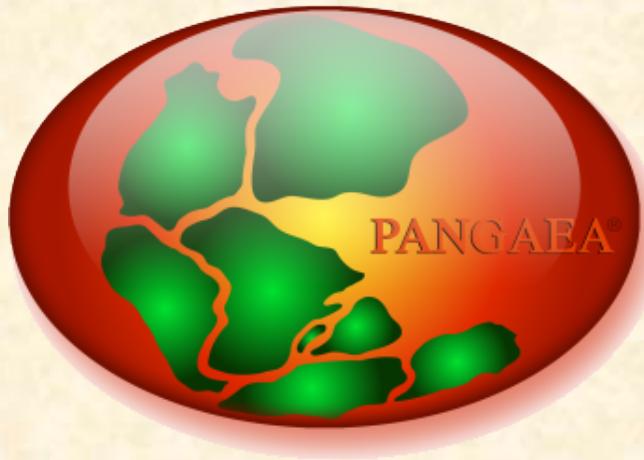


# Introduction to the Data Library PANGAEA® and submitting data



Stefanie Schumacher



---

PANGAEA – Data Publisher for Earth & Environmental Science

# Why should we archive our data?

**SPIEGEL ONLINE** WISSENSCHAFT

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Nachrichten > Wissenschaft > Weltall

15. August 2006 Drucken | Senden | Bookmark | Merken

PEINLICHE PANNE Schrift: - +

## Nasa hat Mondlandungs-Videos verbummelt

Es klingt wie in einem schlechten Film: Die Kassetten mit den Bildern der ersten Mondlandung sind weg. Nasa haben über ein Jahr nach den Videos gesucht und gefunden.

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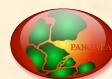
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Feature - online  
**Space Week: Lost Moon landing tapes discovered**  
by Carmelo Amalfi  
Cosmos Online  
1 November 2006

For years 'lost' tapes recording data from the Apollo 11 Moon landing have been stored underneath the seats of Australian physics students. A recent search has uncovered them.

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Apollo 11 Moon landing tapes lost

# Data sharing and archiving

Nature:  
Vol 461, 10 September 2009

[doi:10.1038/461145a](https://doi.org/10.1038/461145a)



The header of the nature news website. It features the 'nature news' logo in white on a red background. Below the logo is a horizontal menu bar with links: 'nature news home', 'news archive', 'specials' (which is highlighted in grey), 'opinion', 'features', 'news blog', and 'events'. A small 'See all specials' button is located in the top right corner.

## Specials

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## Data Sharing

Sharing data is good. But sharing your own data? That can get complicated. As two research communities who held meetings in May on the issue report their proposals to promote data sharing in biology, a special issue of *Nature* examines the cultural and technical hurdles that can get in the way of good intentions.

- [EDITORIAL](#)
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### Editorial



#### [Data's shameful neglect](#)

Research cannot flourish if data are not preserved and made accessible. All concerned must act accordingly.  
9 September 2009

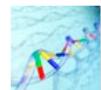
### Feature



#### [Data sharing: Empty archives](#)

Most researchers agree that open access to data is the scientific ideal, so what is stopping it happening? Bryn Nelson investigates why many researchers choose not to share.  
9 September 2009

### Opinion



#### [Prepublication data sharing](#)

Rapid release of prepublication data has served the field of genomics well. Attendees at a workshop in Toronto recommend extending the practice to other biological data sets.  
9 September 2009



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# Good scientific practice in research and scholarship

European Science Foundation (ESF), 2000

## ***Data accumulation, handling, and storage***

36. Data are produced at all stages in experimental research and in scholarship. Data sets are an important resource, which enable later verification of scientific interpretations and conclusions. They may also be the starting point for further studies. It is vital, therefore, that all primary and secondary data are stored in a secure and accessible form.
  
37. Institutions may pay particular attention to documenting and archiving original research and scholarship data. Several codes of good practice recommend a minimum period of 10 years, longer in the case of especially significant or sensitive data. National or regional discipline-based archives should be considered where there are practical or other problems in storing data at the institution where the research was conducted.



# Open Access

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### Budapest Open Access Initiative

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#### Berlin Declaration

**Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities**



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# Supplementary data

Marine Micropaleontology 74 (2010) 108–118



Contents lists available at ScienceDirect

Marine Micropaleontology

journal homepage: [www.elsevier.com/locate/marmicro](http://www.elsevier.com/locate/marmicro)



## Paleoceanographic evolution of North Pacific surface water off Japan during the past 150,000 years

Itaru Koizumi <sup>a,\*</sup>, Hirofumi Yamamoto <sup>b</sup>

<sup>a</sup> Hokkaido University, Japan

<sup>b</sup> Japan Agency for Marine-Earth Science and Technology (JAMSTEC), Japan

### ARTICLE INFO

#### Article history:

Received 19 November 2009

Received in revised form 24 January 2010

Accepted 28 January 2010

#### Keywords:

Td' (the ratio of warm- and cold-water diatoms)-derived annual SST (°C)

Wavelet analysis

Last interglacial period

Kuroshio-Kuroshio Extension

Oyashio

Togara Warm Current

Earth's orbital parameters

El Niño-Southern Oscillation (ENSO)

### ABSTRACT

Hydrographic variability in the Mixed Water Region of the Northwest Pacific Ocean at latitudes 35°–40°N, between the Kuroshio Extension and Oyashio Front, causes complex upwelling, leading to large primary productivity and thus great fishery resources. We reconstructed the periodicity of the variability in North Pacific Intermediate Water upwelling and surface ocean hydrography based on the high-resolution analysis of diatom assemblages in seven cores, representing the last 150,000 years. We derived annual sea surface temperatures (SSTs) through diatom-based proxy ( $Td'$ ). The  $Td'$ -derived annual SSTs (°C) are controlled by orbital forcing, and show a reversed saw-tooth in southern cores, in contrast to a normal saw-tooth pattern in the northern ones. Oceanic diatom abundances along the northern margin of the Mixed Water Region are twice times as high as beneath the axis of the Kuroshio Extension, and fluctuated in a reversed saw-tooth pattern with higher overall abundances interglacials. After the last deglaciation, annual SSTs declined markedly during Heinrich and Bond events in the northern North Atlantic; when ice-sailed detritus transported by icebergs was abundant. Wavelet analyses of the record of oceanic diatom abundances show significant variability at 2.0-kyr, 2 to 5.6-kyr and 3.2 to 9.6-kyr periods. Wavelet analyses of the annual SST records show significant periodicity at 1.4 to 2.6-kyr, 3.3 to 4.0-kyr, 7.2 to 12.8-kyr cycles.

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### Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.marmicro.2010.01.003](https://doi.org/10.1016/j.marmicro.2010.01.003).

### Reference



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# Open Access ?

## Access Online Article

### Paleoceanographic evolution of North Pacific surface water off Japan during the past 150,000 years Original Research Article

*Marine Micropaleontology*, Volume 74, Issues 3–4, April 2010, Pages 108-118  
Itaru Koizumi, Hirofumi Yamamoto [View Abstract](#)

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		Table A1 (MD01-0421)																				
Depth (m)		0.01	0.06	0.16	0.26	0.38	0.76	0.94	1.14	1.34	1.88	1.93	1.88	2.03	2.26	2.46	2.66	2.86	3.05	3.18	3.38	3.96
Age (cal kyr BP)		0.24	0.29	0.38	0.50	0.77	0.96	1.16	1.25	1.55	1.77	1.89	2.12	2.37	2.61	2.88	3.10	3.34	3.59	3.72	3.88	4.25
Diatom abundance (10 <sup>3</sup> /g)		3.15	2.38	3.15	2.38	3.15	2.77	2.93	2.96	3.15	3.54	7.14	3.15	3.69	2.77	2.92	2.88	3.35	3.15	2.88	2.10	
Ostracode abundance (10 <sup>3</sup> /g)		2.39	2.20	1.57	2.20	1.46	2.13	2.07	1.88	9.66	2.27	2.24	2.23	2.29	1.93	1.45	1.63	1.83	1.58	1.77	1.53	1.34
Astacoides ellipticus		1	1	2	2	2	1			1	1	1	1	1	1	1	1	2	1	1	1	
Astacoides elongatus																						
Alexus novaezealandiae		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Antennulaea exerytoides																						
Anterosphaera arcuata																						
Anterosphaera fibulae																						
Anterosphaera arcocapsa																						
Asperella effusa																						
Asperella nodulifera		2																				
Asperella tuberculata		3	1	2		1	1	1	2	3	1	1	1	1	1	1	1	3	1			
Fragilaria cylindrus		6	8	4	3	5	9	4	7	6	8	9	3	1	5	3	4	6	6	5	3	
Hedidium curvirostre																						
Nitzschia intermedia																						
Nitzschia leptocephala																						
Planktonica sol																						
Pseudosolenites calcaratus		1	2	1	1	1	2	1	1	1	1	1	3	5	3	2	5	2	1	1	2	
Rhizosolenites associata		1																				
Rhizosolenites bergonii		1	4	3																		
Roperia laevigata		3	2	1	1	1	1	1	1	3	2	2	1	1	1	2	1					
Thalassiosira leptopus		1	1	4	2	1	2	2	2	1	2	2	1	2	5	4	3	2	3	1		
Thalassiosira ostreorum		6	5	4	3	7	8	4	4	7	6	9	3	2	8	6	2	6	5	9		
Water-mate species in O		25	21	18	21	17	22	18	16	25	27	27	27	25	14	14	26	27	20	21	15	25
Astacoides curvirostra		3	4	6	2	3	1	2	1	2	2	3	3	1	1	1	2	2	2	3	1	
Astacoides elongatus		1	1																			
Anterosphaera robusta																						
Bacterioidea fragilis		2	1	3	3	4	5	1	4	6	2	1	3	1	1	2	1	1	1	3	2	
Chaetoceros fasciculatus		1	2	1	1	1	1	1	1	1	1	1	1	1	1	2						
Gymnodinium nimbiferum		6	4	4	1	3	5	1	3	2	3	5	3	1	5	11	3	3	4	2	4	
Gymnodinium ostreae		1	1	1	1	2	3	2	3	2	1	1	4	2	4	1	2	2	2			
Fragilaria cylindrus		1	1	1	1	2	2	1	1	3	2	1	1	1	1	1	2	2				
Fragilaria acuminata		5	2																			
Neodictyota ceratophores		10	14	15	14	14	19	19	16	12	15	13	11	15	9	9	11	11	7	5	15	
Porosira glabra		1		3	2	1	1	1	1	3	2	1	1	1	1	1	1	1	1	1		
Rhizosolenites heterotis		1																				
Thalassiosira gravida		3	6	6	4	6	2	4	5	6	3	3	6	7	4	4	6	5	4	3	2	
Thalassiosira hyalina																						
Thalassiosira lyngbya			2																			
Thalassiosira nordenskjoldii		6	5	1	3	5	5	3	7	4	2	1	5	3	4	4	5	8	6	4	3	
Thalassiosira nitida		4	4	7	2	4	2	8	5	6	3	4	4	6	1	3	2	1	6	5	2	
Cold-water species in O		47	48	45	46	42	43	42	41	47	41	40	27	33	46	41	29	31	39	26		
T° values		34.7	30.4	28.6	31.2	28.3	33.9	25.7	28.5	37.0	39.7	42.2	32.8	35.0	34.1	29.8	35.1	28.7	44.4	40.4	29.1	53.7
Annual T°-GST (°C)		18.8	16.6	16.4	17.1	16.3	17.4	16.7	17.0	17.8	18.2	17.8	16.5	17.3	17.6	16.8	17.1	16.9	18.4	18.3	16.1	19.7
Anterosphaera heptactis																						
Gymnodinium contracta																						
Gymnodinium obscurum																						
Gymnodinium radiatum																						
Nitzschia biograpta																						
Nitzschia capillipes																						
Nitzschia aculeata																						
Rhizosolenites exigua		5	3	6	9	2	5	5	6	6	6	4	7	8	2	2	3	6	1	10	4	
Rhizosolenites styliformis		3	5	2	5	3	2	6	1	1	4	5	4	2	2	5	2	2	3	5	3	
Rhizosolenites sp.		1																				
Solenites stellata		1	1	2																		
Thalassiosira eccentrica		2	6	3	2	8	2	2	2	5	2	5	6	4	4	1	3	3	4	6	5	
Thalassiosira fimbriata		5	1	1																		
Thalassiosira gravida v.																						
Thalassiosira rotula		3	2	3	3	2	3	3	4	2	2	4	4	4	6	1	2	1	2	1	2	
Thalassiosira peruviana		4	3	1	3	4	1	2	1	1	1	3	2	2	3	2	2	5	1			
Thalassiosira subtilis		2	4	4	2	1	3	1	1	3	1	1	1	5	1	1	2	4	1	3	4	
Thalassiosira sp.		2	1	3	1	1	2	4	1	2	1	1	2	1	1	1	2	1	2	1	3	
Thalassiosira fischeri		4	1	1	1	2	2	2	3	4	3	2	1	2	1	3	2	1	2	3	2	
Thalassiosira longistigma		4	1	1	1	2	2	2	3	4	3	2	1	2	1	3	2	1	2	3	2	
Oscillatoria species		106	95	91	97	83	91	98	85	88	90	87	92	90	87	89	90	90	93	88	78	92
Cyclotella stylifera																						
Navicula crenularis																						

# Relational database



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## Data Description

Always quote citation when using data!

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### Citation:

Koizumi, I.; Yamamoto, H (2010): Vertical distribution of diatoms in North Pacific sediments.  
doi:10.1594/PANGAEA.776366,

*Supplement to: Koizumi, Itaru; Yamamoto, Hirofumi (2010): Paleoceanographic evolution of North Pacific surface water off Japan during the past 150,000 years. Marine Micropaleontology, 74(3-4), 108-118, doi:10.1016/j.marmicro.2010.01.003*

### Abstract:

Hydrographic variability in the Mixed Water Region of the Northwest Pacific Ocean at latitudes 35°-40°N, between the Kuroshio Extension and Oyashio Front, causes complex upwelling, leading to large primary productivity and thus great fishery resources. We reconstructed the periodicity of the variability in North Pacific Intermediate Water upwelling and surface ocean hydrography based on the high-resolution analysis of diatom assemblages in seven cores, representing the last 150,000 years. We derived annual sea surface temperatures (SSTs) through a diatom-based proxy (Td). The Td-derived annual SSTs (°C) are controlled by orbital forcing, and show a reversed saw-tooth in southern cores, in contrast to a normal saw-tooth pattern in the northern cores. Oceanic diatom abundances along the northern margin of the Mixed Water Region are twice times as high as beneath the axis of the Kuroshio Extension, and fluctuated in a revised saw-tooth pattern with higher overall abundances interglacials. After the last deglaciation, annual SSTs declined markedly during Heinrich and Bond events in the northern North Atlantic, when ice-raftered detritus transported by icebergs was abundant. Wavelet analyses of the record of oceanic diatom abundances show significant variability at 2.0-kyr, 2 to 5.6-kyr and 3.2 to 9.6-kyr periods. Wavelet analyses of the annual SST records show significant periodicity at 1.4 to 2.6-kyr, 3.3 to 4.0-kyr, 7.2 to 12.8-kyr cycles.

### Project(s):

Ocean Drilling Program (ODP)

### Coverage:

Median Latitude: 38.477917 \* Median Longitude: 146.055988 \* South-bound Latitude: 36.000000 \* West-bound Longitude: 141.780000 \* North-bound Latitude: 40.560000 \* East-bound Longitude: 152.000000

Minimum Age: 0.000 ka BP \* Maximum Age: 152.580 ka BP

### Event(s):

186-1150A \* Latitude: 39.181910 \* Longitude: 143.331910 \* Date/Time Start: 1999-06-22T18:30:00 \* Date/Time End: 1999-06-26T22:15:00 \* Elevation: -2680.8 m \* Recovery: 566.40 m \* Penetration: 722.60 m \* Location: North Pacific Ocean \* Campaign: Leg186 \* Basis: Joides Resolution \* Device: Drilling \* Comment: 76 cores; 722.6 m cored; 0 m drilled; 78.4 % recovery

MD01-2421 (MD012421) \* Latitude: 36.023500 \* Longitude: 141.780000 \* Date/Time: 2001-06-16T04:33:00 \* Elevation: -2286.0 m \* Recovery: 45.84 m \* Location: Japan Trench \* Campaign: MD122 (IMAGES VII - WEPAMA) \* Basis: Marion Dufresne \* Device: Giant piston corer

MR00-05-2PC \* Latitude: 40.000000 \* Longitude: 146.000000 \* Elevation: -5177.0 m \* Location: Northwest Pacific \* Device: Piston corer

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### Size:

7 datasets



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## Download Data

Download ZIP file containing all datasets as tab-delimited text (use the following character encoding: ISO-8859-1: ISO Western (PANGAEA default))



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easy download and usage in various applications

Name	Änderungsdatum
datasets	Heute, 11:34:54
186-1150A_diatom.tab	Heute, 10:34:40
MD01-2421_diatom.tab	Heute, 10:34:40
MR00-05-2PC_diatom.tab	Heute, 10:34:40
MR02-03-2_diatom.tab	Heute, 10:34:40
MR97-04-1MUC_diatom.tab	Heute, 10:34:40
MR99-04-2PC_diatom.tab	Heute, 10:34:40
MR99-04-3_diatom.tab	Heute, 10:34:40
198	1.34
199	1.56
200	1.65
201	1.85
202	2.05
203	2.25
204	2.45
205	2.66
206	2.85
207	3.05
208	3.15
209	3.36
210	3.56
211	3.76
212	3.95
213	4.16
214	4.31
215	4.53
216	4.63
217	4.84
218	5.04
219	5.24
220	5.44
221	5.64
222	5.84
223	6.03
224	6.14
225	6.34
226	6.54
227	6.75
228	6.95
229	7.15
230	7.35
231	7.53
232	7.63
233	7.84





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The system is open to any scientist or project to archive and publish data.



# History & Milestones

1987 Core repository database

1989 SEDI/SEDAT proprietary predecessor

1994 SEDAN/SEPAN relation predecessor

1996 PANAGAEA

1998 [www.pangaea.de](http://www.pangaea.de)

2001 WDC-MARE

2004 OAI and **DOI**

2006 Data citation, portal software

2008 Data warehouse

2009 Elsevier-Partnership

2010 AGU-Partnership

...

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# Digital Object Identifier - DOI

[doi:10.1016/S0098-3004\(02\)00039-0](http://dx.doi.org/10.1016/S0098-3004(02)00039-0)



## Computers & Geosciences

Volume 28, Issue 10, December 2002, Pages 1201–1210

Shareware and freeware in the Geosciences II. A special issue in honour of John  
Butler



## PANGAEA—an information system for environmental sciences

Michael Diepenbroek<sup>a</sup>, , Hannes Grobe<sup>b</sup>, , Manfred Reinke<sup>b</sup>, , Uwe Schindler<sup>c</sup>, , Reiner Schlitzer<sup>b</sup>, , Rainer Sieger<sup>b</sup>, , Gerold Wefer<sup>a</sup>,

<sup>a</sup> Center for Marine Environmental Sciences (MARUM), University Bremen, Bremen 28334, Germany

<sup>b</sup> Alfred Wegener Institute for Polar and Marine Research, Bremerhaven 27515, Germany

<sup>c</sup> Physics Department, University of Erlangen-Nuremberg, Erlangen 91058, Germany

[http://dx.doi.org/10.1016/S0098-3004\(02\)00039-0](http://dx.doi.org/10.1016/S0098-3004(02)00039-0), How to Cite or Link Using DOI

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Alfred Wegener Institute for Polar and  
Marine Research, Bremerhaven



Center for Marine Environmental  
Sciences, Bremen



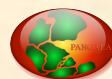
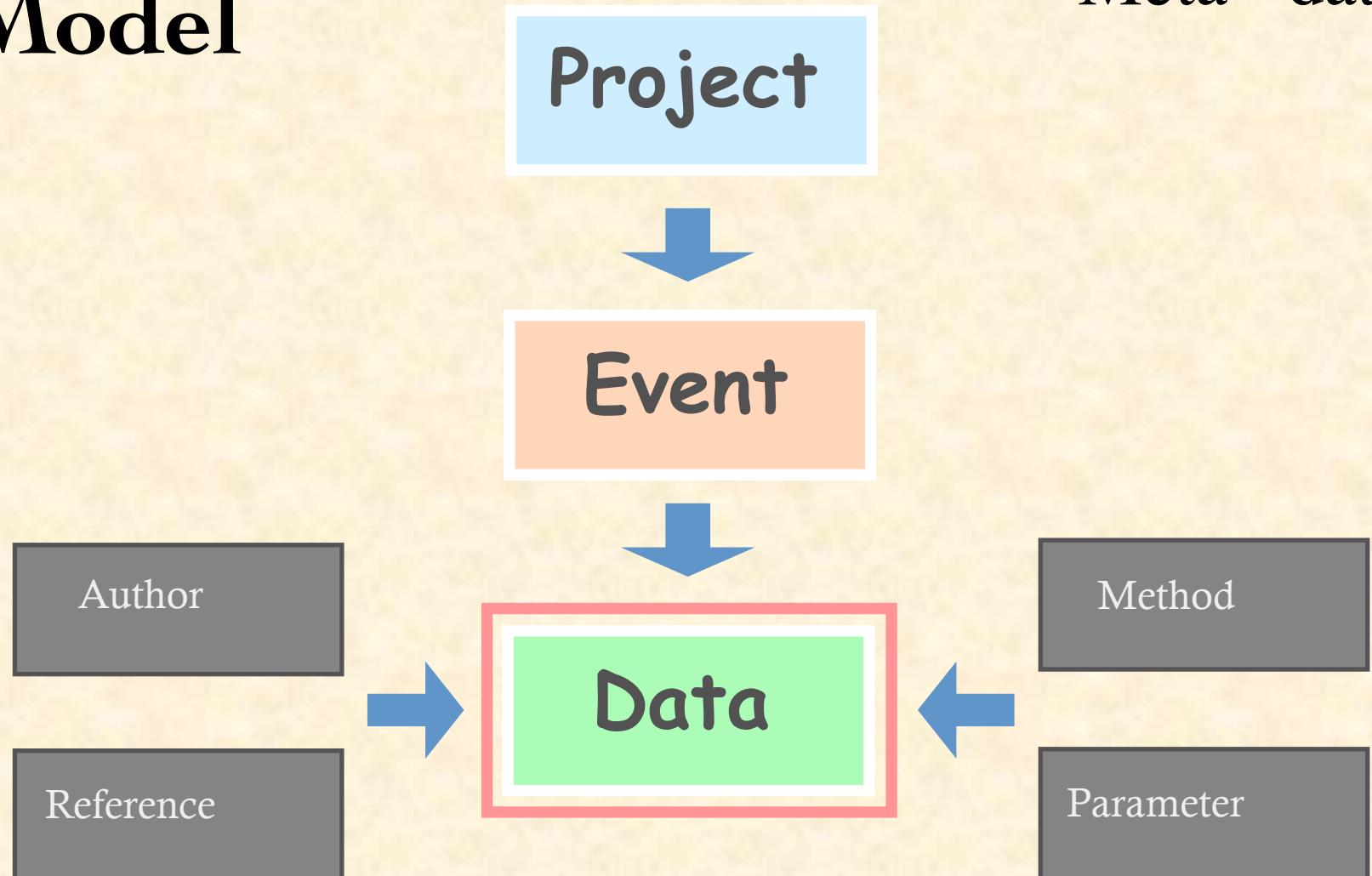
*Both institutions have committed to long-term operate PANGAEA*



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# Data Model

Meta - data



# Geo-code & meta-data

*when ?*



date/time or age

*what ?*



parameter [unit]

*how ?*



method

*where ?*



latitude  
longitude

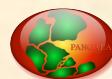
ice, water, air,  
sediment, object...

123.4    text



*who ?*

investigator  
reference

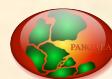


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*no metadata without data ...*

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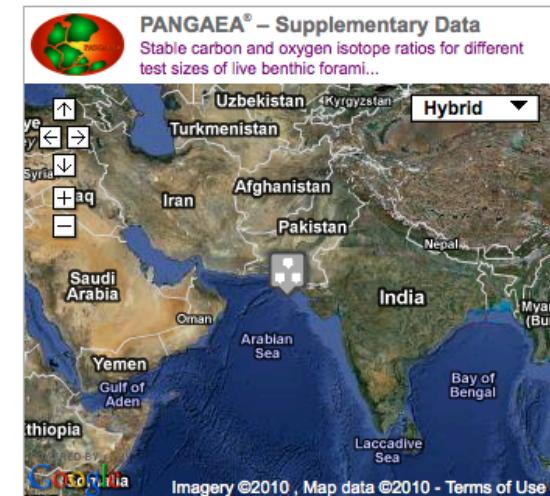
Font Size: A A A

[PDF \(525 K\)](#) | [Export citation](#) | [E-mail article](#)[Article](#)[Figures/Tables \(10\)](#)[References \(91\)](#)[Thumbnails](#) | [Full-Size images](#)**Marine Micropaleontology**

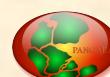
Volume 76, Issues 3-4, September 2010, Pages 92-103

[doi:10.1016/j.marmicro.2010.06.002](#) | [How to Cite or Link Using DOI](#)  
Copyright © 2010 Elsevier B.V. All rights reserved.[Permissions & Reprints](#)**Research paper****Ontogenetic effects on stable carbon and oxygen isotopes in tests of live (Rose Bengal stained) benthic foraminifera from the Pakistan continental margin**Stefanie Schumacher<sup>a, b</sup>, , Frans J. Jorissen<sup>a, b</sup>, , Andreas Mackensen<sup>c</sup>, , Andrew J. Gooday<sup>d</sup>, , and Olivier Pays<sup>e</sup>, <sup>a</sup> Laboratory of Recent and Fossil Bio-Indicators (BAIF), Angers University, 2 Bd Lavoisier, 49045 Angers Cedex 01, France<sup>b</sup> Laboratory of Marine Bio-Indicators (LEBIM), Ile d'Yeu, Ker Chalon, France<sup>c</sup> Alfred Wegener Institute for Polar and Marine Research, Am Alten Hafen 26, 27568 Bremerhaven, Germany<sup>d</sup> National Oceanography Centre, Southampton, European Way, Southampton SO14 3ZH, United Kingdom<sup>e</sup> LEESA, Ecology and Conservation Biology group, Angers University, 2 Bd Lavoisier, 49045 Angers Cedex 01, France

Received 11 December 2008; revised 10 June 2010; accepted 17 June 2010. Available online 25 June 2010.

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## Data Description

**Citation:** Schumacher, S et al. (2010): Stable carbon and oxygen isotope ratios for different test sizes of live benthic foraminifera from the Arabian Sea. doi:10.1594/PANGAEA.707882,  
Supplement to: Schumacher, Stefanie; Jorissen, Frans J; Mackensen, Andreas; Gooday, Andrew J; Pays, Olivier (2010): Ontogenetic effects on stable carbon and oxygen isotopes in tests of live (Rose Bengal stained) benthic foraminifera from the Pakistan continental margin. *Marine Micropaleontology*, 76(3-4), 92-103, doi:10.1016/j.marmicro.2010.06.002

**Abstract:** We determined the stable oxygen and carbon isotopic composition of live (Rose Bengal stained) tests belonging to different size classes of two benthic foraminiferal species from the Pakistan continental margin. Samples were taken at 2 sites, with water depth of about 135 and 275 m, corresponding to the upper boundary and upper part of the core region of the oxygen minimum zone (OMZ). For *Uvigerina* ex gr. *U. semiornata* and *Bolivina* aff. *B. dilatata*, delta<sup>13</sup>C and delta<sup>18</sup>O values increased significantly with increasing test size. In the case of *U. ex gr. U. semiornata*, delta<sup>13</sup>C increased linearly by about 0.105 per mil for each 100-μm increment in test size, whereas delta<sup>18</sup>O increased by 0.02 to 0.06 per mil per 100 μm increment. For *B. aff. B. dilatata* the relationship between test size and stable isotopic composition is better described by logarithmic equations. A strong positive linear correlation is observed between delta<sup>18</sup>O and delta<sup>13</sup>C values of both taxa, with a constant ratio of delta<sup>18</sup>O and delta<sup>13</sup>C values close to 2:1. This suggests that the strong ontogenetic effect is mainly caused by kinetic isotope fractionation during CO<sub>2</sub> uptake. Our data underline the necessity to base longer delta<sup>18</sup>O and delta<sup>13</sup>C isotope records derived from benthic foraminifera on size windows of 100 μm or less. This is already common practice in down-core isotopic studies of planktonic foraminifera.

**Project(s):** Paleoenvironmental Reconstructions from Marine Sediments @ AWI (AWI\_Paleo)

**Coverage:** Median Latitude: 23.246609 \* Median Longitude: 66.634777 \* South-bound Latitude: 23.214720 \* West-bound Longitude: 66.567830 \* North-bound Latitude: 23.289160 \* East-bound Longitude: 66.719720

**Event(s):** CD145\_55803#5 (A300) \* Latitude: 23.214720 \* Longitude: 66.567830 \* Date/Time: 2003-03-22T00:00:00 \* Elevation: -306.0 m \* Recovery: 0.10 m \* Location: Arabian Sea \* Campaign: CD145 \* Basis: Charles Darwin \* Device: MultiCorer

CD146\_55901#11 (A140) \* Latitude: 23.289160 \* Longitude: 66.719720 \* Date/Time: 2003-04-23T00:00:00 \* Elevation: -133.0 m \* Recovery: 0.10 m \* Location: Arabian Sea \* Campaign: CD146 \* Basis: Charles Darwin \* Device: MultiCorer

CD151\_56101#7 (A140) \* Latitude: 23.280167 \* Longitude: 66.711833 \* Date/Time: 2003-09-20T07:30:00 \* Elevation: -133.0 m \* Recovery: 0.10 m \* Location: Arabian Sea \* Campaign: CD151 \* Basis: Charles Darwin \* Device: MultiCorer

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**Size:** 10 datasets



## Download Data

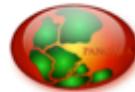
Download ZIP file containing all datasets as tab-delimited text (use the following character encoding: ISO-8859-1: ISO Western (PANGAEA default))

## Datasets listed in this Collection

1. Schumacher, S; Jorissen, FJ; Mackensen, A et al. (2010): (Table 2) Stable carbon and oxygen isotope ratios of live *Uvigerina* ex gr. *U. semiornata* from sediment core CD145\_55803#5. doi:10.1594/PANGAEA.707872
2. Schumacher, S; Jorissen, FJ; Mackensen, A et al. (2010): (Table 2) Stable carbon and oxygen isotope ratios of live *Uvigerina* ex gr. *U. semiornata* from sediment core CD146\_55901#11. doi:10.1594/PANGAEA.707873



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## Data Description

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**Citation:** Schumacher, S et al. (2010): (Table 2) Stable carbon and oxygen isotope ratios of live Uvigerina ex gr. U. semiornata from sediment core CD145\_55803#5. doi:10.1594/PANGAEA.707872,  
*In Supplement to: Schumacher, Stefanie; Jorissen, Frans J; Mackensen, Andreas; Gooday, Andrew J; Pays, Olivier (2010): Ontogenetic effects on stable carbon and oxygen isotopes in tests of live (Rose Bengal stained) benthic foraminifera from the Pakistan continental margin. Marine Micropaleontology, 76(3-4), 92-103, doi:10.1016/j.marmicro.2010.06.002*

**Project(s):** Paleoenvironmental Reconstructions from Marine Sediments @ AWI (AWI\_Paleo) [\[View\]](#)

**Coverage:** Latitude: 23.214720 \* Longitude: 66.567830

Minimum DEPTH, sediment: 0.0 m \* Maximum DEPTH, sediment: 0.0 m

**Event(s):** CD145\_55803#5 (A300) [\[View\]](#) \* Latitude: 23.214720 \* Longitude: 66.567830 \* Date/Time: 2003-03-22T00:00:00 \* Elevation: -306.0 m \* Recovery: 0.10 m \* Location: Arabian Sea [\[View\]](#) \* Campaign: CD145 [\[View\]](#) \* Basis: Charles Darwin [\[View\]](#) \* Device: MultiCorer [\[View\]](#)

## Parameter(s):

#	Name	Short Name	Unit	Principal Investigator	Method	Comment
1	DEPTH, sediment	Depth	m			Geocode
2	Depth, top/min	Depth top	m	Schumacher, Stefanie		
3	Depth, bottom/max	Depth bot	m	Schumacher, Stefanie		
4	Foraminifera, benthic, size average	Foram bent size	µm	Schumacher, Stefanie	Measured with object micrometer	
5	Standard deviation	Std dev	±	Schumacher, Stefanie	calculated	test size
6	Number of tests	Tests	#	Schumacher, Stefanie		
7	Uvigerina ex gr. U. semiornata, d13C	U. ex gr. U. semiornata d13C	per mil PDB	Schumacher, Stefanie	Mass spectrometer Finnigan MAT 251	
8	Uvigerina ex gr. U. semiornata, d18O	U. ex gr. U semiornata d18O	per mil PDB	Schumacher, Stefanie	Mass spectrometer Finnigan MAT 251	

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**Size:** 77 data points



## Data

Download dataset as tab-delimited text (use the following character encoding: [ISO-8859-1: ISO Western \(PANGAEA default\)](#))

1	2	3	4	5	6	7	8
Depth [m]	Depth top [m]	Depth bot [m]	Foram bent size [µm]	Std dev [±]	Tests [#]	U. ex gr. U. semiornata d13C [per mil PDB]	U. ex gr. U semiornata d18O [per mil PDB]
0.0025	0.000	0.005	207	18.9	10	-1.26	0.85
0.0025	0.000	0.005	225	19.9	20	-1.09	0.75
0.0025	0.000	0.005	294	11.1	10	-1.20	0.55
0.0025	0.000	0.005	392	16.3	8	-1.01	0.66
0.0025	0.000	0.005	479	10.4	7	-0.92	0.79
0.0025	0.000	0.005	592	23.6	6	-0.80	0.85



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Earth Syst. Sci. Data, 1, 1–5, 2009  
www.earth-syst-sci-data.net/1/1/2009/  
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## Compilation of ozonesonde profiles from the Antarctic Georg-Forster-Station from 1985 to 1992

G. König-Langlo and H. Gernandt

Alfred Wegener Institute for Polar and Marine Research, Bussestraße 24, 27570 Bremerhaven, Germany

Received: 29 July 2008 – Published in Earth Syst. Sci. Data Discuss.: 22 September 2008

Revised: 1 December 2008 – Accepted: 23 December 2008 – Published: 12 January 2009

**Abstract.** On 22 May 1985 the first balloon-borne ozonesonde was successfully launched by the staff of Georg-Forster-Station ( $70^{\circ}46' S$ ,  $11^{\circ}41' E$ ). The subsequent weekly ozone soundings mark the beginning of a continuous investigation of the vertical ozone distribution in the southern hemisphere by Germany.

The measurements began the year the ozone hole was discovered. They significantly contribute to other measurements made prior to and following 1985 at other stations. The regular ozone soundings from 1985 until 1992 are a valuable reference data set since the chemical ozone loss became a significant feature in the southern polar stratosphere.

The balloon-borne soundings were performed at the upper air sounding facility of the neighbouring station Novolazarevskaya, just 2 km from Georg-Forster-Station. Until 1992, ozone soundings were taken without interruption. Thereafter, the ozone sounding program was moved to Neumayer-Station ( $70^{\circ}39' S$ ,  $8^{\circ}15' W$ ) 750 km further west.

### Data coverage and parameter measured

Repository-Reference: doi:10.1594/PANGAEA.547983

Coverage: East: 11.8300; South: -70.7700;

Location Name: Georg-Forster-Station, Antarctica

Date/Time Start: 1985-05-22T05:19:00

Date/Time End: 1992-01-29T01:19:00

Parameter	Short Name	Unit	Comment
Altitude	Altitude	m	height above mean sea level
Date/Time	Date/Time		universal time code (UTC)
Longitude	Longitude		at launching point
Latitude	Latitude		at launching point
Ozone, partial pressure	O <sub>3</sub>	mPa	
Pressure, at given altitude	PPPP	hPa	
Temperature, air	TTT	degC	
Wind direction	dd	deg	
Wind speed	ff	m/sec	



Correspondence to: G. König-Langlo  
(gert.koenig-langlo@awi.de)

Published by Copernicus Publications.

### 1 Introduction

The first permanently operated German research base – later named Georg-Forster-Station – was established in 1976 in the Schirmacher Oasis at  $70^{\circ}46' S$ ,  $11^{\circ}41' E$ . The station was permanently used and operated as an annex to the Russian station Novolazarevskaya until 1987, and then as a German Antarctic station named after the German natural scientists, author and revolutionary Georg Forster (1754–1794) until 1993.

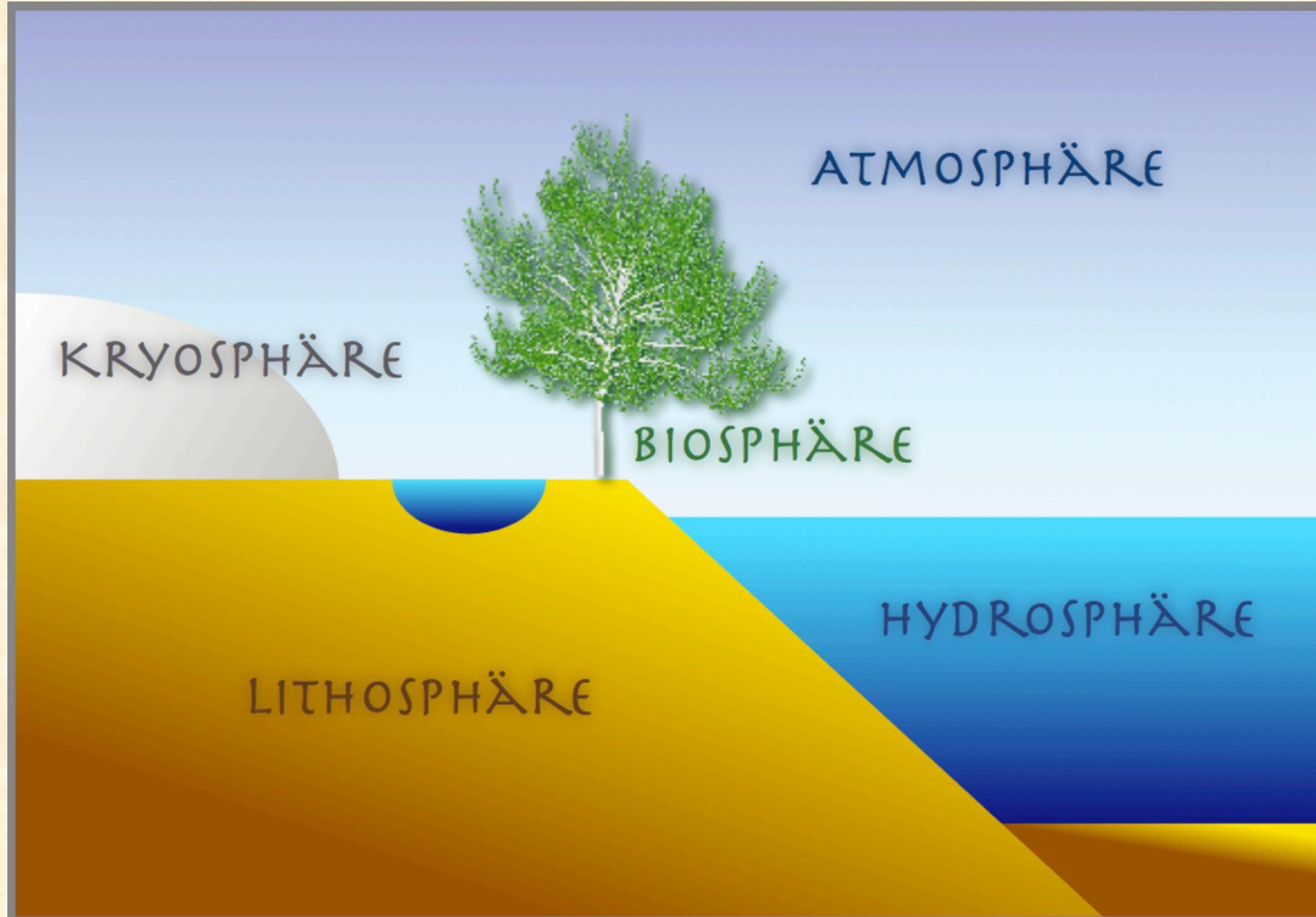
Long-term studies of magnetospheric-ionospheric processes, geophysical investigations, biological studies and sea ice observations using satellite imaging were performed.

The station became known to the international scientific community when the vertical extent of the “ozone hole” in the southern polar stratosphere was firstly recorded by regular balloon-borne ozone observations in 1985 (Gernandt, 1987a, b).

The ozone sounding programme was a major contribution of the Meteorological Service to the Antarctic research of the German Democratic Republic (GDR). The station was established as a long-term ozone-sonde observatory in cooperation with the Russian Arctic and Antarctic Research Institute (AARI) and the Aerological Observatory Lindenberg (AOL) in order to study the climatology of the ozone layer in

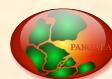
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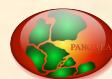
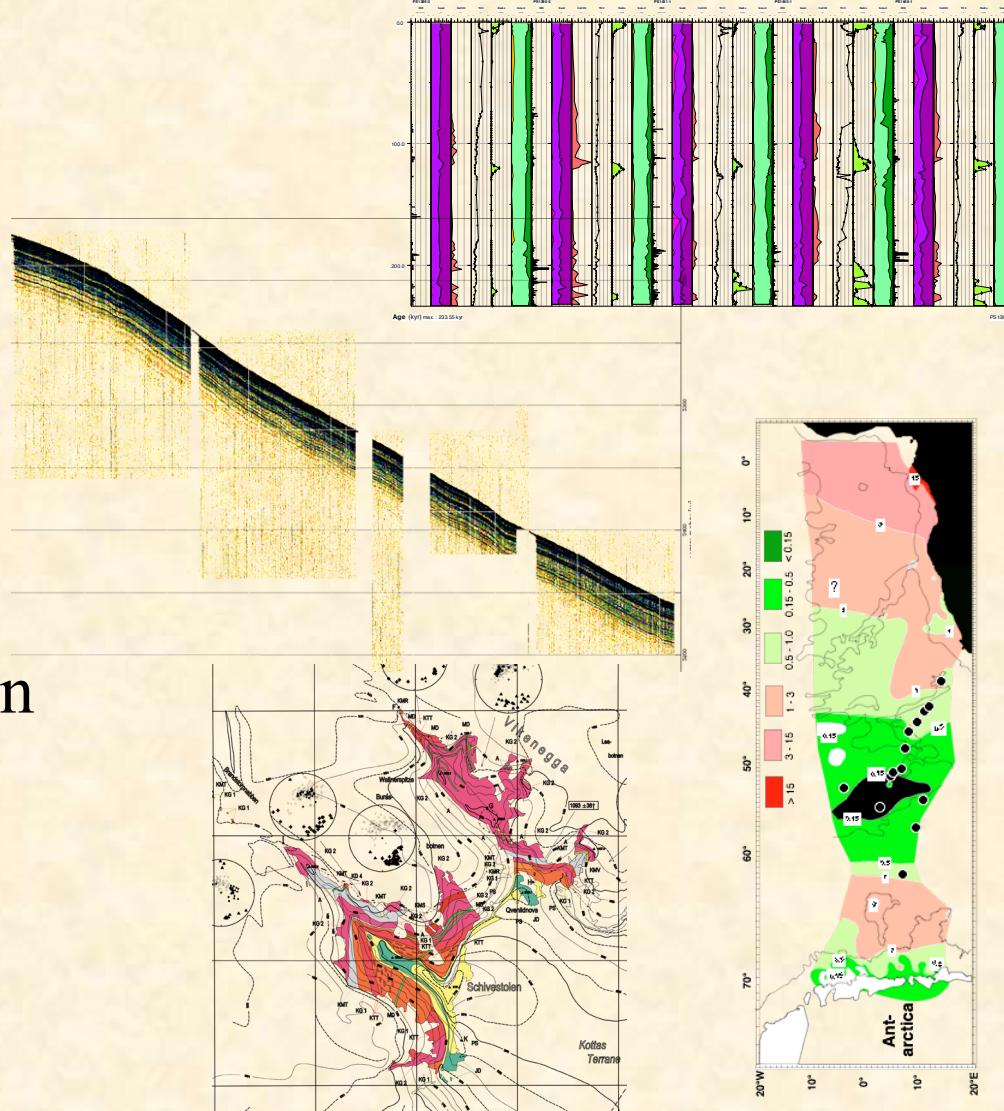
# Major Projects

<u>International</u>	<u>EU</u>	<u>National</u>
Radiation JGOFS Oceanography Ice cores Marine geology	Pollen CarboOcean Ocean acidification HERMES/Hermione EPOCA	Marine environment Tree rings HISTRA Data archaeology DFG/BMBF



# Examples from Geoscientific Research

- ◊ Sediment profile
- ◊ Seismic profile
- ◊ Faunal distribution
- ◊ Geological map

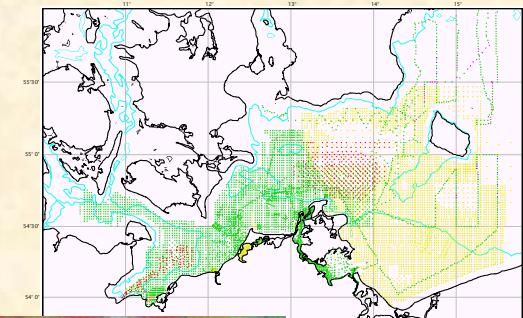


# Examples from Environmental Research

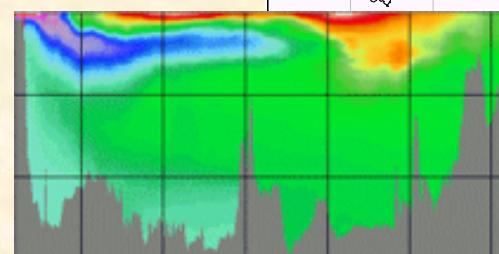
- ◆ Images



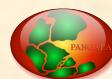
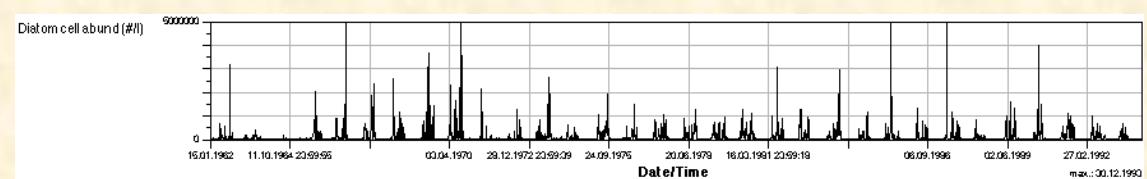
- ◆ Distributed samples



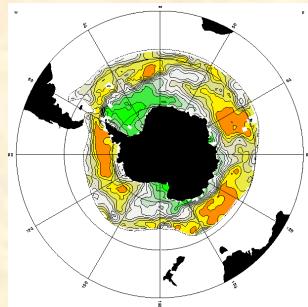
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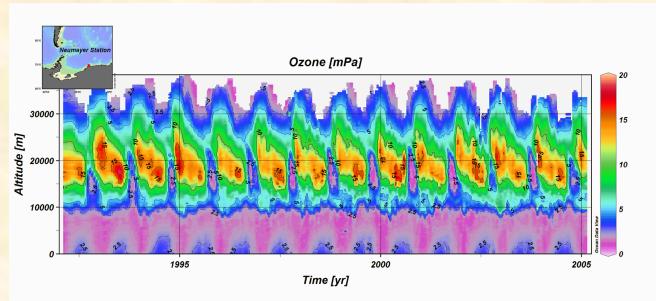
- ◆ Times Series



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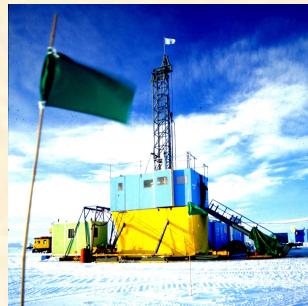
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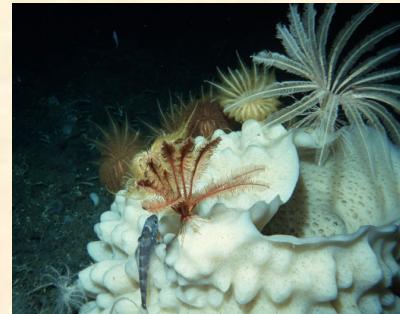
Ozone profiles



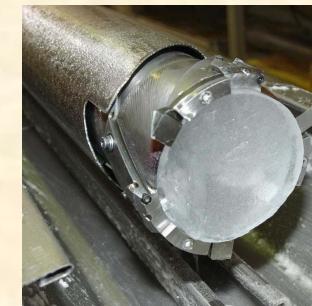
Sediments and Rocks



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Cape Roberts Project



Archive of  
Underwater Imaging



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Joint Global Ocean Flux Studies



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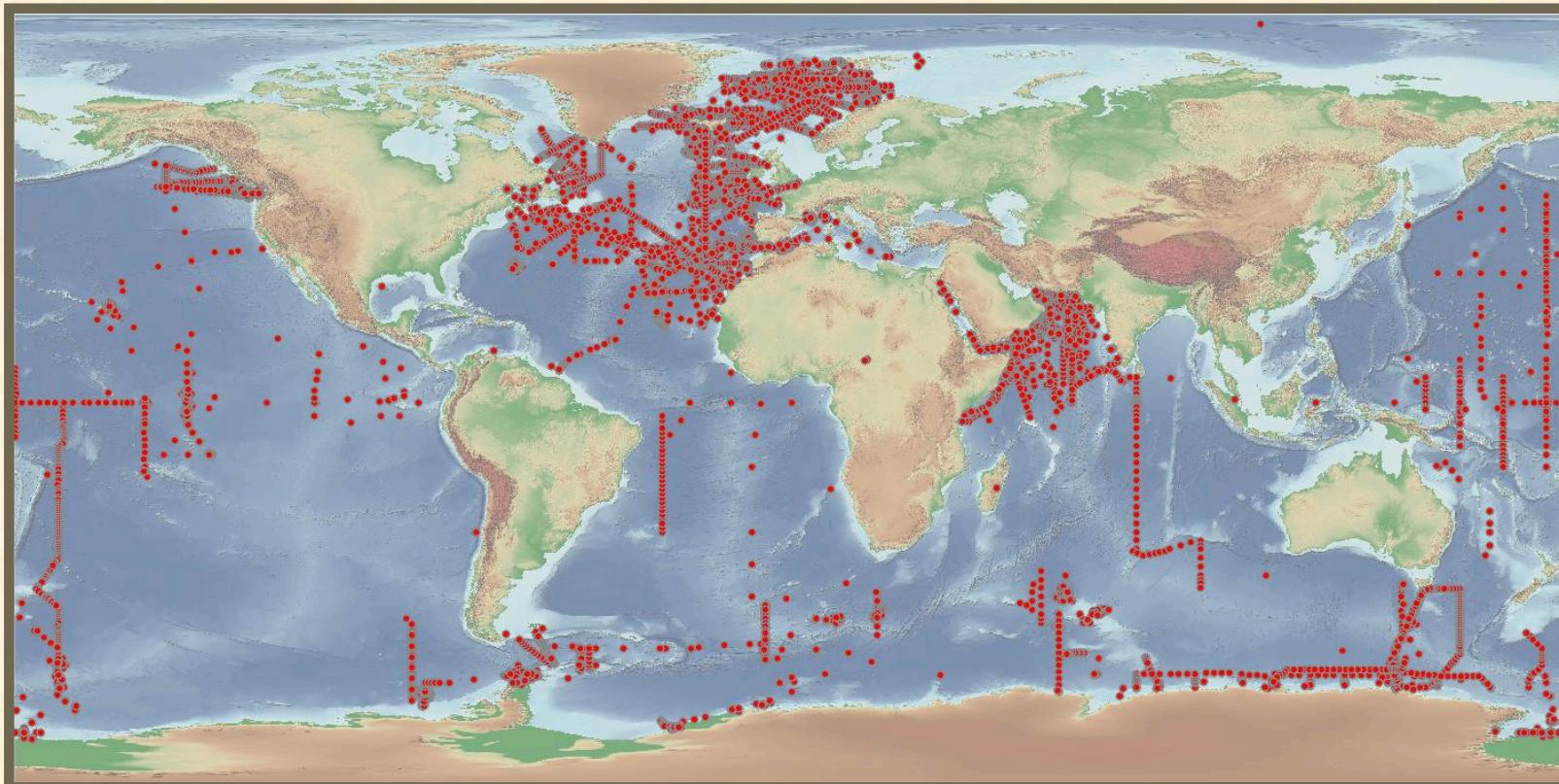
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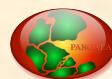
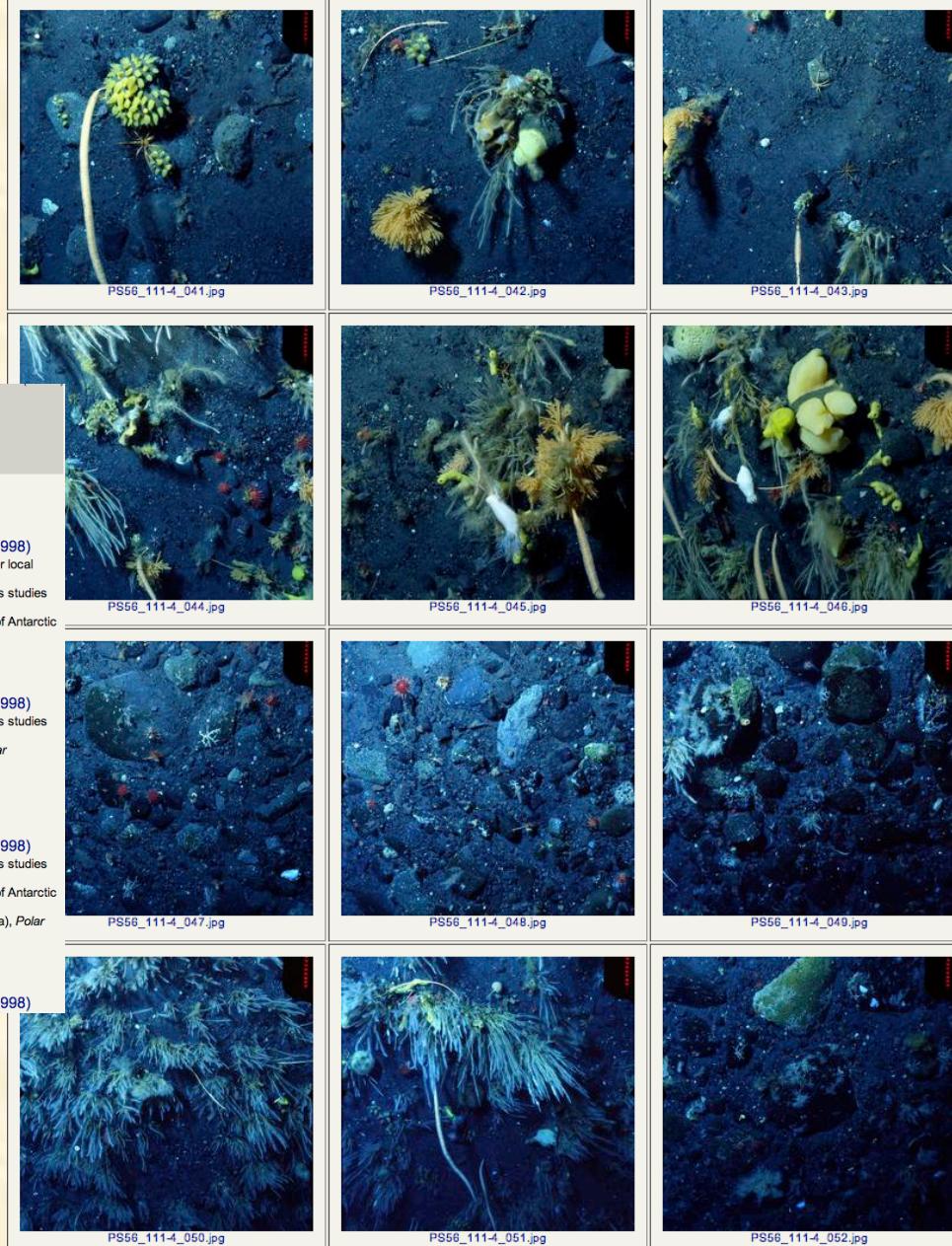
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Gutt, J; Arntz, WE; Balguerias, E et al. (2003): Diverse approaches to questions of diversity: German contributions to benthos studies around South American and Antarctica, *Gayana*  
Gutt, J; Piepenburg, D (2003): Scale-dependent impacts of catastrophic disturbances by grounding icebergs on the diversity of Antarctic benthos, *Marine Ecology Progress Series* (and more)  
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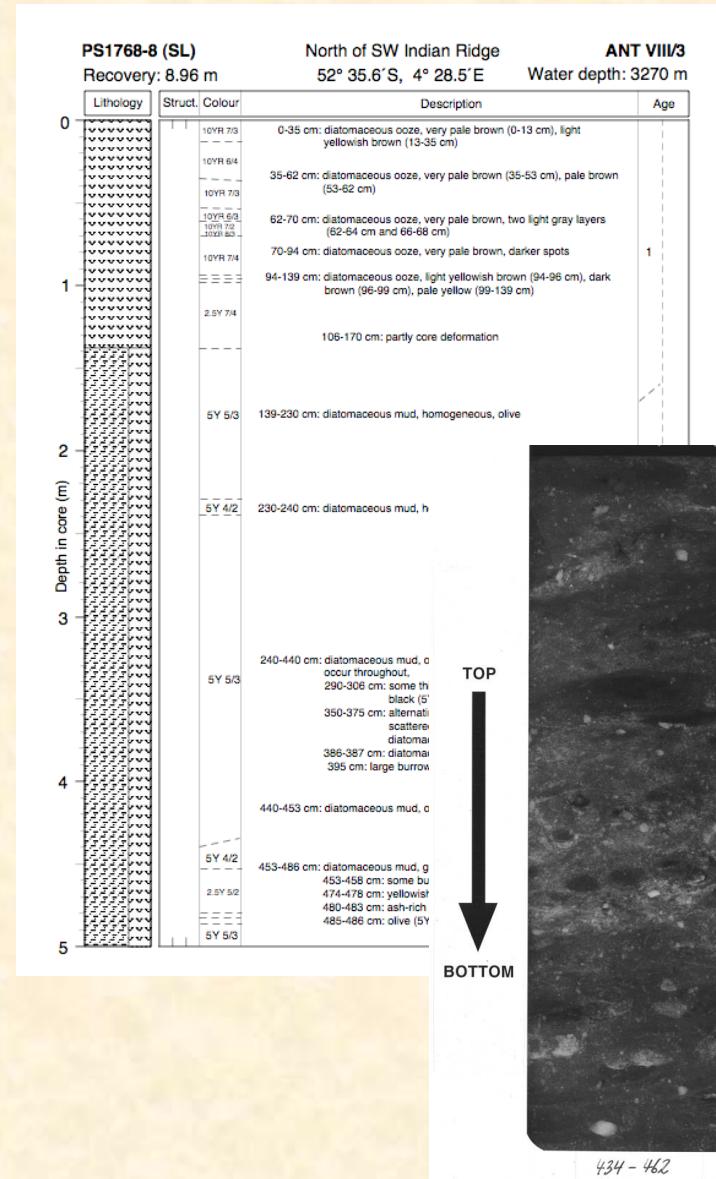
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Gutt, J (2001): High latitude antarctic benthos: a coevolution of nature conservation and ecosystem research?, *Ocean and Polar Research*  
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Gutt, J; Piepenburg, D (2003): Scale-dependent impacts of catastrophic disturbances by grounding icebergs on the diversity of Antarctic benthos, *Marine Ecology Progress Series*  
Gutt, J; Starmans, A (2001): Quantification of iceberg impact and benthic recolonisation patterns in the Weddell Sea (Antarctica), *Polar Biology* (and more)  
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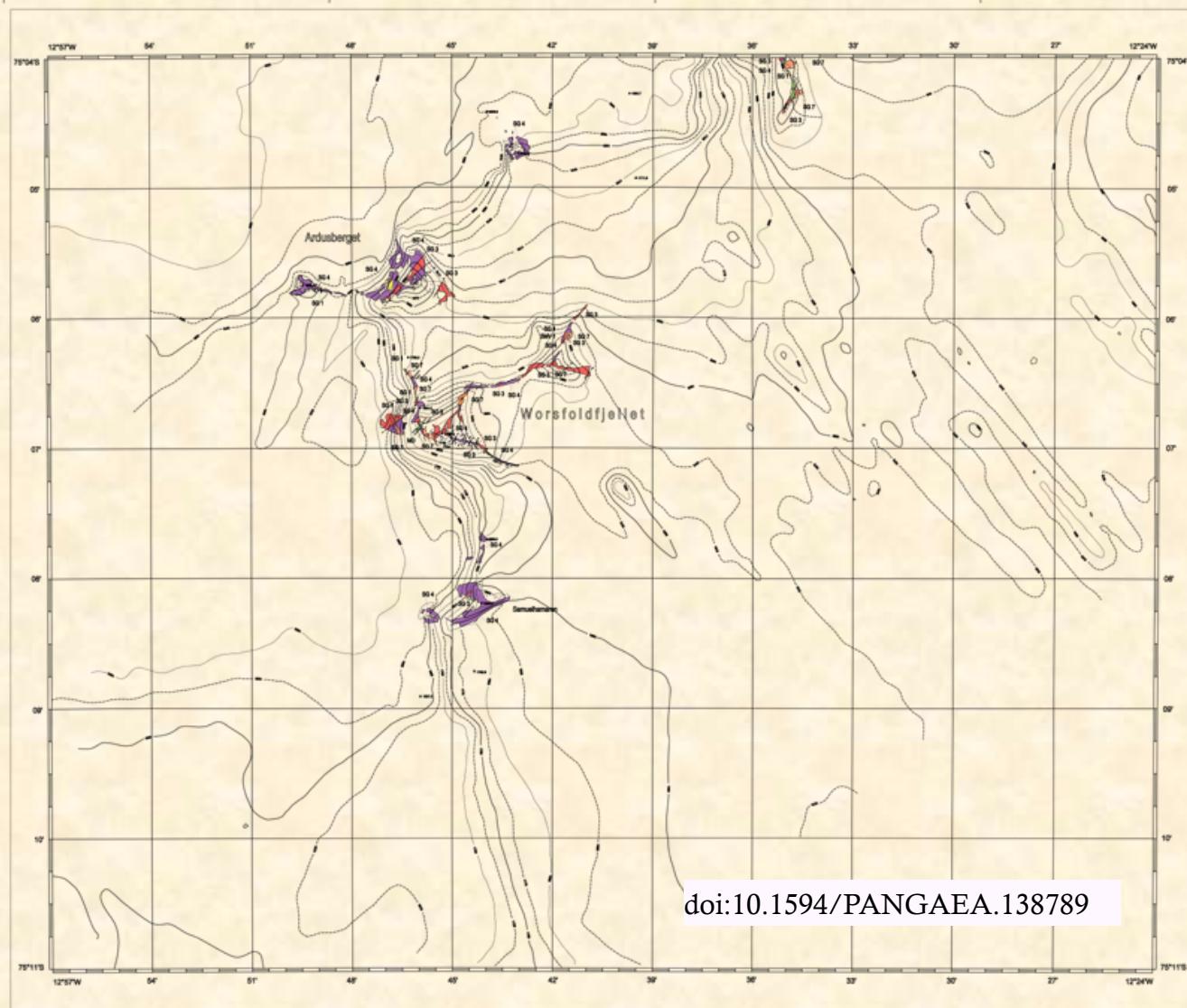
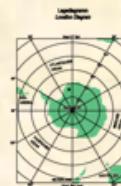
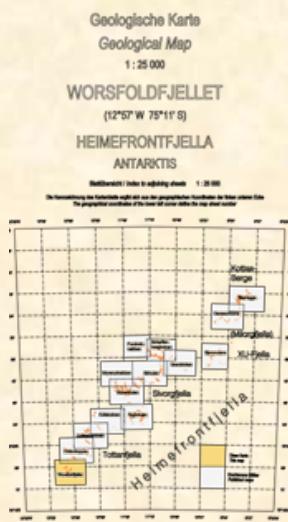


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# Sediment core documentation



# Geological map



doi:10.1594/PANGAEA.138789

DOI

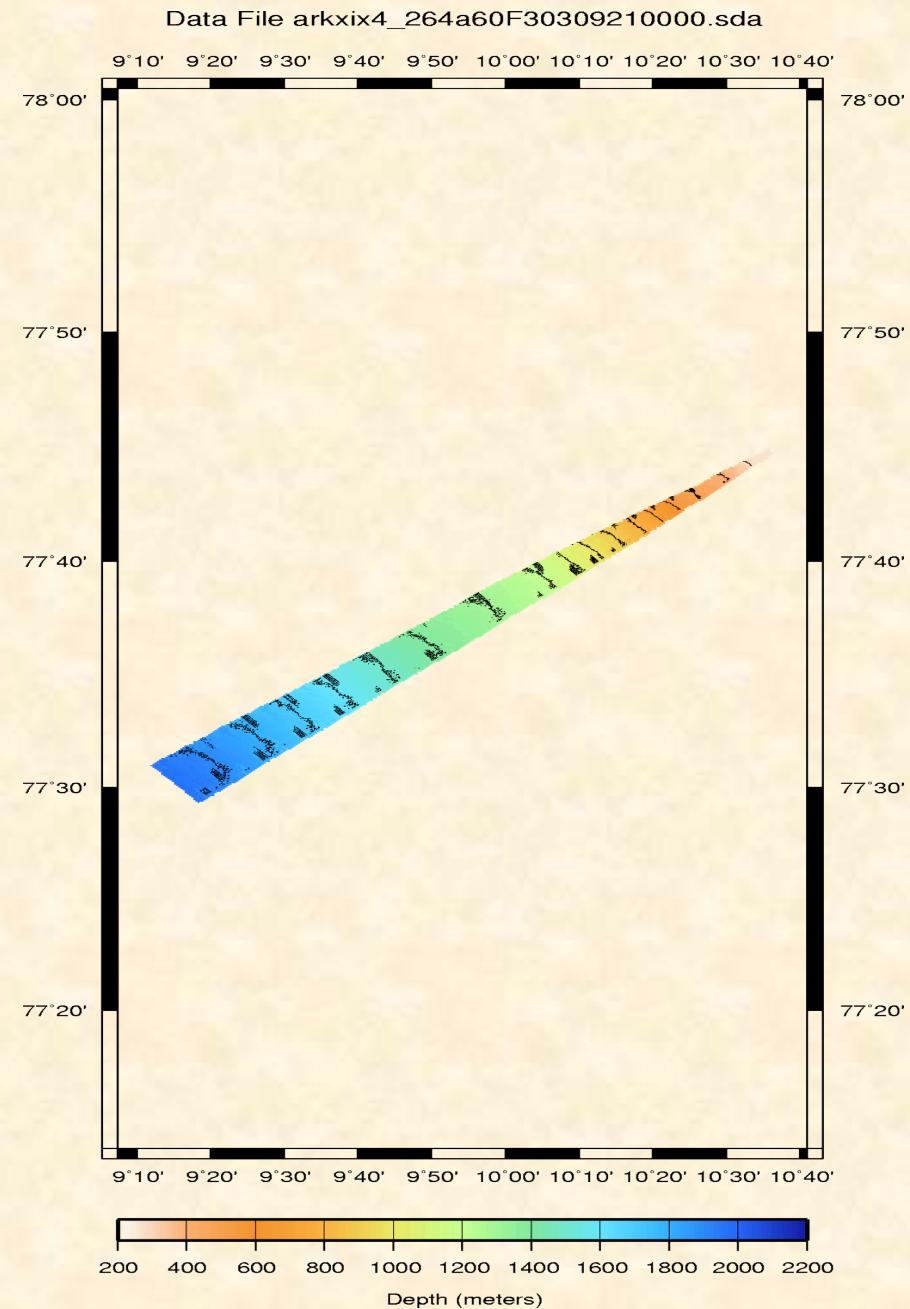
TIBOrder

Google



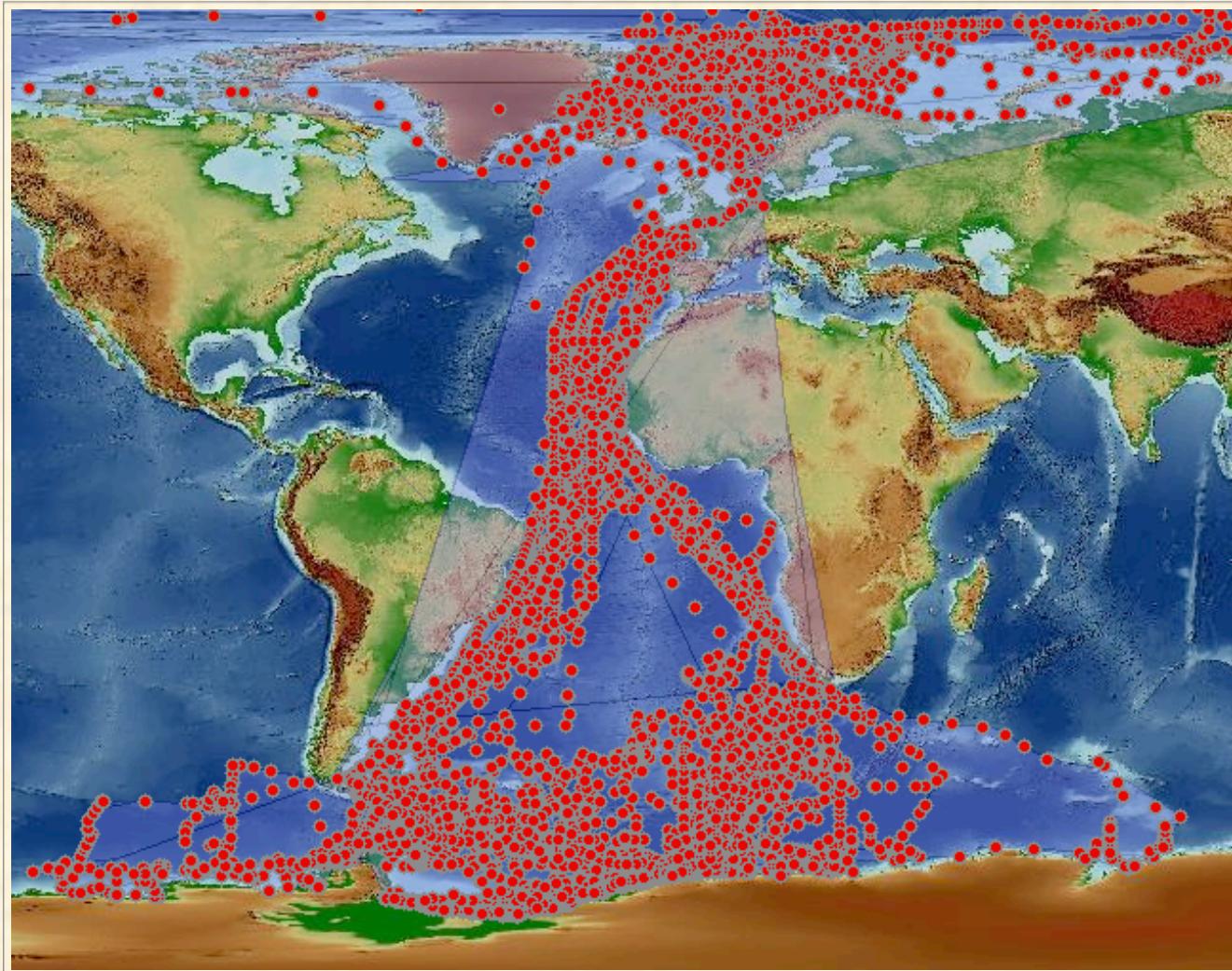
# Bathymetry

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# Meteorological observations



[doi:10.1594/PANGAEA.269619](https://doi.org/10.1594/PANGAEA.269619)



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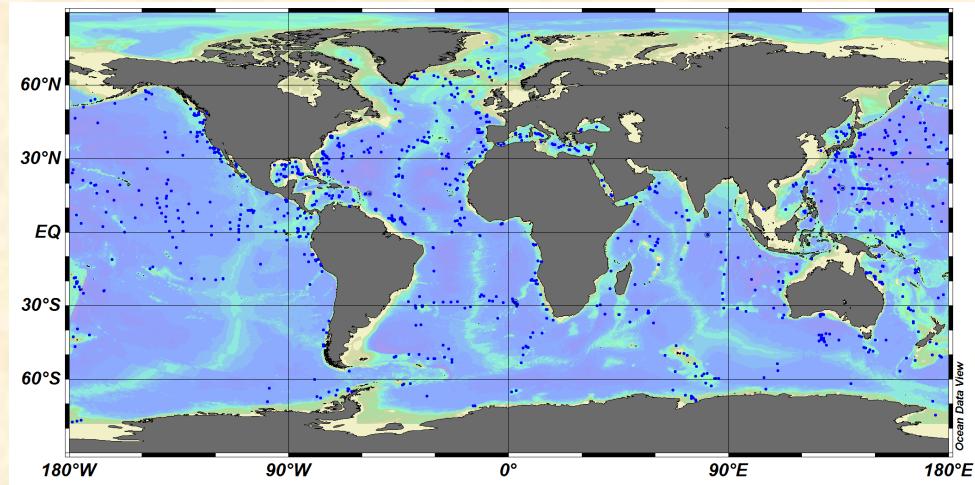


Data Archeology



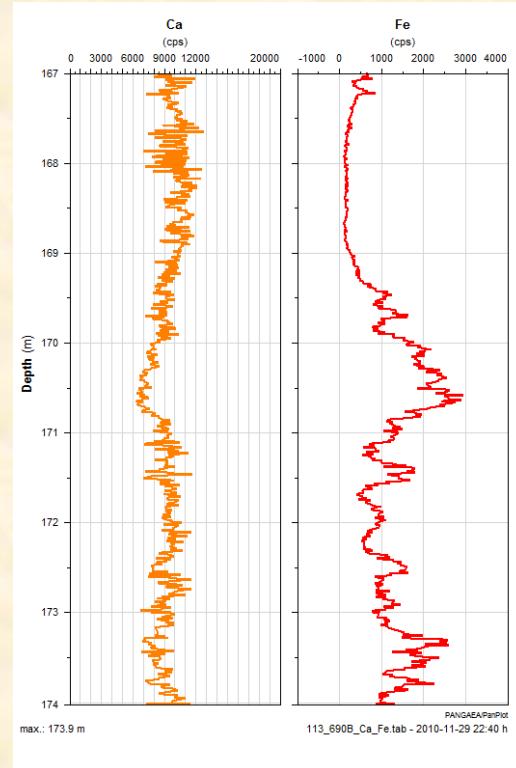
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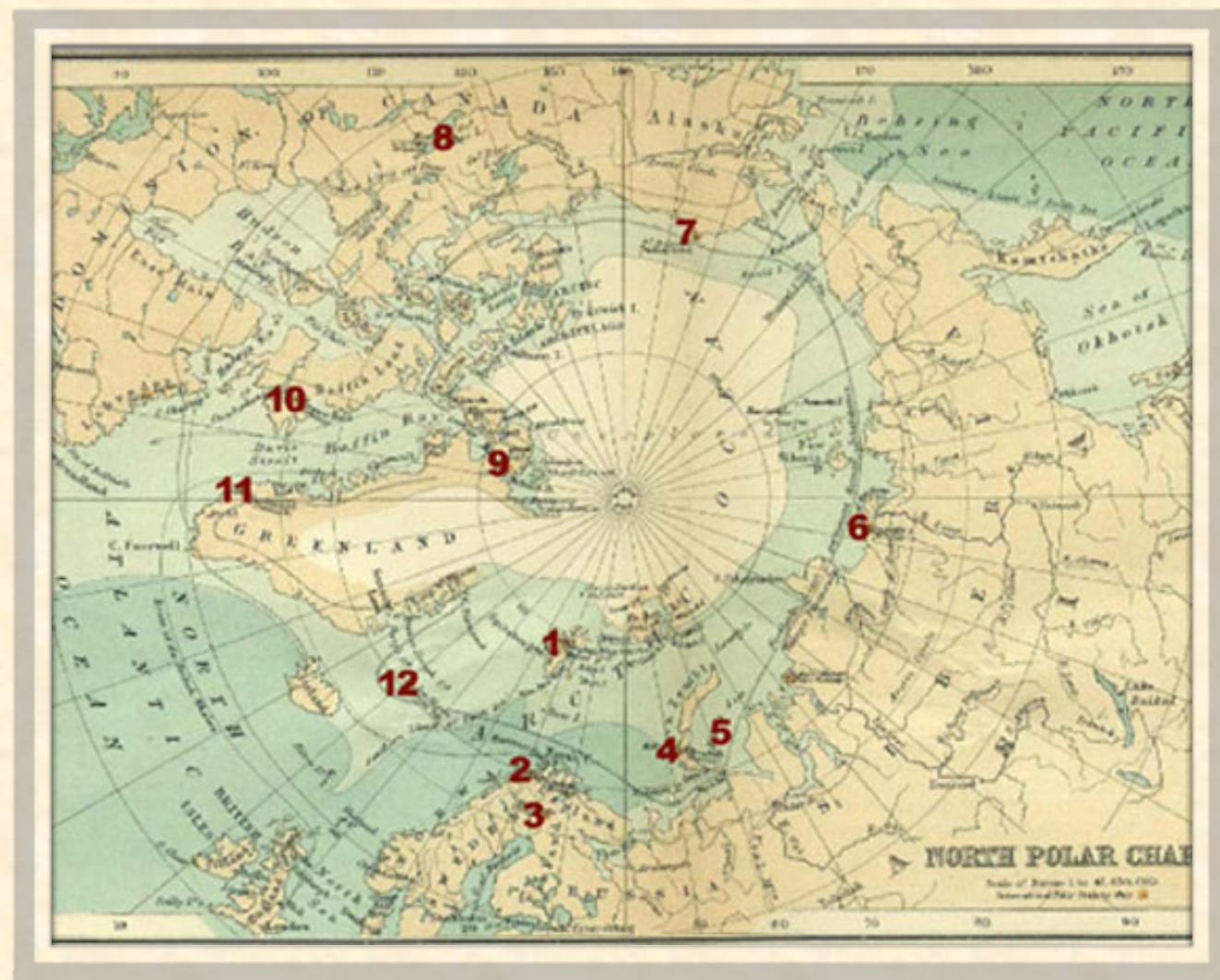
Post-Cruise data: Scientific Results and non-DSDP/ODP/IODP journals



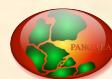
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## International Polar Year (1882-1883)



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# Data Access

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Uvigerina ex. gr. U. semiornata

Suche

Ungefähr 2.430 Ergebnisse (0,34 Sekunden)

Alles

[\(Table 2\) Stable carbon and oxygen isotope ratios of live Uvigerina ...](#)

[doi.pangaea.de/10.1594/PANGAEA.707876](http://doi.pangaea.de/10.1594/PANGAEA.707876) - Diese Seite übersetzen

Schumacher, S et al. (2010): (Table 2) Stable carbon and oxygen isotope ratios of live **Uvigerina ex gr. U. semiornata** from sediment core CD151\_56111#1.

Sie haben diese Seite 5 Mal aufgerufen. Letzter Besuch: 27.09.11

Bilder

[\(Table 2\) Stable carbon and oxygen isotope ratios of live Uvigerina ...](#)

[doi.pangaea.de/10.1594/PANGAEA.707872](http://doi.pangaea.de/10.1594/PANGAEA.707872) - Diese Seite übersetzen

Schumacher, S et al. (2010): (Table 2) Stable carbon and oxygen isotope ratios of live

**Uvigerina ex gr. U. semiornata** from sediment core CD145\_55803#5.

Maps

[\(Table 2\) Stable carbon and oxygen isotope ratios of live Uvigerina ...](#)

Videos

[\(Table 2\) Stable carbon and oxygen isotope ratios of live Uvigerina ...](#)

News

[\(Table 2\) Stable carbon and oxygen isotope ratios of live Uvigerina ...](#)

Shopping

[\(Table 2\) Stable carbon and oxygen isotope ratios of live Uvigerina ...](#)

Mehr

[\(Table 2\) Stable carbon and oxygen isotope ratios of live Uvigerina ...](#)

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All Water Sediment Ice Atmosphere

Globobulimina affinis

Search

Help

Advanced Search

Preferences

more...

Logged in as sschumacher (log out, profile)

Always quote citation when using data!

410 datasets found on search for »Globobulimina...«

Show Map Google Earth Data Warehouse

<< PREV | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | NEXT >>

1. **Schmiedl, G; Pfeilsticker, M; Hemleben, C et al. (2004): Stable oxygen and carbon isotope composition of benthic foraminifera from the western Mediterranean Sea**

Supplement to: **Schmiedl, G; Pfeilsticker, M; Hemleben, C et al. (2004): Environmental and biological effects on the stable isotope composition of recent deep-sea benthic foraminifera from the western Mediterranean Sea. *Marine Micropaleontology***

Size: 5 datasets

doi:10.1594/PANGAEA.728234 - Score: 100% - Similar datasets

2. **Mackensen, A; Licari, L (2004): Standing stocks and carbon isotopes of live benthic foraminifera from the South Atlantic**

Supplement to: **Mackensen, A; Licari, L (2004): Carbon isotopes of live benthic foraminifera from the South Atlantic: Sensitivity to bottom water carbonate saturation state and organic matter rain rates. In: Wefer, G; Mulitza, S & Ratmeyer, V (eds.), *The South Atlantic in the Late Quaternary: Reconstruction of Material Budgets and Current Systems*, Springer, Berlin, Heidelberg, New York**

Size: 3 datasets

doi:10.1594/PANGAEA.728233 - Score: 74% - Similar datasets

3. **Hayward, BW; Carter, R; Grenfell, HR et al. (2001): Distribution of deep-sea foraminifera in surface sediments east of New Zealand**

Supplement to: **Hayward, BW; Carter, R; Grenfell, HR et al. (2001): Depth distribution of Recent deep-sea benthic foraminifera east of New Zealand, and their potential for improving paleobathymetric assessments of Neogene microfaunas. *New Zealand Journal of Geology and Geophysics***

Reference: **Hayward, BW; Neil, HL; Carter, R et al. (2002): Factors influencing the distribution patterns of Recent deep-sea benthic foraminifera, east of New Zealand, Southwest Pacific Ocean. *Marine Micropaleontology***

Size: 3 datasets

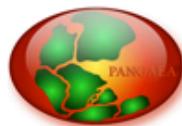
doi:10.1594/PANGAEA.705250 - Score: 35% - Similar datasets



PANGAEA – Data Publisher for Earth & Environmental Science

# Data Warehouse search for *Globobulimina affinis*

Logged in as sschumacher (log out, profile)



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Data Publisher for Earth & Environmental Science

Always quote citation when using data!

## Data Warehouse Download (BETA) on query for »Globobulimina...«

To start a data warehouse download, add geocodes (colored red/blue) and parameters to the configuration by dragging or double-clicking them. It is recommended to first choose a vertical geocode (colored red) to further reduce the list of available parameters. Order of geocodes and parameters in the download matrix may be changed by dragging rows in the configuration list. For best results put latitude/longitude in one of the first columns, as the download matrix is ordered by the primary geocode! Depending on size of result set, the query may take some time until file download starts.

### Available Parameters and Geocodes

Page 1 of 217 < prev 1 2 3 4 5 6 next >

Score ▾	Parameter/Geocode	
	DEPTH, sediment [m]	+
	LATITUDE	+
	LONGITUDE	+
	DATE/TIME	+
	AGE [ka BP]	+
100.0%	Globobulimina affinis	+
37.8%	Globobulimina affinis [#/10 cm <sup>3</sup> ]	+
19.9%	Sample code/label	+
17.9%	Globobulimina affinis [#/g]	+
15.6%	Globobulimina pacifica	+
14.0%	Melonis pomphiloides	+
13.5%	Pullenia bulloides	+
13.1%	Globobulimina affinis [%]	+
12.0%	Depth, composite [mcd]	+
11.8%	Uvigerina peregrina	+

Implicit averaging

Calculate standard deviation of averaged values

Download data in the following character encoding: x-MacRoman: Macintosh Roman

**Start Data Warehouse Query**

### Configuration

Page 1 of 1 < prev 1 next >

Parameter/Geocode	Method	
LATITUDE		↓ ↵
LONGITUDE		↑ ↓ ↵
DEPTH, sediment [m]		↑ ↓ ↵
AGE [ka BP]		↑ ↓ ↵
Globobulimina affinis [#/10 cm <sup>3</sup> ]	<any>	↑ ↵



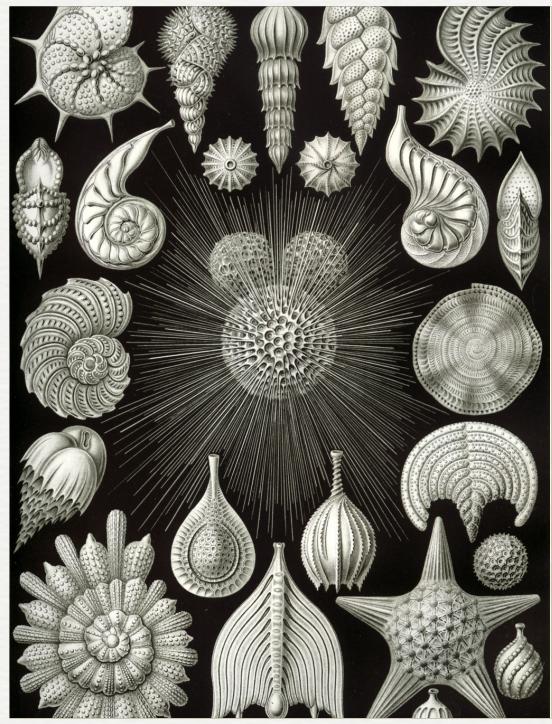
PANGAEA – Data Publisher for Earth & Environmental Science

# Data Warehouse search for *Globobulimina affinis*

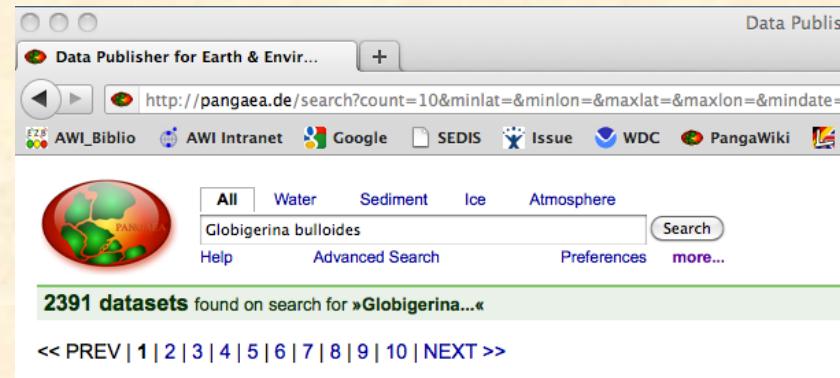
L	A	B	C	D	E	F	G	H	I	J	K	L
Latitude	Longitude	Depth [m]	Age [ka BP]	G. affinis	G. affinis [#/10 cm**3]	G. affinis [#/g]	G. affinis [%]	Origin of Values				
2	-45.85	-75.6922	0.45	R				<a href="http://doi.pangaea.de/10.1594/PANGAEA.299500">http://doi.pangaea.de/10.1594/PANGAEA.299500</a>				
3	-45.85	-75.6917	478.12	R				<a href="http://doi.pangaea.de/10.1594/PANGAEA.299501">http://doi.pangaea.de/10.1594/PANGAEA.299501</a>				
4	-31.785	15.5	0					<a href="http://doi.pangaea.de/10.1594/PANGAEA.511340">0 http://doi.pangaea.de/10.1594/PANGAEA.511340</a>				
5	-31.785	15.5	0					<a href="http://doi.pangaea.de/10.1594/PANGAEA.511368">0 http://doi.pangaea.de/10.1594/PANGAEA.511368</a>				
6	-31.785	15.5	0			0		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511349">http://doi.pangaea.de/10.1594/PANGAEA.511349</a>				
7	-31.785	15.5	0.02			0.12		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511349">http://doi.pangaea.de/10.1594/PANGAEA.511349</a>				
8	-31.785	15.5	0.02					<a href="http://doi.pangaea.de/10.1594/PANGAEA.511342">4.6 http://doi.pangaea.de/10.1594/PANGAEA.511342</a>				
9	-31.785	15.5	0.02			0.26		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511345">0.3 http://doi.pangaea.de/10.1594/PANGAEA.511345;</a>				
0	-31.785	15.5	0.04			0.26		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511349">http://doi.pangaea.de/10.1594/PANGAEA.511349</a>				
1	-31.785	15.5	0.04			0		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511349">http://doi.pangaea.de/10.1594/PANGAEA.511349</a>				
2	-28.998333	13.836667	0			0		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511339">http://doi.pangaea.de/10.1594/PANGAEA.511339</a>				
3	-28.998333	13.836667	0.02			0		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511339">http://doi.pangaea.de/10.1594/PANGAEA.511339</a>				
4	-28.998333	13.836667	0.02			0		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511339">http://doi.pangaea.de/10.1594/PANGAEA.511339</a>				
5	-28.998333	13.836667	0.04			0		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511339">http://doi.pangaea.de/10.1594/PANGAEA.511339</a>				
6	-28.998333	13.836667	0.04			0.26		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511339">http://doi.pangaea.de/10.1594/PANGAEA.511339</a>				
7	-28.998333	13.836667	0.06			0.26		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511339">http://doi.pangaea.de/10.1594/PANGAEA.511339</a>				
8	-27.951667	14.005	0					<a href="http://doi.pangaea.de/10.1594/PANGAEA.511340">0.7 http://doi.pangaea.de/10.1594/PANGAEA.511340</a>				
9	-27.951667	14.005	0					<a href="http://doi.pangaea.de/10.1594/PANGAEA.511368">0 http://doi.pangaea.de/10.1594/PANGAEA.511368</a>				
0	-27.951667	14.005	0			0		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511350">http://doi.pangaea.de/10.1594/PANGAEA.511350</a>				
1	-27.951667	14.005	0.02			0		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511350">http://doi.pangaea.de/10.1594/PANGAEA.511350</a>				
2	-27.951667	14.005	0.02					<a href="http://doi.pangaea.de/10.1594/PANGAEA.511342">0.1 http://doi.pangaea.de/10.1594/PANGAEA.511342</a>				
3	-27.951667	14.005	0.02			0		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511345">0 http://doi.pangaea.de/10.1594/PANGAEA.511345;</a>				
4	-27.951667	14.005	0.04			0		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511350">http://doi.pangaea.de/10.1594/PANGAEA.511350</a>				
5	-27.951667	14.005	0.04			0.06		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511350">http://doi.pangaea.de/10.1594/PANGAEA.511350</a>				
6	-26.791667	13.455	0					<a href="http://doi.pangaea.de/10.1594/PANGAEA.511340">1.1 http://doi.pangaea.de/10.1594/PANGAEA.511340</a>				
7	-26.791667	13.455	0					<a href="http://doi.pangaea.de/10.1594/PANGAEA.511368">0 http://doi.pangaea.de/10.1594/PANGAEA.511368</a>				
8	-26.791667	13.455	0			0		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511351">http://doi.pangaea.de/10.1594/PANGAEA.511351</a>				
9	-26.791667	13.455	0.02			0.06		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511351">http://doi.pangaea.de/10.1594/PANGAEA.511351</a>				
0	-26.791667	13.455	0.02					<a href="http://doi.pangaea.de/10.1594/PANGAEA.511342">1.3 http://doi.pangaea.de/10.1594/PANGAEA.511342</a>				
1	-26.791667	13.455	0.02			0.26		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511345">0.6 http://doi.pangaea.de/10.1594/PANGAEA.511345;</a>				
2	-26.791667	13.455	0.04			0.06		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511351">http://doi.pangaea.de/10.1594/PANGAEA.511351</a>				
3	-26.791667	13.455	0.04			0.26		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511351">http://doi.pangaea.de/10.1594/PANGAEA.511351</a>				
4	-25.516667	13.233333	0					<a href="http://doi.pangaea.de/10.1594/PANGAEA.511340">3.3 http://doi.pangaea.de/10.1594/PANGAEA.511340</a>				
5	-25.516667	13.233333	0					<a href="http://doi.pangaea.de/10.1594/PANGAEA.511368">3.3 http://doi.pangaea.de/10.1594/PANGAEA.511368</a>				
6	-25.516667	13.233333	0			1.86		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511352">http://doi.pangaea.de/10.1594/PANGAEA.511352</a>				
7	-25.516667	13.233333	0.02			2.76		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511352">http://doi.pangaea.de/10.1594/PANGAEA.511352</a>				
8	-25.516667	13.233333	0.02			1.4		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511345">5.4 http://doi.pangaea.de/10.1594/PANGAEA.511345;</a>				
9	-25.516667	13.233333	0.04			1.98		<a href="http://doi.pangaea.de/10.1594/PANGAEA.511352">http://doi.pangaea.de/10.1594/PANGAEA.511352</a>				



## Data-Warehouse > retrieval & compilation



*Globigerina bulloides*

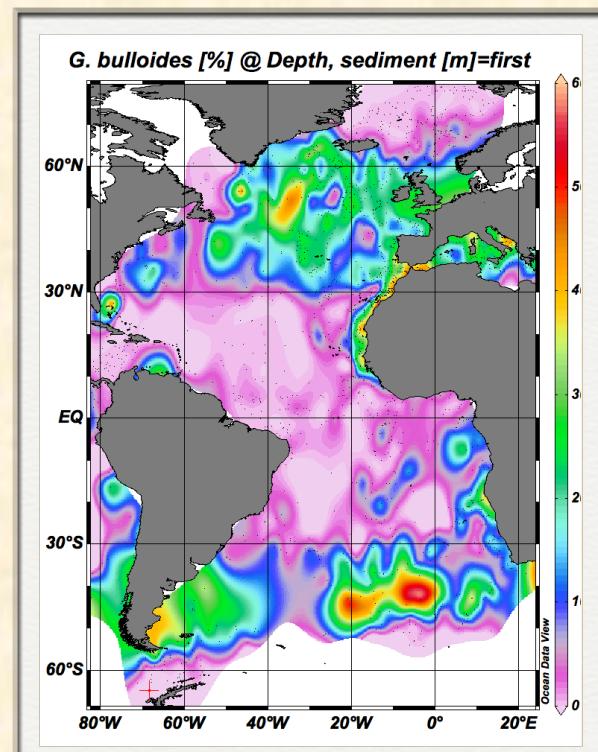


The screenshot shows a search results page for "Globigerina bulloides". At the top, there are tabs for All, Water, Sediment, Ice, and Atmosphere, with "All" selected. Below the tabs is a search bar containing "Globigerina bulloides" and a "Search" button. A green globe icon is visible on the left. Below the search bar, it says "2391 datasets found on search for »Globigerina...«". At the bottom, there is a navigation bar with links like "Help", "Advanced Search", "Preferences", and "more...". Above the search bar, there are links for AWI\_Biblio, AWI Intranet, Google, SEDIS, Issue, WDC, PangaWiki, and L.



This is a detailed view of a dataset page for Globigerina bulloides. It includes a header with "All", "Water", "Sediment", "Ice", and "Atmosphere" tabs, and a search bar. Below the header, there's a list of publications and their details, such as authors, titles, and abstracts. A blue arrow points from this screenshot to the "Pan2Applic" logo below it.

Pan2Applic



Distribution map (ODV)



# Empty archives

Most researchers agree that open access to data is the scientific ideal, so what is stopping it happening? **Bryn Nelson** investigates why many researchers choose not to share.



In 2003, the University of Rochester in New York launched a digital archive designed to preserve and share dissertations, preprints, working papers, photographs, music scores — just about any kind of digital data the university's investigators could produce. Six months of research and marketing had convinced the university that a publicly accessible online archive would be well received. At the time of the launch, the university librarians were worried that a flood of uploaded data might swamp the available storage space.

Six years later, the US\$200,000 repository lies mostly empty.

or didn't understand how to use the archive, or lamented that they just didn't have any more hours left in the day to spend on this business.

As Gibbons and anthropologist Nancy Fried Foster observed in their 2005 postmortem<sup>1</sup>, "The phrase 'if you build it, they will come' does not yet apply to IRs [institutional repositories]."

A similar reality check has greeted other data-sharing efforts. Most researchers happily embrace the idea of sharing. It opens up observations to independent scrutiny, fosters

data. Physicists, mathematicians and computer scientists use arXiv.org, operated by Cornell University in Ithaca, New York; the International Council for Science's World Data System holds data for fields such as geophysics and biodiversity; and molecular biologists use the Protein Data Bank, GenBank and dozens of other sites. The astronomy community has the International Virtual Observatory Alliance, geo-scientists and environmental researchers have Germany's Publishing Network for Geoscientific & Environmental Data (PANGAEA),

"We got the software up and running and said 'Give us your stuff'. That's

ILLUSTRATIONS BY J.H. VANDERENDONCK

# Submit data

## Provision of data

Data provided by author/  
principle investigator

During manuscript preparation or  
submission

data can be  
paper public

The screenshot shows a web browser window for the PANGAEA Data Publisher for Earth & Environmental Science. The address bar shows the URL <http://pangaea.de/>. The page header includes the PANGAEA logo, the text "Data Publisher for Earth & Environmental Science", and links for RSS, Google, ePIC, AWI\_Biblio, AWI Intranet, Google, Pangawiki, WDC, LEO, and navigation arrows. A message "Not logged in ([log in](#) or [sign up](#))" is displayed. Below the header, there is a globe icon and a message "Logged in as sschumacher ([log out](#), [profile](#))". The main content area features the PANGAEA logo and the text "Submit Data to PANGAEA". It includes a welcome message: "Welcome to the PANGAEA data submission system. Any data from earth and life sciences are accepted. We highly appreciate you archiving and publishing your data with PANGAEA." Below this, three green checkmark icons list benefits: "Benefits. Published data are fully citable and can be cross-referenced with journal articles – [read more...](#)", "Data preparation and quality control. We will be in direct contact with you during preparation and archiving of your data – [read more...](#)", and "Costs. PANGAEA can be used free of charge. Nevertheless, we appreciate any possible financial support – [read more...](#)". A note at the bottom states: "When you start the data submission process below, you will be redirected to the PANGAEA issue tracker that will assist you in providing metadata and uploading data files. Any communication with our editors will go through this issue tracker." A large blue button labeled "SUBMIT YOUR DATA" is centered at the bottom of the main content area. At the very bottom, a link reads "Further details about data submission to PANGAEA – if you have any comments on the data submission process, please [contact us](#)".

Issue Type  Data Submission

Summary \* Data submission 2013-01-10T08:52:57Z (Stefanie Schumacher, Alfred Wegener Institute for Polar and Marine Research, Bremerhaven)

The summary (subject) is used as identifier in the further communication.

Author(s) \* Schumacher, Stefanie

Please, enter the author(s) (the principal investigators) for the data set(s) you want to submit.One author per line; example: Smith, Joe Peter

Title Live benthic foraminifera of the Arabian Sea

The title should ideally reflect what has been measured, observed, or calculated, when, where, and how.Description Abstract:Live (Rose Bengal stained) and dead benthic foraminiferal communities (hard-shelled species only) from the Pakistan continental margin oxygen minimum zone (OMZ) have been studied in order to determine the relation between faunal composition and the oxygenation of bottom waters. During R.R.S. Charles Darwin Cruises 145 and 146 (12 March to May 28 2003), 11 multicores were taken on the continental margin off Karachi, Pakistan. Two transects were sampled, constituting a composite bathymetric profile from 136 m (above the OMZ in spring 2003) down to 1870 m water depth. Cores (surface area 25.5 cm<sup>2</sup>) were processed as follows: for stations situated above, and in the upper part of the OMZ, sediment slices were taken for the 0-0.5 and 0.5-1 cm intervals, and then in 1 cm intervals down to 10 cm.ABSTRACT and/or further details describing the data.

Keywords

Separate keywords by comma or semicolon.Attachment  Arab\_Meer\_tot\_monsoon.xlsxThe maximum file upload size is 100.00 MB.For larger files leave a corresponding note in the description – DATA FILE(S) ARE REQUIRED!For data submissions, read our format guide.

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General information on used licences can be found on the [Creative Commons](#) license pages.

Labels

Begin typing to find and create labels or press down to select a suggested label.Context of the data submission, e.g. PROJECT, Institute, etc.Labels have to be one word!Related Article(s) Schumacher, Stefanie; Jorissen, Frans J; Dissard, Delphine; Larkin, Kate E; Gooday, Andrew J (2007): Live (Rose Bengal stained) and dead benthic foraminifera from the oxygen minimum zone of the Pakistan continental margin (Arabian Sea). *Marine Micropaleontology*, 62(1), 45-73, doi:10.1016/j.marmicro.2006.07.004Please, specify any references to science articles related to your data, in particular if your data are a supplement to an article.Copy/paste the full citation, preferably with a Digital Object Identifier (DOI) name.

# Workflow in data publishing

**Editorial**

**Review**

- Provision of data (PI)
- Import to PANGAEA (curator)
- Proof-Read (PI)
- Corrections (curator/editor)
- Peer review (reviewer ?)
- Publication with DOI & citation



## Your benefit:

citeable data and can be cross-referenced with journal articles

### Acknowledgements

For supplementary data see: [doi:10.1594/PANGAEA.707882](https://doi.org/10.1594/PANGAEA.707882).

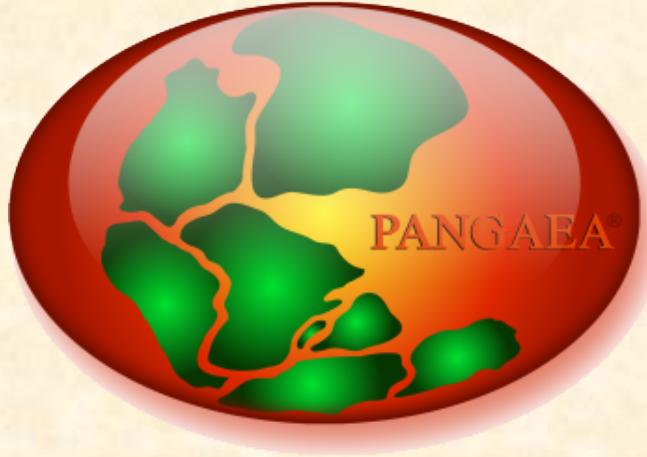
open access to data

data in several widely accepted machine-readable formats

persistent identifier (DOI)

quality assurance on metadata





[www.pangaea.de](http://www.pangaea.de)

We are looking forward to archive Your data.

Thank You



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PANGAEA – Data Publisher for Earth & Environmental Science