

# Neutral lipid concentrations from sediment cores 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/2707>

**Version:** December 18, 1995

**Version Date:** 1995-12-18

## Project

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

## Program

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

Contributors	Affiliation	Role
<a href="#">Wakeham, Stuart</a>	Skidaway Institute of Oceanography (SKIO)	Principal Investigator
<a href="#">Chandler, Cynthia L.</a>	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

## Table of Contents

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

## Dataset Description

Neutral lipid concentrations, Sediment cores

## Methods & Sampling

**PI:** Stuart Wakeham  
**of:** Skidaway Institute of Oceanography  
**dataset:** Neutral lipid concentrations, Sediment cores  
**dates:** October 30, 1992 to December 13, 1992  
**location:** N: 9 S: -12 W: -140 E: -140  
**project/cruise:** EQPAC/TT013 - Benthic cruise  
**ship:** Thomas Thompson

Samples collected with a multicore device, see event log for precise locations of multicore sampling.

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

## Data Files

**File****lipid\_core.csv**(Comma Separated Values (.csv), 2.04 KB)

MD5:8efa2bc1f4655d00b7243f42b3796044

Primary data file for dataset ID 2707

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

Parameter	Description	Units
neutral_lipids	concentration of neutral lipids (see list of lipid names below)	ng/g dry wt.
n9_0_0d5	Nominal latitude (9N) of the core location along 140W, (0-0.5)cm is the interval in the core sampled.	
n9_10_12	Nominal latitude (9N) of the core location along 140W, (10_12)cm is the interval in the core sampled.	
n5_0_0d5	Nominal latitude (5N) of the core location along 140W, (0-0.5)cm is the interval in the core sampled.	
n5_10_12	Nominal latitude (5N) of the core location along 140W, (10_12)cm is the interval in the core sampled.	
n2_0_0d5	Nominal latitude (2N) of the core location along 140W, (0-0.5)cm is the interval in the core sampled.	
eq_0_0d5	Nominal latitude (0N) of the core location along 140W, (0-0.5)cm is the interval in the core sampled.	
eq_10_12	Nominal latitude (0N) of the core location along 140W, (10_12)cm is the interval in the core sampled.	
s2_0_0d5	Nominal latitude (2S) of the core location along 140W, (0-0.5)cm is the interval in the core sampled.	
s5_0_0d5	Nominal latitude (5S) of the core location along 140W, (0-0.5)cm is the interval in the core sampled.	
s12_0_0d5	Nominal latitude (12S) of the core location along 140W, (0-0.5)cm is the interval in the core sampled.	
Neutral Lipid names have been prefixed with nl_, which must be	ignored when deciphering the lipid name.	
14ROH	C14-alcohol	
2,6,10-TMP-one	2,6,10-trimethylpentadecanone	
15ROH	C15-alcohol	
16ROH	C16-alcohol	
17ROH	C17-alcohol	
18ROH	C18-alcohol	
phytol	phytol	
19ROH	C19-alcohol	
20ROH	C20-alcohol	
21ROH	C21-alcohol	
22ROH	C22-alcohol	
23ROH	C23-alcohol	
27HC	C27-alkane	

24ROH	C24-alcohol	
28HC	C28-alkane	
squalene	squalene	
25ROH	C25-alcohol	
29HC	C29-alkane	
26ROH	C26-alcohol	
30HC	C30-alkane	
27ROH	C27-alcohol	
31HC	C31-alkane	
27(5,22)	cholesta-5,22-dien-3B-ol	
27(22)	cholest-22-en-3B-ol	
28ROH	C28-alcohol	
27(5)	choles-5-en-3B-ol	
27(0)	cholestan-3B-ol	
bisnorhopane	bisnorhopane	
28(5,22)	24-methylcholesta-5,22-dien-3B-ol	
28(22)	24-methylcholest-22-en-3B-ol	
27(4-en-3-one)	cholest-4-en-3-one	
28(5,24(28))	24-methylcholesta-5,24(28)-dien-3B	
28(5)	24-methylcholest-5-en-3B-ol	
28-diol	C28-alkane-diol	
29(5,22)	24-ethylcholesta-5,22-dien-3B-ol	
DM-29(5,22)	23,24-dimethylcholesta-5,22-dien-3	
29(5)	24-ethylcholest-5-en-3B-ol	
29(0)	24-etylcholestan-3B-ol	
29(5,24(28))	24-ethylcholesta-5,24(28)E-dien-3B	
30(22)	4,23,24-trimethylcholest-22-en-3B-	
30(0)	4,23,24-trimethylcholestan-3B-ol	
30-diol	C30-alkane-diol	
30-keto-ol	C30-alkane keto-ol	
homohopane	homohopane	
37:2 alkenone	C37:2 alkenone	
38:2 alkenone	C38:2 ethyl-alkenone	

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

## 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.

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

## 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.

[ [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](#) ]