

Event Log from R/V Hugh R. Sharp cruise HRS1314 in the Chesapeake Bay and coastal Atlantic Ocean in August 2013

Website: <https://www.bco-dmo.org/dataset/641253>

Version: 23 March 2016

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Project

» [The role of soluble Mn\(III\) in the biogeochemical coupling of the Mn, Fe and sulfur cycles](#) (Soluble ManganeseIII)

Contributors	Affiliation	Role
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Dataset Description

Chesapeake Bay 2013 cruise LOG
(R/V Sharp cruise HRS1314 - 130809GL)
Chesapeake Bay / Offshore August 9 - August 16, 2013

[LutherTeboChesBay2013LOG_Metadata \(complete document\)](#)

Methods & Sampling

Generated by science party

[LutherTeboChesBay2013LOG_Metadata \(complete document\)](#)

Data Processing Description

BCO-DMO Processing Notes

- Generated from original file "LutherTeboChesBay2013LOG_Metadata" contributed by George Luther
- Text from document copy/pasted into spreadsheet format
- Parameter names edited to conform to BCO-DMO naming convention found at [Choosing Parameter Name](#)
- Date converted to YYYYMMDD
- GMT Date inserted to correspond to GMT Time
- Lat/Lon converted from degs, decimal minutes to decimal degrees (degs, decimal minutes maintained)
- Latitude degree values for CTD#38 and CTD#39 changed from 37 to 38 to agree with cruise track

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Data Files

File
CruiseLog.csv (Comma Separated Values (.csv), 8.85 KB) MD5:c9e6a9929612de48107c069722dd7206
Primary data file for dataset ID 641253

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Parameters

Parameter	Description	Units
Sampling_Type	Sampling Type	text
Local_Date	Local Date	YYYYMMDD
Local_Time	Local Time	HHMM
GMT_Date	Date (GMT)	YYYYMMDD
GMT_Time	Time (GMT)	HHMM
Latitude	Station Latitude Position (South is negative)	decimal degrees
Lat_DegsMins_N	Station Latitude Position North	degs decimal minutes
Longitude	Station Longitude Position (West is negative)	decimal degrees
Lon_DegsMins_W	Station Longitude Position West	degs decimal minutes
Comments	Comments	text

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Deployments

HRS1314

Website	https://www.bco-dmo.org/deployment/641156
Platform	R/V Hugh R. Sharp
Start Date	2013-08-08
End Date	2013-08-16

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Project Information

The role of soluble Mn(III) in the biogeochemical coupling of the Mn, Fe and sulfur cycles (Soluble ManganeseIII)

Coverage: Chesapeake Bay and coastal Atlantic Ocean

Description from NSF award abstract:

The research conducted by investigators in the School of Marine Science and Policy at the University of Delaware and within the Department of Environmental and Biomolecular Systems of Oregon Health and Science University will examine the importance of soluble Mn(III) in the biogeochemical cycling of Mn. To date,

most studies of Mn in marine environments have not considered Mn(III), the intermediate oxidation state between the soluble reduced state (Mn(II)) and the more insoluble oxidized state (Mn(IV)). The presence and stability of Mn(III) in marine systems, especially those where oxygen levels are reduced, changes the dynamics and stability, solubility and fate and transport of Mn in these locations, and at interfaces between oxic and low oxygen environments. This is not understood at present and the proposed research is poised to provide new information concerning the Mn cycle and is potentially transformative research. The PIs have developed new methods to examine Mn(III) levels in the environment and this capability will bolster the successful accomplishment of the project's goals. The studies will not only focus on understanding the cycling of Mn between its various oxidation states but will determine the concentration and distribution of Mn(III) in stratified coastal ocean waters and in sediment porewaters. The study will also examine the potentially important role of Mn(III) in mediating and influencing the biogeochemical cycling of Mn with that of Fe and S, which are both important components of the major ocean chemical cycles. A better understanding of the biogeochemistry of Mn will inform not only scientists interested in metal cycling in the ocean but also those focused on studies across redox transition zones. The proposed research has an international component and the investigators have developed plans to broadly disseminate their results to students at all levels and to the community. The Principal Investigators have a strong history in education and graduate student and post-doctoral support and mentoring and this will continue under the current grant.

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Funding

Funding Source	Award
NSF Division of Biological Infrastructure (NSF DBI)	DBI-0424599
NSF Division of Ocean Sciences (NSF OCE)	OCE-1155385
NSF Division of Ocean Sciences (NSF OCE)	OCE-1154307
Simons Foundation (Simons)	unknown SCOPE Simons

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