All the species seen during broad-scale cruises from the US-GLOBEC Georges Bank Program

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Data Type: Cruise Results
Version: 1
Version Date: 2004-02-13

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

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

Contributors	Affiliation	Role
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Abstract
All the species seen during broad-scale cruises from the US-GLOBEC Georges Bank Program, 1993-1999.

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Coverage

Spatial Extent: **N**:42.3 **E**:-65.68 **S**:40.3 **W**:-68.99

Temporal Extent: 1993 - 1999

Dataset Description

Contributed by: Maria Casas and Ted Durbin

Date: February 13, 2004

This data object shows **all** the species identified during the US GLOBEC Georges Bank broad-scale cruises, including MOC and Pump instruments. This list will be used by the Zooplankton meter^2 count data from GSO/URI and the Zooplankton meter^3 count data from GSO/URI data objects to help define which species were expected to be found.

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Parameters

Parameter	Description	Units
taxon_code	Taxon 10 digit code	
taxon	Taxon name	

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Instruments

Dataset-specific Instrument Name	MOCNESS.25
Generic Instrument Name	MOCNESS.25
Dataset-specific Description	MOCNESS 1/4 meter square nets.
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-1/4 carries nine 1/4-m2 nets usually of 64 micrometer mesh and is used to sample the larger micro-zooplankton.

Dataset-specific Instrument Name	MOCNESS1
Generic Instrument Name	MOCNESS1
Dataset-specific Description	MOCNESS 1 meter square nets (150 and 335 micrometer mesh).
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-m2 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).

Dataset-specific Instrument Name	MOCNESS10
Generic Instrument Name	MOCNESS10
Dataset-specific Description	MOCNESS 10 meter square nets (3 millimeter mesh).
Generic Instrument Description	The Multiple Opening/Closing Net and Environmental Sensing System (MOCNESS) is based on the Tucker Trawl principle (Tucker, 1951). The MOCNESS-10 (with 10 m^2 nets) carries 6 nets of 3.0-mm circular mesh which are opened and closed sequentially by commands through conducting cable from the surface (Wiebe et al., 1976). In this system, "the underwater unit sends a data frame, comprising temperature, depth, conductivity, net-frame angle, flow count, time, number of open net, and net opening/closing, to the deck unit in a compressed hexadecimal format every 2 seconds and from the deck unit to a microcomputer every 4 seconds" (Wiebe et al., 1985).

Dataset-specific Instrument Name	Pump3
Generic Instrument Name	Zooplankton Pump - gas powered diaphragm
Dataset-specific Description	Gas-powered, single diaphragm water pump.
Generic Instrument Description	This kind of diaphragm pump, manufactured by Homelite and run on gasoline, is called a positive displacement pump because it pumps a specific volume for each pump cycle. Diaphragm pumps move fluids more slowly than centrifugal pumps but treat the animals more gently and they can handle thicker mud and larger amounts of solids. They also tolerate air being drawn into the pump and can be run dry without damage. In 2002, Homelite was acquired and became Riverside Pump Manufacturing, Inc. Diaphragm pumps feature a straight through self priming design and the rubber elastomer diaphragm and flapper valves are easily replaced on site.

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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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