

# Trace-elemental data (Mn/Ca) of benthic foraminifers from core-top sediments of Gullmarsfjorden, Sweden's west coast

**SND-ID:** 2023-61-1. **Version:** 1. **DOI:** <https://doi.org/10.5878/50fg-7x12>

## Download data

Bulimina\_marginata\_data.csv (17.36 KB)

Nonionellina\_labradorica\_data.csv (14.87 KB)

## Associated documentation

README.txt (1.05 KB)

## Download all files

2023-61-1-1.zip (~33.27 KB)

## Citation

Brinkmann, I. (2023) Trace-elemental data (Mn/Ca) of benthic foraminifers from core-top sediments of Gullmarsfjorden, Sweden's west coast (Version 1) [Data set]. Lund University. Available at: <https://doi.org/10.5878/50fg-7x12>

## Creator/Principal investigator(s)

[Inda Brinkmann](#) - Lund University, Department of Geology

## Research principal

[Lund University](#) - Department of Geology

## Description

Dataset of Mn/Ca in *Bulimina marginata* and *Nonionellina labradorica* (CTG-labelled) acquired by Laser-Ablation Inductively Coupled Mass Spectrometry (LA-ICP-MS). Comprises data of the three most-recently formed chambers (n, n-1 and n-2), as well as the proloculus area (p; *B. marginata* only). The specimens were collected from core-top samples of two sites in the fjord Gullmarn on the west coast of Sweden over a temporal gradient spanning the years 2018 and 2019. The data set is part of a study exploring the response of foraminiferal Mn/Ca to low-oxygen bottom-water conditions.

Sediment from the fjord Gullmarn was sampled in September 2018, February 2019 and June 2019 (R/V Oscar von Sydow and R/V Skagerak, respectively) at two sites: GF 117 (115–117 m water depth; 58°19.695'N, 11°33.147'E) and GF 71 (69–71 m water depth; 58°17.116'N, 11°30.546'E). Sediment cores were recovered with a GEMAX® twin-barrel corer (modified Gemini corer, 9 cm diameter, from Oy Kart AB, Finland). The top 0-1 and 1-2 cm of the cores were collected and CTG-labelled to identify living foraminifera. *Bulimina marginata* and *Nonionellina labradorica* specimens were selected and bleached (NaOCl 5%). Trace element concentrations of test walls were analysed using a Bruker Aurora Elite (quadrupole) ICP-MS and a 193 nm Cetac Analyte G2 excimer laser installed with a two volume HelEx2 sample cell (Dept. of Geology, Lund University, Lund, Sweden). U.S. National Institute of Standards and Technology SRM NIST610 was used as external calibration material with GeoReM (Geological and Environmental Reference Materials; Jochum et al., 2005) composition values (via

<http://georem.mpch-mainz.gwdg.de>). Please contact the main author for further details.

### **Data contains personal data**

No

### **Language**

[English](#)

### **Time period(s) investigated**

2018-09-17 - Ongoing

2019-02-24 - Ongoing

2019-06-11 - Ongoing

### **Data format / data structure**

[Numeric](#)

### **Species and taxons**

[Nonionellina labradorica](#)

[Foraminifera](#)

[Bulimina marginata](#)

### **Geographic spread**

Geographic location: [Lyse Parish](#), [Bokenäset Parish](#)

Geographic description: Gullmarn (also known as Gullmarsfjorden or Gullmaren)

### **Responsible department/unit**

Department of Geology

### **Contributor(s)**

Helena L. Filipsson - Lund University, Department of Geology

Christine Barras - University of Angers, Laboratory of Planetology and Geodynamics

Joan M. Bernhard - Woods Hole Oceanographic Institution, Department of Geology and Geophysics

K. Mareike Paul - University of Helsinki, Department of Geosciences and Geography

Magali Schweizer - University of Angers, Laboratoire de Planétologie et Géosciences

Andrea Somogyi - Synchrotron SOLEIL, Nanoscopium

Sha Ni - University of Hamburg, Institute for Geology

Tom Jilbert - University of Helsinki, Department of Geosciences and Geography

### **Funding 1**

- Funding agency: Royal Physiographic Society of Lund

### **Funding 2**

- Funding agency: Academy of Finland

### **Funding 3**

- Funding agency: Crafoord Foundation

#### **Funding 4**

- Funding agency: European Research Council
- Funding agency's reference number: 730872
- Funding information: CALIPSOplus under the EU Framework Programme for Research and Innovation HORIZON 2020

#### **Funding 5**

- Funding agency: Swedish Research Council
- Funding agency's reference number: 2017-04190\_VR

#### **Funding 6**

- Funding agency: Woods Hole Oceanographic Institution
- Funding information: The Investment in Science Fund at WHOI

#### **Research area**

[Climate research](#) (Standard för svensk indelning av forskningsämnen 2011)

[Environmental sciences](#) (Standard för svensk indelning av forskningsämnen 2011)

[Geochemistry](#) (Standard för svensk indelning av forskningsämnen 2011)

[Oceanography, hydrology and water resources](#) (Standard för svensk indelning av forskningsämnen 2011)

#### **Keywords**

[Trace elements](#), [Fjords](#), [Benthic foraminifera](#), [Manganese](#), [Deoxygenation](#), [Hypoxia](#)

#### **Point (Lon/Lat)**

11.550852, 58.327983

#### **Point (Lon/Lat)**

11.508134, 58.285083

#### **Line string (Lon/Lat)**

11.400336, 58.272158

11.482775, 58.23603

11.661392, 58.368799

11.736962, 58.427089

11.68475, 58.465177

11.566588, 58.496049

11.559718, 58.423494

11.532238, 58.362317

#### **Line string (Lon/Lat)**

11.400336, 58.272158

11.532238, 58.362317

## **Accessibility level**

Access to data through SND  
Data are freely accessible

## **Use of data**

[Things to consider when using data shared through SND](#)

## **License**

[CC BY-NC 4.0](#)

## **Versions**

Version 1. 2023-03-30

## **Contact for questions about the data**

Inda Brinkmann

[inda.brinkmann@geol.lu.se](mailto:inda.brinkmann@geol.lu.se)

## **Download metadata**

[DataCite](#)

[DDI 2.5](#)

[DDI 3.3](#)

[DCAT-AP-SE 2.0](#)

[JSON-LD](#)

[PDF](#)

[Citation \(CLS\)](#)

[File overview \(CSV\)](#)

**Published:** 2023-03-30