Genomic Sequence data from R/V Ka'imikai-O-Kanaloa, R/V Kilo Moana KOK0220, KM0325 near Hawaii (22.75 N, 158 W) from 2002-2003 (C-MORE project)

Website: https://www.bco-dmo.org/dataset/517582
Version: 06 June 2014
Version Date: 2014-06-06

Project
» Center for Microbial Oceanography: Research and Education (C-MORE)

Contributors	Affiliation	Role
DeLong, Edward	Massachusetts Institute of Technology (MIT-Dept CEE)	Principal Investigator
Nahorniak, Jasmine	Oregon State University (OSU-CEOAS)	Data Manager
Gegg, Stephen R.	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

Table of Contents

Dataset Description

Clone and metagenomic sequences from Station ALOHA, near Hawaii (22.75 N, 158 W)

Data from the accession numbers listed below can be accessed from NCBI (http://www.ncbi.nlm.nih.gov/).

BioProject: PRJNA29033

GenBank accession numbers
Nucleotide: genomic sequences
EU795109-EU795141
EU795173-EU795221
EU795256-EU795267
EU795269-EU795272
EU795281-EU795282

[table of contents | back to top]

Parameters

Parameters for this dataset have not yet been identified

[table of contents | back to top]

Deployments

KOK0220

Website	https://www.bco-dmo.org/deployment/516617
Platform	R/V Ka`imikai-O-Kanaloa
Report	http://hahana.soest.hawaii.edu/hot/csreports/cs140.html
Start Date	2002-10-05
End Date	2002-10-09
Description	The objective of this cruise was to continue building a collection of hydrographic and biogeochemical data at the Hawaii Ocean Time-series(HOT) stations. Four stations were to be occupied during the cruise, in the following order: 1) Station 1, referred to as Station Kahe, is located at 21° 20.6' N, 158° 16.4' W and was to be occupied on October 5 for about 3 hours. 2) Station 2: ALOHA (A Long Term Oligotrophic Habitat Assessment) is defined as a circle with a 6 nautical mile radius centered at 22° 45'N, 158° W. This is the main HOT station and was to be occupied for 3 days from October 6 though October 8. 3) Station 8: HALE ALOHA is located at 22° 20' N, 158° 10.6' W. Station 8 was planned to be occupied on October 8 for about 2 hours. 4) Station 6: Located off Kahe Point at 21° 50.8' N, 158° 21.8' W. Station 6 was planned to be occupied on October 8 for about 3 hours. A single CTD cast was to be conducted at Station 1 to collect continuous profiles of various physical and chemical parameters. Water samples were to be collected at discrete depths for biogeochemical measurements. Upon arrival at Station ALOHA, a floating sediment trap array was to be deployed. A full-depth CTD cast was to be conducted followed by CTD casts at 3-hour intervals for 36 hours of continuous and discrete data collection. Plankton net tows were to be conducted near noon and midnight on October 6 and 7. A floating primary production experiment was to be deployed and recovered on October 7. Following recovery of the sediment traps on October 8, the ship was scheduled to return to Station ALOHA for trace metal and optical casts. Once work was completed at Station ALOHA, the ship was to transit to Station 8 for a single 1000 m CTD cast then to Station 6 for a single 2500 m cast. The ship was scheduled to return to SNUG Harbor at 0800 on October 9 and unload. The following instruments were to collect data throughout the cruise: a shipboard ADCP, a thermosalinograph, a fluorometer and an anemometer.

KM0325

Website	https://www.bco-dmo.org/deployment/516658
Platform	R/V Kilo Moana
Start Date	2003-12-18
End Date	2003-12-22
Description	Original data are available from the NSF R2R data catalog The objective of this cruise was to maintain a collection of hydrographic and biogeochemical data at the Hawaii Ocean Time-series (HOT) stations. Three stations were to be occupied during the cruise, in the following order: 1) Station 1, referred to as Station Kahe, is located at 21 20.6'N, 158 16.4'W and was to be occupied on December 18 for about 3 hours. 2) Station 2: ALOHA (A Long Term Oligotrophic Habitat Assessment) is defined as a circle with a 6 nautical mile radius centered at 22 45'N, 158W. This is the main HOT Station and was to be occupied for 3 days from December 19 to December 21. 3) Station 6, referred to as Station Kaena, is located off Kaena Point at 21 50.8'N, 158 21.8'W was to be occupied on December 21 for about 2 hours. A single CTD cast was to be conducted at Station 1 to collect continuous profiles of various physical and chemical parameters. Water samples were to be collected at discrete depths for biogeochemical measurements. Upon arrival at Station ALOHA, a free-drifting sediment trap array was to be deployed. After deployment, a full-depth CTD cast was to be conducted, followed by CTD casts at strict 3 hour intervals for at least 36 hours for continuous and discrete data collection, followed by another full-depth CTD cast. One free-drifting array was to be deployed for 12 hours for incubation experiments on December 20. A plankton net was to be deployed near noon and midnight on December 19 and 20 at Station ALOHA. After CTD work at Station ALOHA was accomplished, the ship was to transit to recover the floating sediment trap array. After recovering the sediment traps, the ship was to return to Sta. ALOHA to continue light cast operations, after which the ship was to transit to Station 6. A near-bottom CTD cast (~2500 m) was to be conducted at Station 6 including salinity samples for calibration, after which the ship was to transit back to Snug Harbor. A Profiling Reflectance Radiometer (PRR) and a Hyperspectral Tethered Spectral Radiometric Buoy (HTSRB) were to be deployed for half-hour periods near noon time on December 19, 20 and 21. A package including a Wet Labs AC9, a Chelsea Fast Repetition Rate Fluorometer (FRRf), and a SeaBird Seacat was to be used to profile the upper 300 m at Sta. ALOHA for one-hour periods on December 20 and 21. A Satlantic ISUS sensor was added to this package to measure the vertical distribution of nitrate. A Remote Automatic Sampler (RAS) was to be deployed after the second deep cast at Station ALOHA with the CTD cable to a target depth of 4500 m, and to be raised to selected levels at pre-determined time intervals, for a total of 8 hours. The following instruments were to collect data throughout the cruise: a thermosalinograph, a fluorometer, and two anemometers.

[table of contents | back to top]

Project Information

Center for Microbial Oceanography: Research and Education (C-MORE)

Website: http://cmore.soest.hawaii.edu/

Coverage: North Pacific Subtropical Gyre (large region around 22 45 N, 158 W)

Project summary

The **Center for Microbial Oceanography: Research and Education** (C-MORE) is a recently established (August 2006; NSF award: EF-0424599) NSF-sponsored Science and Technology Center designed to facilitate a more comprehensive understanding of the diverse assemblages of microorganisms in the sea, ranging from the genetic basis of marine microbial biogeochemistry including the metabolic regulation and environmental controls of gene expression, to the processes that underpin the fluxes of carbon, related bioelements and energy in the marine environment. Stated holistically, C-MORE's primary mission is: *Linking Genomes to Biomes*.

We believe that the time is right to address several major, long-standing questions in microbial oceanography. Recent advances in the application of molecular techniques have provided an unprecedented view of the structure, diversity and possible function of sea microbes. By combining these and other novel approaches with more well-established techniques in microbiology, oceanography and ecology, it may be possible to develop a meaningful predictive understanding of the ocean with respect to energy transduction, carbon sequestration, bioelement cycling and the probable response of marine ecosystems to global environmental variability and climate change. The strength of C-MORE resides in the synergy created by bringing together experts who traditionally have not worked together and this, in turn, will facilitate the creation and dissemination of new knowledge on the role of marine microbes in global habitability.

The new Center will design and conduct novel research, broker partnerships, increase diversity of human resources, implement education and outreach programs, and utilize comprehensive information about microbial life in the sea. The Center will bring together teams of scientists, educators and community members who otherwise do not have an opportunity to communicate, collaborate or design creative solutions to long-term ecosystem scale problems. The Center's research will be organized around four interconnected themes:

- (Theme I) microbial biodiversity,
- (Theme II) metabolism and C-N-P-energy flow,
- (Theme III) remote and continuous sensing and links to climate variability, and
- (Theme IV) ecosystem modeling, simulation and prediction.

Each theme will have a leader to help coordinate the research programs and to facilitate interactions among the other related themes. The education programs will focus on pre-college curriculum enhancements, in service teacher training and formal undergraduate/graduate and post-doctoral programs to prepare the next generation of microbial oceanographers. The Center will establish and maintain creative outreach programs to help diffuse the new knowledge gained into society at large including policymakers. The Center's activities will be dispersed among five partner institutions:

- Massachusetts Institute of Technology,
- Woods Hole Oceanographic Institution,
- Monterey Bay Aquarium Research Institute,
- University of California at Santa Cruz and
- Oregon State University

and will be coordinated at the University of Hawaii at Manoa.

Related Files:

Strategic plan (PDF file)

[table of contents | back to top]

Funding

Funding Source	Award
US Department of Energy (DOE)	unknown C-MORE DOE
NSF Division of Biological Infrastructure (NSF DBI)	DBI-0424599
Gordon and Betty Moore Foundation (GBMF)	unknown C-MORE Moore

[table of contents | back to top]