

Changing Arctic Ocean meeting  
28 – 29 September 2017  
Glasgow

JOANA BEJA, BODC  
PROGRAMME DATA MANAGER

National Oceanography Centre  
NATURAL ENVIRONMENT RESEARCH COUNCIL

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### Data Policy

- Programme data: 2 year restriction to all users (except programme participants and external collaborators)
- Exception for PhD data: 3 year restriction from collection date
- Once restriction period has elapsed, data will become publicly available

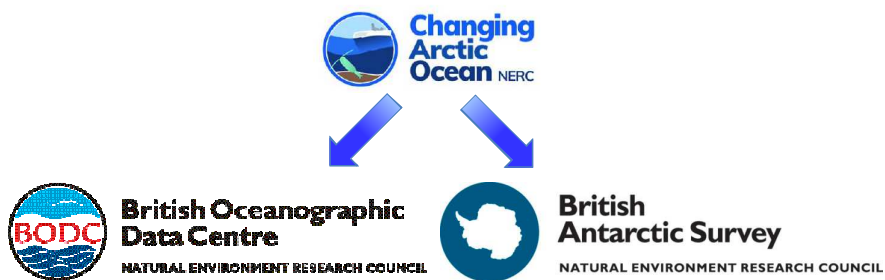
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## Data Management

- Two data centre approach: BODC primary, BAS-PDC secondary



- Aim: To have all the datasets archived, ingested, discoverable by the end of the programme

## Data Sources



2555 series + 341641 samples (<https://www.bodc.ac.uk>)

- **Arctic Data Explorer:** 26516 datasets (<http://arctic-data-explorer.labs.nsidc.org/#>)



37608 datasets (<https://www.pangaea.de>)



131690 datasets (<https://www.seadatanet.org>)



404 (mainly) NSF funded projects (<http://armap.org/>)



31 cruises with surface hydrography data (<http://www.gosud.org>)



80115 stations with temp/sal (<https://www.nodc.noaa.gov/GTSP/>)



OCEAN BIOGEOGRAPHIC INFORMATION SYSTEM 108807 records (<http://www.iobis.org>)

- **ARGO:** 20210 profiles (<http://www.ifremer.fr/lpo/naarc/#>)



215 seal tags (<http://www.meop.net/>)

## Data Object Identifiers

- Data needs to be submitted to BODC or PDC prior to DOI minting
- Once DOI is minted, data will become public, it constitutes a citable reference
- BODC's catalogue: [https://www.bodc.ac.uk/data/published\\_data\\_library/](https://www.bodc.ac.uk/data/published_data_library/)
- BODC's guidance: [https://www.bodc.ac.uk/submit\\_data/data\\_citations/](https://www.bodc.ac.uk/submit_data/data_citations/)
- AGU: "all data necessary to understand, evaluate, replicate, and build upon the reported research must be made available and accessible whenever possible"
- Nature group: "The preferred way to share large data sets is via public repositories"

Natural Environment Research ... | [https://www.bodc.ac.uk/data/published\\_data\\_library/catalogue/10.5285/40b332e8-e719-40a6-e053-6c8fabcd12b3](https://www.bodc.ac.uk/data/published_data_library/catalogue/10.5285/40b332e8-e719-40a6-e053-6c8fabcd12b3)

Published Data Library (PDL)


### Multi-population responses of elevated pCO<sub>2</sub> in the common periwinkle *Littorina littorea* from the NE Atlantic

**Download**

<b>Title</b>	Multi-population responses of elevated pCO <sub>2</sub> in the common periwinkle <i>Littorina littorea</i> from the Northeast Atlantic.
<b>Author(s)</b>	Calosi P. (1), Melanun S. (1), Turner L.M. (1), Adail Y. (2), Davidson R.L. (3), Birnie J.J. (2), Vlast M.R. (3), Widdcombe S. (2), Rundle S.D. (1) (1) University of Plymouth School of Marine Science and Engineering; (2) Plymouth Marine Laboratory; (3) University of Birmingham School of Biosciences
<b>Subject</b>	biota, geoscientific information, oceans, environment
<b>Abstract</b>	Physiological responses to temperature are known to be a major determinant of species' distributions and can dictate the sensitivity of populations to global warming. In contrast, little is known about how other major global change drivers, such as ocean acidification (OA), will shape species' distributions in the future. Here, by integrating population genetics with experimental data for growth and mineralisation, physiology and metabolism, we demonstrate that the sensitivity of populations of the gastropod <i>Littorina littorea</i> to future OA is shaped by regional adaptation. Individuals from populations towards the edges of the natural latitudinal range in the Northeast Atlantic exhibit greater shell dissolution and the inability to upregulate their metabolism when exposed to low pH, thus appearing most sensitive to low seawater pH. Our results suggest that future levels of OA could mediate temperature-driven shifts in species' distributions, thereby influencing future biogeography and the functioning of marine ecosystems. Please note that CO <sub>2</sub> sequences generated and analysed during this study are available from GenBank ( <a href="http://www.ncbi.nlm.nih.gov/genbank">www.ncbi.nlm.nih.gov/genbank</a> ) (accession numbers: KP221214-KP221558).
<b>Temporal coverage</b>	01 June 2010 - 30 September 2012
<b>Spatial coverage</b>	Northeast Atlantic Ocean (40W)
<b>File format</b>	Delimited
<b>Language</b>	English
<b>Discovery metadata record</b>	<a href="#">Link to the related European Directory of Marine Environmental Data (EDMED) record</a>
<b>Publisher</b>	British Oceanographic Data Centre - Natural Environment Research Council, UK
<b>Publication date</b>	31 December 2016
<b>Digital Object Identifier (DOI)</b>	doi:10.5285/40b332e8-e719-40a6-e053-6c8fabcd12b3
<b>Short DOI</b>	doi:10bweb
<b>Citation text</b>	Calosi P., Melanun S., Turner L.M., Adail Y., Davidson R.L., Birnie J.J., Vlast M.R., Widdcombe S., Rundle S.D. (2016) Multi-population responses of elevated pCO <sub>2</sub> in the common periwinkle <i>Littorina littorea</i> from the Northeast Atlantic. British Oceanographic Data Centre - Natural Environment Research Council, UK doi:10bweb.

Related PDL pages at BODC

[Dataset standards](#)

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## How can BODC help you?

- JCR cruises: On board data managers
- Other cruises/fieldwork: log sheet templates, guidance for collating metadata
- Submission guidance online:  
[https://www.bodc.ac.uk/submit\\_data/submission\\_guidelines/general\\_guide/](https://www.bodc.ac.uk/submit_data/submission_guidelines/general_guide/)
- Data Submission



## Metadata template

[https://www.bodc.ac.uk/submit\\_data/submission\\_templates/](https://www.bodc.ac.uk/submit_data/submission_templates/)

BODC Dataset Metadata Template version 2.0(draft) - updated 01/01/2016  
 High level descriptive information about the dataset \* = must complete field. All other fields as appropriate.

Dataset title:	Should be descriptive to distinguish from similar datasets (e.g. "Molecular nutrient measurements from CTD niskin collected depth profiles along a north-south transect in the Atlantic Ocean on cruise AMT19/K039" as opposed to "Nutrient data").	
Author(s):	List of authors ("Other, A.N.") in the order they should be cited. Separate authors using ";".	
Institute(s):	Institute(s) where the author(s) were when the dataset was generated. Separate institutes using ";".	
Contact email(s):	To whom any questions about the dataset should be addressed.	
Additional contributors:	Those who have helped in the collection of the data that are not included in the authors list. Separate contributors using ";".	
Project:	Project or grant that funded the collection and analyses of samples to generate the data set contents.	
Project PI:	Organisation(s) that funded the project or grant under which the dataset was collected. Separate multiple organisations using ";".	
Funded by:	Short summary covering why, who, where, when, what measurements are contained within and how the dataset was generated.	
Dataset abstract:		
Temporal coverage - Start date:	As format "yyyy-mm-dd".	
End date:	As format "yyyy-mm-dd".	
Time zone of date/time in file:	e.g. UT, UT+3, ...	
If time-series - resolution of data:	e.g. Hourly, daily, weekly, monthly, yearly	
Geographic coverage - N (top):	Degrees	Limits to bounding box containing the data coverage. +ve = N; -ve = S +ve = E; -ve = W +ve = E; -ve = W
S (bottom):	Minutes	
E (right):		
W (left):		
Lat/Lon reference system:	e.g. WGS 84	

### Data discoverability (project EDMED)

<https://www.bodc.ac.uk/resources/inventories/edmed/>

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**European Directory of Marine Environmental Data (EDMED)**

#### Search results

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Host	Data set name	Show
	AARI 10 - day sea ice total concentration for the Arctic Ocean, 1950-1992	
	ACCACIA hydrographic, biogeochemical and meteorological data from cruises in the Arctic Ocean (March and July 2013) as part of the Arctic Research Programme	
	Acoustic data from the Arctic Seas (2000-2006)	
	AIDJEX (1975) - Side Looking Airborne Radar (SLAR)	
	Arctic Aerial photography 1979 - 1980	
	Arctic Aerial Photography of Sea Ice (1983-1993)	
	Arctic oceanographic horizontal sound velocity profiles (1978)	
	Arctic platform-mounted upward-looking and sidescan echo-sounder data	
	Arctic region special ice observations Data base	
	Arctic Water Temperature-Conductivity-Depth (CTD) Data (1993)	

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### SFT area for CAO

[\(https://www.bodc.ac.uk/my\\_account/secure\\_file\\_transfer/\)](https://www.bodc.ac.uk/my_account/secure_file_transfer/)

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## How can you help BODC?

- Reply to emails!
- Be clear when describing your experiments/analysis/methods/parameters (and units)
- Be consistent when labelling samples  
(JR16006, JR~~16~~006, JR~~16~~006)
- Include all required metadata details (use metadata template)
- Do not submit data at the end of project
- Request DOIs in advance of abstract submission



**Expert**  
 An expert is someone with extensive knowledge in a particular area. Experts are called upon for their expertise in problem-solving.



WHERE? WHAT?  
 HOW? WHO?  
 WHY? WHEN?

 A graphic featuring a background of colorful question marks in various sizes and colors (blue, green, yellow, orange, red, purple, pink). In the center, five speech bubbles contain the words: WHERE? (blue), WHAT? (purple), HOW? (yellow), WHO? (pink), and WHY? (orange). A large red speech bubble at the bottom contains the word WHEN?.