

Field notes:

Braganzavågen, Van Mijenfjorden, Svalbard

August 2010



Hovercraft on the tidal flat, Braganzavågen

*Astrid Lyså and Eiliv Larsen
Geological Survey of Norway*

Project:

Tidal sediments in cold, modern settings; their potential for palaeo-environmental reconstructions. Project at NGU (No. 335600 Astrid Lyså) and UNIS (No. 2900-9562, Maria Jensen).

Field period:

August 18.-30. 2010

Participants:

Astrid Lyså and Eiliv Larsen, NGU
Yngve Kristoffersen (UiB)
Jørgen Haagensli/ John Inge Karlsen (UNIS)
Helene Ferrandi og Chris Hooke (French Film team)

Weather conditions:

Mainly sunny, a few days cloudy and foggy, temperatures up to 12° C, mainly calm conditions

Logistic:

Safety equipments (UNIS)
Hovercraft (UNIS/ University of Bergen)
Accommodation in Svea (via UNIS)
“Russer-bor” (NGU, useless in these sediments)

Funding:

NGU (through the SciencePub Project)
Store Norske Spitsbergen Kullkompani (providing aerial photos)

General comments:

The plan was to sample (1 m sediment tubes, sediment surface for grain-size distribution, sediment surface for forams and sediment-cores using the “Russer-bor”) from the intertidal zone of the Bragantzavågen. We were able to sample all planned stations at the sediment surface. Due to extremely sticky clayey sediments the “Russer-bor” was useless. The one-meter sediment tubes were only possible to sample from the uppermost part of the intertidal zone. In the lower part the clay was too wet and sticky.

In total we sampled 7 sediment-tubes à max 1 m, 10 samples for modern forams, 1 sample (algae), 35 samples for grain-size distribution at the surface. All samples were taken on the plane to Trondheim and are stored at NGU.

Our next plan will be to go into the subtidal part and into the lake in the Credner-moraine. For this we will need other drilling equipment for winter coring.

Stored in Svea (blue UNIS container at Polartun, marked Maria Jensen):

4 x 2 m PVC tubes (11 cm in diameter)
3 x 90-100 cm PVC tubes
12 lids (11 cm)
11 pieces of oasis (enough for 11 cores)
5 x 1 m PVC tubes (56 mm in diameter)
About 30 lids (56 mm)

Important telephone numbers:

Plassjef Svea	99280835 (Rune Hesthammer)
Leirvakt Svea	79025301
Flyterminal Svea	99280831
SAS Cargo, LYB	9571 4550
Lufttransport, LYB	79024770
Booking Lufttransport	79025300
Pole Position, LYB	9023535 / 97742340 (Bodil)

Sites at at Braganzavågen April and August 2010:

Site no	UTM	Core no (April)	Core depth	Comments April 2010	Samples (August)	Comments August 2010	Photos
S2010-1	0541015-8648036	S2010-1-1	0-128 cm		Surface Foram		AL 4-5 (25.8)
		S2010-1-2	150-272 cm				
S2010-1a	0541348-8648190	S2010-1a-1	0-167 cm		Surface Foram	In the middle of the scooter track	AL 6-7 (25.8)
		S2010-1a-2	185-380 cm				
S2010-2	0541681-8648360	S2010-2-1	0-155 cm		Surface Foram		AL 8-9 (25.8)
		S2010-2-2	170-316 cm	Upper part (ca. 20 cm) is disturbed as the sediments were stretched			
S2010-2a	0542368-8648728	S2010-2a-1	0-196 cm		Surface Foram		AL 12-13 (25.8)
		S2010-2a-2	220-355 cm	Loose ca. 5 cm extra of sediments in the top (sawing mistake)			
S2010-2b	0542520-8648806	S2010-2b-1	0-170 cm		Surface Foram		AL 14-15 (25.8)
		S2010-2b-2	190-375 cm				
		S2010-2b-3	395-595 cm				
S2010-2c	0542113-8648627				Surface Foram		AL 10-11 (25.8)
S2010-3	0542775-8648943			Not able to sample due to frozen sediment surface			
S2010-3a	0543329-8649254				1 m core Surface Foram		AL 16-19 (25.8)
S2010-3b	0542822-8649015				1 m core Surface Foram Algae	Wet surface, small water ponds, algae	AL 22-23 (22.8)

S2010-4	0543927-8649548			Frozen sediment surface, did not try to sample	1 m core Surface Foram	Very compact sed. Cracks (dried) at sed. surface	AL 1-21 (22.8)
S2010-5	0544836-8650027			No try (closer to high tide)			
S2010-5b	0544930-8649970				1 m core Surface	Bar above high tide. Drift wood	AL 24-27 (22.8)
S2010-6	0545933-8650613			No try (closer to high tide)			
S2010-7	0545750						
S2010-7b	0545516-8648570				1 m core Surface	Surface similar to S2010-4	AL 47-48 (22.8)
S2010-7c	0545809-8648753				Surface		AL 21 (23.8)
S2010-8	0545020-8648124						
S2010-8b	0544902-8647956				1 m core Surface	Surface similar to S2010-7b	AL 49-51 (22.8)
S2010-9	0544277-8647543				Surface Foram	Not able to sample core (very wet and sticky)	AL 19-20 (23.8)
S2010-9a	0544404-8647420				Surface		AL 25 (25.8)
S2010-10	0543590-8647008				Surface		AL 28-29 (25.8)
S2010-10a	0543581-8647460				Surface		AL 26-27 (25.8)
S2010-11	0543213-8646718					Too wet for sampling	AL 30 (25.8)
S2010-11a	0543308-8646809				Surface		
S2010-12	0542667-8646289				Surface	Sampling in water (5 cm) sea grass	AL 28-29 (26.8)
S2010-12a	0543006-8646554				Surface	Sampling in water (15 cm)	
S2010-13	0543332-8647625				Surface	Marks from iceberg scouring	AL 37-40 (26.8)
S2010-	0543344-				Surface		AL 35-

13a	8647365						36 (26.8)
S2010-14	0543961-8646132				Surface		AL 32-33 (26.8)
S2010-14a	0543692-864699				Surface		AL 34 (26.8)
S2010-15	0547245-8650418				1 m core Surface	River bar in main channel. Rippled surface	AL 30-46 (22.8)
S2010-16	0545746-8648615				Surface	Several circle features at the surface, size dm= 0.5-1 m, rims about 5 cm high	AL 22-25 (23.8)
S2010-17	0545612-8648445				Surface		AL 26-27 (23.8)
S2010-18	0545560-8648363				Surface		AL 28 (23.8)
S2010-19	0541962-8648880				Surface		AL 41 (26.8)
S2010-20	0541705-8648700				Surface		AL 42 (26.8)
S2010-21	0541448-8648485				Surface		AL 43 (26.8)
S2010-22	0541165-8648319				Surface		AL 44-45 (26.8)
S2010-23	0541122-8648308				Surface		
S2010-24	0541030-8648317				Surface	Coal fragments at the surface	
S2010-25	0543282-8648588				Surface		

Map of the Braganzavågen tidal flat with sites from April and August 2010