

# Membrane lipids in sediments collected during R/V Thomas G. Thompson cruise TT013 in the Equatorial Pacific in 1992 during the U.S. JGOFS Equatorial Pacific (EqPac) project

Website: <https://www.bco-dmo.org/dataset/2699>

Version: July 30, 2002

Version Date: 2002-07-30

## Project

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

## Program

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

Contributors	Affiliation	Role
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## Dataset Description

Membrane lipids in sediments

## Methods & Sampling

**PI:** Fred Dobbs  
**of:** Old Dominion University  
**dataset:** Membrane lipids, in sediments  
**dates:** October 30, 1992 to December 13, 1992  
**location:** N: 9 S: -12 W: -140 E: -135  
**project/cruise:** EqPac/TT013 - Benthic survey  
**ship:** R/V Thomas Thompson

**Methodology:** Findlay, R.H., and F.C. Dobbs. 1993. Quantitative description of microbial communities using lipid analysis. Chapter 32 in Handbook of Methods in Aquatic Microbial Ecology. (P.F. Kemp, B.F. Sherr, E.B. Sherr, and J.J. Cole, editors), pp. 271-284. Lewis Publishers, Boca Raton.

### DMO Notes:

All samples are extracted from multicores. Data are displayed as a summary at a nominal geographic location. The summary consists of samples from one or more cores or stations. Sample size is 0.5 cm except for the sample at 9.5 cm which is a 1 cm sample.

## Data Files

File
<b>lipid_sed.csv</b> (Comma Separated Values (.csv), 4.45 KB) MD5:3cc17ebcfe6bacaddca79fd414ed15f5
Primary data file for dataset ID 2699

## Parameters

Parameter	Description	Units
sta_name	station name	dimensionless
sta	station number from event log	dimensionless
lat_n	nominal latitude; negative denotes south	degrees
lon_n	nominal longitude; negative denotes west	degrees
tube_num	tube number, multicore	dimensionless
depth_core	depth in core, mid-point of interval sampled	centimeters
saturates_norm	saturates, normal	mole per cent
saturates_term_b	saturates, terminally branched	mole per cent
saturates_mid_c_b	saturates, mid-chain branched	mole per cent
monoenoics	monoenoics	mole per cent
monoenoics_b	monoenoics, branched	mole per cent
polyenoics	polyenoics	mole per cent

## Instruments

<b>Dataset-specific Instrument Name</b>	Multi Corer
<b>Generic Instrument Name</b>	Multi Corer
<b>Generic Instrument Description</b>	The Multi Corer is a benthic coring device used to collect multiple, simultaneous, undisturbed sediment/water samples from the seafloor. Multiple coring tubes with varying sampling capacity depending on tube dimensions are mounted in a frame designed to sample the deep ocean seafloor. For more information, see Barnett et al. (1984) in <i>Oceanologica Acta</i> , 7, pp. 399-408.

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## Deployments

### TT013

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57732">https://www.bco-dmo.org/deployment/57732</a>
<b>Platform</b>	R/V Thomas G. Thompson
<b>Start Date</b>	1992-10-30
<b>End Date</b>	1992-12-13
<b>Description</b>	Purpose: Benthic Survey, 12°N-12°S at 140°W TT013 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.

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## 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.

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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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