

Magnetic Susceptibility (raw data from the ITRAX instrument) for a sediment core taken from Ongael Lake, Palau in 2013 (PaPaPro project)

Website: <https://www.bco-dmo.org/dataset/473114>

Version: 1

Version Date: 2013-12-17

Project

» [Do Parallel Patterns Arise from Parallel Processes?](#) (PaPaPro)

Program

» [Dimensions of Biodiversity](#) (Dimensions of Biodiversity)

Contributors	Affiliation	Role
Sachs, Julian P.	University of Washington (UW)	Principal Investigator
Dawson, Michael N.	University of California-Merced (UC Merced)	Co-Principal Investigator
Rauch, Shannon	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

Table of Contents

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

Dataset Description

This is the raw data from the ITRAX instrument.

Methods & Sampling

Core was recovered from Ongael Lake with a Universal corer on 11-Sept-2013. Magnetic Susceptibility was measured at [ANSTO](#) with ITRAX instrument on 14-Oct-2013.

Data Processing Description

No processing has been done. These are raw data.

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

Data Files

File
POLO-UC1_mag_sus.csv (Comma Separated Values (.csv), 12.82 KB) MD5:298c0c303d245a9a3efbb0a19220055b
Primary data file for dataset ID 473114

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

Parameters

Parameter	Description	Units
lat	Latitude where the sediment core was taken.	decimal degrees
lon	Longitude where the sediment core was taken.	decimal degrees
year	4-digit year when the sediment core was taken.	YYYY
month	2-digit month of year when the sediment core was taken.	01 to 12
day	2-digit day of month when the sediment core was taken.	01 to 31
position	Position along the sediment core.	millimeters (mm)
validity		
bottom_measurement	Magnetic susceptibility, bottom measurement.	unitless, reported as SI x 10 ⁻⁵
top_measurement	Magnetic susceptibility, top measurement.	unitless, reported as SI x 10 ⁻⁵
corrected_measurement	Magnetic susceptibility, corrected measurement.	unitless, reported as SI x 10 ⁻⁵

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

Instruments

Dataset-specific Instrument Name	Universal corer
Generic Instrument Name	Gravity Corer
Generic Instrument Description	The gravity corer allows researchers to sample sediment layers at the bottom of lakes or oceans. The coring device is deployed from the ship and gravity carries it to the seafloor. (http://www.whoi.edu/instruments/viewInstrument.do?id=1079).

Dataset-specific Instrument Name	ITRAX XRF
Generic Instrument Name	ITRAX X-ray Fluorescence Core Scanner
Dataset-specific Description	Magnetic Susceptibility Data from the Palau sediment core from Ongael Lake was measured at ANSTO with ITRAX instrument on 14 October 2013. See more at: http://www.ansto.gov.au/ResearchHub/IER/Capabilities/Radiochemistry/inde...
Generic Instrument Description	An Itrax X-ray Fluorescence (XRF) core scanner provides high-resolution, non-destructive elemental analysis of sediment cores. They can provide optical and radiographic images as well as XRF spectrometry elemental profiles. Itrax instruments may accommodate a variety of sample types including sediment and rock cores, speleothems, corals and wood.

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

Deployments

Ongael 2013-09

Website	https://www.bco-dmo.org/deployment/473284
Platform	shoreside Palau
Start Date	2013-09-11
End Date	2013-10-08

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

Project Information

Do Parallel Patterns Arise from Parallel Processes? (PaPaPro)

Website: <http://marinelakes.ucmerced.edu/>

Coverage: Western Pacific; Palau; Indonesia (West Papua)

This project will survey the taxonomic, genetic, and functional diversity of the organisms found in marine lakes, and investigate the processes that cause gains and losses in this biodiversity. Marine lakes formed as melting ice sheets raised sea level after the last glacial maximum and flooded hundreds of inland valleys around the world. Inoculated with marine life from the surrounding sea and then isolated to varying degrees for the next 6,000 to 15,000 years, these marine lakes provide multiple, independent examples of how environments and interactions between species can drive extinction and speciation. Researchers will survey the microbes, algae, invertebrates, and fishes present in 40 marine lakes in Palau and Papua, and study how diversity has changed over time by retrieving the remains of organisms preserved in sediments on the lake bottoms. The project will test whether the number of species, the diversity of functional roles played by organisms, and the genetic diversity within species increase and decrease in parallel; whether certain species can greatly curtail diversity by changing the environment; whether the size of a lake determines its biodiversity; and whether the processes that control diversity in marine organisms are similar to those that operate on land.

Because biodiversity underlies the ecosystem services on which society depends, society has a great interest in understanding the processes that generate and retain biodiversity in nature. This project will also help conserve areas of economic importance. Marine lakes in the study region are important for tourism, and researchers will work closely with governmental and non-governmental conservation and education groups and with diving and tourism businesses to raise awareness of the value and threats to marine lakes in

Indonesia and Palau.

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

Program Information

Dimensions of Biodiversity (Dimensions of Biodiversity)

Website: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503446

Coverage: global

(adapted from the NSF Synopsis of Program)

Dimensions of Biodiversity is a program solicitation from the NSF Directorate for Biological Sciences. FY 2010 was year one of the program. [\[MORE from NSF\]](#)

The NSF Dimensions of Biodiversity program seeks to characterize biodiversity on Earth by using integrative, innovative approaches to fill rapidly the most substantial gaps in our understanding. The program will take a broad view of biodiversity, and in its initial phase will focus on the integration of genetic, taxonomic, and functional dimensions of biodiversity. Project investigators are encouraged to integrate these three dimensions to understand the interactions and feedbacks among them. While this focus complements several core NSF programs, it differs by requiring that multiple dimensions of biodiversity be addressed simultaneously, to understand the roles of biodiversity in critical ecological and evolutionary processes.

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

Funding

Funding Source	Award
NSF Division of Ocean Sciences (NSF OCE)	OCE-1241247

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