Herbivory data; phytoplankton growth and microzooplankton grazing rates from R/V Thomas G. Thompson TT043, TT045, TT050, TT054 cruises in the Arabian Sea in 1995 (U.S. JGOFS Arabian Sea project)

Website: https://www.bco-dmo.org/dataset/2525
Version: March 13, 2000
Version Date: 2000-03-13

Project
» U.S. JGOFS Arabian Sea (Arabian Sea)

Program
» U.S. Joint Global Ocean Flux Study (U.S. JGOFS)

Contributors	Affiliation	Role
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Dataset Description

Herbivory data including phytoplankton growth and microzooplankton grazing rates

Methods & Sampling

See Platform deployments for cruise specific documentation

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Parameters

Parameter	Description	Units
event	event number from event log	
sta_std	Arabian Sea standard station identifier	
sta	station number from event log	
cast	TM cast number from event log	
depth_n	nominal sample depth observed	meters
phyto_growth	phytoplankton specific growth rate	per day
microzoo_graze	microzooplankton grazing rate	per day
phyto_growth_net	net phytoplankton growth rate	per day

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Instruments

Dataset-specific Instrument Name	Go-flo Bottle
Generic Instrument Name	GO-FLO Bottle
Dataset-specific Description	30L GoFlo bottles on the trace metal clean rosette were used to collect water.
Generic Instrument Description	GO-FLO bottle cast used to collect water samples for pigment, nutrient, plankton, etc. The GO-FLO sampling bottle is specially designed to avoid sample contamination at the surface, internal spring contamination, loss of sample on deck (internal seals), and exchange of water from different depths.

Dataset-specific Instrument Name	Trace Metal Bottle
Generic Instrument Name	Trace Metal Bottle
Generic Instrument Description	Trace metal (TM) clean rosette bottle used for collecting trace metal clean seawater samples.

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Deployments

TT043

Website	https://www.bco-dmo.org/deployment/57704
Platform	R/V Thomas G. Thompson
Report	http://osprey.bcodmo.org/datasetDeployment.cfm?ddid=2580&did=353&flag=view
Start Date	1995-01-08
End Date	1995-02-05
Description	Purpose: Process Cruise #1 (Late NE Monsoon) **Methods & Sampling** PI: David Caron of: Woods Hole Oceanographic Institution dataset: Microplankton grazing; herbivory dates: January 10, 1995 to January 30, 1995 location: N: 21.1804 S: 10.0078 W: 58.0165 E: 68.7515 project/cruise: Arabian Sea/TTN-043 - Process Cruise 1 (Late NE Monsoon) ship: Thomas Thompson David Caron WHOI Herbivory Methodology Microzooplankton grazing on phytoplankton, herbivory, was measured using the dilution technique (1) as modified by Landry et al (2). The modifications of this method provide a means of determining microzooplankton grazing rates of phytoplankton as well as phytoplankton growth rates. Experiments were performed on shallow (5-10m) and deep (35-80m) water samples at the "long" stations. Water was collected in 30L GoFlo bottles on the trace metal clean rosette. Filtrate (

TT045

Website	https://www.bco-dmo.org/deployment/57706
Platform	R/V Thomas G. Thompson
Start Date	1995-03-14
End Date	1995-04-10
Description	**Methods & Sampling** PI: David Caron of: Woods Hole Oceanographic Institution dataset: Microplankton grazing; herbivory dates: March 18, 1995 to April 06, 1995 location: N: 19.1549 S: 10.016 W: 58.0097 E: 68.739 project/cruise: Arabian Sea/TTN-045 - Process Cruise 2 (Spring Intermonsoon) ship: Thomas Thompson David Caron WHOI Herbivory Methodology Microzooplankton grazing on phytoplankton, herbivory, was measured using the dilution technique (1) as modified by Landry et al (2). The modifications of this method provide a means of determining microzooplankton grazing rates of phytoplankton as well as phytoplankton growth rates. Experiments were performed on shallow (5-10m) and deep (35-80m) water samples at the "long" stations. Water was collected in 30L GoFlo bottles on the trace metal clean rosette. Filtrate (

TT050

Website	https://www.bco-dmo.org/deployment/57711
Platform	R/V Thomas G. Thompson
Start Date	1995-08-18
End Date	1995-09-15
Description	**Methods & Sampling** PI: Michael Landry and Lisa Campbell of: University of Hawaii dataset: Phytoplankton growth, microzooplankton herbivory dates: August 18, 1995 to September 12, 1995 location: N: 22.4998 S: 10.0002 W: 57.304 E: 68.7527 project/cruise: Arabian Sea/TTN-050 - Process Cruise 5 (Late SW Monsoon) ship: Thomas Thompson Methods: Rate estimates were made by seawater dilution per JGOFS protocols. Full methods described in: Landry, M.R., S.L. Brown, L. Campbell, J. Constantinou and H. Liu. 1998. Spatial patterns in phytoplankton growth and microzooplankton grazing in the Arabian Sea during monsoon forcing. Deep-Sea Res. II 45: 2353-2368.

TT054

Website	https://www.bco-dmo.org/deployment/57715
Platform	R/V Thomas G. Thompson
Start Date	1995-11-30
End Date	1995-12-28
Description	**Methods & Sampling** PI: Michael Landry and Lisa Campbell of: University of Hawaii dataset: Phytoplankton growth, microzooplankton herbivory dates: November 30, 1995 to December 23, 1995 location: N: 22.502 S: 10.0347 W: 58.0013 E: 68.78 project/cruise: Arabian Sea/TTN-054 - Process Cruise 7 (Early NE Monsoon) ship: Thomas Thompson Methods: Rate estimates were made by seawater dilution per JGOFS protocols. Full methods described in: Landry, M.R., S.L. Brown, L. Campbell, J. Constantinou and H. Liu. 1998. Spatial patterns in phytoplankton growth and microzooplankton grazing in the Arabian Sea during monsoon forcing. Deep-Sea Res. II 45: 2353-2368.

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Project Information

U.S. JGOFS Arabian Sea (Arabian Sea)

Website: http://usjgofs.whoi.edu/research/arabian.html

Coverage: Arabian Sea

The U.S. Arabian Sea Expedition which began in September 1994 and ended in January 1996, had three major components: a U.S. JGOFS Process Study, supported by the National Science Foundation (NSF); Forced Upper Ocean Dynamics, an Office of Naval Research (ONR) initiative; and shipboard and aircraft measurements supported by the National Aeronautics and Space Administration (NASA). The Expedition consisted of 17 cruises aboard the R/V Thomas Thompson, year-long moored deployments of five instrumented surface buoys and five sediment-trap arrays, aircraft overflights and satellite observations. Of the seventeen ship cruises, six were allocated to repeat process survey cruises, four to SeaSoar mapping cruises, six to mooring and benthic work, and a single calibration cruise which was essentially conducted in transit to the Arabian Sea.

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Program Information

U.S. Joint Global Ocean Flux Study (U.S. JGOFS)

Website: http://usjgofs.whoi.edu/

Coverage: Global

The United States Joint Global Ocean Flux Study was a national component of international JGOFS and an integral part of global climate change research.

The U.S. launched the Joint Global Ocean Flux Study (JGOFS) in the late 1980s to study the ocean carbon cycle. An ambitious goal was set to understand the controls on the concentrations and fluxes of carbon and

associated nutrients in the ocean. A new field of ocean biogeochemistry emerged with an emphasis on quality measurements of carbon system parameters and interdisciplinary field studies of the biological, chemical and physical process which control the ocean carbon cycle. As we studied ocean biogeochemistry, we learned that our simple views of carbon uptake and transport were severely limited, and a new "wave" of ocean science was born. U.S. JGOFS has been supported primarily by the U.S. National Science Foundation in collaboration with the National Oceanic and Atmospheric Administration, the National Aeronautics and Space Administration, the Department of Energy and the Office of Naval Research. U.S. JGOFS, ended in 2005 with the conclusion of the Synthesis and Modeling Project (SMP).

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Funding

Funding Source	Award
National Science Foundation (NSF)	unknown Arabian Sea NSF

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