

HADES-K - Deployment Log from R/V Thomas G. Thompson TN309 from the Kermadec Trench adjacent to New Zealand; 2014 (HADES project)

Website: <https://www.bco-dmo.org/dataset/626031>

Version: 02 November 2015

Version Date: 2015-11-02

Project

» [Controls on Hadal Megafaunal Community Structure: a Systematic Examination of Pressure, Food Supply, and Topography](#) (HADES)

Contributors	Affiliation	Role
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Dataset Description

HADES-K - Deployment Log

Methods & Sampling

Generated by cruise personnel

Data Processing Description

BCO-DMO Processing Notes

- Generated from original file: "HADESK_deployment_log_20140517_0325.xlsx" contributed by Tim Shank
- Parameter names edited to conform to BCO-DMO naming convention found at [Choosing Parameter Name](#)
- "nd" (no data) inserted into blank cells and cells with "-"
- Minor corrections to date/time fields (remove spaces, add a missing digit)
- Lat/Lon integer degrees and decimal minutes signed to match lat/lon decimal degrees

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Data Files

File
HADESK_DeployLog.csv (Comma Separated Values (.csv), 22.12 KB) MD5:3ce0595a8ad4e228361a64e3404b7968
Primary data file for dataset ID 626031

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Parameters

Parameter	Description	Units
Deploy_No	Consecutive Deployment Number	dimensionless
Vehicle	Vehicle or Instrument Deployed	text
Site	Deployment Site	text
Dive_ID	Dive Id	text
Station	Station	dimensionless
Deploy_Date_Time_GMT	Date/Time of Deployment (includes date/time ranges)	YYYYMMDD_HHMM
Deploy_Lat	Deployment Latitude (South is Negative)	decimal degrees
Deploy_Lon	Deployment Longitude (West is Negative)	decimal degrees
Deploy_Lat_Deg	Deployment Latitude Integer Degrees (South is Negative)	degrees
Deploy_Lat_Min	Deployment Latitude Decimal Minutes (South is Negative)	decimal minutes
Deploy_Lon_Deg	Deployment Longitude Integer Degrees (West is Negative)	degrees
Deploy_Lon_Min	Deployment Longitude Decimal Minutes (West is Negative)	decimal minutes
Recovery_Date_Time_GMT	Date/Time of Recovery (includes date/time ranges)	YYYYMMDD_HHMM
Recovery_Lat	Recovery Latitude (South is Negative)	decimal degrees
Recovery_Lon	Recovery Longitude (West is Negative)	decimal degrees
Recovery_Lat_Deg	Recovery Latitude Integer Degrees (South is Negative)	degrees
Recovery_Lat_Min	Recovery Latitude Decimal Minutes (South is Negative)	decimal minutes
Recovery_Lon_Deg	Recovery Longitude Integer Degrees (West is Negative)	degrees
Recovery_Lon_Min	Recovery Longitude Decimal Minutes (West is Negative)	decimal minutes
Target_Depth	Target Depth	meters
Time_on_bottom	Time On Bottom	text
Depth	Depth	meters
Radio_Freq	Radio Frequency of Tracking Beacon on Vehicle	text
Notes	Notes	text

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Deployments

TN309

Website	https://www.bco-dmo.org/deployment/536488
Platform	R/V Thomas G. Thompson
Start Date	2014-04-10
End Date	2014-05-20
Description	Original data are available from the NSF R2R data catalog

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Project Information

Controls on Hadal Megafaunal Community Structure: a Systematic Examination of Pressure, Food Supply, and Topography (HADES)

Website: <http://www.whoi.edu/hades/>

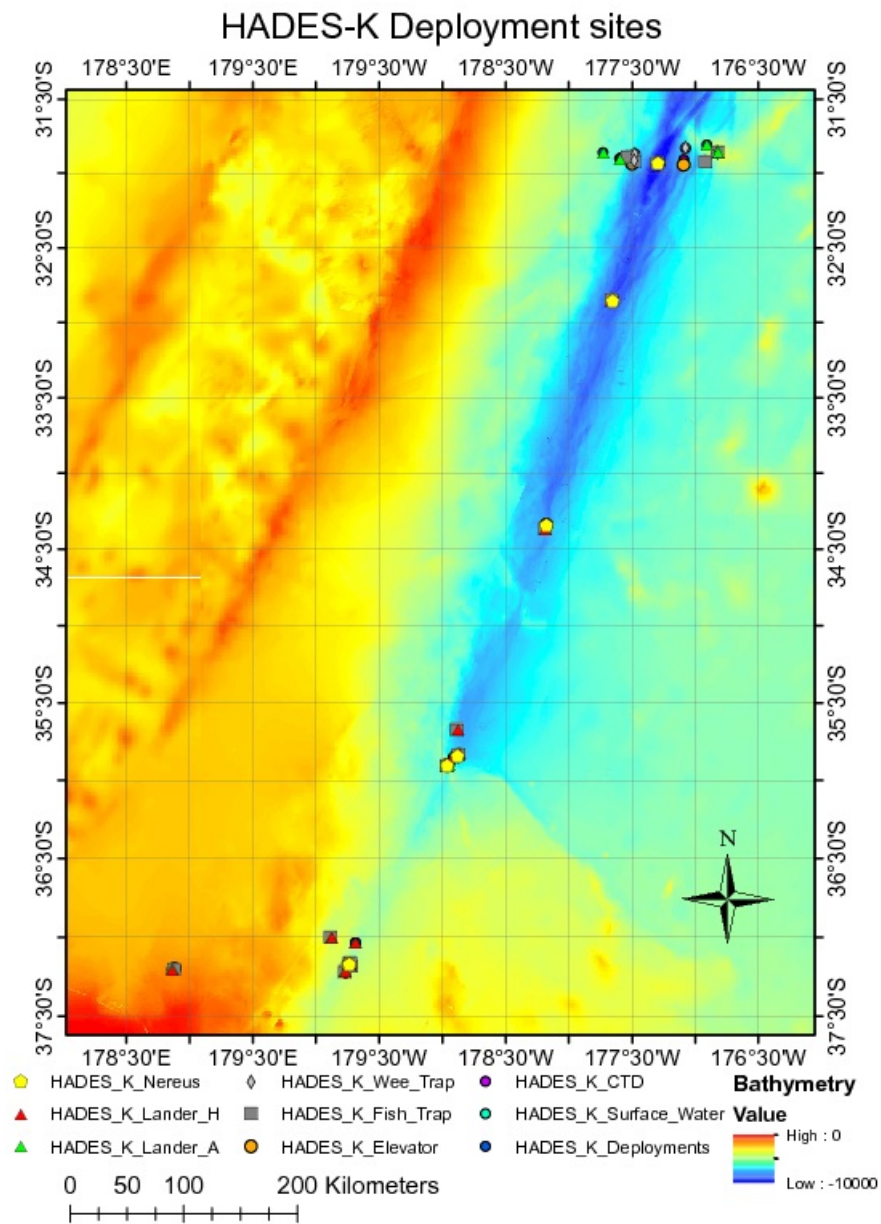
Coverage: Kermadec Trench adjacent to New Zealand: approximately 37 12.75 S and 178 51.43 E to 31 51.29 S and 176 49.07 W

Extracted from the NSF award abstract:

Severe technical challenges associated with the extremes of hydrostatic pressure have prevented major advances in hadal ecological studies, and relegated hadal systems to among the most poorly investigated habitats on Earth. Through this project, Hadal Ecosystems Studies (HADES) program, PIs will determine the composition and distribution of hadal species, the role of hadal pressures (piezolyte concentrations, enzyme function under pressure), food supply (distribution of POC with the abundance and biomass of trench organisms, and metabolic rates/energetic demand), and depth/topography (genetic divergence and spatial connectivity of populations) have on impacting deep-ocean community structure. This project will examine these factors using the world's first full-ocean depth hybrid remotely operated vehicle (HROV) in conjunction with the only full-ocean depth imaging lander (Hadal-Lander). This project will provide the first seafloor data and samples in one of the world's best, yet little known trenches- the Kermadec Trench (SW Pacific Ocean).

Megafaunal community structure and the relationship between POC and benthic bacterial biomass will be examined as a function of depth and location by systematic high-definition imaging and sediment/faunal sampling transects from abyssal to full trench depths both along and perpendicular to the trench axis. Population genetic approaches will provide levels of genetic divergence and evolutionarily independent lineages to assess the role of depth and topography in trenches and their adjacent abyssal plain in promoting the formation of species. Physiological constraints will be investigated by examining in-situ respiration of selected fauna and tissue concentrations of such protein stabilizers as trimethylamine oxide (TMAO), and the structural adaptations of macromolecules.

Image of NEREUS Deployment Sites. [click on the image to view a larger version]



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Funding

Funding Source	Award
NSF Division of Ocean Sciences (NSF OCE)	OCE-1131620
NSF Division of Ocean Sciences (NSF OCE)	OCE-1130712
NSF Division of Ocean Sciences (NSF OCE)	OCE-1130494

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