

Particulate C, N and carbohydrate percentages from sediment cores from 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/2701>

Version: June, 1996

Version Date: 1996-06-01

Project

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

Program

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

Contributors	Affiliation	Role
Hedges, John	University of Washington (UW)	Principal Investigator
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Dataset Description

Particulate C, N and carbohydrate percentages from sediment cores

Methods & Sampling

PI: John Hedges (Hedges/Lee/Wakeham)
of: University of Washington
dataset: Particulate C, N and carbohydrate percentages from sediment cores
dates: October 30, 1992 to December 13, 1992
location: N: 9 S: -12 W: -140 E: -135
project/cruise: EQPAC/TT013, Benthic cruise
ship: Thomas Thompson

Note:

Samples from station 10 and 15 at sediment_depth 0.0 cm are are samples of the soupy portion of the cores that was slurped off the top before splitting was done.

Note:

The core samples analyzed are COMPOSITES of many multicores. Because these are composite samples, no single event number applies.

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Data Files

File
carbcore.csv (Comma Separated Values (.csv), 1.01 KB) MD5:67ded6ddb3e74c3f78634610c805c12a
Primary data file for dataset ID 2701

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Parameters

Parameter	Description	Units
sta	station number corresponding to coring location assigned during EqPac Cruises TT007 and TT011 (see event logs)	
lat_n	nominal latitude of coring location in whole degrees (negative = south)	degrees
lon_n	nominal longitude of coring location in whole degrees (negative = west)	degrees
depth_core_avg	average depth (from core top) of sediment sampling interval	centimeters
POC	weight percent of organic carbon in total particulates determined by aqueous acidification (salt-corrected wt.)	percent
N_p_tot	weight percent of total nitrogen in total particulates (salt-corrected wt.)	percent
PIC	weight percent of inorganic carbon in total particulates determined by deducting POC from total partic. carbon (salt-corrected)	percent
lyxose	weight percent lyxose monomer of total carbohydrates	percent
arabinose	weight percent arabinose monomer of total carbohydrates	percent
rhamnose	weight percent rhamnose monomer of total carbohydrates	percent
ribose	weight percent ribose monomer of total carbohydrates	percent
xylose	weight percent xylose monomer of total carbohydrates	percent
fucose	weight percent fucose monomer of total carbohydrates	percent
mannose	weight percent mannose monomer of total carbohydrates	percent
galactose	weight percent galactose monomer of total carbohydrates	percent
glucose	weight percent glucose monomer of total carbohydrates	percent
carb_tot_POC_ratio	weight ratio of mg total carbohydrates per 100mg organic carbon in particulate matter	mg per 100mg

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Deployments

TT013

Website	https://www.bco-dmo.org/deployment/57732
Platform	R/V Thomas G. Thompson
Start Date	1992-10-30
End Date	1992-12-13
Description	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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