on multiple R/V Endeavor, Albatross IV, Oceanus, Delaware, Cape Hatteras, Parizeau, and CCGS Cygnus cruises in the Gulf of Maine and Georges Bank from 1995-1999 (GLOBEC)

Website: https://www.bco-dmo.org/dataset/3660
Data Type: Cruise Results
Version: 1
Version Date: 2012-06-01

Project
» U.S. GLOBEC Georges Bank (GB)

Program
» U.S. GLOBal ocean ECosystems dynamics (U.S. GLOBEC)

Contributors	Affiliation	Role
Limeburner, Richard	Woods Hole Oceanographic Institution (WHOI)	Principal Investigator
Rauch, Shannon	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

Abstract
Drifter track data from drifters deployed on multiple R/V Endeavor, Albatross IV, Oceanus, Delaware, Cape Hatteras, Parizeau, and CCGS Cygnus cruises in the Gulf of Maine and Georges Bank from 1995-1999. Satellite-tracked drifters with holey sock drogues centered at 10, 15 and 40-m depths were deployed over Georges Bank during 1995-99 in support of the U.S. GLOBEC/Georges Bank Program.

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Coverage

Spatial Extent: **N**:53.623 **E**:-13.247 **S**:21.036 **W**:-77.139
Temporal Extent: 1995-01-01 - 1999-07-08

Dataset Description

Satellite-tracked drifters with holey sock drogues centered at 10, 15 and 40-m depths were deployed over Georges Bank during 1995-99 in support of the U.S. GLOBEC/Georges Bank Program.

References:
Christopher E. Naimie, Richard Limeburner, Charles G. Hannah and Robert C. Beardsley, 2001. On the geographic and seasonal patterns of the near-surface circulation on Georges Bank - from real and simulated drifters. Deep-Sea Research II: Topical Studies in Oceanography, vol 48, pp 501-518.

Methods & Sampling

The status of drogue presence is indicated by timing the submergence of the surface float. When the drogue is attached, its drag will cause the surface sphere to submerge occasionally as a wave passes. If the drogue has been lost, the surface sphere remains at the surface and is not buried by waves. When the surface float submerges, contacts on top of the sphere are shorted out by the seawater and the PTT controller starts counting the length of time (seconds) the contacts are shorted. Every 30 minutes the accumulated submergence time is scaled by 0.1 (for example, 1000 seconds is scaled to 100) and loaded into the first byte of the data string and a new submergence time is started. Typical submergence values are 10 to 100. Consistent submergence values of 0 indicate the drogue has been lost. The maximum submergence value is 180 and indicates the surface float is sinking, or heavily fouled.

Those drifters with identifications starting with a "g" were generally deployed in US territorial waters and those with an "n" deployed in Canadian waters by the Bedford Institute of Oceanography.

Data Processing Description

All drifters originally submitted by this investigator, regardless of year deployed, had a year day value beginning with January 1, 1995 (year day of 1.0000). Thus, a deployment in 1996 had a year day >365.0000 and a deployment in 1999 had a deployment year day value >1461.0000 (1996 was a leap year). BCO-DMO converted those original year day values to standard yrday_gmt values (0 to 365, or 0 to 366 for leap years).

Based on dates of deployment and recovery, a drifter file may span two calendar years. The 'year_start' parameter indicates the year the drifter was deployed.

BCO-DMO made the following modifications: Calculated actual 'yrday_gmt' values from the original 'yrday_special' column (yrday_special = number of days since January 1, 1995); Added argosid and cruiseid from the 'drifters_start'_positions' dataset; Re-formatted all values from scientific notation to integers; Changed incorrect year values for drifter g96; Corrected the year value in cases where yrday_special and year did not match (e.g. if yrday_special was 367, but year was 1995, changed year to 1996); Changed values of '999.00' to 'nd' to indicate 'no data'; Removed data for drifter g162 because it was undergoing gps testing locally.

BCO-DMO corrected unknown/missing cruise ID's for the following drifters:
g31- corrected to EN274. (Cruise report for EN274 documents the deployment of g31.)
g47- corrected to EN278. (Original data has EN278 listed.)
g84 and g85 - corrected to EN291. (EN291 cruise report documents the deployment of these drifters.)
g98 and g99 - corrected to EN294. (EN294 cruise report documents the deployment of these drifters.)
g140 and g142 - corrected to EN300. (EN300 cruise report documents the deployment of these drifters.)
g157 and g158 - corrected to OC315. (Original data has OC315 listed and Oceanus schedule confirms dates, locations, and investigators.)
g159 - corrected to OC316. (Original data has OC316 listed and cruise report confirms this.)
n6 to n10 - corrected to PAR98-078. (Cruise report for PAR-98-078 documents the deployment of these drifters.)

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Data Files

File
drifter_tracks.csv (Comma Separated Values (.csv), 23.32 MB) MD5:b5ff0db3cc3ee89498523ecf918bef67 Primary data file for dataset ID 3660

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Related Datasets

IsRelatedTo

Limeburner, R. (2012) **Initial drifter deployment positions from R/V Endeavor, R/V Albatross IV, R/V Oceanus, R/V Delaware, R/V Cape Hatteras, CCGS Cygnus, and R/V Parizeau in the Gulf of Maine and Georges Bank from 1995-1999.** Biological and Chemical Oceanography Data Management Office (BCO-DMO). (Version 1) Version Date 2012-06-01 doi:10.1575/1912/bco-dmo.2305.1 [view at BCO-DMO]

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Parameters

Parameter	Description	Units
year_start	Year that the drifter was initially deployed (e.g. 1995).	dimensionless
drifterid	Drifter identification number. 'g' = drifter initially deployed in US water; 'n' = drifter deployed in Canadian waters by the Bedford Institute of Oceanography.	dimensionless
argosid	ARGOS drifter identification number.	dimensionless
cruiseid	Identification number of the cruise on which the drifter was initially deployed (e.g. OC302 = R/V Oceanus cruise number 302). 'nd' = cruiseid unknown.	dimensionless
lat	Latitude in decimal degrees; positive = North.	decimal degrees
lon	Longitude in decimal degrees; negative = West.	decimal degrees
temp	Water temperature.	degrees Celsius
submergence	Tension value between surface float and drogue.	unknown
yrday_gmt	Day of the year and decimal time (01 to 366); calculated from the original column 'yrday_special' (year day since 01/01/95).	dimensionless
year	Year, in YYYY format (e.g. 1996).	dimensionless
day_gmt	Day of the month (0 to 30), in DD format.	dimensionless
month_gmt	Month of the year (01 to 12), in MM format.	dimensionless
time_gmt	Time of day (24 hour clock), including decimal minutes.	dimensionless
ISO_DateTime_UTC	Date and time (UTC) formatted to ISO8601 standard. T indicates start of time string; Z indicates UTC.	YYYY-mm-ddTHH:MM:SS.ssZ

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Instruments

Dataset-specific Instrument Name	Drifter Buoy
Generic Instrument Name	Drifter Buoy
Generic Instrument Description	Drifting buoys are free drifting platforms with a float or buoy that keep the drifter at the surface and underwater sails or socks that catch the current. These instruments sit at the surface of the ocean and are transported via near-surface ocean currents. They are not fixed to the ocean bottom, therefore they "drift" with the currents. For this reason, these instruments are referred to as drifters, or drifting buoys. The surface float contains sensors that measure different parameters, such as sea surface temperature, barometric pressure, salinity, wave height, etc. Data collected from these sensors are transmitted to satellites passing overhead, which are then relayed to land-based data centers. definition sources: https://mmisw.org/ont/ioos/platform/drifting_buoy and https://www.aoml.noaa.gov/phod/gdp/faq.php#drifter1

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Deployments

EN259

Website	https://www.bco-dmo.org/deployment/57399
Platform	R/V Endeavor
Report	http://globec.whoi.edu/globec-dir/reports/en259.html
Start Date	1995-01-10
End Date	1995-01-22
Description	process zoology

EN261

Website	https://www.bco-dmo.org/deployment/57401
Platform	R/V Endeavor
Start Date	1995-02-10
End Date	1995-02-20
Description	broad-scale

EN263

Website	https://www.bco-dmo.org/deployment/57403
Platform	R/V Endeavor
Report	http://globec.whoi.edu/globec-dir/reports/en263/EN263.pdf
Start Date	1995-03-13
End Date	1995-03-24
Description	broad-scale

EN265

Website	https://www.bco-dmo.org/deployment/57405
Platform	R/V Endeavor
Start Date	1995-04-11
End Date	1995-04-22
Description	broad-scale

AL9506

Website	https://www.bco-dmo.org/deployment/57372
Platform	R/V Albatross IV
Report	http://globec.whoi.edu/globec-dir/reports/al9506/al9506new.html
Start Date	1995-06-05
End Date	1995-06-15
Description	broad-scale

AL9508

Website	https://www.bco-dmo.org/deployment/57373
Platform	R/V Albatross IV
Report	http://globec.whoi.edu/globec-dir/reports/al9508/a9508rp2.HTM
Start Date	1995-07-10
End Date	1995-07-20
Description	broad-scale

EN274

Website	https://www.bco-dmo.org/deployment/57412
Platform	R/V Endeavor
Report	http://globec.whoi.edu/globec-dir/reports/en274/EN274.pdf
Start Date	1995-09-29
End Date	1995-10-05
Description	long term mooring recovery

AL9513

Website	https://www.bco-dmo.org/deployment/57374
Platform	R/V Albatross IV
Report	http://globec.whoi.edu/globec-dir/reports/al9513/AL9513.pdf
Start Date	1995-10-30
End Date	1995-11-08
Description	long term mooring deployment

EN276

Website	https://www.bco-dmo.org/deployment/57413
Platform	R/V Endeavor
Report	http://globec.whoi.edu/globec-dir/reports/en276/EN276.pdf
Start Date	1996-01-10
End Date	1996-01-22
Description	broad-scale

EN278

Website	https://www.bco-dmo.org/deployment/57414
Platform	R/V Endeavor
Start Date	1996-02-13
End Date	1996-02-25
Description	broad-scale

OC275

Website	https://www.bco-dmo.org/deployment/57440
Platform	R/V Oceanus
Start Date	1996-03-11
End Date	1996-03-22
Description	broad-scale

EN282

Website	https://www.bco-dmo.org/deployment/57415
Platform	R/V Endeavor
Start Date	1996-04-08
End Date	1996-04-20
Description	broad-scale

AL9605

Website	https://www.bco-dmo.org/deployment/57375
Platform	R/V Albatross IV
Report	http://globec.whoi.edu/globec-dir/reports/al9605/al9605.html
Start Date	1996-05-06
End Date	1996-05-17
Description	broad-scale

AL9607

Website	https://www.bco-dmo.org/deployment/57376
Platform	R/V Albatross IV
Report	http://globec.whoi.edu/globec-dir/reports/al9607/AL9607.pdf
Start Date	1996-06-03
End Date	1996-06-13
Description	broad-scale

AL9701

Website	https://www.bco-dmo.org/deployment/57378
Platform	R/V Albatross IV
Report	http://globec.whoi.edu/globec-dir/reports/al9701/cral9701.htm
Start Date	1997-01-13
End Date	1997-01-20
Description	broad-scale

EN292

Website	https://www.bco-dmo.org/deployment/57418
Platform	R/V Endeavor
Report	http://globec.whoi.edu/globec-dir/reports/en292/en292cruisereport.html
Start Date	1997-01-13
End Date	1997-01-21
Description	process

OC298

Website	https://www.bco-dmo.org/deployment/57444
Platform	R/V Oceanus
Report	http://globec.whoi.edu/globec-dir/reports/oc298/cruisereport.html
Start Date	1997-02-11
End Date	1997-02-23
Description	broad-scale

EN296

Website	https://www.bco-dmo.org/deployment/57419
Platform	R/V Endeavor
Report	http://globec.whoi.edu/globec-dir/reports/en296/EN296.pdf
Start Date	1997-03-04
End Date	1997-03-16
Description	process zooplankton vital rates

DE9703

Website	https://www.bco-dmo.org/deployment/57393
Platform	R/V Delaware II
Start Date	1997-02-17
End Date	1997-02-26
Description	process

OC300

Website	https://www.bco-dmo.org/deployment/57446
Platform	R/V Oceanus
Report	http://globec.whoi.edu/globec-dir/reports/oc300/oc300rpt.mr7.html
Start Date	1997-03-16
End Date	1997-03-28
Description	broad-scale

OC302

Website	https://www.bco-dmo.org/deployment/57448
Platform	R/V Oceanus
Report	http://globec.whoi.edu/globec-dir/reports/oc302/oce302.html
Start Date	1997-04-22
End Date	1997-05-02
Description	broad-scale

CH0697

Website	https://www.bco-dmo.org/deployment/57389
Platform	R/V Cape Hatteras
Start Date	1997-04-19
End Date	1997-05-02
Description	process

AL9705

Website	https://www.bco-dmo.org/deployment/57379
Platform	R/V Albatross IV
Report	http://globec.whoi.edu/globec-dir/reports/al9705/al9705.html
Start Date	1997-05-19
End Date	1997-05-27
Description	broad-scale

AL9707

Website	https://www.bco-dmo.org/deployment/57380
Platform	R/V Albatross IV
Report	http://globec.whoi.edu/globec-dir/reports/al9707/al9707.html
Start Date	1997-06-18
End Date	1997-06-28
Description	broad-scale

AL9801

Website	https://www.bco-dmo.org/deployment/57382
Platform	R/V Albatross IV
Report	http://globec.whoi.edu/globec-dir/reports/al9801/al9801.html
Start Date	1998-01-07
End Date	1998-01-19
Description	broad-scale

OC315

Website	https://www.bco-dmo.org/deployment/57654
Platform	R/V Oceanus
Report	http://www.smast.umassd.edu/OCEANOL/reports/CONVEX/OC315/oc315_report.html
Start Date	1998-01-09
End Date	1998-01-12
Description	Not a GLOBEC Georges Bank cruise, but of interest to the GLOBEC community.

OC316

Website	https://www.bco-dmo.org/deployment/57655
Platform	R/V Oceanus
Report	http://www.smast.umassd.edu/OCEANOL/reports/CONVEX/OC316/oc316_report.html
Start Date	1998-01-29
End Date	1998-02-02
Description	Not a GLOBEC Georges Bank cruise, but of interest to the GLOBEC community.

OC317

Website	https://www.bco-dmo.org/deployment/57451
Platform	R/V Oceanus
Start Date	1998-02-06
End Date	1998-02-19
Description	broad-scale

OC319

Website	https://www.bco-dmo.org/deployment/57452
Platform	R/V Oceanus
Report	http://globec.whoi.edu/globec-dir/reports/oc319/oc319new/oc319rpt.8april98.htm
Start Date	1998-03-15
End Date	1998-03-27
Description	broad-scale

OC322

Website	https://www.bco-dmo.org/deployment/57454
Platform	R/V Oceanus
Report	http://globec.whoi.edu/globec-dir/reports/oc322/oc322.html
Start Date	1998-04-15
End Date	1998-04-27
Description	broad-scale

AL9806

Website	https://www.bco-dmo.org/deployment/57384
Platform	R/V Albatross IV
Report	http://globec.whoi.edu/globec-dir/reports/al9806/al9806.html
Start Date	1998-05-13
End Date	1998-05-22
Description	broad-scale

AL9808

Website	https://www.bco-dmo.org/deployment/57385
Platform	R/V Albatross IV
Report	http://globec.whoi.edu/globec-dir/reports/al9808/al9808.html
Start Date	1998-06-16
End Date	1998-06-26
Description	broad-scale

AL9901

Website	https://www.bco-dmo.org/deployment/57386
Platform	R/V Albatross IV
Report	http://globec.whoi.edu/globec-dir/reports/al9901/al9901.html
Start Date	1999-01-12
End Date	1999-01-24
Description	broad-scale

OC336

Website	https://www.bco-dmo.org/deployment/57459
Platform	R/V Oceanus
Report	http://globec.whoi.edu/globec-dir/reports/oc336/oc336cruise-report.html
Start Date	1999-02-11
End Date	1999-02-23
Description	broad-scale

EN320

Website	https://www.bco-dmo.org/deployment/57427
Platform	R/V Endeavor
Report	http://globec.whoi.edu/globec-dir/reports/en320new/en320mda.htm
Start Date	1999-03-10
End Date	1999-03-23
Description	broad-scale

OC341

Website	https://www.bco-dmo.org/deployment/57464
Platform	R/V Oceanus
Report	http://globec.whoi.edu/globec-dir/reports/oc341/reptoc341.html
Start Date	1999-04-16
End Date	1999-04-27
Description	broad-scale

AL9904

Website	https://www.bco-dmo.org/deployment/57387
Platform	R/V Albatross IV
Start Date	1999-05-19
End Date	1999-05-27
Description	broad-scale

AL9906

Website	https://www.bco-dmo.org/deployment/57388
Platform	R/V Albatross IV
Report	http://globec.whoi.edu/globec-dir/reports/al9906/al9906rpt.html
Start Date	1999-06-14
End Date	1999-06-24
Description	broad-scale

PAR98-078

Website	https://www.bco-dmo.org/deployment/57477
Platform	R/V Parizeau
Report	http://globec.whoi.edu/globec-dir/reports/par9878/par9878.htm
Start Date	1999-02-10
End Date	1999-02-16
Description	process

CY98-079

Website	https://www.bco-dmo.org/deployment/57392
Platform	CCGS Cygnus
Report	http://globec.whoi.edu/globec-dir/reports/cygnus9879/cygnus9879.htm
Start Date	1999-03-23
End Date	1999-03-31
Description	long term mooring deployment

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Project Information

U.S. GLOBEC Georges Bank (GB)

Website: http://globec.whoi.edu/globec_program.html

Coverage: Georges Bank, Gulf of Maine, Northwest Atlantic Ocean

The U.S. GLOBEC Georges Bank Program is a large multi- disciplinary multi-year oceanographic effort. The proximate goal is to understand the population dynamics of key species on the Bank - Cod, Haddock, and two species of zooplankton (*Calanus finmarchicus* and *Pseudocalanus*) - in terms of their coupling to the physical environment and in terms of their predators and prey. The ultimate goal is to be able to predict changes in the distribution and abundance of these species as a result of changes in their physical and biotic environment as well as to anticipate how their populations might respond to climate change.

The effort is substantial, requiring broad-scale surveys of the entire Bank, and process studies which focus both on the links between the target species and their physical environment, and the determination of fundamental aspects of these species' life history (birth rates, growth rates, death rates, etc).

Equally important are the modelling efforts that are ongoing which seek to provide realistic predictions of the flow field and which utilize the life history information to produce an integrated view of the dynamics of the populations.

The U.S. GLOBEC Georges Bank Executive Committee (EXCO) provides program leadership and effective communication with the funding agencies.

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Program Information

U.S. GLOBal ocean ECosystems dynamics (U.S. GLOBEC)

Website: http://www.usglobec.org/

Coverage: Global

U.S. GLOBEC (GLOBal ocean ECosystems dynamics) is a research program organized by oceanographers and fisheries scientists to address the question of how global climate change may affect the abundance and production of animals in the sea.

The U.S. GLOBEC Program currently had major research efforts underway in the Georges Bank / Northwest Atlantic Region, and the Northeast Pacific (with components in the California Current and in the Coastal Gulf of Alaska). U.S. GLOBEC was a major contributor to International GLOBEC efforts in the Southern Ocean and Western Antarctic Peninsula (WAP).

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Funding

Funding Source	Award
National Science Foundation (NSF)	unknown GB NSF
National Oceanic and Atmospheric Administration (NOAA)	unknown GB NOAA

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