

CYNTHIA L. CHANDLER

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Information systems professional with thirty-four years of experience integrating information systems technology with oceanographic research

EDUCATION:

Adobe Acrobat 9 Professional Training Class ... September 2010, WHOI
Geospatial Metadata Training Course, NOAA NCDDC ... 8-9 March 2010, Woods Hole
Drupal CMS Core Expertise ... May 2008, WHOI
SQL with MySQL ... November 2007, WHOI
Drupal Boot Camp ... October 2007, Cambridge, MA
Plone: Basics, Organization and Design ... September 2006, WHOI
Cyber-infrastructure Summer Institute for Geoscientists ... August 2006, UCSD, CA
Introduction to Photoshop ... June 2006, WHOI
Cascading Style Sheets and DreamWeaver Templates ... March 2005, WHOI
Cascading Style Sheets ... December 2004, WHOI
Advanced XML and XSLT ... October 2004, WHOI
Introduction to XML ... June 2004, WHOI
MATLAB ... Spring 2002, WHOI
JAVA Programming ... December 2001, WHOI
Introduction to DreamWeaver ... November 2001, WHOI
Presenting Data and Information ... April 2001, Edward Tufte, Yale University
Perl Programming ... Spring 1998, WHOI
UNIX Shell Programming ... Spring 1994, University of Massachusetts Lowell
Variety of Computer Science courses ... 1982 – 1993
Marine Ecology ... June - August 1975, Harvard University/Marine Biological Laboratory
B.A., Zoology, SUNY at Geneseo, NY ... May 1975

PROFESSIONAL SKILLS:

experienced user of information technology systems; relational database design and management;
UNIX / linux / Windows System Administration
Programming/Coding: perl, UNIX shell (variety), MATLAB, HTML, XML/XSLT, C, JAVA
Applications: DreamWeaver, Fireworks, Live Access Server, ferret, GMT, Acrobat, Photoshop,
MATLAB, Microsoft Office, Open Office, EndNote, Web Services, MySQL, drupal, variety of Text
editors
Teaching: course modules for management of oceanographic data

PROFESSIONAL EXPERIENCE:

June 2014-present. Information Systems Specialist, Marine Chemistry and Geochemistry

(MC&G), co-manager of Biological and Chemical Oceanography Data Management Office (BCO DMO), providing comprehensive data management support for select U.S. NSF OCE, PLR ANT and ARC funded projects; database design and management; data processing and quality control; collaboration with data curators from US and International ocean research projects; integration of Semantic Web technologies (e.g. semantic tools, ontologies, Linked Open Data).

March 2007-June 2014. Information Systems Associate III, Marine Chemistry and Geochemistry (MC&G), co-manager of Biological and Chemical Oceanography Data Management Office (BCO DMO), providing comprehensive data management support for select U.S. NSF OCE and OPP funded projects; database design and management; management of Microsoft Windows, RedHat linux systems; data processing and quality control; Web site design and maintenance; collaboration with data managers from US and International ocean research projects and open source software development teams; and continued support for US JGOFS and OCB data systems.

May 2005. Information Systems Associate II, Marine Chemistry and Geochemistry (MC&G), responsible for supporting information systems needs of Ocean Carbon and Biogeochemistry Coordination and Data Management Office (OCB CDMO), including: database design and management, management of Microsoft Windows, IRIX UNIX and RedHat linux systems, data processing and quality control, Web site design and maintenance and collaboration with data managers from other ocean science projects and open source software development teams (<http://ocb.whoi.edu>).

September 2000. Information Systems Associate II, Marine Chemistry and Geochemistry (MC&G), responsible for supporting information processing needs of U.S. Joint Global Ocean Flux Study (JGOFS), including: database design and management, management of Microsoft Windows platforms and SGI IRIX and Sun Solaris UNIX and RedHat linux systems, data processing and quality control, Web site design and maintenance and collaboration with U.S. GLOBEC data management staff and software development teams based at PMEL in Seattle, WA and University of Rhode Island (<http://usjgofs.whoi.edu>).

October 1994. Information Systems Associate I, Marine Chemistry and Geochemistry (MC&G), responsible for supporting information processing needs of Dr. Jean Whelan's Petroleum Organic Geochemistry Group (POGG) including: database design and management, management of MacOS, Windows NT and Solaris UNIX systems, processing of organic geochemistry data, Web site design and maintenance (<http://dynatog.whoi.edu/>).

June 1993. Information Systems Associate I, Computer and Information Services (CIS). Member of Desktop and Workstation Services Team responsible for providing WHOI with technical assistance in selecting, using and maintaining UNIX workstations and related hardware and software.

March 1991. Information Systems Associate I, Information Systems Center (ISC). VAX/VMS Software Manager responsible for installation and support of operating system and layered software.

June 1987. Programmer II, Information Processing and Communications Laboratory (IPCL), Department of Applied Ocean Physics and Engineering. Assistant System Manager of VAX/VMS

computer systems responsible for installation and support of operating system and layered software, development and maintenance of system software, system tuning and performance issues, security and consulting.

March 1986. Senior Research Assistant, Department of Physical Oceanography, Woods Hole Oceanographic Institution. Principal areas of responsibility: 1) DEC microVAX system manager, 2) software specialist and data analyst for the C-SALT (Caribbean Sheets And Layers Transects) and FASINEX (Frontal Air-Sea Interaction Experiment) oceanographic field research programs and 3) consultant to the WHOI CTD Group

January 1985. Senior Research Assistant, CTD Group, Department of Physical Oceanography, Woods Hole Oceanographic Institution: position involved similar areas of responsibility as previous RA III position, but with less supervision.

January 1981. Research Assistant III, CTD Group, Department of Physical Oceanography, Woods Hole Oceanographic Institution: position involved five main areas of responsibility: 1) software specialist - responsible for maintenance and some development of both shore-based and sea-going software systems associated with CTD data acquisition, processing and archiving, 2) system manager: Hewlett-Packard 1000 and 2000 series computer systems running Real Time Executive operating system, 3) principal data analyst responsible for overseeing quality of CTD data and accuracy of calibration efforts, 4) supervisor of shipboard operations responsible for training and supervision of CTD watch standers and 5) liaison between CTD Group and scientists

June 1979. Research Assistant, Data Processing II, CTD Group, Physical Oceanography, Woods Hole Oceanographic Institution: involved in acquisition and processing of Neil Brown Instrument Systems Conductivity Temperature Depth (NBIS-CTD) data ashore and at sea

September 1975-June 1979. Various positions as Biology Research Assistant at University of Massachusetts Lanesville Research Station, Gloucester, MA, Marine Biological Laboratory and Woods Hole Oceanographic Institution, Woods Hole, MA.

AWARDS:

Recipient of WHOI's 2008 Linda Morse-Porteous award for outstanding technical staff service and dedication to discovery and excellence

PROFESSIONAL AFFILIATIONS:

Member, American Society of Information Science and Technology (ASIS&T), 2003-2010

Member, The Oceanographic Society (TOS), 2010 - present

Member, Association for the Sciences of Limnology and Oceanography (ASLO), 2010 - present

Member, AGU 2005- present

Member, ACM 2007- 2012

Voting member, Earth Science Information Partners, representing BCO-DMO, December 2012 – present

RESEARCH INTERESTS:

ocean informatics, database design, data management, online data systems, development of marine ontologies, marine metadata standards, use of information technology especially Semantic Web Technologies to facilitate the process by which information becomes knowledge

PROFESSIONAL ACTIVITIES:**Ongoing and Multi-year**

Member, AGU Earth Space Science Informatics Focus Group Executive Committee, Nov 2008 – 2013

Invited Member, European COST (European Cooperation in Science and Technology)

Action ES0801 Working Group 3 - Data Management, April 2009 - 2013

Appointed Member, Integrated Marine Biogeochemistry and Ecosystem Research (IMBER) Data Management Committee, December 2009 - present

Invited member, US Ocean Acidification Data Management Steering Committee, 2011 - present

Invited member, Ocean Acidification International Coordination Centre Data Management Technical Group, 2013 – present

WHOI and BCO-DMO representative, and invited member of the Semantics and Ontologies Community Group, NSF Earth Cube Initiative, 2011 – present

Member, EarthCube Semantics Network (ESN), of the NSF EarthCube Research Coordination Network, May 2012 – present

Voting member, Earth Science Information Partners, representing BCO-DMO, December 2012 – present

Invited member, World Data System (WDS)/Research Data Alliance (RDA) Data Publication Working Group (WG) and on the WG's Bibliometrics sub-group

Member, Woods Hole Ocean Informatics Advisory Committee, May 2013 - present

Member, Belmont Forum E-Infrastructures and Data Management Collaborative Research Action, Work Package 3, Harmonization of global data infrastructure for sharing environmental data.

Co-chair elect, UNESCO IOC International Oceanographic Data and Information Exchange (IODE), 2015-2017

PROFESSIONAL ACTIVITIES by YEAR in REVERSE CHRONOLOGICAL ORDER:**2014 (through 31 August 2014)**

Participant: Ontology Summit 2014: Big Data and Semantic Web Meet Applied Ontology. Virtual Conference, Thursday afternoons at 12:30 EDT, 16 January - 24 April 2014.
<http://ontolog.cim3.net/cgi-bin/wiki.pl?OntologySummit2014>.

Project PI, meeting coordinator: NSF EarthCube Data Facilities (15-17 January 2014; Washington, DC; URL) Project PI and planning committee member.

Session convener, presenter, participant. 2014 Joint Ocean Sciences Meeting (23-28 February 2014; Honolulu, HI; <http://www.sgmeet.com/osm2014>); Session Title: Big Data for a Big Ocean: Progress in Data Availability and Interoperability; co-conveners: Cynthia Chandler (WHOI), Edward Kearns (NOAA), Kenneth Casey (NOAA), Benjamin Hamlington (UC Boulder), Andrew Bingham (NASA, JPL, PO-DACC), Robert Leben (UC Boulder)

Participant. Research Data Alliance Third Plenary: The Data Sharing Community: Playing YOUR part (26-28 March 2014; Dublin, Ireland; <https://www.rd-alliance.org/plenary3/programme.html>)

RDA member and co-chair of Marine Data Harmonization Interest Group
member WDS/RDA Publishing Data Interest Group
and Data Publication Bibliometrics Working Group

Participant, presenter. OA ICC Technical meeting on Management of Biological Data Related to Ocean Acidification: International Cooperation and Development of Standards (23-24 April 2014; IAEA Environment Laboratories, Monaco Cedex, Monaco; http://ioc-unesco.org/index.php?option=com_oe&task=viewEventRecord&eventID=1493)

Presenter, participant. R2R National Data Center Annual Meeting (14-16 May 2014; NGDC, Boulder, CO; URL: <http://rvdata.us>)
Presented updates on WHOI-R2R work: shipboard event logger and CTD data QA

Discussion lead, participant. OCB Scoping Workshop: Improving predictive biogeochemical models through single cell-based analyses of marine plankton physiological plasticity, genetic diversity and evolutionary processes (28-30 May 2014; Bigelow Laboratory for Ocean Sciences; Boothbay, ME; <http://www.whoi.edu/website/taxon-specific-biogeochemistry/>)

Invited lecturer. UNOLS Chief Scientist Training (9 June 2014; BIOS, Bermuda; <http://csw.unols.org/>)

Two presentations: "Rolling Deck to Repository (R2R) Program: a Brief Overview" and "Introduction to Data Management"

Meeting coordinator, participant. Semantics Smackdown: an Agile exercise in smacking down and marking up ocean science research data (best workshop of the year by far !!)

(10-13 June 2014; RPI/TWC, Troy, NY; <http://www.bco-dmo.org/meetings/semantics-smackdown-2014>)

Workshop Planning Committee Member, Session coordinator and lead, presenter and participant. GeoData 2014: Strengthening the connections, building the inter-agency network (17-19 June 2014; NCAR, Boulder, Colorado; <http://tw.rpi.edu/web/Workshop/Community/GeoData2014>) Coordinator and discussion lead for two breakout groups:

1. Social, political and financial issues of connecting geodata in and between governmental agencies: Feedback from the academic and commercial sectors.
2. Technical issues of connecting geodata in and between governmental agencies: Vocabularies for data annotation and service

Pre-conference workshop convener, presenter, participant. IMBER OSM 2014: Future Oceans (22-27 June 2014, Bergen, Norway, <http://www.imber.info/index.php/Meetings/IMBER-OSC-2014>) Pre-conference event: Data Management Data Management for IMBER Convener(s): Cyndy **Chandler** (BCO-DMO, WHOI), Todd D. O'Brien (NMFS-NOAA), Alberto Piola (SHN/UBA, Argentina); Presented workshop results in plenary.

Session convener, presenter, participant. ESIP Summer Meeting 2014: Linking It Together: Sustainable Software Advancing Science Data and Services (8-11 July 2014; Frisco, CO; <http://commons.esipfed.org/taxonomy/term/1245>); Session co-convenor: EarthCube Rapid Prototype Activities in Support of Improved Access to Ocean Science Data, session co-convenors: D. Kinkade; R. Arko; C. Chandler; A. Shepherd and S. Diggs; and Session co-convenor: Schema.org Dataset Extension Hack-a-Thon, Conveners: D. Fils, A. Shepherd and C. Chandler

Session convener, presenter, participant. ODIP Workshop #3 (5-8 August 2014; AIMS, Townsville, Queensland, Australia; (URL: <http://www.odip.org/>) Representative ODIP-USA;

Session lead, coordinator: Data Publication and Citation

Presenter: Data Publication and Citation: Regional Update on Projects in the USA

2013

Session convener and lead. Research Data Life Cycle. interactive session with 33 on site and 6 remote participants at the Federation of Earth Science Information Partners (ESIP) 2013 Winter meeting. 8-10 January 2013. Washington, DC.

Instructor. IOC IODE-XXII Pre-Conference Training Course & Workshop, Ensenada, Mexico, March 2013. 2-day Training Course & Workshop to familiarize data managers and information managers with new issues and latest developments in their domain. I presented the module on "Publication of Oceanographic Research Data" including details about the SCOR/IODE funded project.

IOC/IODE-XXII/3 IOC Committee on International Oceanographic Data and Information Exchange, Twenty-second Session, 11-15 March 2013, Ensenada, Mexico, <http://www.iode.org/iode22>
IOC = INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (of UNESCO)

IODE = International Oceanographic Data and Information Exchange

Co-coordinator and participant. Workshop for ADCP data handling/processing offered by Jules Hummond (JASADCP, UH). WHOI. Woods Hole, MA. May 2013.

Served as Information Management Specialist on NSF Site Review Team for the 2013 Moorea Coral reef LTER site review (per request of NSF OCE program manager); Moorea, French Polynesia, July 2013.

Invited participant, presenter and panel member: 2nd U.S. Ocean Acidification Principal Investigators' Meeting (Gallaudet Univ., Washington, DC; 17-20 September 2013;)
Invited by NSF OCE program managers; served as an invited panel member

Participant and presenter: International Conference on Marine Data and Information Systems (IMDIS) 2013 (Lucca, Italy; 23-25 September 2013; <http://imdis2013.seadatanet.org/>)

Co-chair of Session 2: Marine Environmental Data Bases: Infrastructures and Data Access Systems; Helped to prepare and distribute a flier for the newly created IODE Associate Data Unit opportunity.

Convener, presenter, participant. NSF EarthCube End-User Domain Workshop: Articulating the Needs of the Ocean Ecosystem Dynamics Community (WHOI, Woods Hole, MA; 7-8 October 2013; <http://workspace.earthcube.org/sites/default/files/files/document-repository/OceanEcosystemDynamicsEndUserWorkshop.pdf>)
project co-PI and member of the Workshop Planning Committee
presentation on Use Case Methodology for Ocean Scientists

Instructor: UNOLS Chief Scientist Training Program (URI, Narragansett, RI; 20 October 2013)
presentations on data management best practices for shipboard data and the R2R event logger system

Invited participant. NSF EarthCube End-User Domain Workshop: Developing a Community Vision of Cyberinfrastructure Needs for Coral Reef Systems Science (Santa Barbara, CA; 23-24 October 2013; <https://projects.nceas.ucsb.edu/nceas/projects/coral-reef-workshop-oct-2013>)
Participant: Ontology Summit 2014: Big Data and Semantic Web Meet Applied Ontology. Virtual Conference, Thursday afternoons at 12:30 EDT, 16 January - 24 April 2014.
<http://ontolog.cim3.net/cgi-bin/wiki.pl?OntologySummit2014>.
Project PI, meeting coordinator: NSF EarthCube Data Facilities (15-17 January 2014; Washington, DC; URL) Project PI and planning committee member.

Session convener, presenter, participant. UNOLS Research Vessel Technical Enhancement Committee (RVTEC) 2013 (TAMU, Corpus Christi, TX; 18 -21 November 2013; http://www.unols.org/meetings/2013/201311rvt/201311rvt_announce.html)
Convened sessions on the R2R Event Logger System and CTD QA Processing

Session convener, presenter, participant. ODIP Second Workshop (La Jolla, CA; 3-6 December 2013; <http://odip.org/>)
Representative ODIP-USA; Session convener: Data Publication and Citation

Session co-convener, 2013 AGU Fall Meeting (San Francisco, CA; 8-13 December 2013; <http://fallmeeting.agu.org/2013/>)

Co-convener of sessions IN51D and IN53C. Data Stewardship in Theory and in Practice. December 13, 2013. Conveners: Cynthia Chandler (Woods Hole Oceanographic Institution), D.L. McGuinness (Tetherless World Constellation, Rensselaer Polytechnic Institute), D.J. Wright (Environmental Systems Research Institute), and L.A. Wyborn (Geosciences Australia)

2012

Session co-convener. "077: Data Systems that Support the US National Policy for the Stewardship of the Ocean, Coasts, and Great Lakes ". 2012 Ocean Sciences Meeting. Park City, Utah. 20-24 February 2012

Invited participant at EVS03: Ocean Policy and Management: Workshop Complementing Session 139; Sunday, February 19. The workshop was organized by Hal Batchelder (OSU); Suzanne Lawrence and Peter Fox (RPI/TWC). The purpose of the workshop was to foster partnerships in support of a Global Large Marine Ecosystem Knowledge Network.

Invited participant at the SPM1.1 Splinter Meeting: NETMAR - Open Service Network for Marine Environmental Data (discuss potential future collaborations between US, EU and Australia in the areas of standards, vocabularies and Linked Open Data). EGU General Assembly 2012, Vienna, Austria.

Prepared and taught 3 tutorial sessions during the OCB Summer PI Workshop, Woods Hole, MA. July 2012.

Participant. 2012 Long Term Ecological Research Information Managers Meeting. Estes Park, CO. 9 September, 2012.

Participant. 2012 Long Term Ecological Research All Scientists Meeting. Estes Park, CO. 10-12 September 2012.

Co-convener. Inaugural meeting of BCO-DMO and LTER Information Managers from marine sites. Estes Park, CO. 11 September 2012.

Participant. The Ocean in a High CO₂ World, Third Symposium. 24-27 September 2012. Monterey, CA. Web site: <http://www.highco2-iii.org> BCO-DMO hosted a booth, "US Ocean Acidification Research Support", which included participation by the Ocean Carbon and Biogeochemistry Project Office and the NOAA Ocean Acidification Program; worked with conference participants to develop use cases related to ocean acidification research.

Invited participant. SCOR/IODE/MBLWHOI Library Workshop on Data Publication, 5th Session, WHOI, Woods Hole, MA. October 2012. Chandler and Raymond presented a joint presentation on the status of work done by BCO-DMO and the MBLWHOI Library.

Instructor, Oceanography Short Course for BP Researchers. Updated and taught two modules: "Data Management 101" and "Better Practices for Management of Marine Field Data" (One of two instructors specifically invited to teach the course again.). October 2012.

Invited participant. Second IODE Workshop on Quality Control of Chemical and Biological Oceanographic Data Collections. Oostende, Belgium. 22-25 October 2012. Presentation: "Examples of Data Quality Indicators for Data Contributed to BCO-DMO". During the workshop Chandler worked with a small International team of experts to draft and submit v2.3 of the "Proposal to adopt a quality flag scheme standard for data exchange in oceanography and marine meteorology" by Sergey Konovalov, Hernan Garcia, Reiner Schlitzer, Laure Devine, Cyndy Chandler, Gwen Moncoiffé, Toru Suzuki, and Alex Kozyr to the Ocean Data Standards Committee.

Co-convenor, AGU Ocean Sciences session OS53E. Science at Sea: Innovative Results From the Oceanographic Research Fleet. Co-convenors: Shawn Smith (Florida State University), Robert Arko (Columbia University), Cynthia Chandler (Woods Hole Oceanographic Institution) and Karen Stocks (University of California San Diego). 2012 Fall Meeting, AGU, San Francisco, CA, 6 December 2012.

2011

Served as Information Management Specialist on NSF Site Review Team for the 2011 North Temperate Lakes LTER site review (per request of NSF OCE program manager). July 2011.

Provided slides presented by Chris German (WHOI), "U.S. GEOTRACES: Data Management for the Pacific Basin", at the U.S. GEOTRACES Pacific Workshop, Location: Scripps Institution of Oceanography - La Jolla, CA - U.S. 12-14 September 2011

Instructor, Oceanography Short Course for BP Researchers. Prepared and taught two modules: "Data Management 101" and "Better Practices for Management of Marine Field Data" (One of two instructors specifically invited to help teach the course again in October 2012). 12-23 September 2011

2010

NSF Award OCE-1031253 funded. A Data Management System and Portal for Access to Ecological and Biogeochemical Ocean Data. Sep 2010 – August 2014.

Invited participant; BCO-DMO representative. OCB Scoping Workshop on Ocean Time-series Sites, Honolulu, HI; "Sea Change: Charting the course for ecological and biogeochemical ocean time series research". 21-23 Sep 2010.

Invited lecturer and coordinator of the pre-workshop data management course. IMBER IMBIZO II Workshop; Hellenic Centre for Marine Research, 10-14 October 2010, in Heraklion, Crete, Greece; two lectures presented: Data Management for IMBER Researchers and Better Practices for Shipboard Data Management.

Workshop participant; 1-3 December 2010, Woods Hole, MA; Coastal Marine Spatial Planning Discovery Vocabularies Workshop: A Joint WHOI/USGS/NOAA Workshop

2000 - 2009

NSF Award OCE-0947822 funded. Collaborative research: Rolling Deck to Repository (R2R): Transforming the Academic Fleet Into an Integrated Global Observing System". September 2009 – August 2014.

Manuscript Review: Earth Science Informatics (Springer); Manuscript Number: ESIN-D-11-00003; Title: DigitalOcean: Building a platform for scientific collaboration and social and media sharing on the Drupal content management system

Member, WHOI Cyberinfrastructure coordinator Search Committee, November 2007 - 2008

NSF Award OCE-0646353 funded. A Data Management System and Portal for Access to Ecological and Biogeochemical Ocean Data. Sep 2006 – August 2010.

Co-chair, WHOI Women's Committee. Oct 2004 – Oct 2006

Information Systems Specialist, NSF LTER Review Panel, April 2006

Member, WHOI Data Portal Pilot Project Team. Feb 2006 – Feb 2007

Co-coordinator, Woods Hole Area Informatics Network, Feb 2006 – Feb 2008

Founding member and Membership coordinator, WHOI Women Technical Staff CIG
Nov 2005 – April 2008

Member, WHOI Gender Equity Program Advisory Committee. May 2005 – Dec 2006

Participant, Data Management / Data Policy Workshop, NSF, Washington, DC. May 2005

Member, WHOI Ocean Informatics and Cyber-infrastructure Steering Committee
and co-chair of the Data Portal Working Group, October 2004 – September 2005

Member, WHOI 75th Anniversary Steering Committee

and member of the 75th Anniversary Public Open House sub-committee

Instructor, Tutorial, Introduction to US JGOFS Live Access Server, WHOI, July 2002.

Leader, US JGOFS Final Data Report: Design Consideration Workshop, WHOI, July 2002.

Volunteer, Volunteer in Public Schools (Falmouth), 1994 – 2009

Judge, Falmouth Science Fair, 2000 – 2008

SUPERVISION AT WHOI (from 3-12 months per year):

Dave Schneider. Sep 2000 - May 2003; since Sep 2008. Data specialist US JGOFS.

George Heimerdinger. September 2000 - May 2003. Data specialist, US JGOFS.

Terri MacEachern. June 2002 - May 2003. temporary employee hired to assist with publication of US JGOFS final data report series.

Terry McKee (Physical Oceanography). since July 2005. Data specialist with BCO-DMO.

Nancy Copley (Biology Department). since Nov 2006. Data specialist with BCO-DMO.

Steve Gegg (MCG). Since May 2008. Data specialist with BCO-DMO.

Alex Dorsk. (WHOI DLA). 2009-2011. R2R event log developer.

Tobias Work (Biology). Sep 2009 – March 2012. BCO-DMO programmer.

Adam Shepherd (CIS). June 2012 – present. BCO-DMO programmer.

Danie Kinkade. (Biology Department) June 2012 – present. BCO-DMO data specialist.

Shannon Rauch. (Biology Department) June 2012 – present. BCO-DMO data specialist.

Cindy Sellers. (AOP&E) April 2012 – present. Research Associate III, R2R event logger project.

OCEANOGRAPHIC RESEARCH CRUISE PARTICIPATION:

Summary: October 1979 – June 2000. experience comprises total of 468 days at sea on 18 oceanographic research cruises aboard six UNOLS vessels, sailing predominantly as scientific

watch leader/CTD software technician doing CTD/XBT profiling, hydrography and mooring work

October 1979 (21 days) R/V KNORR 75, WH/WH, scientific watch stander, CTD software trainee, deep-sea mooring experiment and CTD profiling in the North Atlantic

March 1980 (28 days) R/V OCEANUS 78 leg IV, Recife, Brazil/Azores, Portugal, scientific watch leader/CTD software technician, CTD profiling, hydrography, helium/tritium sampling, Beta-spiral triangle study area in the mid-Atlantic

April 1980 (18 days) R/V OCEANUS 78 leg V, Azores/WH, scientific watch leader/CTD software technician, CTD profiling, hydrography, Labrador and Norwegian Sea

Sept-Oct 1980 (34 days) R/V ATLANTIS II 107 leg XI, Punta Arenas, Chile/Punta Arenas, scientific watch leader/CTD software technician, CTD profiling, hydrography, Southern Atlantic

June 1981 (31 days) R/V ATLANTIS II 109 leg I, WH/Cadiz, Spain, scientific watch leader/CTD software technician, CTD profiling, hydrography, west-east transect at 36 North

August 1981 (30 days) R/V ATLANTIS II 109 leg III, Las Palmas, Canary Is./WH, scientific watch leader/CTD software technician, CTD profiling, hydrography, east-west transect at 24 North

June 1982 (18 days) R/V KNORR 95, WH/WH, scientific watch leader/CTD software technician, CTD profiling, hydrography, Warm Core Rings Experiment, Gulf Stream

July-August 1982 (17 days) R/V THOMAS G. THOMPSON 169, Adak, Alaska/Adak, scientific watch leader/CTD software technician, CTD profiling, hydrography, Aleutian Trench in the North Pacific

March 1983 (32 days) R/V OCEANUS 133 leg V, Walvis Bay, SA/Recife, scientific watch leader/CTD software technician, CTD profiling, hydrography, east-west transect at 11 South

April-May 1983 (31 days) R/V OCEANUS 133 leg VII, Recife/WH, scientific watch leader/CTD software technician, CTD profiling, hydrography, south-north transect at 53 West

July-Sept 1983 (46 days) R/V KNORR 104, WH/Azores/Recife, scientific watch leader/CTD software technician, CTD profiling, hydrography, north-south transect along 35 West

Nov-Dec 1983 (28 days) R/V THOMAS G. THOMPSON 178, Midway Is./Guam Is., scientific watch leader/CTD software technician, CTD profiling, hydrography, deep-sea mooring deployment and recovery (ZONAL experiment)

Sep-Oct 1984 (28 days) R/V THOMAS G. THOMPSON 184, Honolulu, HI/Midway Is., scientific watch leader/CTD software technician, CTD pro-filing, hydrography, deep-sea mooring deployment and recovery (ZONAL experiment)

Nov-Dec 1984 (21 days) R/V THOMAS WASHINGTON 3 leg 9, Montevideo, Uruguay/Rio de Janeiro, Brazil, scientific watch leader/ CTD software technician, CTD/XBT profiling, hydrography,

(Brazil Current Experiment)

Mar-Apr 1985 (18 days) R/V ENDEAVOR 128, Bridgetown, Barbados/Bridgetown, scientific watch leader/CTD software technician, CTD/XBT profiling, hydrography, mooring deployment, (C-SALT experiment)

Jun-Jul 1985 (35 days) R/V THOMAS G. THOMPSON 189, Guam Is./Guam, scientific watch leader/CTD software technician, CTD profiling, hydrography, pressure gauge deployment (WEPOCS-I experiment)

Nov-Dec 1985 (18 days) R/V KNORR 118, Bridgetown, Barbados/Bridgetown, scientific watch leader/CTD software technician, CTD/XBT profiling, hydrography, mooring deployment, (C-SALT experiment)

May-June 2000 (14 days) R/V KNORR 161-7, Recife, Brazil/Norfolk, VA, , scientific watch/CTD software technician, CTD profiling, CTD data processing, hydrography

PAPERS IN REFEREED JOURNALS AND BOOKS:

Glover, D.M., **C.L. Chandler**, S.C. Doney, K.O. Buesseler, G. Heimerdinger, J.K.B. Bishop, and G.R. Flierl. 2006. The U.S. JGOFS Data Management Experience, Deep-Sea Res., II, 53(5-7), 793-802. doi:10.1016/j.dsr2.2006.01.018

Baker, KS; **Chandler, CL**. 2008. Enabling long-term oceanographic research: Changing data practices, information management strategies and informatics. Deep Sea Research Part II. 55 (18-19) : 2132-2142. doi:10.1016/j.dsr2.2008.05.009

Glover, David M., Wiebe, Peter H., Chandler, Cynthia L., and Levitus, Sydney. 2010. "IOC Contributions to International, Interdisciplinary Open Data Sharing". Oceanography 23(3):140-151, doi:10.5670/oceanog.2010.29.

Wiebe, P H, Groman, R G and Chandler, C L. 2011. "Data Management in US GLOBEC". Current: The Journal of Marine Education (27) 2: 30-33.

Boyd, Philip W.; Bakker, Dorothee C. E.; Chandler, Cynthia (2012). A New Database to Explore the Findings from Large-Scale Ocean Iron Enrichments Experiments. OCEANOGRAPHY. 25 (4), 64-71. DOI: <http://dx.doi.org/10.5670/oceanog.2012.10> (Database curated by BCO-DMO from work done by SCOR Working Group 131)

Leadbetter, A., Raymond, L., Chandler, C., Pikula, L., Pissierssens, P., Urban, E. (March 2013). Ocean Data Publication Cookbook. Intergovernmental Oceanographic Commission, Manuals and Guides, number 64, (IOC/MG/64; <http://www.iode.org/mg64>). 45 pp. and annexes.

Leadbetter, A., R. Arko, C. Chandler, A. Shepherd and R. Lowry. 2013. "Linked Data: An Oceanographic Perspective". The Journal of Ocean Technology 8(3). September 2013.

Leadbetter, A; Arko, R.; Chandler, C.; Shepherd, A.; Lowry, R. (2014) "Loose integration of local information to generate collaborative marine science knowledge" Chapter 1.7 in "Collaborative Knowledge in Scientific Research Networks", Diviacco, P; Fox, P; Pshenichy, C; Leadbetter, A. eds. IGI Global. 424 pages. DOI: 10.4018/978-1-4666-6567-5

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Arko, R.; C.L. Chandler; P.D. Clark; A. Milan; J. Mize (2011), Rolling Deck to Repository (R2R): A Linked Data Approach for the U.S. Academic Research Fleet, Abstract IN33E-03 presented at 2011 Fall Meeting, AGU, San Francisco, CA, 7 December.

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PLANNING; poster ID 1079 presented at Session S077: Data Systems that Support the US National Policy for the Stewardship of the Ocean, Coasts, and Great Lakes. 2012 Ocean Sciences Meeting, Salt Lake City, Utah, 22 February 2012.

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Presented by C. Chandler: Fox, P. A.; Batchelder, H.; Lawrence, S. J.; Maffei, A.; Young, O.: INFORMATION MODELS FOR DEVELOPMENT AND EVOLUTION OF COMPLEX MULTI-SCALE KNOWLEDGE NETWORKS FOR MARINE ECOSYSTEMS; poster ID A0522 presented at Session S139: Governing Across Scales: Innovative Stewardship of Earth Systems. 2012 Ocean Sciences Meeting, Salt Lake City, Utah, 22 February 2012.

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C.L. Chandler, R.C. Groman, M.D. Allison, P.H. Wiebe, D.M. Glover, and S.R. Gegg. 2012. "Effective Management of Ocean Biogeochemistry and Ecological Data: the BCO-DMO Story". Geophysical Research Abstracts, Vol. 14, EGU2012-1258, solicited oral presentation in Session "ESSI1.2/OS4.7 Informatics in Oceanography and Ocean Science" at EGU General Assembly 2012, Vienna, Austria. <http://meetingorganizer.copernicus.org/EGU2012/EGU2012-1258.pdf>

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Chandler, C. 2012. Invited speaker: INTEGRATING DATA: A CASE STUDY FROM THE BCO-DMO PROJECT. NOAA 3rd Annual 2012 Environmental Data Management Conference. University of Maryland, MD. May 21-22

Fox, P., Maffei, A., Di Stefano, M., Lawrence, S., and Chandler, C. 2012. The Integrated Ecosystems Assessment Initiative – Enabling the Assessment Of Impacts on Large Marine Ecosystems: Informatics to the Forefront of Science Based Decision Support . In Proceedings of Data 2012 - Int'l Conf. on Data Technologies and Applications (July 25-27 2012, Rome, Italy; <http://www.dataconference.org/>).

Fox, P.; Maffei, A.; DiStefano, M.; Lawrence, S.; Beaulieu, S. and Chandler, C. 2012. "The Integrated Ecosystems Assessment Initiative - enabling the assessment of impacts on Large Marine Ecosystems: informatics to the forefront of science based decision support". Poster R:27 presented in Theme Session R: Mapping and modelling of planktonic ecosystems for better monitoring and future projections of responses to global change during the ICES ASC in Bergen, Norway, September 2012.

Carbotte, S., S. Miller, A. Maffei, S. Smith, V. Ferrini, R. Arko, K. Stocks, S. O'Hara, C. Chandler, M. Bourassa, D. Clark, A. Sweeney, J. Morton. 2012. From Rolling Deck to Repository (R2R): Progress in Systematically Capturing Underway Data from the US Academic Fleet. Geo-Seas International Workshop, University College, Cork, Ireland. Oct 9-10, 2012. URL: http://www.geo-seas.eu/content/news_details.asp?menu=0220000_000026

Fredericks, J.; R. Arko, C. Chandler, H. Glaves, A. Maffei, J. Pearlman, K. Stocks, C. Waldmann (2012). OUTREACH AND COLLABORATION - EMERGING ACTIVITIES. 2012 SUMMIT WHITE PAPERS: A NEW DECADE OF THE INTEGRATED OCEAN OBSERVING SYSTEM. IOOS Summit, Herndon, VA.

Chandler, C.L., R.C. Groman, M.D. Allison, P.H. Wiebe, and D.M. Glover (12/3/12). Improving Access to Ocean Research Data throughout the Data Life Cycle. AGU 2012 Fall Meeting. San Francisco, CA. Allison, M.D., R.C. Groman, C.L. Chandler, C.R. Galvarino, P.H. Wiebe, and D.M. Glover (12/3/12). Visualization Beyond the Map: The Challenges of Managing Data for Re-Use. 2012 AGU Fall Meeting. San Francisco, California.

Lisa M. Raymond; Cynthia L. Chandler; Roy K. Lowry; Edward R. Urban; Gwenaëlle Moncoiffe; Adam Leadbetter; Peter Pissierssens; Cathy Norton; Linda Pikula (2012) "Data Citation: An International Oceanographic Collaboration", Poster IN23C-1526 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 6 December 2012. (<http://fallmeeting.agu.org/2012/eposters/eposter/in23c-1526/>)

Adam Shepherd; Robert A. Arko; Andrew R. Maffei; Cynthia L. Chandler (2012) "Maintaining Scientific Community Vocabularies in Drupal through Consumption of Linked Open Data and Web Services", Poster IN51C-1698 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 6 December 2012. (<http://fallmeeting.agu.org/2012/eposters/eposter/in51c-1698/>)

Elizabeth Coburn; Andrew R. Maffei; Cynthia L. Chandler; Lisa M. Raymond (2012) "Controlled Vocabularies and Ontologies for Oceanographic Data: The R2R Eventlogger Project", Poster IN51C-1699 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 6 December 2012. (<http://fallmeeting.agu.org/2012/e posters/eposter/in51c-1699/>)

Robert A. Arko; Cynthia L. Chandler; Paul D. Clark; Adam Shepherd; Carla Moore (2012) "Rolling Deck to Repository (R2R): Linking and Integrating Data for Oceanographic Research". Invited presentation IN51C-1700 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 6 December 2012. (<http://fallmeeting.agu.org/2012/e posters/eposter/in51c-1700/>)

Andrew R. Maffei; Cynthia L. Chandler; Laura Stolp; Stephen Lerner; James Avery; Tim Thiel (2012) "R2R Eventlogger: Community-wide Recording of Oceanographic Cruise Science Events" , Poster OS51E-1921 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 6 December 2012. (<http://fallmeeting.agu.org/2012/e posters/eposter/os51e-1921/>)

Robert A. Arko; Paul D. Clark; Cynthia L. Chandler; Shawn R. Smith (2012) "Rolling Deck to Repository (R2R): Building a Reference Cruise Catalog for the Research Fleet" , Poster OS51E-1920 presented at 2012 Fall Meeting, AGU, San Francisco, CA, 6 December 2012. (<http://fallmeeting.agu.org/2012/e posters/eposter/os51e-1920/>)

2013

Chandler, C.L. (2013). The Data Life Cycle - Oceanographic Research Data. IMBER IMBIZO III pre-conference workshop. National Institute of Oceanography, Goa, India. January 2013.

Chandler, C.L. (2013). DATA MANAGEMENT IN SUPPORT OF IMBER RESEARCH. IMBER IMBIZO III. National Institute of Oceanography, Goa, India. January 2013.

Chandler, C.L., M.D. Allison, R.C. Groman, S.R. Gegg, P.H. Wiebe, D.M. Glover (2013). BCO-DMO: AN OCEAN BIOGEOCHEMISTRY DATA RESOURCE. ASLO 2013 Aquatic Sciences Meeting. New Orleans, LA. February 2013.

Allison, M. D., Groman, R. C., Gegg, S. R., Chandler, C. L., Sterner, R. W., Brovold, S., Galvarino, C. R., Wiebe, P. H., Glover, D. M (2013). MANAGING DATA FOR THE LONG HAUL: THE BCO-DMO PERSPECTIVE. ASLO 2013 Aquatic Sciences Meeting. New Orleans, LA. February 2013

Chandler, CL. 2013. Cyber-infrastructure for Oceanographic Research Data". Invited presentation: Ocean OMICS Workshop Planning Meeting. Hosted by the Consortium for Ocean Leadership, sponsored by GBMF and NSF OCE, Washington DC. 5 March 2013.

Chandler, C.L., R.C. Groman, M.D. Allison, P.H. Wiebe, D.M. Glover (March 2013). The Biological and Chemical Oceanography Data Management Office. IOC IODE XXII Conference. Ensenada, Mexico.

Arko, R.; C. Chandler, K.Stocks, S. Smith, PD Clark, A. Shepherd, C. Moore, S. Beaulieu (April 2013). Rolling Deck to Repository (R2R): Collaborative Development of Linked Data for Oceanographic Research. EGU General Assembly 2013. Vienna, Austria.

Chandler, C., R. Groman, M. Allison, P. Wiebe, and D. Glover (April 2013). Data Stewardship throughout the Ocean Research Data Life Cycle. EGU General Assembly 2013. Vienna, Austria.

Leadbetter, A; Lowry, R.K.; Arko, R.; Chandler, C.L.; and Shepherd, A. (April 2013). Adding Value to Semantics Through Vocabulary Extension and Mapping. EGU General Assembly. Vienna, Austria.

Poster: **Chandler**, C., R. Groman, D. Allison, P. Wiebe and D. Glover (2013) The Biological and Chemical Oceanography Data Management Office and Support for Ocean Acidification Research. poster. 2nd U.S. Ocean Acidification Principal Investigators' Meeting; Washington, DC;. 17-20 September 2013.

Talk: **Chandler**, C., R. Groman, D. Allison, P. Wiebe and D. Glover (2013) One Approach to Ensuring Long-term Access to Ocean Research Data, Proceedings of IMDIS 2013 Intl. Conf. on Marine Data and Info. Sys., Lucca, Italy, Sept. 23-25, 2013. Bollettino di Geofisica Teorica ed Applicata, An Intl. Journal of Earth Sciences. Abstract #138, pgs. 213-215.

Talk: **Chandler**, C., S. Konovalov, H. Garcia, R. Schlitzer, L. Devine, G. Moncoiffé, T. Suzuki, A. Kozyr and G. Reed (2013) IODE Data Quality Flag Scheme, Proceedings of IMDIS 2013 Intl. Conf. on Marine Data and Info. Sys., Lucca, Italy, Sept. 23-25, 2013. Bollettino di Geofisica Teorica ed Applicata, An Intl. Journal of Earth Sciences. Abstract #171, pgs. 197-199.

Poster: **Chandler**, C., A. Maffei, L. Stolp, C. Sellers, E. Coburn, T. Thiel, R. Arko (2013), R2R Science Eventlogger: Supporting Data Interoperability with Controlled Vocabularies, Proceedings of IMDIS 2013 Intl. Conf. on Marine Data and Info. Sys., Lucca, Italy, Sept. 23-25, 2013. Bollettino di Geofisica Teorica ed Applicata, An Intl. Journal of Earth Sciences. Abstract #170, pgs. 276-278.

Poster: Raymond, L., C. **Chandler**, A. Leadbetter, E. Urban, P. Pissierssens and L. Pikula (2013) Publishing and Citing Ocean Data, Proceedings of IMDIS 2013 Intl. Conf. on Marine Data and Info. Sys., Lucca, Italy, Sept. 23-25, 2013. Bollettino di Geofisica Teorica ed Applicata, An Intl. Journal of Earth Sciences. Abstract #057, pgs. 233-234.

Poster: Allison, D., R. Groman, C. **Chandler**, S. Rauch, D. Kinkade, P. Wiebe, D. Glover and C. Galvarino (2013) Are the Data Really Available?, Proceedings of IMDIS 2013 Intl. Conf. on Marine Data and Info. Sys., Lucca, Italy, Sept. 23-25, 2013. Bollettino di Geofisica Teorica ed Applicata, An Intl. Journal of Earth Sciences. Abstract #168, pgs. 184-185.

Talk: Leadbetter, A., R. Arko, C. **Chandler**, R. Lowry (2013), Linked Data: An Oceanographic Perspective, Proceedings of IMDIS 2013 Intl. Conf. on Marine Data and Info. Sys., Lucca, Italy, Sept. 23-25, 2013. Bollettino di Geofisica Teorica ed Applicata, An Intl. Journal of Earth Sciences. Abstract #032, pgs. 18-20.

Talk: Carbotte, S., R. Arko, V. Ferrini, K. Stocks, S. Miller, A. Maffei, C. **Chandler**, S. Smith, M. Bourassa (2013), Rolling Deck to Repository (R2R): Working with International Partners to Improve Data Discovery and Access, Proceedings of IMDIS 2013 Intl. Conf. on Marine Data and Info. Sys., Lucca, Italy, Sept. 23-25, 2013. Bollettino di Geofisica Teorica ed Applicata, An Intl. Journal of Earth Sciences. Abstract #139, pgs. 38-39.

Copley, NJ, MD Allison, C **Chandler**, R Groman, A Shepherd, P Wiebe and D Glover. 2013. Biodiversity Vocabulary Management at BCO-DMO. Poster presented at the Biodiversity Information Standards (TDWG) 2013 Annual Conference. Florence, Italy. 28 Oct - 1 Nov 2013.

Presenter: **UNOLS Chief Scientist Training Program** (URI, Narragansett, RI; 20 October 2013) presentations on data management best practices for shipboard data and the R2R event logger system

2013 AGU Fall Meeting (San Francisco, CA; 8-13 December 2013;

<http://fallmeeting.agu.org/2013/>)

Co-convener of sessions IN51D and IN53C. Data Stewardship in Theory and in Practice. December 13, 2013. Conveners: **Cynthia Chandler** (Woods Hole Oceanographic Institution), D.L. McGuinness (Tetherless World Constellation, Rensselaer Polytechnic Institute), D.J. Wright (Environmental Systems Research Institute), and L.A. Wyborn (Geosciences Australia)

Invited talk: **Chandler**, C.L.; R.C. Groman; M.D. Allison; P.H. Wiebe; D.M. Glover (2013) "Using Controlled Vocabularies and Semantics to Improve Ocean Data Discovery". (Invited Talk) Abstract IN52B-05, presented at 2013 Fall Meeting, AGU, San Francisco, CA, 13 December 2013. (<http://abstractsearch.agu.org/meetings/2013/FM/sections/IN/sessions/IN52B/abstracts/IN52B-05.html>)

Poster: Arko, R.A.; K. Stocks; SP Miller; CL **Chandler**, AR Maffei, SR Smith; HM Glaves (2013) "Rolling Deck to Repository (R2R): Supporting Global Data Access Through the Ocean Data Interoperability Platform (ODIP)". Abstract IN53C-1574, poster presented at 2013 Fall Meeting, AGU, San Francisco, CA, 13 December 2013. (<http://abstractsearch.agu.org/meetings/2013/FM/sections/IN/sessions/IN53C/abstracts/IN53C-1574.html>)

Poster: Kinkade, Danie; Molly D. Allison; Cynthia L. **Chandler**; Robert C. Groman; Shannon Rauch; Adam Shepherd; Stephen R. Gegg; Peter H. Wiebe; David M. Glover (2013) "BCO-DMO: Enabling Access to Federally Funded Research Data". Abstract PA31A-1814, poster presented at 2013 Fall Meeting, AGU, San Francisco, CA, 11 December 2013. (<http://abstractsearch.agu.org/meetings/2013/FM/sections/PA/sessions/PA31A/abstracts/PA31A-1814.html>)

Poster: Narock, Thomas W.; Pascal Hitzler; Robert A. Arko; Cynthia L. **Chandler**; Eric A. Rozell (2013) "Leveraging Crowdsourcing and Linked Open Data for Geoscience Data Sharing and Discovery". Abstract IN23B-1431, poster presented at 2013 Fall Meeting, AGU, San Francisco, CA, 10 December 2013. (<http://abstractsearch.agu.org/meetings/2013/FM/sections/IN/sessions/IN23B/abstracts/IN23B-1431.html>)

Poster: Narock, Thomas W.; Robert A. Arko; Cynthia L. **Chandler**; Eric A. Rozell (2013) "Improved Access to Scientific Data Through Technology, Standards, and Best Practices". Abstract PA31A-1821, poster presented at 2013 Fall Meeting, AGU, San Francisco, CA, 11 December 2013. (<http://abstractsearch.agu.org/meetings/2013/FM/sections/PA/sessions/PA31A/abstracts/PA31A-1821.html>)

Talk: Rauch, Shannon; Molly D. Allison; Robert C. Groman; Cynthia L. **Chandler**; Charlton Galvarino; Stephen R. Gegg; Danie Kinkade; Adam Shepherd; Peter H. Wiebe; David M. Glover. (2013) "Improved Discovery and Re-Use of Oceanographic Data through a Data Management Center". Abstract ED43E-03, poster presented at 2013 Fall Meeting, AGU, San Francisco, CA, 12 December 2013. (<http://abstractsearch.agu.org/meetings/2013/FM/sections/ED/sessions/ED43E/abstracts/ED43E-03.html>)

Poster: Rauch, Shannon; Molly D. Allison; Robert C. Groman; Cynthia L. **Chandler**; Charlton Galvarino; Stephen R. Gegg; Danie Kinkade; Adam Shepherd; Peter H. Wiebe; David M. Glover (2013) "Improving the User Experience of Finding and Visualizing Oceanographic Data". Abstract IN31C-1508, poster presented at 2013 Fall Meeting, AGU, San Francisco, CA, 11 December 2013. (<http://abstractsearch.agu.org/meetings/2013/FM/sections/IN/sessions/IN31C/abstracts/IN31C-1508.html>)

Invited talk: Shepherd, Adam; Robert C. Groman; Cynthia L. **Chandler**; David Gaylord; Miao Sun (2013) "Sustainable Software Decisions for Long-term Projects (Invited Talk) Abstract IN31D-03 presented at 2013 Fall Meeting, AGU, San Francisco, CA, 11 December 2013. (<http://abstractsearch.agu.org/meetings/2013/FM/sections/IN/sessions/IN31D/abstracts/IN31D-03.html>)

2014

Poster: **Chandler**, CL, RC Groman, MD Allison, PH Wiebe and DM Glover (2014) "The Biological and Chemical Oceanography Data Management Office". Poster presented 8 January 2014 at Winter ESIP 2014, Washington, DC. <http://commons.esipfed.org/node/1907>

Session convener, presenter, participant. **2014 Joint Ocean Sciences Meeting** (23-28 February 2014; Honolulu, HI; <http://www.sgmeet.com/osm2014>)

I convened a session with Edward Kearns (NOAA), Kenneth Casey (NOAA), Benjamin Hamlington (UC Boulder), Andrew Bingham (NASA, JPL, PO-DACC), Robert Leben (UC Boulder)
Session Title: Big Data for a Big Ocean: Progress in Data Availability and Interoperability

Chandler, C. L.; Groman, R. C.; Allison, M. D.; Wiebe, P. H.; Glover, D. M. (2014) "BCO-DMO: IMPROVING DATA DISCOVERY AND ACCESS FOR OCEAN SCIENCE RESEARCH". poster ID 15007 presented at Session 113: Big Data for a Big Ocean: Progress in Data Availability and Interoperability. 2014 Ocean Sciences Meeting, Honolulu, HI. 27 February 2014. Abstract: <http://www.sgmeet.com/osm2014/viewabstract.asp?AbstractID=15007>

Groman, R. C.; Allison, M. D.; **Chandler**, C. L.; Glover, D. M.; Kinkade, D. B. (2014) "PROGRESS IN DATA DISCOVERY AND ACCESS". poster ID 17766 presented at Session 071: Frontiers of oceanographic data and methods. 2014 Ocean Sciences Meeting, Honolulu, HI. 27 February 2014. Abstract:

<http://www.sgmeet.com/osm2014/viewabstract.asp?AbstractID=17766>

Kinkade, D. B.; Allison, M. D.; **Chandler**, C. L.; Groman, R. C.; Galvarino, C. (2014) "ACCESS TO MARINE PRIMARY PRODUCTION DATA AND METADATA IN THE BCO-DMO REPOSITORY". poster ID 17770 presented at Session 048: Ocean primary productivity: Variability and influence. 2014 Ocean Sciences Meeting, Honolulu, HI. 24 February 2014. Abstract:

<http://www.sgmeet.com/osm2014/viewabstract.asp?AbstractID=17770>

Rauch, S. M.; Allison, M. D.; **Chandler**, C. L.; Gegg, S. R.; Groman, R. C. (2014) "BCO-DMO MANAGEMENT OF U.S. GEOTRACES TRACE ELEMENT AND ISOTOPE DATA". poster ID 17687 presented at Session 080: Biogeochemistry of Trace Elements and their Isotopes. 2014 Ocean Sciences Meeting, Honolulu, HI. 27 February 2014. Abstract:

<http://www.sgmeet.com/osm2014/viewabstract.asp?AbstractID=17687>

Participant, presenter. **OA ICC Technical meeting on Management of Biological Data Related to Ocean Acidification: International Cooperation and Development of Standards**

(23-24 April 2014; IAEA Environment Laboratories, Monaco Cedex, Monaco; http://ioc-unesco.org/index.php?option=com_oe&task=viewEventRecord&eventID=1493)

Presentation: **Chandler**, CL. (2014) "One Approach to Ensuring Long-term Access to Ocean Research Data"

Coordinator, discussion lead: Data Policy, Data Publication & Citation, and Early Involvement of Scientists

Chandler, C., R. Groman, A. Shepherd, M. Allison, R. Arko, Y. Chen, P. Fox, D. Glover, P. Hitzler, A. Leadbetter, T. Narock, P. West, and P. Wiebe. 2014. "Enhancing Ocean Research Data Access", Geophysical Research Abstracts, Vol. 16; EGU2014-2439. Presented in session "ESSI1.2 Informatics in Oceanography and Ocean Science" at EGU General Assembly 2014, Vienna, Austria. <http://meetingorganizer.copernicus.org/EGU2014/EGU2014-2439.pdf>

Chandler, C. 2014. "Data Publication and Permanent Identifiers". Invited presentation, "Connecting Research Infrastructures through Brokering Services – A Joint COOPEUS – ODIP Workshop". EGU Splinter Meeting SPM 2.11. EGU General Assembly 2014, Vienna, Austria.

R. Arko, C. **Chandler**, K. Stocks, S. Smith, PD Clark, A. Shepherd, C. Moore, S. Beaulieu. 2014. "Rolling Deck to Repository (R2R): Collaborative Development of Linked Data for Oceanographic Research", Geophysical Research Abstracts, Vol. 16, EGU2014-9564, presented in Session "ESSI 1.2 Informatics in Oceanography and Ocean Science" at EGU General Assembly 2014, Vienna, Austria. <http://meetingorganizer.copernicus.org/EGU2014/EGU2014-9564.pdf>

Chen, Y, A. Shepherd, C. **Chandler**, R. Arko, A. Leadbetter (2014), "Ontology Based Vocabulary Matching for Oceanographic Instruments", Geophysical Research Abstracts, Vol. 16, EGU2014-12909-2. Presented in session "ESSI 1.2 Informatics in Oceanography and Ocean Science" at EGU General Assembly 2014, Vienna, Austria.

<http://meetingorganizer.copernicus.org/EGU2014/EGU2014-12909-2.pdf>

Leadbetter, Lowry, Arko, **Chandler**, Shepherd. 2014. "Adding Value to Semantics Through Vocabulary Extension and Mapping", Geophysical Research Abstracts, Vol. 16, EGU2014-4868, presented in Session "ESSI 2.2 Metadata, Data Models, and Semantics" at EGU General Assembly 2014, Vienna, Austria. <http://meetingorganizer.copernicus.org/EGU2014/EGU2014-4868.pdf>

Leadbetter, A., R. Arko, C. **Chandler**, A. Shepherd (2014), "Linked Ocean Data", Geophysical Research Abstracts, Vol. 16, EGU2014-2101. Presented in session "ESSI1.2 Informatics in Oceanography and Ocean Science" at EGU General Assembly 2014, Vienna, Austria.

<http://meetingorganizer.copernicus.org/EGU2014/EGU2014-2101.pdf>

Shepherd, A., C. **Chandler**, R. Arko, Y. Chen, A. Krisnadhi, P. Hitzler, R. Groman, S. Rauch (2014), "Semantic Entity Pairing for Improved Data Validation and Discovery", Geophysical Research Abstracts, Vol. 16; EGU2014-2476. Presented in session "ESSI1.2 Informatics in Oceanography and Ocean Science" at EGU General Assembly 2014, Vienna, Austria.

<http://meetingorganizer.copernicus.org/EGU2014/EGU2014-2476.pdf>

Presenter, participant. **R2R National Data Center Annual Meeting** (14-16 May 2014; NGDC, Boulder, CO; URL: <http://rvdata.us>)

Presented updates on WHOI-R2R work: shipboard event logger and CTD data QA

Invited presenter. **UNOLS Chief Scientist Training** (9 June 2014; BIOS, Bermuda; <http://csw.unols.org/>)

Two presentations:

"Rolling Deck to Repository (R2R) Program: a Brief Overview"

"Introduction to Data Management"

Meeting coordinator, participant. **Semantics Smackdown**: an Agile exercise in smacking down and marking up ocean science research data (best workshop of the year by far !!) (10-13 June 2014; RPI/TWC, Troy, NY; <http://www.bco-dmo.org/meetings/semantics-smackdown-2014>)

Poster: Helen Graves, Dick Schaap, Robert Arko, Karen Stocks, Cynthia **Chandler**, Shawn Smith, Suzanne Carbotte, Roger Proctor. 2014. "Towards a Global Framework to Support the Interoperability of Marine Data Management Infrastructures: ODIP and R2R Efforts". Poster presented at NSF EarthCube All-Hands Meeting, Washington, DC. 24-26 June 2014.

Invited plenary talk. **Chandler**, CL. (2014) "Technical Issues of Connecting GeoData within and Between Governmental Agencies: Focus on NSF Research Data". Presentation as part of panel of experts: "Technical issues of connecting geodata in and between governmental agencies". GeoData 2014. 18 June 2014.

Pre-conference workshop convener, presenter, participant. IMBER OSM 2014: Future Oceans (22-27 June 2014, Bergen, Norway, <http://www.imber.info/index.php/Meetings/IMBER-OSC-2014>)

Pre-conference event: Data Management Data Management for IMBER

Convener(s): Cyndy **Chandler** (BCO-DMO, WHOI), Todd D. O'Brien (NMFS-NOAA), Alberto Piola (SHN/UBA, Argentina); Presented workshop results in plenary.

Presenter and participant: OCB Summer PI Meeting (21-24 July 2014; WHOI, Woods Hole, MA; URL: <http://www.whoi.edu/workshops/ocbworkshop2014/>)

Poster presentation series: Biological and Chemical Oceanography Data Management Office
And also provided information resources for R2R and NSF EarthCube projects.

Session convener, presenter, participant. ESIP Summer Meeting 2014: Linking It Together: Sustainable Software Advancing Science Data and Services (8-11 July 2014; Frisco, CO; <http://commons.esipfed.org/taxonomy/term/1245>)

Poster: Chandler, C.L. (2014) "Linking Us Together: the GeoScience Knowledge Network". poster presentation at Summer ESIP 2014, Frisco, Colorado. July 2014.

Session co-convener: EarthCube Rapid Prototype Activities in Support of Improved Access to Ocean Science Data; Conveners: D. Kinkade; R. Arko; C. **Chandler**; A. Shepherd and S. Diggs

Session co-convener: Schema.org Dataset Extension Hack-a-Thon Conveners: D. Fils, A. Shepherd and C. **Chandler**

Session convener, presenter, participant. ODIP Workshop #3 (5-8 August 2014; AIMS, Townsville, Queensland, Australia; (URL: <http://www.odip.org/>) Representative ODIP-USA;

Session lead, coordinator: Data Publication and Citation

Presenter: Data Publication and Citation: Regional Update on Projects in the USA

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