

Sarcodine counts and carbon biomass, from net tows from R/V Thomas G. Thompson cruises TT008, TT012 in the Equatorial Pacific in 1992 during the U.S. JGOFS Equatorial Pacific (EqPac) project

Website: <https://www.bco-dmo.org/dataset/2686>

Version: August 24, 1995

Version Date: 1995-08-24

Project

» [U.S. JGOFS Equatorial Pacific](#) (EqPac)

Program

» [U.S. Joint Global Ocean Flux Study](#) (U.S. JGOFS)

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Table of Contents

- [Dataset Description](#)
 - [Methods & Sampling](#)
- [Parameters](#)
- [Instruments](#)
- [Deployments](#)
- [Project Information](#)
- [Program Information](#)

Dataset Description

Sarcodine counts and carbon biomass, from net tows

Methods & Sampling

See Platform deployments for cruise specific documentation

[[table of contents](#) | [back to top](#)]

Parameters

Parameter	Description	Units
event	event number from event log	
sta	station number from event log	
mdepth	mid depth, center point of depth range sampled	meters
depth_r	depth range sampled by net tow	meters
h_t_Dino	counts of heterotrophic thecate dinoflagellates	count/liter
Rad	counts of radiolarians	count/liter
Foram	counts of foraminiferans	count/liter
Acanth	counts of acantharians	count/liter
h_t_Dino_C	carbon biomass, heterotrophic thecate dinoflagellates	nanograms
Rad_C	carbon biomass, radiolarian	nanograms
Foram_C	carbon biomass, foraminiferan	nanograms
Acanth_C	carbon biomass, acantharians	nanograms
depth_mid	mid depth, center point of depth range sampled	meters
dino_h_t	counts of heterotrophic thecate dinoflagellates	count/liter
rads	counts of radiolarians	count/liter
dino_h_t_C	carbon biomass, heterotrophic thecate dinoflagellates	nanograms
rads_C	carbon biomass, radiolarians	nanograms

[[table of contents](#) | [back to top](#)]

Instruments

Dataset-specific Instrument Name	MOCNESS
Generic Instrument Name	MOCNESS
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. There are currently 8 different sizes of MOCNESS in existence which are designed for capture of different size ranges of zooplankton and micro-nekton Each system is designated according to the size of the net mouth opening and in two cases, the number of nets it carries. The original MOCNESS (Wiebe et al, 1976) was a redesigned and improved version of a system described by Frost and McCrone (1974).(from MOCNESS manual) This designation is used when the specific type of MOCNESS (number and size of nets) was not specified by the contributing investigator.

[[table of contents](#) | [back to top](#)]

Deployments

TT008

Website	https://www.bco-dmo.org/deployment/57729
Platform	R/V Thomas G. Thompson
Start Date	1992-03-19
End Date	1992-04-15
Description	<p>Purpose: Spring Time Series; Equator, 140°W TT008 was one of five cruises conducted in 1992 in support of the U.S. Equatorial Pacific (EqPac) Process Study. The five EqPac cruises aboard R/V Thomas G. Thompson included two repeat meridional sections (12°N - 12°S), 2 equatorial surveys, and a benthic survey (all at 140° W). The scientific objectives of this study were to observe the processes in the Equatorial Pacific controlling the fluxes of carbon and related elements between the atmosphere, euphotic zone, and deep ocean. As luck would have it, the survey window coincided with an El Nino event. A bonus for the research team.</p> <p>Methods & Sampling PI: Diane Stoecker of: Woods Hole Oceanographic Institution dataset: Sarcodine counts and carbon biomass, from net tows dates: March 21, 1992 to April 10, 1992 location: N: 2.0088 S: -2.0295 W: -140.1103 E: -139.9297 project/cruise: EqPac/TT008 - Spring Time Series ship: Thomas Thompson PI-Notes: Samples obtained from Greta Fryxell's moaness system. Each sample is a 5% split of the 26 um nets at each depth. Samples were preserved with 20% buffered formalin. Strontium chloride was added to aid with acantharian preservation. Samples stored in dark and refrigerated.</p>

TT012

Website	https://www.bco-dmo.org/deployment/57731
Platform	R/V Thomas G. Thompson
Start Date	1992-09-24
End Date	1992-10-21
Description	<p>Purpose: Fall Time Series; Equator, 140°W TT012 was one of five cruises conducted in 1992 in support of the U.S. Equatorial Pacific (EqPac) Process Study. The five EqPac cruises aboard R/V Thomas G. Thompson included two repeat meridional sections (12°N - 12°S), 2 equatorial surveys, and a benthic survey (all at 140° W). The scientific objectives of this study were to observe the processes in the Equatorial Pacific controlling the fluxes of carbon and related elements between the atmosphere, euphotic zone, and deep ocean. As luck would have it, the survey window coincided with an El Nino event. A bonus for the research team.</p> <p>Methods & Sampling PI: Diane Stoecker of: Woods Hole Oceanographic Institution dataset: Sarcodine counts and carbon biomass, from net tows dates: October 09, 1992 to October 21, 1992 location: N: 0.0192 S: -0.0158 W: -140.009 E: -139.947 project/cruise: EqPac/TT012 - Fall Time Series ship: Thomas Thompson PI-Notes: Samples obtained from Greta Fryxell's moaness system. Each sample is a 5% split of the 26 um nets at each depth. Samples were preserved with 20% buffered formalin. Strontium chloride was added to aid with acantharian preservation. Samples stored in dark and refrigerated.</p>

[[table of contents](#) | [back to top](#)]

Project Information

U.S. JGOFS Equatorial Pacific (EqPac)

Website: <http://usjgofs.whoi.edu/research/eqpac.html>

Coverage: Equatorial Pacific

The U.S. EqPac process study consisted of repeat meridional sections (12°N -12°S) across the equator in the central and eastern equatorial Pacific from 95°W to 170°W during 1992. The major scientific program was focused at 140° W consisting of two meridional surveys, two equatorial surveys, and a benthic survey aboard the R/V Thomas Thompson. Long-term deployments of current meter and sediment trap arrays augmented the survey cruises. NOAA conducted boreal spring and fall sections east and west of 140°W from the R/V Baldrige and R/V Discoverer. Meteorological and sea surface observations were obtained from NOAA's in place TOGA-TAO buoy network.

The scientific objectives of this study were to determine the fluxes of carbon and related elements, and the processes controlling these fluxes between the Equatorial Pacific euphotic zone and the atmosphere and deep ocean. A broad overview of the program at the 140°W site is given by Murray et al. (Oceanography, 5: 134-142, 1992). A full description of the Equatorial Pacific Process Study, including the international context and the scientific results, appears in a series of Deep-Sea Research Part II special volumes:

Topical Studies in Oceanography, A U.S. JGOFS Process Study in the Equatorial Pacific (1995), Deep-Sea Research Part II, Volume 42, No. 2/3.

Topical Studies in Oceanography, A U.S. JGOFS Process Study in the Equatorial Pacific. Part 2 (1996), Deep-Sea Research Part II, Volume 43, No. 4/6.

Topical Studies in Oceanography, A U.S. JGOFS Process Study in the Equatorial Pacific (1997), Deep-Sea Research Part II, Volume 44, No. 9/10.

Topical Studies in Oceanography, The Equatorial Pacific JGOFS Synthesis (2002), Deep-Sea Research Part II, Volume 49, Nos. 13/14.

[[table of contents](#) | [back to top](#)]

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).

[[table of contents](#) | [back to top](#)]