Die Datenbibliothek PANGAEA® – Datenmanagement und Archiv für die Erdsystemforschung

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Alfred-Wegener-Institut, Bremerhaven
hdl:10013/epic.45242

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der

Erdsystemforschung und Umweltwissenschaften

offen für

Wissenschaftler, Projekte und Institute

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GEMEINSCHAFT

Entwicklung

ALFRED-WEGENER-INSTITUT
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- 1987 Sedimentkern Datenbank
- 1989 SEDI/SEDAT proprietärer Vorgänger
- 1994 SEDAN/SEPAN relationaler Vorgänger
- 1996 PANGAEA
- 1998 **www.pangaea.de**
- 2001 WDC-MARE (ICSU-WDS)
- 2004 OAI and DOI
- 2006 Datenzitat, Portale
- 2008 Data warehouse
- 2009 Archiv für ESSD (Earth System Science Data) und Verlags-Kooperationen (z.B. Elsevier)

Jeder Datensatz wird über die DOI identifiziert, geteilt, publiziert und referenziert

PANGAEA Betreiber

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marum
Zentrum für Marine
Umweltwissenschaften

Beide Institute haben den Langzeitbetrieb PANGAEAs zugesichert

Datenmodel

Meta-Daten

Parameter
Methode/Gerät
Einheit

Autor
Mitarbeiter/Institut
Referenz

Projekt
Kampagne
Event

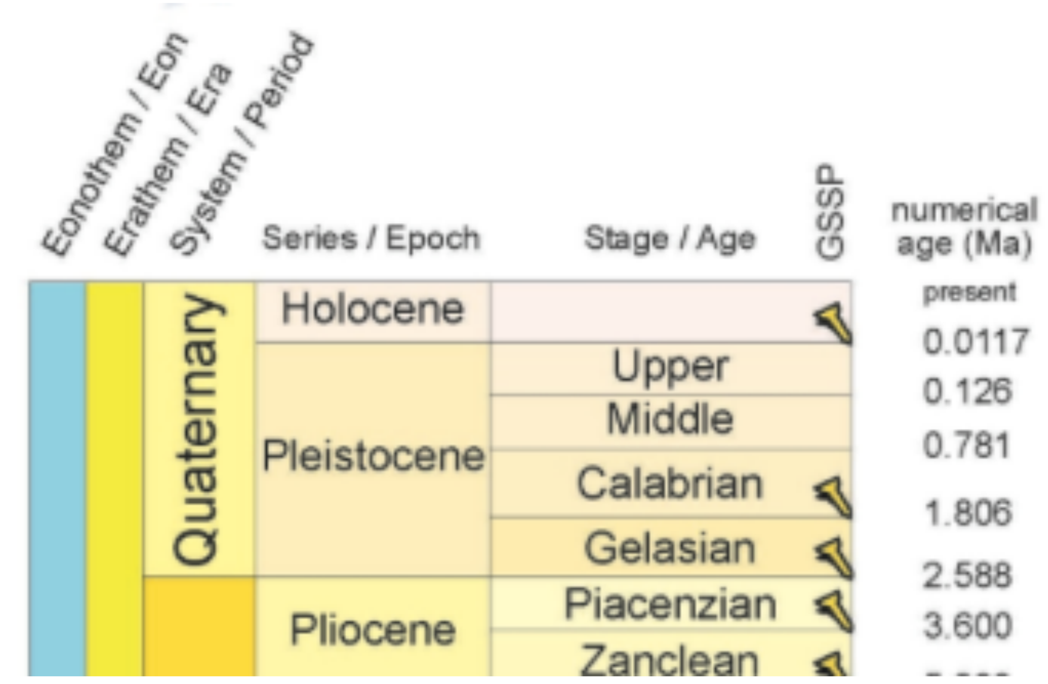
Daten

Datenmodel

wo?

Latitude/Longitude

wann?



Datum/Uhrzeit oder *geol. Alter*

was?

Parameter [Einheit]

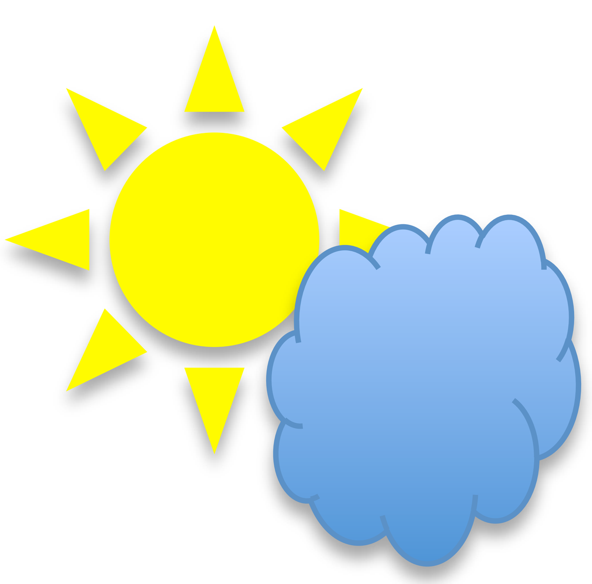
numerisch

16
B. dilatata [#]
178
17
4

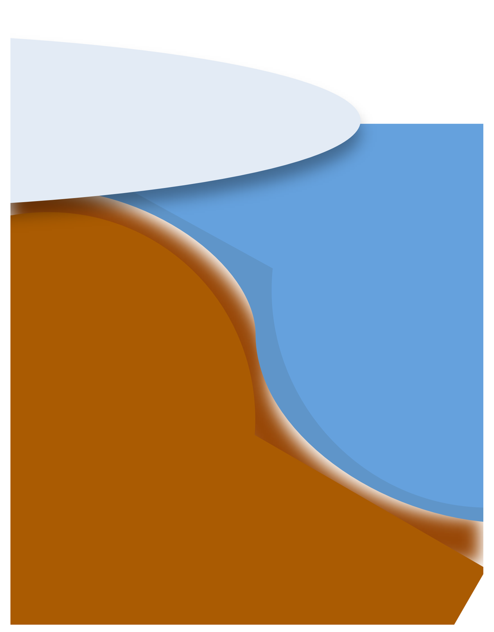
Text

3
Lithology
Aleuritic clay
Aleuritic clay
Nannofossil clays

Objekt



Luft



Eis

Wasser

Sediment

wer?

Autor/Referenz

wie?

Methode

Daten in PANGAEA

AWI

Logged in as **sschumacher** (log out, profile)

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Data Description

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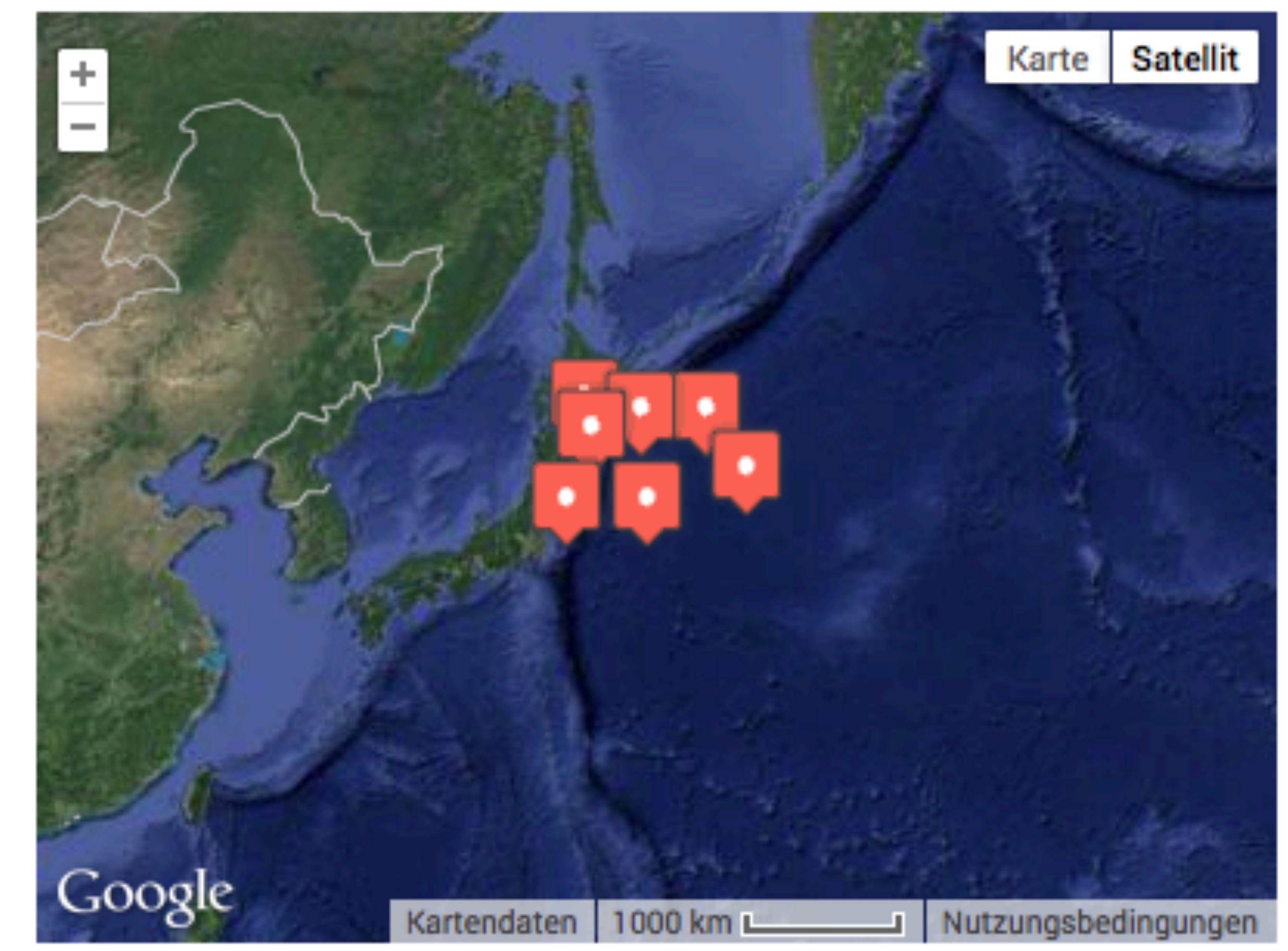
Citation: Koizumi, I; Yamamoto, H (2010): Vertical distribution of diatoms in North Pacific sediments. doi:10.1594/PANGAEA.776366,
Supplement to: **Koizumi, Itaru; Yamamoto, Hirofumi (2010):** Paleoceanographic evolution of North Pacific surface water off Japan during the past 150,000 years. *Marine 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-rafted 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:* 38.477916 * *Median Longitude:* 146.055987 * *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

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. **Koizumi, I; Yamamoto, H (2010):** (Table A1) Diatom abundance in sediment core MD01-2421. doi:10.1594/PANGAEA.775547
2. **Koizumi, I; Yamamoto, H (2010):** (Table A2) Diatom abundance in sediment core MR02-03-2. doi:10.1594/PANGAEA.776118

Verlags-Kooperation

ELSEVIER

Marine Micropaleontology

Volume 74, Issues 3–4, April 2010, Pages 108–118

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

Itaru Koizumi[a], Hirofumi Yamamoto[b]

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DOI: 10.1016/j.marmicro.2010.01.003

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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-rafted 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

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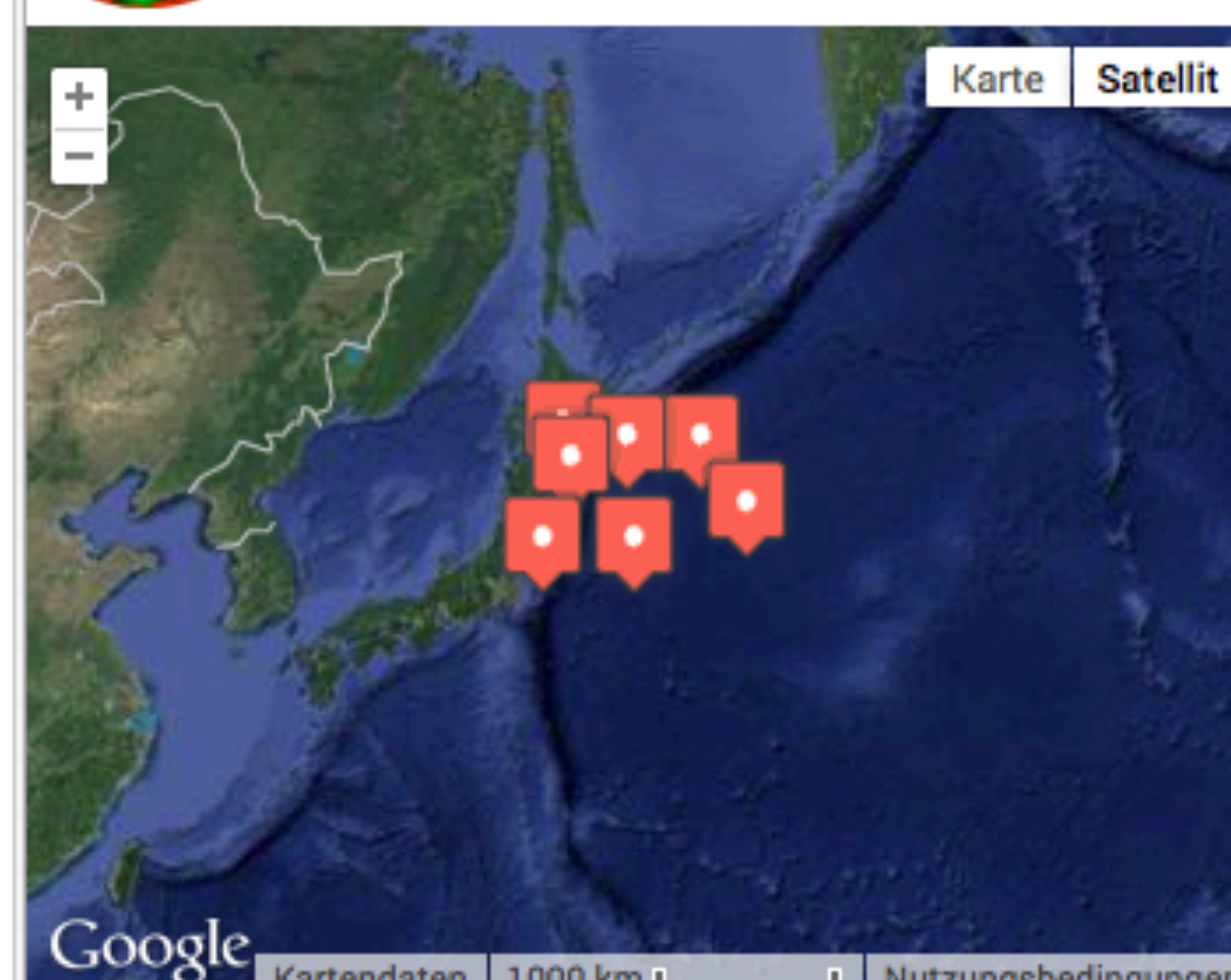
Vertical distribution of diatoms in North Pacific sediments



Acknowledgements:
For supplementary data see: doi:10.1594/PANGAEA.776366

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Daten in PANGAEA

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Data Description

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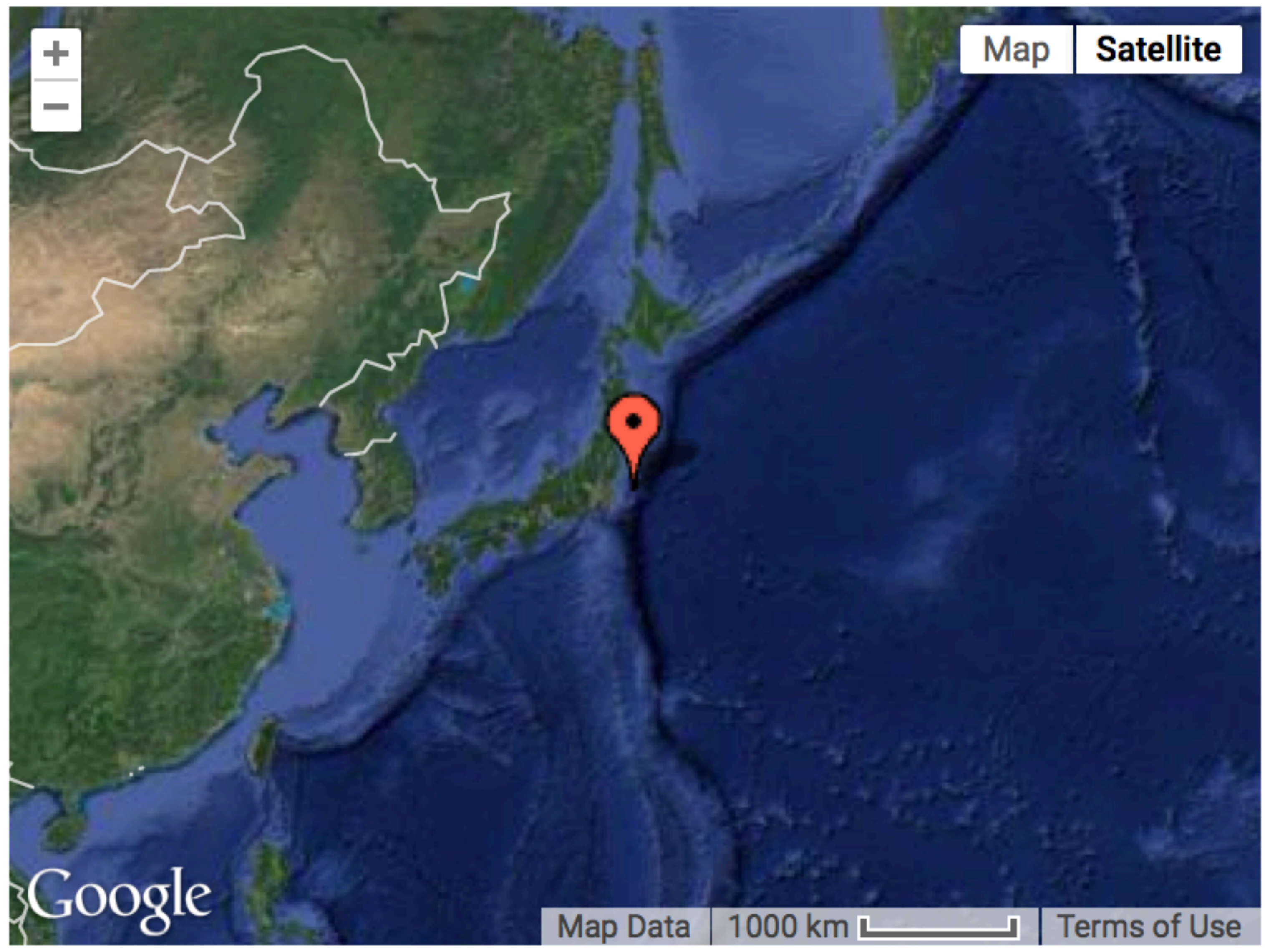
Citation: Koizumi, I; Yamamoto, H (2010): (Table A1) Diatom abundance in sediment core MD01-2421. doi:10.1594/PANGAEA.775547, *In Supplement to:* **Koizumi, Itaru; Yamamoto, Hirofumi (2010):** Paleoceanographic evolution of North Pacific surface water off Japan during the past 150,000 years. *Marine Micropaleontology*, **74(3-4)**, 108-118, doi:10.1016/j.marmicro.2010.01.003



Coverage: *Latitude:* 36.023500 * *Longitude:* 141.780000

Minimum Age: 0.240 ka BP * *Maximum Age:* 143.780 ka BP

Minimum DEPTH, sediment/rock: 0.0 m * *Maximum DEPTH, sediment/rock:* 45.2 m

Event(s): **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 (GPC)

Comment: Total count of 200 specimens per sample.

Parameter(s):

#	Name	Short Name	Unit	Principal Investigator	Method	Comment
1	DEPTH, sediment/rock	Depth	m			Geocode
2	AGE	Age	ka BP			Geocode
3	Diatoms, total abundance per unit sediment mass	TDA/sed	10^6 #/g	Koizumi, Itaru	Counting, diatoms	
4	Diatoms, oceanic					
5	Actinocyclus ellipticus					
6	Actinocyclus elongatus					
7	Alveus marinus					
8	Asterolampra marylandica					

Data

Download dataset as tab-delimited text *(use the following character encoding:* UTF-8: Unicode (PANGAEA default) *)*

1 Depth [m]	2 Age [ka BP]	3 TDA/sed [10^6 #/g]	4 Diatom oceanic [10^6 #/g]	5 A. ellipticus [#]	6 A. elongatus [#]	7 A. marinus [#]	8 A. marylandica [#]	9 A. arachne [#]	10 A. flabellatus [#]	11 A. sarcophagus [#]	12 A. africa
0.01	0.24	31.6	23.9	0	0	1	0	0	0	0	
0.06	0.29	31.5	22.0	0	0	1	0	0	1	0	
0.16	0.38	23.6	15.7	0	0	2	0	0	0	0	
0.35	0.58	31.5	22.8	0	0	2	0	0	0	0	
0.55	0.77	23.6	14.6	0	0	2	0	0	1	0	
0.75	0.96	31.5	21.3	0	0	1	0	0	0	0	
0.94	1.16	27.7	20.7	0	0	0	0	0	1	0	
1.14	1.35	28.3	18.8	0	0	0	0	0	0	0	

Datensuche

Verbreitung der Daten und Meta-Informationen über Suchmaschinen, Bibliothekskataloge und Internet-Portale

Suchmaschinen

Google Deutschland

Projekte

WRMC-BSRN
World Radiation Monitoring Center-
Baseline Surface Radiation Network

IODP
INTERNATIONAL OCEAN
DISCOVERY PROGRAM

Portale

Data Portal
German Marine Research

OAIster
Find the pearls

GBIF.ORG
Free and open access to biodiversity data

PANGAEA

Bibliothekskataloge

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ePIC

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Wer:
Autor/Wissenschaftler

Datenimport durch
Pangaea Team

Proofread durch Autor/
Korrekturen

Publikation mit DOI
& Zitation

Daten können Login
geschützt werden, bis das
Paper publiziert ist

Datenmanagement

Datenerhebung

Projekt Wissenschaftler

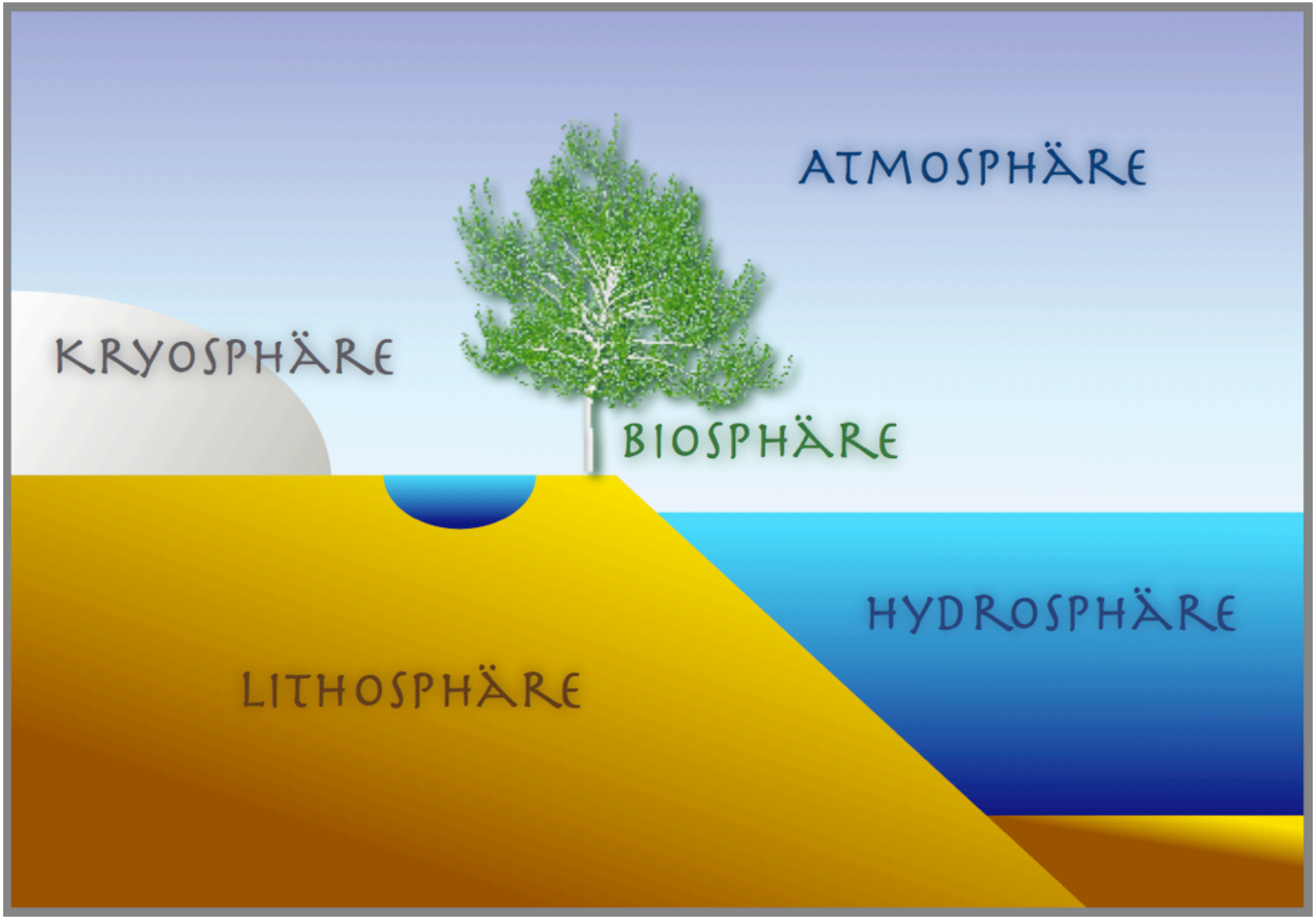
- Daten zur Archivierung aufbereiten
- Prüfung der Daten
- Einreichen der Daten

Datenimport

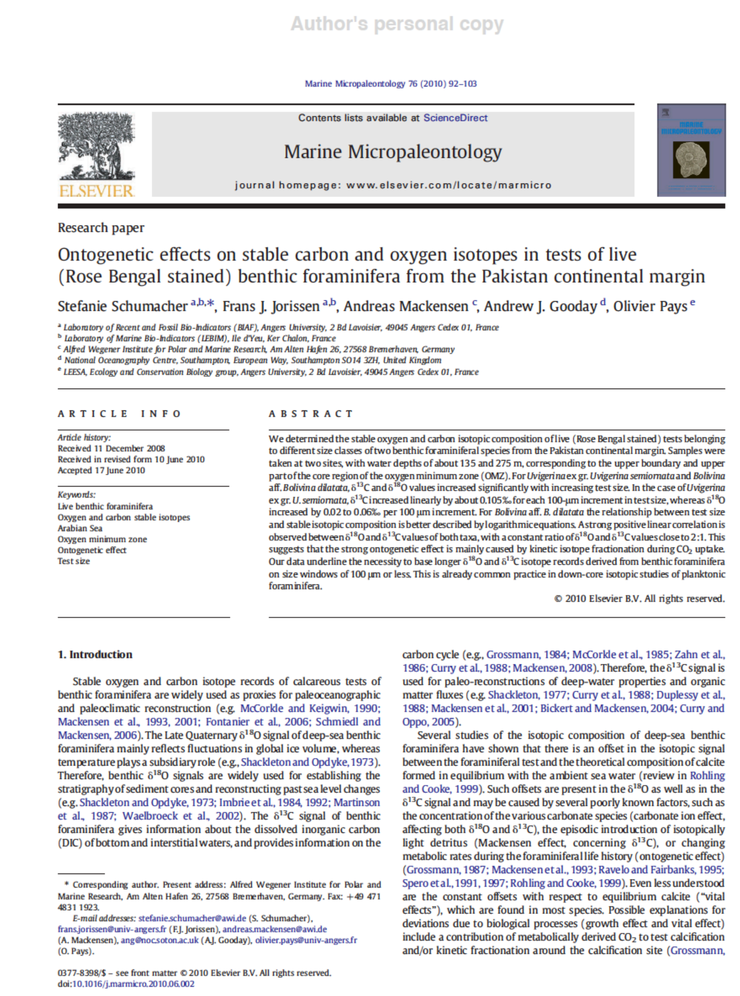
- technische Qualitätskontrolle
- standardisierter Import
- zeitnah

Pangaea-Team

Datenmanagement - Datenvielfalt



Datenmanagement - Zukunft



Marine Micropaleontology 76 (2010) 92–103

Contents lists available at ScienceDirect

Marine Micropaleontology

journal homepage: www.elsevier.com/locate/marmicro

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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 [a,b,*], Frans J. Jorissen [a,b], Andreas Mackensen [c], Andrew J. Gooday [d], Olivier Pays [e]

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[b] Laboratory of Marine Bio-Indicators (LEBIM), Ile d'Yeu, Ker Chalon, France
[c] Alfred Wegener Institute for Polar and Marine Research, Am Alten Hafen 26, 27568 Bremerhaven, Germany
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[e] LEESA, Ecology and Conservation Biology group, Angers University, 2 Bd Lavoisier, 49045 Angers Cedex 01, France

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Keywords:
Live benthic foraminifera
Oxygen and carbon stable isotopes
Arabian Sea
Oxygen minimum zone
Ontogenetic effect
Test size

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 two sites, with water depths 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. *Uvigerina semiornata* and *Bolivina* aff. *Bolivina dilatata*, $\delta^{13}C$ and $\delta^{18}O$ values increased significantly with increasing test size. In the case of *Uvigerina* ex gr. *U. semiornata*, $\delta^{13}C$ increased linearly by about 0.105‰ for each 100-µm increment in test size, whereas $\delta^{18}O$ increased by 0.02 to 0.06‰ per 100 µm increment. For *Bolivina* 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 $\delta^{18}O$ and $\delta^{13}C$ values of both taxa, with a constant ratio of $\delta^{18}O$ and $\delta^{13}C$ values close to 2:1. This suggests that the strong ontogenetic effect is mainly caused by kinetic isotope fractionation during CO_2 uptake. Our data underline the necessity to base longer $\delta^{18}O$ and $\delta^{13}C$ isotope records derived from benthic foraminifera

Schiffsdaten

Labordaten

Veröffentlichungen

Datenmanagementplan

Wissenschaftler

Projekte

Institute

Benefit

❖ Datenzitat, Verlinkung Publikation – Daten

❖ Persistenter Identifikator (DOI)

Acknowledgements
For supplementary data see: doi:10.1594/PANGAEA.707882.

❖ Daten langzeit-archiviert

❖ open access

❖ es fehlt: einheitlicher Archivierungsplan

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