

HADES-K Specify Export 201305190833 final 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/536882>

Version: 31 October 2014

Version Date: 2014-10-31

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 - Specify Export 201305190833 Final

Methods & Sampling

(tbd)

Data Processing Description

BCO-DMO Processing Notes

- Generated from original file: "HADESK_Specify_Export_201305190833_Final.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
- Date reformatted to YYYYMMDD
- Time reformatted to HHMM

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Data Files

File
HADESK_Export.csv (Comma Separated Values (.csv), 625.94 KB) MD5:6d6a35c343c457b6c8a4663ad79e2f93
Primary data file for dataset ID 536882

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Parameters

Parameter	Description	Units
NIWA_No	NIWA Number	dimensionless
Cruise_Name	Cruise Name	text
Site	Site	text
Cruise	Official UNOLS Cruise Id	text
Dive_Drop_No	Dive/Drop Number	text
NEREUS_Stn	NEREUS Station Number	dimensionless
Gear	Sampling Gear	text
Date	Date (UTC??)	YYYYMMDD
Start_Time	Start Time (UTC??)	HHMM
PI	Principal Investigator	text
Institution	PI Institution	text
Split_No	Split Number	dimensionless
Phylum	Phylum	text
Class	Class	text
Order	Order	text

Family	Family	text
Genus	Genus	text
Species	Species	text
Full_Taxon_Name	Full Taxon Name	text
Latitude1	Latitude (South is negative)	decimal degs
Longitude1	Longitude (West is negative)	decimal degs
Depth	Sample Depth	meters
Prep_Type	Preparation Type	text
No_of_Samples	Number of Samples	dimensionless
Container	Container	ml
Tissue_Sample_Type	Tissue Sample Type	text
Analysis	Analysis	text
Remarks	Remarks	text
No_of_Individuals	Number of Individuals	integer
Sex	Sex	text
Size	Size	text
Weight	Weight	grams
Mfish_Code	Mfish Code	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/>

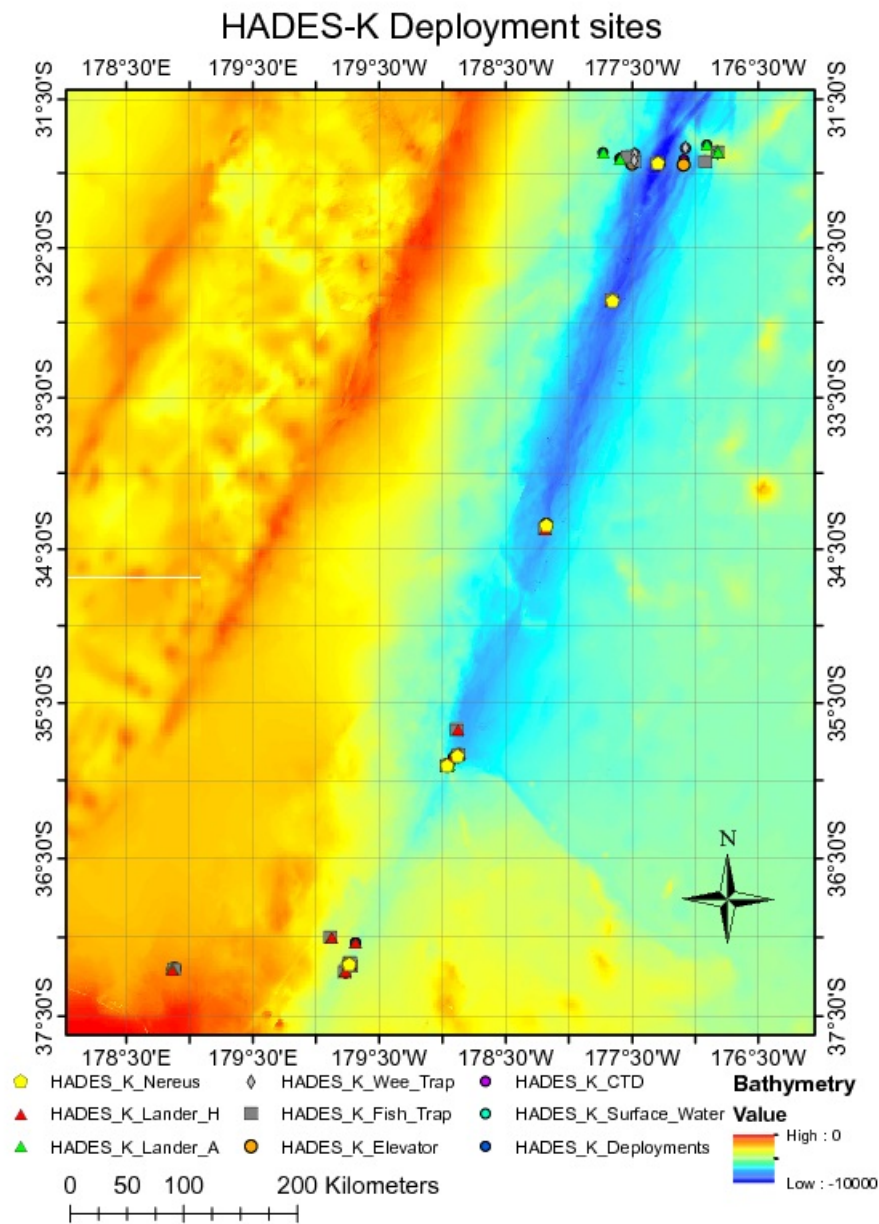
Coverage: Kermadec Trench adjacent to New Zealand: approximately 37 12.75 S and 178 51.43 E to 31 51.29 S and 176 49.07 W

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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