



Course programme within the ESSReS Curriculum

ESSReS-L8: Bioarchives, a source for climate reconstructions

Block course: 28 February – 01 March 2011, two days, 09:00h – 18:00h

Location: Alfred-Wegener-Institut Bremerhaven Building E and D

Responsible: T. Brey, G. Nehrke, J. Krause-Nehring, Gerald Langer and Nina Keul

Email: info@earth-system-science.org

This course will focus on the use of carbonate bioarchives, mainly foraminiferans and bivalves for the reconstruction of past climate and environment variability. We will have a closer look at lab procedures- and analytical techniques. What can be done, what pitfalls there are. For our lab work, we will collect some samples in the field!

NOTE: for the excursion to the intertidal you should be equipped with rubber boots and with water & wind proof gear.

Unit 1:

Date: Monday, 28 Feb 2011
Location: AWI (morning) – Outdoors (afternoon)
Building: D (morning)
Room: 2930, floor 2A

09:00 – 10:45: Introduction to macroorganismic bioarchives

11:00 – 13:00: Biomineralization and Proxies

Organizational issues, splitting into groups for the second day!

13:00 – 14:00: lunch break

14:00 – 18:00: Excursion to the intertidal, Cuxhaven
Collection of benthic foraminifera

Note: We organized a bus transfer from Building D to Cuxhaven and back.
Departure time from building D: 14:00h sharp
Departure time from Cuxhaven: 17:00h
Approximated arrival time in Bremerhaven: about 18:00h

Unit 2:

Date: Tuesday, 01 Mar 2011
Location: AWI
Building: D and E
Room: D 2nd floor, E 2nd floor

The course will split into four groups A,B,C,D, these groups will rotate through the program. Organization of the groups will be done during Unit 1!

09:00 – 12:00:

Bivalve sclerochronology	3h	Buiding D	Groups A + B
Working with forams	1.5h	Building E	Group C, than D
RAMAN analysis	1.5h	Building E	Group D, than C

12:00 – 13:30: lunch break

13:30 – 17:00:

Bivalve sclerochronology	3h	Buiding D	Groups C + D
Working with forams	1.5h	Building E	Group A, than B
RAMAN analysis	1.5h	Building E	Group B, than A