

**Surface and Intermediate Water hydrography, planktonic and  
benthic biota in the Caribbean Sea – Climate, Bio and  
Geosphere linkages (OPOKA)**

Cruise No. 78, Leg 1

February 22 – March 28, 2009,  
Colón (Panama) – Port of Spain (Trinidad and Tobago)

**- Supplementary Material -**

**Part 1**

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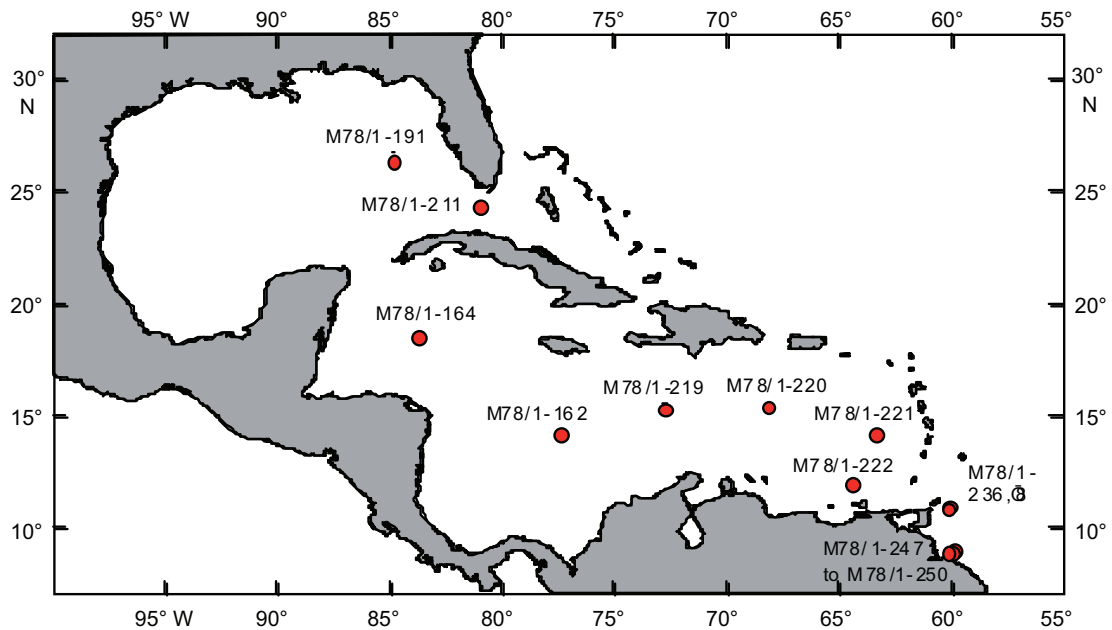
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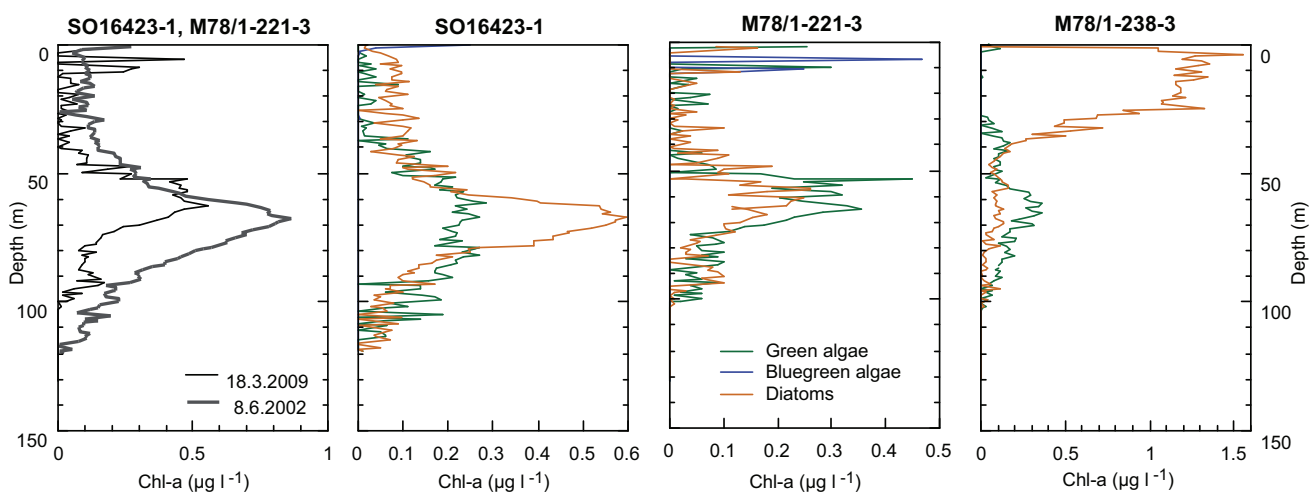
## 5.1.2 Appendix items: Shallow CTD and Fluorometer Measurements



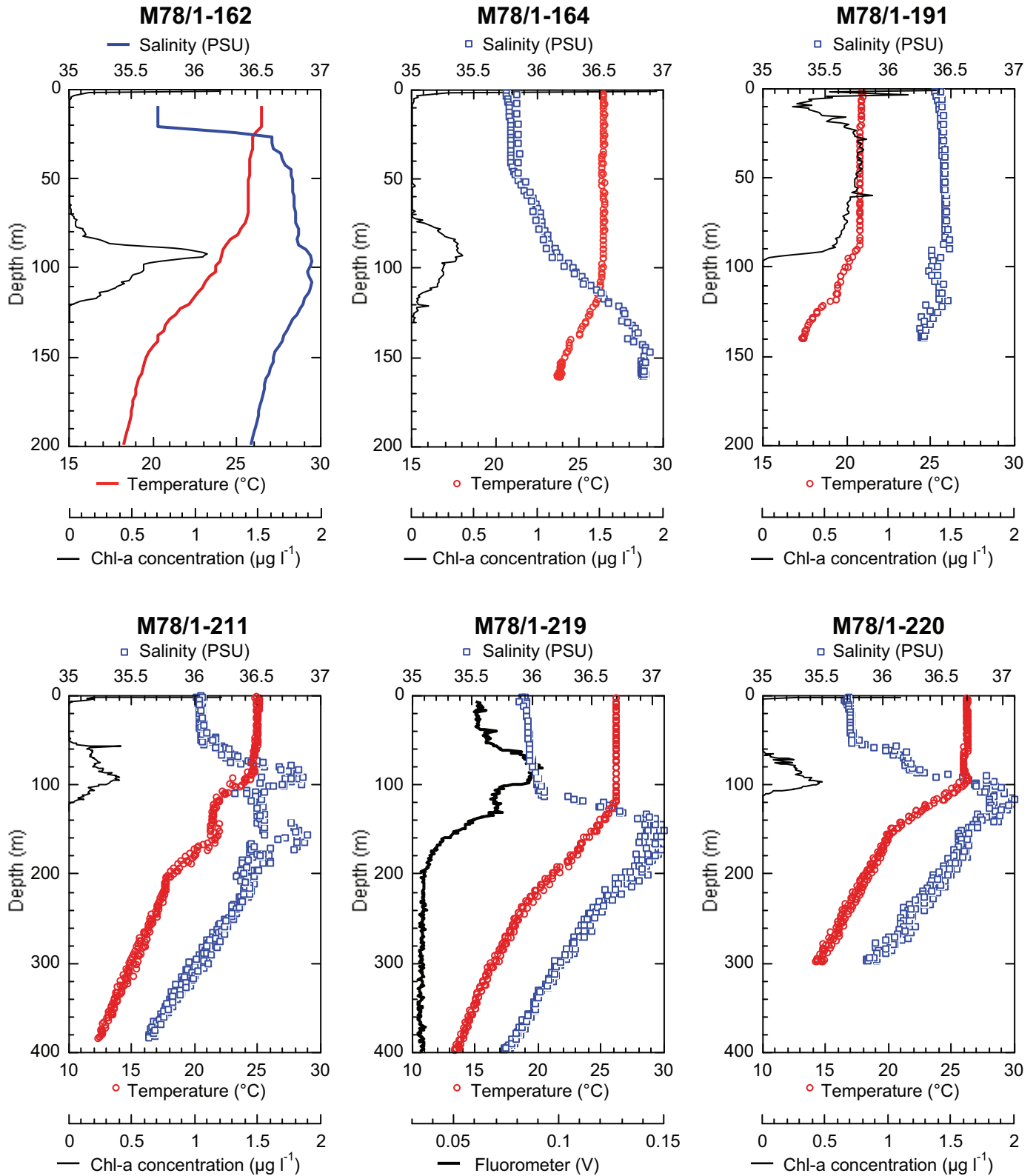
**Appendix Fig. 5.1.2.1:** Stations with shallow CTD and Fluorometer measurements.

**Appendix Table. 5.1.2.1:** Surface water salinity at R/V Sonne cruise SO164 CTD-Stations in the southern Caribbean and Florida Straits compared with measurements during cruise M78/1 at the same locations. The values differ by -0.2 to 0.4 PSU and were in 2009 on average higher by 0.1 PSU than in 2002.

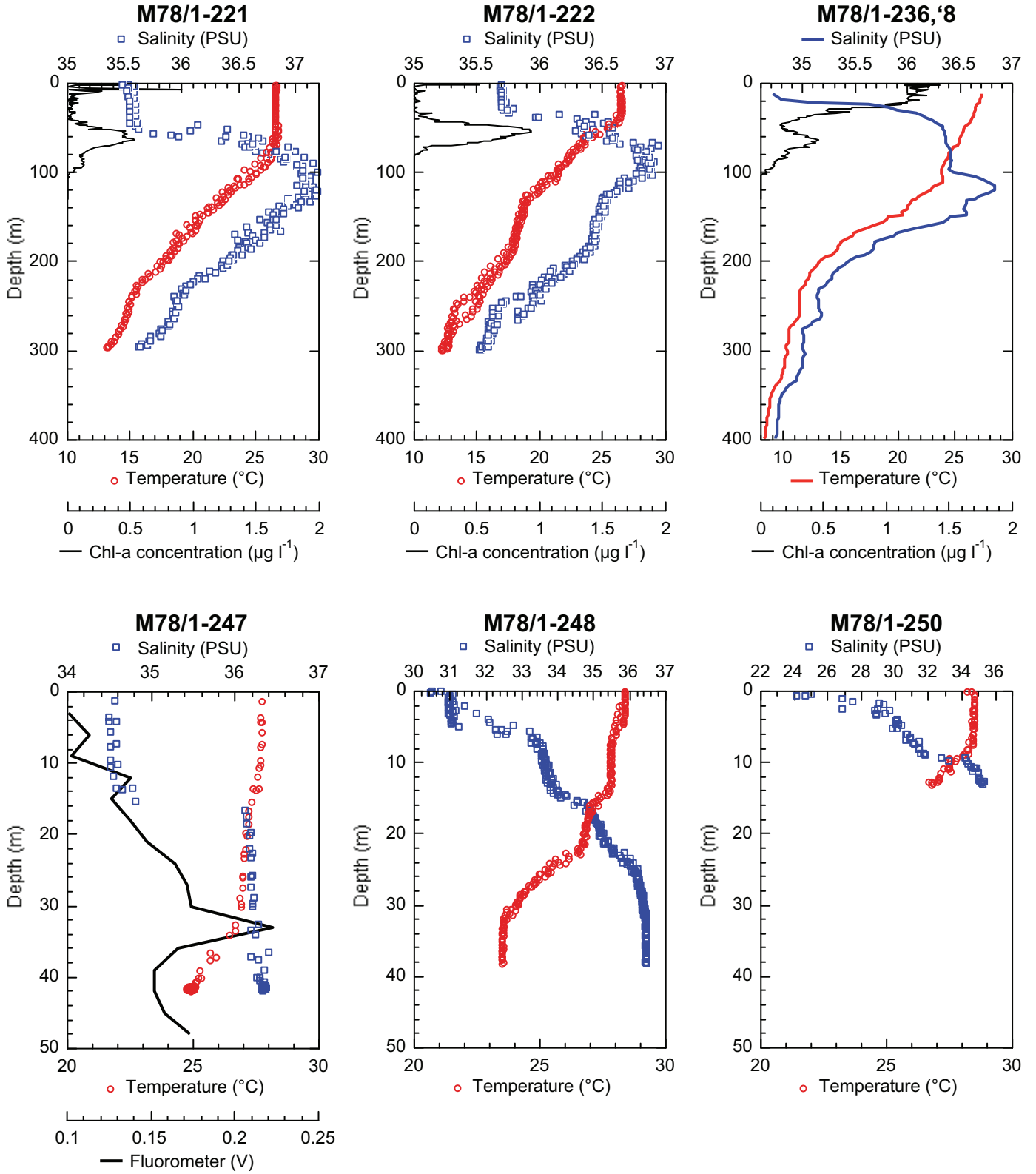
Station May-June 2002	Surface water salinity (PSU)	Station February-March 2009	Surface water salinity (PSU)	Salinity difference (PSU)
SO16423-2	35.5	M78/1-221-1, '-7, '-8	35.3	-0.2
SO16422-1	35.6	M78/1-220-8, '-9	36.0	+0.4
SO16402-1	36.0	M78/1-219-7, '-8	35.9	-0.1
SO16401-2	35.7	M78/1-162-1	36.1	+0.4
SO16408-8	36.1	M78/1-211-3, '-4, '-5, '-6	36.0	-0.1
Mean value:				+0.1



**Appendix Fig. 5.1.2.2:** Depth distribution of different algae groups in the Caribbean (Station 221) and western Atlantic (Station 238). Note the differences between 2002 and 2009 measurements.



**Appendix Fig. 5.1.2.3:** Chlorophyll-a concentrations, temperature and salinity of near surface waters at the Plankton Stations and off Boca Grande. Measurements were performed with an RBR XR-420 CTD (open symbols, all data), bbe Moldaenke FluoroProbe (thin line, upcast and downcast data re-sampled at 1-m intervals by linear integration), and with a Seabird SBE09 CTD (thick line, upcast data as mean values over 1-m intervals). The Seabird CTD data were only considered at stations where the FluoroProbe or RBR CTD data were lost or not recorded.



Appendix Fig. 5.1.2.3: continuation.

### 5.1.3 Appendix items: Water Samples

**Appendix Table 5.1.3:** Coordinates, water depth, sampling depths and investigators of water samples taken on cruise M78/1. The CTD number refers to the filename in the data archive. The sampling depths were recorded as pressure readings of the CTD. The numbers differ from the actual water depth by a few metres.

Station M78/1-	CTD no.	Latitude (N)	Longitude (W)	Depth (m)	Sampling Depths (dbar)	Investigator
162-1	001-	14°12.607'	77°23.399'	4033	10, 35, 70, 120, 225, 675, 1000, 1500, 2000, 3000, 4033	Flögel, Garlich, Haley, Nürnberg, Troccoli
164-1	002-	18°30.521'	83°38.207'	1174	10, 40, 80, 150, 249, 551, 702, 1173	Flögel, Garlich, Haley, Nürnberg, Troccoli
166-1	003-	21°39.410'	86°10.154'	1554	11, 40, 80, 111, 200, 506, 751, 1470	Flögel, Garlich, Haley, Nürnberg, Troccoli
182-1	004-	28°59.994'	87°50.060'	1510	10, 30, 60, 120, 158, 199, 320, 602, 752, 1515	Flögel, Garlich, Haley, Nürnberg, Troccoli
185-2	005-	28°59.840'	86°19.690'	334	11, 31, 61, 120, 140, 181, 221, 302, 334	Troccoli
194-1	006-	26°12.185'	84°43.875'	539	534	Flögel
194-2	007-	26°12.185'	84°43.879'	538	59, 99, 109, 199, 299, 402, 501, 534	Flögel, Garlich
194-3	008-	26°12.185'	84°43.878'	538	60, 535	Flögel
194-4	009-	26°12.185'	84°43.878'	538	533	Flögel
194-5	010-	26°12.185'	84°43.878'	538	531	Flögel
194-6	011-	26°12.185'	84°43.879'	538	534	Flögel
194-7	012-	26°12.184'	84°43.878'	538	63, 103, 113, 203, 304, 404, 504, 533	Flögel, Nürnberg
194-8	013-	26°12.184'	84°43.878'	538	64, 104, 114, 204, 304, 405, 505, 534	Garlich
194-9	014-	26°12.185'	84°43.878'	538	533	Flögel
194-10	015-	26°12.185'	84°43.878'	538	533	Flögel
194-11	016-	26°12.184'	84°43.878'	538	533	Flögel
194-12	017-	26°12.185'	84°43.878'	538	79, 119, 129, 220, 320, 420, 521, 532	Flögel, Garlich
194-13	018-	26°12.185'	84°43.879'	538	11, 31, 51, 91, 151, 302, 420, 531	Flögel, Haley, Nürnberg, Troccoli
200-2	019-	23°56.352	81°23.581	1158	43, 83, 99, 143, 223, 232, 289, 312, 554, 801, 950, 1150	Flögel, Haley, Nürnberg
210-1	020-	24°14.750'	80°55.338'	456	11, 40, 84, 456	Troccoli
210-2	021-	24°14.901'	80°55.343'	456	39, 98, 149, 190, 275, 401	Garlich
210-3	022-	24°14.862'	80°55.205'	456	450	Flögel
210-4	023-	24°14.822'	80°55.187'	455	454	Flögel
210-5	024-	24°14.835'	80°55.164'	459	426	Flögel
210-6	025-	24°14.869'	80°55.117'	452	456	Flögel
210-7	026-	24°14.850'	80°55.201'	456	43, 103, 153, 193, 278, 403, 546	Garlich

Station M78/1-	CTD no.	Latitude (N)	Longitude (W)	Depth (m)	Sampling Depths (dbar)	Investigator
210-8	027-	24°14.044'	80°55.993'	453	453	Flögel
210-9	028-	24°14.784'	80°55.250'	471	454	Flögel
210-10	029-	24°14.909'	80°55.207'	462	457	Flögel
210-11	030-	24°14.861'	80°55.105'	452	451	Flögel
210-12	031-	24° 14.991'	80° 55.075'	456	11, 40, 84, 100, 150	Garlichs, Troccoli
210-13	032-	24° 14.883'	80° 55.107'	452	11, 39, 84, 100, 150, 189, 273, 395, 456	Flögel, Nürnberg
219-1	033-	15°18.271	72°47.087	2956	10, 49, 99, 218, 596, 697, 796, 995, 1494, 1994, 2890, 2956	Flögel, Nürnberg, Troccoli
220-1	034-	15°23.993'	68°12.012'	4480	10, 60, 90	Troccoli
220-2	035-	15°23.994'	68°11.999'	4480	136, 196, 485, 686, 1983, 2680, 3487, 4482	Flögel, Garlichs, Haley, Nürnberg
221-1	036-	14°11.898	63°25.455	1534	10, 30, 60, 199	Troccoli
221-2	037-	14°11.987	63°25.411	1534	99, 149, 198, 498, 697, 997, 1395, 1525	Flögel, Nürnberg
222-1	038-	12°1.493'	64°28.552'	1023	10, 29, 55, 75, 140, 229, 748, 1016	Haley
226-4	x	11°48.681'	64°35.993'	200	surface	Haley
236-1	039-	10°59.693'	60°11.936'	1587	11, 32, 41, 111, 441, 732, 967, 1530	Garlichs, Haley, Troccoli
238-2	040-	10°56.275'	60°14.859	751	786	Flögel
246-1	041-	09°9.998'	59°54.043'	65	10, 30, 50	Haley, Troccoli
247-1	042-	09°6.005'	59°56.997'	58	10, 30, 50	Haley, Troccoli
249-1	x	08°56.500'	60°12.670'	9	surface	Haley, Nürnberg, Troccoli

## 5.2.1. Appendix items: Plankton Net

**Appendix Table 5.2.1.1:** Plankton net stations, sampling intervals and sample destinations during FS Meteor cruise M78/1. (P = proxies, IfM GEOMAR, C = calcite flux, National Oceanography Center, Southampton, UK, G = genetics, University of Tübingen)

M78/1	Latitude	Longitude	Depth (m)	Sampling intervals (m)					Destinat.		
				P	C	G					
162-2	14°12.60'N	77°23.40'W	4033	0-100	100-200	200-300	300-500	500-700			x
162-3	14°12.60'N	77°23.40'W	4033	0-20	20-40	40-60	60-80	80-100			x
162-4	14°12.60'N	77°23.40'W	4043	0-100	100-200	200-300	300-500	500-700		x	
162-5	14°12.59'N	77°23.41'W	4035	0-20	20-40	40-60	60-80	80-100		x	
164-2	18°30.49'N	83°38.43'W	1180	0-100	100-200	200-300	300-500	500-700			x
164-2	18°30.51'N	83°38.02'W	1187	0-20	20-40	40-60	60-80	80-100			x
164-2	18°30.59'N	83°38.46'W	1184	0-100	100-200	200-300	300-500	500-700		x	
164-2	18°30.51'N	83°38.27'W	1186	0-20	20-40	40-60	60-80	80-100		x	
191-1	26°12.51'N	84°46.23'W	855	0-100	100-200	200-300	300-500	500-700			x
191-2	26°12.51'N	84°46.24'W	850	0-20	20-40	40-60	60-80	80-100			x
191-3	26°12.52'N	84°46.24'W	850	0-100	100-200	200-300	300-500	500-700		x	
191-4	26°12.51'N	84°46.24'W	849	0-20	20-40	40-60	60-80	80-100		x	
211-1	24°15.24'N	80°54.72'W	454	0-100	100-170	170-300	250-320	320-400			x
211-2	24°14.90'N	80°55.08'W	453	0-20	20-40	40-60	60-80	80-100			x
211-3	24°15.19'N	80°54.70'W	457	0-100	100-170	170-300	250-320	320-400		x	
211-4	24°15.27'N	80°55.09'W	447	0-20	20-40	40-60	60-80	80-100		x	
211-5	24°15.50'N	80°54.81'W	456	0-60	60-100	100-200	200-300	300-400	x		
211-6	24°15.30'N	80°54.69'W	453	0-60	60-100	100-200	200-300	300-400	x		
219-2	15°18.30'N	72°47.06'W	2962	0-100	100-200	200-300	300-500	500-700			x
219-3	15°18.30'N	72°47.06'W	2961	0-20	20-40	40-60	60-80	80-100			x
219-4	15°18.30'N	72°47.06'W	2961	0-100	100-200	200-300	300-500	500-700		x	
219-5	15°18.30'N	72°47.06'W	2960	0-20	20-40	40-60	60-80	80-100		x	
219-6	15°18.30'N	72°47.06'W	2962	0-700	700-1000	1000-1500	1500-2000	2000-2500		x	
219-7	15°18.30'N	72°47.06'W	2960	0-60	60-125	125-180	180-220	220-400	x		
219-8	15°18.30'N	72°47.06'W	2960	0-60	60-125	125-180	180-220	220-400	x		
220-3	15°23.99'N	68°12.00'W	4479	0-100	100-200	200-300	300-500	500-700			x
220-4	15°23.99'N	68°12.00'W	4481	0-20	20-40	40-60	60-80	80-100			x
220-5	15°23.99'N	68°12.00'W	4481	0-100	100-200	200-300	300-500	500-700		x	
220-6	15°23.99'N	68°12.00'W	4482	0-20	20-40	40-60	60-80	80-100		x	
220-7	15°23.99'N	68°12.00'W	4487	0-700	700-1000	1000-1500	1500-2000	2000-2500		x	
220-8	15°23.99'N	68°12.00'W	4481	0-70	70-110	110-150	150-220	220-300	x		
220-9	15°23.99'N	68°12.00'W	4482	0-70	70-110	110-150	150-220	220-300	x		
221-3	14°11.90'N	63°25.43'W	1541	0-100	100-200	200-300	300-500	500-700			x
221-4	14°11.90'N	63°25.43'W	1535	0-20	20-40	40-60	60-80	80-100			x
221-5	14°11.89'N	63°25.43'W	1535	0-100	100-200	200-300	300-500	500-700		x	
221-6	14°11.89'N	63°25.43'W	1534	0-20	20-40	40-60	60-80	80-100		x	
221-7	14°11.89'N	63°25.43'W	1533	0-40	40-60	60-150	150-210	210-300	x		
221-8	14°11.89'N	63°25.43'W	1535	0-40	40-60	60-150	150-210	210-300	x		
222-2	12°1.55'N	64°28.70'W	1029	0-100	100-200	200-300	300-500	500-700			x
222-3	12°1.50'N	63°28.59'W	1023	0-20	20-40	40-60	60-80	80-100			x
222-4	12°1.56'N	64°28.80'W	1029	0-100	100-200	200-300	300-500	500-700		x	
222-5	12°1.55'N	63°28.60'W	1024	0-20	20-40	40-60	60-80	80-100		x	
222-6	12°1.57'N	64°28.80'W	1031	0-40	40-80	80-120	120-180	180-300	x		
222-7	12°1.55'N	64°28.80'W	1028	0-40	40-80	80-120	120-180	180-300	x		
238-3	10°57.11'N	60°14.87'W	900	0-100	100-200	200-300	300-500	500-700			x
238-4	10°57.92'N	60°14.94'W	1095	0-20	20-40	40-60	60-80	80-100			x
238-5	10°56.95'N	60°14.86'W	846	0-100	100-200	200-300	300-500	500-700		x	
238-6	10°57.70'N	60°14.92'W	1077	0-20	20-40	40-60	60-80	80-100		x	



**Appendix Table 5.2.1.2:** Specimens of planktonic foraminifera from plankton net hauls during Meteor cruise M78/1 isolated onboard for genetic analyses (G) and calcite flux investigation (C).

Station	Sampling depth (m)	Sample destination	<i>G. trilobus</i>	<i>G. sacculifer</i>	<i>G. glutinata</i>	<i>G. menardii</i>	<i>G. calida</i>	<i>N. duterrei</i>	<i>H. pelagica</i>	<i>G. rubescens</i>	<i>G. inflata</i>	<i>G. scitula</i>	<i>G. siphonifera</i>	<i>G. bulloides</i>	<i>N. pachyderma</i>	<i>S. dehiscentes</i>	<i>G. tumida</i>	<i>G. unguilata</i>	<i>O. univversa</i>	<i>B. digitata</i>	<i>G. ruber</i>	<i>G. ruber w</i>	<i>G. ruber p</i>	<i>P. obliquiloculata</i>	<i>G. truncatulinoides</i>	<i>G. hirsuta</i>	<i>G. tenella</i>	<i>T. quinqueloba</i>	<i>G. crassiformis</i>	<i>N. incompta</i>	<i>G. conglobatus</i>	<i>O. riedeli - G. anfracta</i>							
162-2	0-700	G	29	1	1			3	4	2	1		4	1		5		4	3				3	1															
162-3	0-100	G	35	1				2		1			8					13	7			1																	
164-2	10-700	G	26	1	7	9			3	8	7	2	8	1		2		13					19																
164-2	0-100	G	27	8	32	6	3	1		16			5	4				33	4				32																
191-1	0-700	G	11			26	29	69			6		5					34	1				4	4	26	37	1								5				
191-2	0-100	G	1		13	44	19	63	2		1							10					1	1	23	28									4				
211-1	0-400	G	16	1	7	8	3	9	8		3		12				1	7	13	1			4	1	3	7			1										
211-2	0-100	G	25	3	5	5	11	4	1			1					11	4	11			15	9	5	2	2	1												
219-2	0-700	G	18		9	3	5	5	2		4	1				15	9	1	6			1	4		2	2	1												
219-3	0-100	G	48		9		9	1	1								1	1	1				11	2															
220-3	0-700	G	19		5	2	4	2	3		1		2			7			6				3	3		3													
220-4	0-100	G	48	3	9		3	1	1										3				5	4															
221-3	0-700	G	6	1	15	1	2	21	4		3	3	1	1		1	4						3	5	9														
221-4	0-100	G	3	4	9	7	2	10	2				2			1		1	10				9	6	2														
222-2	0-700	G	12		5		3	10	3	1	19		2					1	6				6	3	4														
222-3	0-100	G	12	3	4	3	3	8			3		1						2				15	2															
238-3	0-700	G	10	5	5	5	1	7	8	1	3	15	3	1	2				1			2	18		5														
238-4	0-100	G	9	6	10		2	5	3	1	1								1			4	18		4														
162-4	0-700	C		6	5		2			1															1														
162-5	0-100	C		14	1	2	3		2	3		2				1	1			1	1		2		2														
164-2	10-700	C		1	1		1		2	2		3				3	7																						
164-2	0-100	C		6	2	1	1					1					6		1				5																
191-3	0-700	C		3	1	1	1	6			1		1	6			5					1			1	5													
191-4	0-100	C		1	3	1	1	5				1	2				4					1			4														
211-3	0-400	C																																					
211-4	0-100	C																																					
219-4	0-700	C		5	3	1			1		1		1			3	1						1																
219-5	0-100	C		7	2			3						1												2													
219-6	0-2500	C		5	4						2		2		1																								
220-5	0-700	C		3	1							1																											
220-6	0-100	C		8	2			1					1	4																									
220-7	0-2500	C		3	4																																		

## 5.2.2 Appendix items: Phytoplankton Taxonomy and Chlorophyll

**Appendix Table 5.2.2.1:** Station list of phytoplankton and chlorophyll samples collected in M 78/1 from February and March 2009.

Station M78/1-	Device	Latitude (N)	Longitude (W)	Date	Hour (local time)	Sample no.	Depth [m]	Filtered volume [litres]
162-1	CTD	14° 12.60'	77° 23.49'	24.02.2009	12:00 PM	162-1	10	2
162-1	CTD	14° 12.60'	77° 23.49'	24.02.2009	12:00 PM	162-2	35	2
162-1	CTD	14° 12.60'	77° 23.49'	24.02.2009	12:00 PM	162-3	70	2
164-1	CTD	18° 30.53'	83° 38.10'	26.02.2009	12:00 PM	164-1	10	2
164-1	CTD	18° 30.53'	83° 38.10'	26.02.2009	12:00 PM	164-2	40	2
164-1	CTD	18° 30.53'	83° 38.10'	26.02.2009	12:00 PM	164-3	80	2
165-1	Pump	21° 41.47'	86° 21.85'	27.02.2009	8:00 AM	165-1	5	5
166-1	CTD	21° 39.48'	86° 10.15'	28.02.2009	5:00 AM	166-1	10	2
166-1	CTD	21° 39.48'	86° 10.15'	28.02.2009	5:00 AM	166-2	40	2
166-1	CTD	21° 39.48'	86° 10.15'	28.02.2009	5:00 AM	166-3	80	2
167-1	Pump	21° 35.59'	86° 15.61'	28.02.2009	2:00 PM	167-1	5	3
-	Pump	25° 58.94'	87° 42.36'	03.03.2009	7:00 AM	180-b	5	3
-	Pump	26° 26.95'	87° 51.71'	03.03.2009	11:00 AM	180-c	5	3
-	Pump	27° 26.03'	88° 11.59'	03.03.2009	5:00 PM	180-d	5	3
181-3	Pump	29° 0.00'	88° 20.00'	04.03.2009	5:00 AM	181-p	5	3
182-1	CTD	28° 59.99'	87° 50.06'	04.03.2009	10:30 PM	181-1	10	2
182-1	CTD	28° 59.99'	87° 50.06'	04.03.2009	10:30 PM	181-2	30	2
182-1	CTD	28° 59.99'	87° 50.06'	04.03.2009	10:30 PM	181-3	60	2
185-2	CTD	28° 59.84'	86° 19.69'	04.03.2009	11:00 PM	185-1	10	2
185-2	CTD	28° 59.84'	86° 19.69'	04.03.2009	11:00 PM	185-2	30	2
185-2	CTD	28° 59.84'	86° 19.69'	04.03.2009	11:00 PM	185-3	60	2
186-1	Pump	26° 36.30'	84° 51.81'	05.03.2009	2:30 PM	186-1	5	3
194-13	CTD	26° 12.18'	84° 43.88'	07.03.2009	9:00 AM	194-1	10	2
194-13	CTD	26° 12.18'	84° 43.88'	07.03.2009	9:00 AM	194-2	25	2
194-13	CTD	26° 12.18'	84° 43.88'	07.03.2009	9:00 AM	194-3	50	2
-	Pump	24° 15.17'	80° 54.25'	09.03.2009	6:30 AM	203-s	5	3
-	Pump	24° 15.44'	80° 54.06'	09.03.2009	1:00 PM	203-b	5	3
210-1	CTD	24° 14.75'	80° 55.34'	09.03.2009	9:30 PM	204-1	10	2
210-1	CTD	24° 14.75'	80° 55.34'	09.03.2009	9:30 PM	204-2	40	2
210-1	CTD	24° 14.75'	80° 55.34'	09.03.2009	9:30 PM	204-3	84	2
210-12	CTD	24° 15.19'	80° 54.78'	10.03.2009	8:30 AM	204b-1	10	2
210-12	CTD	24° 15.19'	80° 54.78'	10.03.2009	8:30 AM	204b-2	40	2
210-12	CTD	24° 15.19'	80° 54.78'	10.03.2009	8:30 AM	204b-3	80	2
-	Pump	22° 42.45'	78° 30.23'	12.03.2009	7:00 AM	204-c	5	3
-	Pump	20° 40.75'	74° 27.53'	13.03.2009	8:00 AM	Transcuba	5	3
-	Pump	16° 41.98'	73° 43.80'	14.03.2009	10:00 AM	Occidcol	5	3

Station M78/1-	Device	Latitude (N)	Longitude (W)	Date	Hour (local time)	Sample no.	Depth [m]	Filtered volume [litres]
219-1	CTD	15° 18.3'	72° 47.06'	14.03.2009	10:00 PM	219-1	10	2
219-1	CTD	15° 18.3'	72° 47.06'	14.03.2009	10:00 PM	219-2	50	2
219-1	CTD	15° 18.3'	72° 47.06'	14.03.2009	10:00 PM	219-3	100	2
220-1	CTD	15° 24.00'	68° 12.00'	16.03.2009	3:30 PM	220-1	10	2
220-1	CTD	15° 24.00'	68° 12.00'	16.03.2009	3:30 PM	220-2	60	2
220-1	CTD	15° 24.00'	68° 12.00'	16.03.2009	3:30 PM	220-3	90	2
-	Pump	15° 1.52'	66° 42.77'	17.03.2009	12:00 PM	anegada-1	5	3
-	Pump	14° 46.54'	65° 43.21'	17.03.2009	6:00 PM	anegada-2	5	3
221-1	CTD	14° 11.90'	63° 25.45'	18.03.2009	8:00 AM	221-1	10	2
221-1	CTD	14° 11.90'	63° 25.45'	18.03.2009	8:00 AM	221-2	30	2
221-1	CTD	14° 11.90'	63° 25.45'	18.03.2009	8:00 AM	221-3	60	2
222-1	CTD	12° 1.48'	64° 28.70'	19.03.2009	2:30 AM	222-1	10	2
222-1	CTD	12° 1.48'	64° 28.70'	19.03.2009	2:30 AM	222-2	30	2
222-1	CTD	12° 1.48'	64° 28.70'	19.03.2009	2:30 AM	222-3	55	2
-	Pump	11° 36.24'	62° 32.71'	20.03.2009	8:00 AM	St george	5	3
-	Pump	11° 1.84'	62° 56.10'	21.03.2009	3:30 AM	Bica dragon	5	2
232-1	Pump	10° 59.00'	61° 31.49'	21.03.2009	2:00 PM	K-1 (232-1)	5	2
-	Pump	11° 36.51'	60° 57.67''	22.03.2009	9:15 AM	235-1	5	3
236-1	CTD	10°59.69'	60°11.94'	22.03.2009	9:00 PM	236-1	10	2
236-1	CTD	10°59.69'	60°11.94'	22.03.2009	9:00 PM	236-2	30	2
236-1	CTD	10°59.69'	60°11.94'	22.03.2009	9:00 PM	236-3	40	2
-	Pump	10° 10.93'	59° 5.29'	23.03.2009	2:30 PM	Atladelata	5	3
-	Pump	9° 57.27'	59° 48.3'	24.03.2009	9:30 AM	Atlt delta sur	5	3
246-1	CTD	9° 10.01	59° 54.04'	25.03.2009	9:00 AM	246-1	10	2
246-1	CTD	9° 10.01	59° 54.04'	25.03.2009	9:00 AM	246-2	30	2
246-1	CTD	9° 10.01	59° 54.04'	25.03.2009	9:00 AM	246-3	50	2
247-1	CTD	9° 6.01'	59° 57.00'	25.03.2009	10:00 AM	247-1	10	2
247-1	CTD	9° 6.01'	59° 57.00'	25.03.2009	10:00 AM	247-2	30	2
247-1	CTD	9° 6.01'	59° 57.00'	25.03.2009	10:00 AM	247-3	50	2
-	Pump	8° 56.47'	60° 12.66'	25.03.2009	4:00 PM	Pluma	5	1
-	Pump	10° 54.03'	61° 45.07'	26.03.2009	3:00 PM	Paria 1	5	2
-	Pump	10° 31.95'	61° 52.84'	26.03.2009	7:00 PM	Paria 2	5	2

### 5.2.3 Appendix items: Zooplankton Filtering

**Appendix Table 5.2.3.1:** Coordinates, date, time, filtered volume, ambient temperature and salinity of zooplankton filter samples. Water from the ship's pumps from 3.5 m depth was used. Samples 2 to 24 were taken from the pure seawater tap in the Universal Laboratory while samples 33 to 47 were taken with the fire hose on deck. Temperature (T) and salinity (S) were mean values from thermosalinograph readings at the beginning and end of filtering.

Sample	Datum (UTC)	Start (UTC)	Latitude	Longitude	End (UTC)	Latitude	Longitude	Vol. (m <sup>3</sup> )	T (°C)	S (PSU)
2	24.02.2009	23:56	14° 12.56'N	77° 23.48'W	9:58	15° 22.42'N	77° 56.04'W	8.47	25.6	36.0
4	27.02.2009	4:07	18° 35.05'N	83° 38.08'W	14:31	19° 54.50'N	84° 58.72'W	2.61	26.6	35.8
5	27.02.2009	15:30	20° 2.15'N	85° 5.38'W	12:55	21° 44.81'N	86° 2.44'W	4.76	26.0	35.7
6	01.03.2009	13:46	22° 21.49'N	86° 29.42'W	17:41	22° 50.87'N	86° 36.28'W	1.53	25.5	35.7
8	04.03.2009	13:24	28° 60.00'N	88° 13.23'W	18:05	29° 0.00'N	87° 50.00'W	2.56	20.6	-
10	05.03.2009	17:31	27° 1.83'N	85° 7.33'W	20:00	26° 36.30'N	84° 51.80'W	1.20	20.0	36.3
11	06.03.2009	0:49	26° 18.35'N	84° 44.97'W	3:03	26° 12.21'N	84° 41.92'W	1.22	20.0	36.4
12	06.03.2009	5:08	26° 10.70'N	84° 44.09'W	7:21	26° 12.48'N	84° 43.41'W	1.09	20.0	-
13	06.03.2009	9:16	26° 19.38'N	84° 45.15'W	11:08	26° 15.50'N	84° 44.31'W	1.32	20.1	-
14	06.03.2009	13:08	26° 12.19'N	84° 43.84'W	15:08	26° 12.41'N	84° 45.41'W	0.80	19.9	36.4
15	06.03.2009	17:06	26° 12.52'N	84° 46.24'W	19:07	26° 12.52'N	84° 46.23'W	1.27	20.0	36.4
16	06.03.2009	21:13	26° 11.82'N	84° 43.99'W	23:46	26° 11.80'N	84° 43.95'W	1.03	20.1	36.4
17	07.03.2009	1:13	26° 11.78'N	84° 43.97'W	3:08	26° 12.19'N	84° 43.88'W	0.90	20.0	36.4
18	07.03.2009	5:06	26° 12.19'N	84° 43.88'W	7:01	26° 12.19'N	84° 43.88'W	1.27	20.0	36.5
19	07.03.2009	9:09	26° 12.18'N	84° 43.88'W	11:30	26° 12.19'N	84° 43.88'W	1.71	20.5	36.4
20	07.03.2009	13:00	26° 12.19'N	84° 43.88'W	15:01	26° 12.17'N	84° 43.94'W	0.95	20.0	36.4
21	07.03.2009	17:07	26° 11.07'N	84° 44.05'W	19:22	26° 11.39'N	84° 44.24'W	1.20	20.2	36.4
23	08.03.2009	19:46	24° 7.15'N	81° 33.17'W	21:56	23° 56.72'N	81° 24.31'W	0.51	24.4	35.9
24	10.03.2009	16:25	24° 15.13'N	80° 54.86'W	21:52	24° 13.10'N	81° 5.30'W	2.19	24.2	35.9
33	19.03.2009	23:11	11° 37.93'N	64° 18.41'W	23:38	11° 38.34'N	64° 14.02'W	0.64	24.4	35.7
34	20.03.2009	17:00	11° 40.70'N	62° 39.24'W	20:32	11° 37.79'N	62° 39.51'W	1.41	26.0	35.2
35	20.03.2009	23:02	11° 47.53'N	62° 38.56'W	0:32	11° 47.54'N	62° 38.60'W	2.05	25.9	35.2
36	21.03.2009	7:58	10° 59.39'N	62° 2.84'W	8:23	10° 56.82'N	61° 59.40'W	0.77	25.1	33.2
37	21.03.2009	13:09	10° 37.49'N	61° 36.23'W	14:00	10° 37.49'N	61° 36.23'W	1.60	26.3	31.1
38	21.03.2009	16:18	10° 48.13'N	61° 40.02'W	16:40	10° 52.60'N	61° 36.52'W	0.68	25.8	32.4
39	21.03.2009	16:47	10° 52.60'N	61° 36.52'W	18:20	10° 59.69'N	61° 30.70'W	2.93	25.3	33.5
40	22.03.2009	14:02	11° 36.21'N	60° 58.24'W	14:43	11° 36.54'N	60° 57.86'W	1.37	25.9	35.3
41	22.03.2009	22:28	11° 5.52'N	60° 15.74'W	23:03	11° 0.82'N	60° 12.56'W	0.30	26.7	34.6
42	23.02.2009	13:15	10° 45.74'N	59° 53.45'W	13:47	10° 42.25'N	59° 48.88'W	1.12	26.4	34.8
43	23.03.2009	21:55	10° 8.87'N	59° 2.33'W	22:32	10° 8.93'N	59° 2.23'W	1.07	26.7	34.9
44	24.03.2009	19:13	9° 59.50'N	59° 57.00'W	22:39	9° 55.93'N	59° 51.74'W	1.40	26.9	34.9
45	25.03.2009	13:14	9° 9.90'N	59° 54.13'W	14:40	9° 6.89'N	59° 56.86'W	0.83	27.0	34.5
46	25.03.2009	18:50	8° 58.00'N	60° 5.01'W	-	-	-	0.40	27.6	32.4
47	25.03.2009	23:06	9° 14.25'N	60° 5.67'W	0:30	9° 22.96'N	60° 2.99'W	0.70	27.2	34.6

**Appendix Table 5.2.3.2:** Coordinates, depth, duration, filtered volume, ambient temperature and salinity of plankton pump samples. The depths refer to the records of the RBR CTD mounted to the plankton pump. The precision of the CTD pressure sensor is  $\pm 0.5$  m depth. Temperature (T) and salinity (S) were mean values from the CTD records during the whole filtering duration.

Station	Latitude	Longitude	Depth (m)	Duration (min)	Volume (m <sup>3</sup> )	T (°C)	S (PSU)
M78/1-164-6	18° 30.52' N	83° 38.53' W	160	55	8.82	23.8	36.8
M78/1-164-7	18° 30.52' N	83° 38.28' W	81	50	8.00	26.5	36.0
M78/1-191-5	26° 12.51' N	84° 46.24' W	140	20	2.00	17.4	36.3
M78/1-247-2	9° 6.01' N	59° 57.00' W	42	49	7.41	24.9	36.3

## 5.3.1 Appendix items: Protocols of OFOS Observations

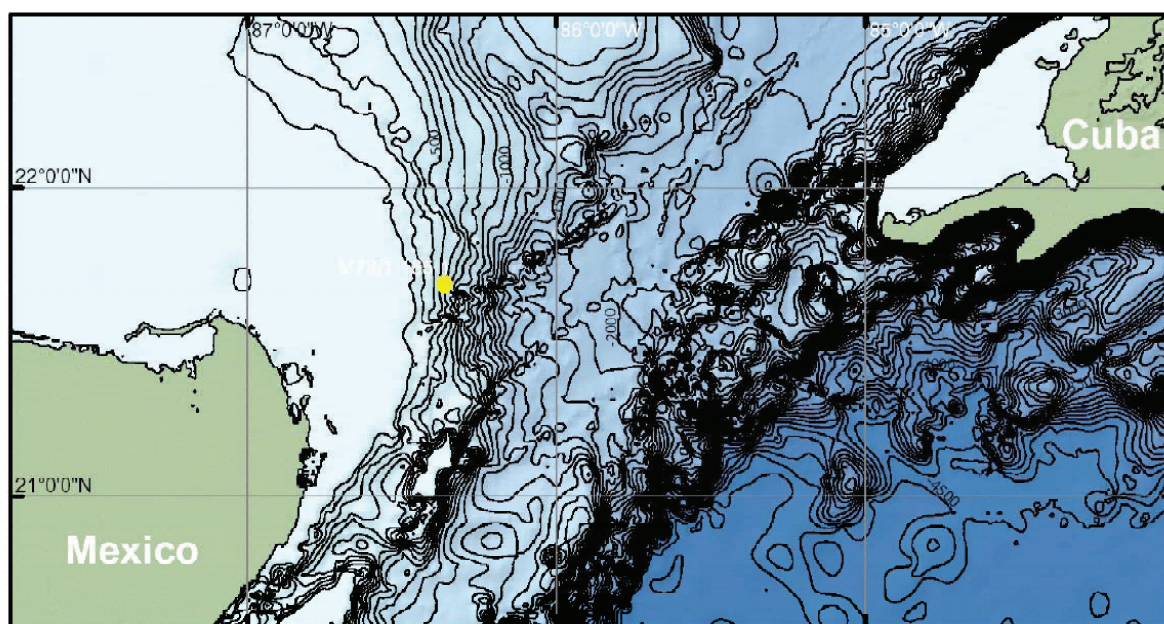
**OFOS Protocol****Station: M78/1-165-1**

Operator: Dullo, Bannert, Flögel

Date [UTC]: 28.02.2009

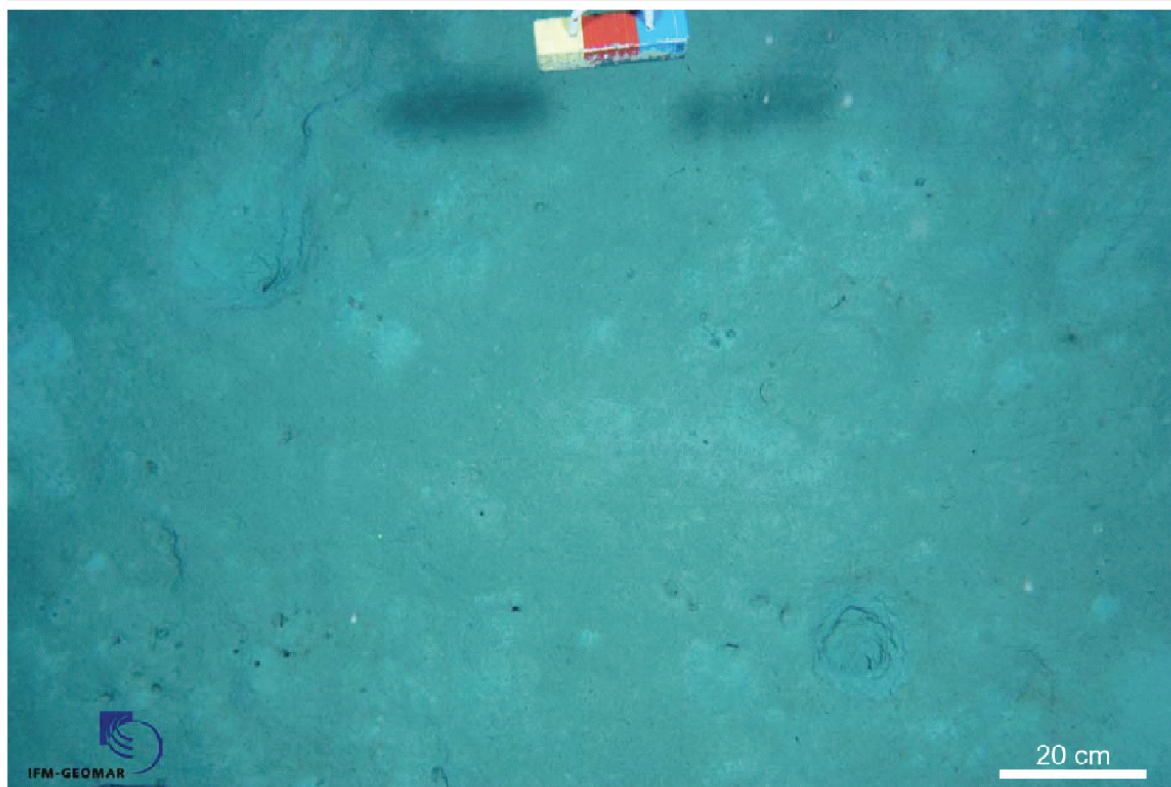
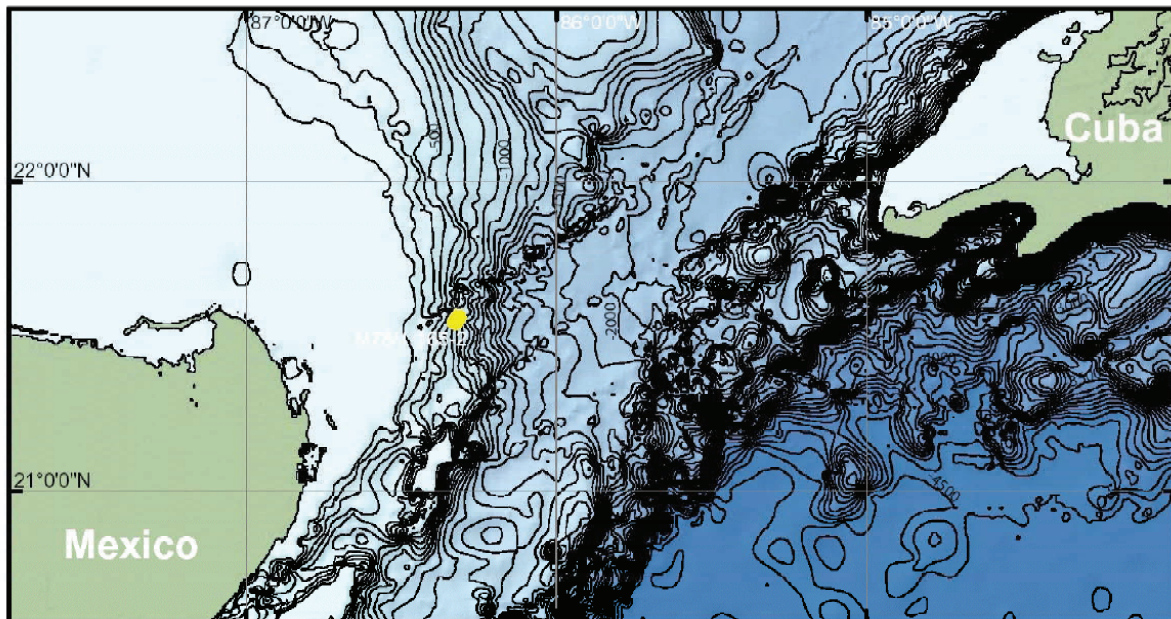
Working area: Yucatan Strait

	Latitude [Dez°]	Longitude [Dez°]	Depth [m]	Date [dd/mm/yyyy]	Time (UTC) [hh:mm]
Start station	21°40.892'	-86°21.720'	400	28.02.2009	01:47
At bottom					
Off bottom		End due to strong currents			
End station					



**OFOS Protocol****Station: M78/1-165-2****Operator: Dullo, Bannert, Flögel****Date [UTC]: 28.02.2009****Working area: Yucatan Strait**

	Latitude [Dez°]	Longitude [Dez°]	Depth [m]	Date [dd/mm/yyyy]	Time (UTC) [hh:mm]
<b>Start station</b>	21°31.72'	-86°19.51'	838	28.02.2009	04:43
<b>At bottom</b>	21°32.945'	-86°19.505'	735	28.02.2009	05:23
<b>Off bottom</b>					
<b>End station</b>	21°34.528'	-86°19.001'	651.6	28.02.2009	06:35



# OFOS Protocol

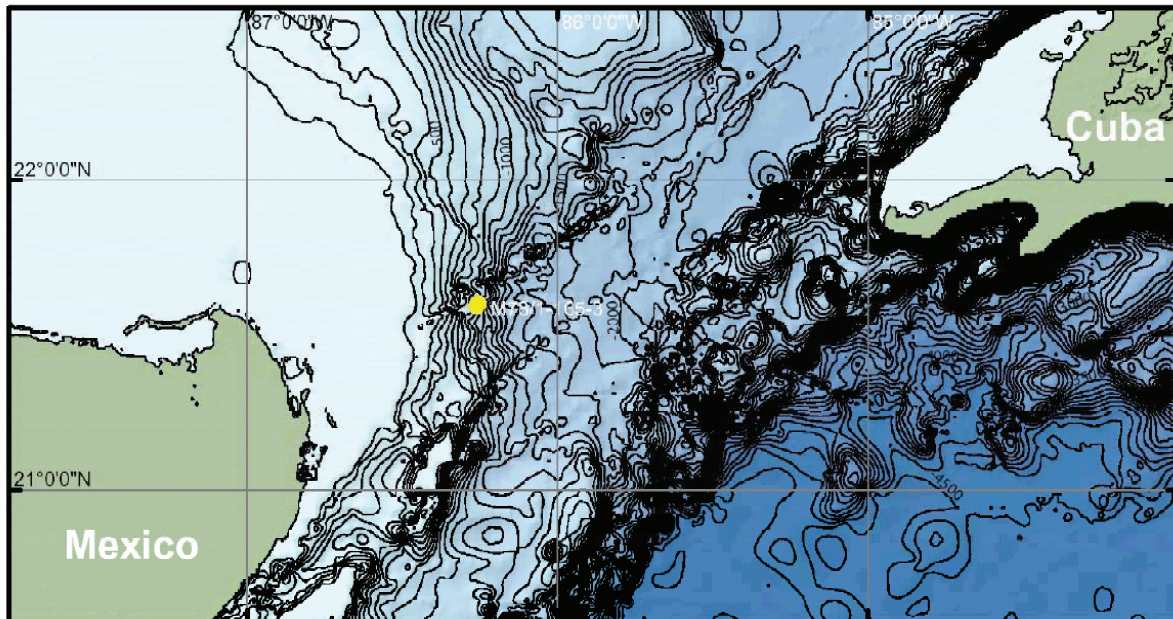
# Station: M78/1-165-3

Operator: Dullo, Bannert, Flögel

Date [UTC]: 28.02.2009

Working area: Yucatan Strait

	Latitude [Dez°]	Longitude [Dez°]	Depth [m]	Date [dd/mm/yyyy]	Time (UTC) [hh:mm]
<b>Start station</b>	21°34.877'	-86°15.602'	948	28.02.2009	07:36
<b>At bottom</b>	21°35.99'	-86°15.508'	990	28.02.2009	08:18
<b>Off bottom</b>			1051	28.02.2009	08:59
<b>End station</b>	21°27.409'	-86°14.760'	1080	28.02.2009	09:38





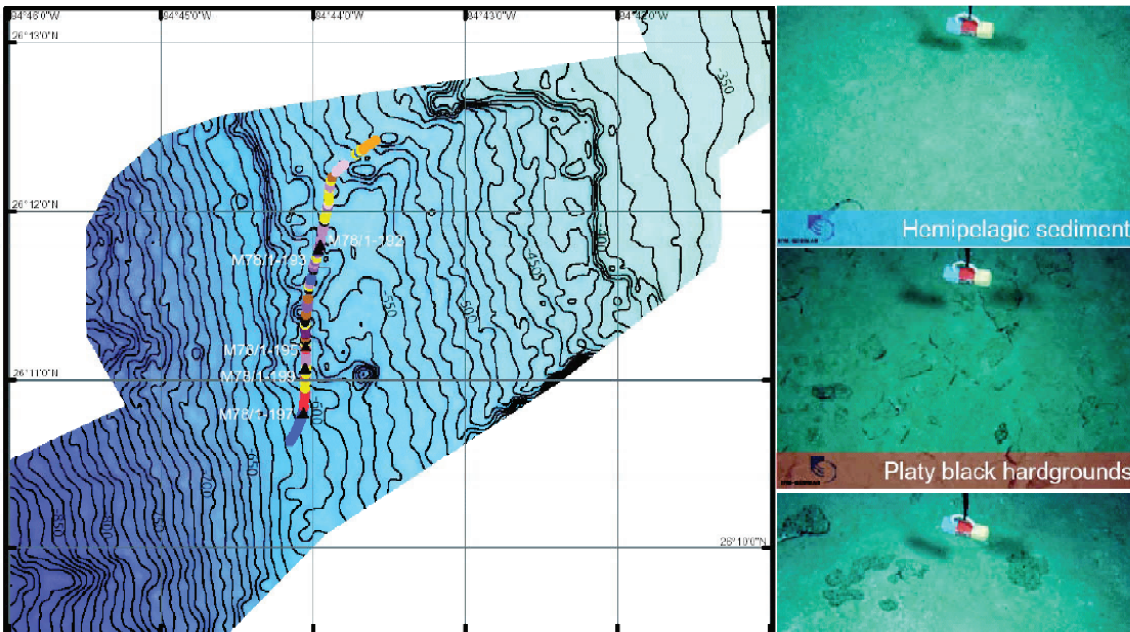
# OFOS Protocol

# Station: M78/1-189-1

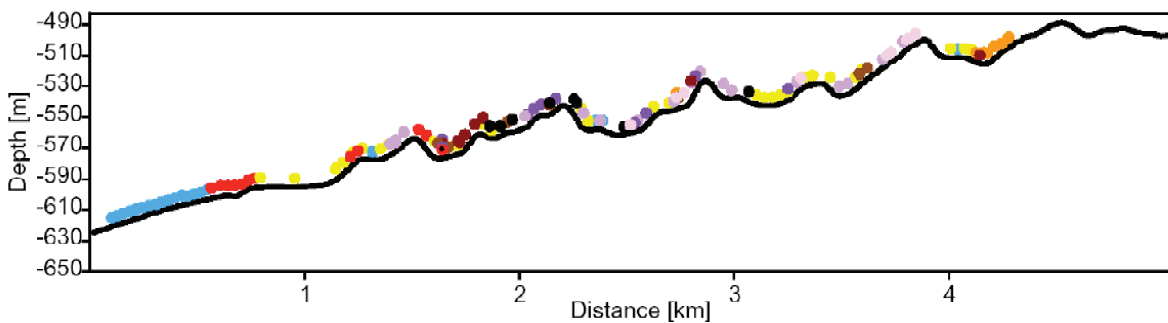
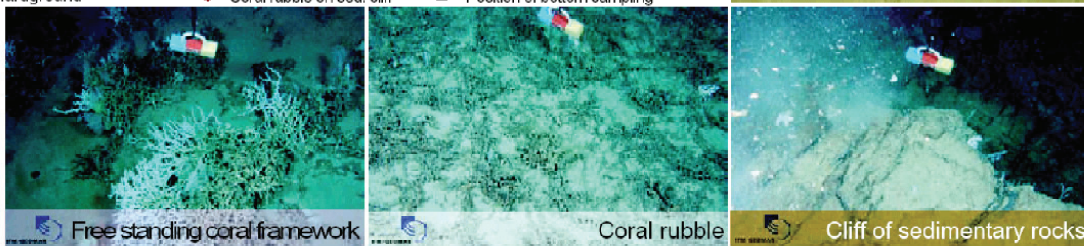
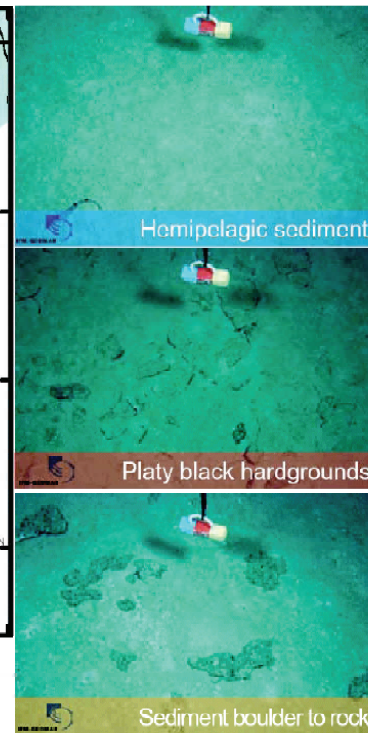
Operator: Dullo, Flögel, Bannert  
 Working area: W Florida Slope

Date [UTC]: 06.03.2009

	Latitude [Dez°]	Longitude [Dez°]	Depth [m]	Date [dd/mm/yy]	Time (UTC) [hh:mm]
Start station	26°10.511'	-84°44.311'	627.0	06.03.2009	04:51
At bottom	26°10.755'	-84°44.045'	598.4	06.03.2009	05:13
Off bottom	26°12.499'	-84°43.417'	521	06.03.2009	07:07
End station	26°12.471'	-84°43.392'	498.2	06.03.2009	07:24



- Hemipelagic mud
- Platy black hardgrounds
- Sed. rock with black dykes
- Hardground
- Cliff of sed. rocks
- Sed. boulder to rock
- Sed. pebbles and boulder
- Coral rubble on sed. cliff
- Coral rubble with boulders
- Coral rubble
- Free standing coral framework
- ▲ Position of bottom sampling



## OFOS Protocol

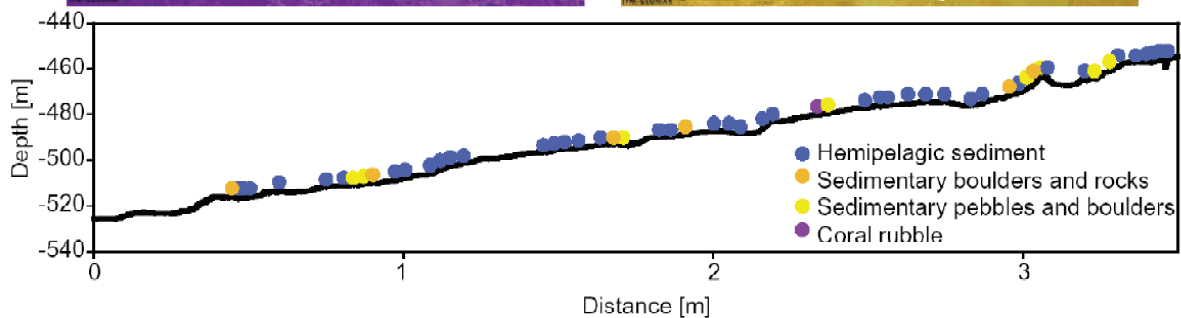
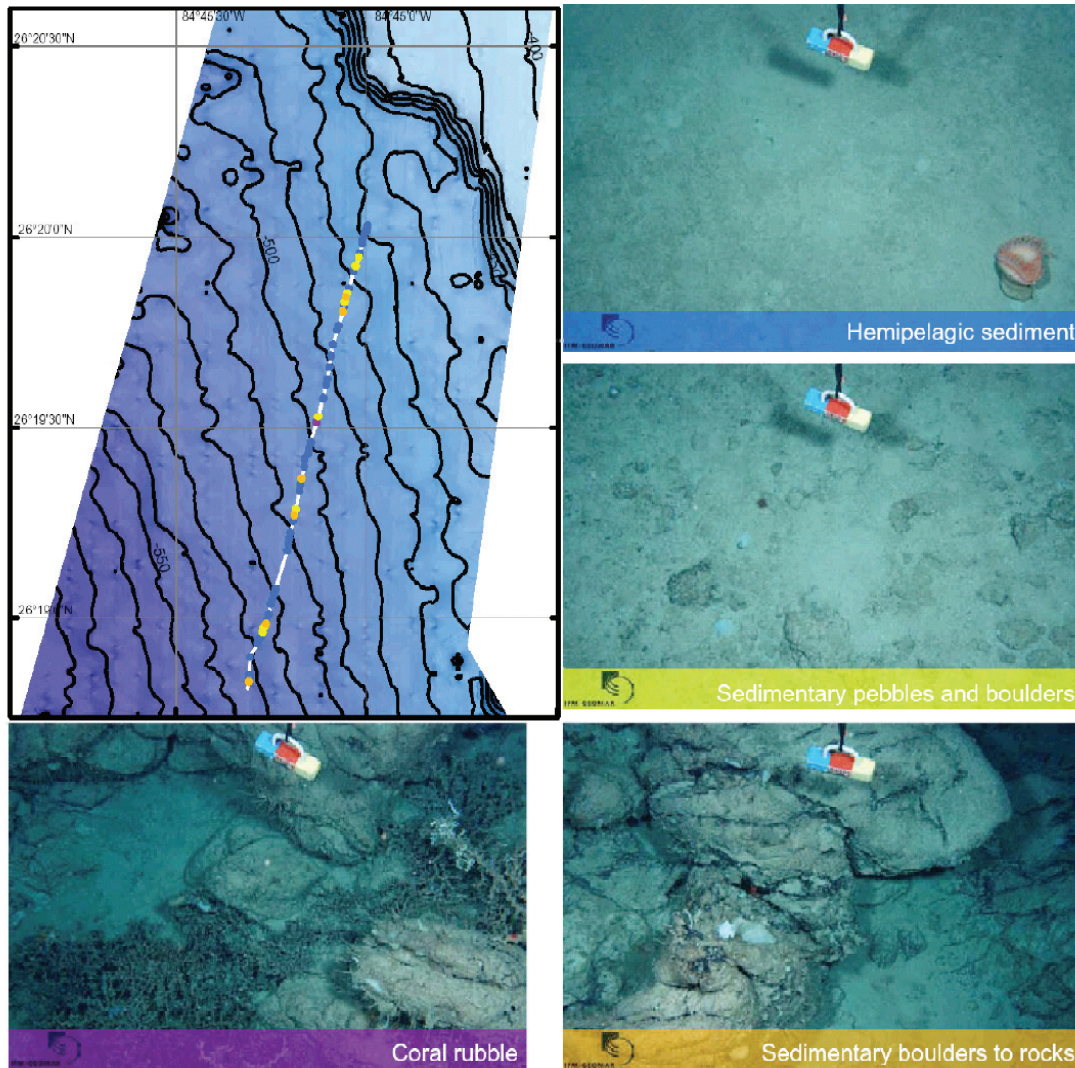
## Station: M78/1-189-2

Operator: Dullo, Flögel, Bannert

Date [UTC]: 06.03.2009

Working area: W Florida Slope

	Latitude [Dez°]	Longitude [Dez°]	Depth [m]	Date [dd/mm/yyyy]	Time (UTC) [hh:mm]
Start station	26°18.731'	-84°45.311'	527	06.03.2009	08:19:00
At bottom	26°18.843'	-84°45.279'	522	06.03.2009	08:36:00
Sampling					
Off bottom	26°20.108'	-84°44.957'	454	06.03.2009	10:13:00
End station	26°20.132'	-84°44.968'	454	06.03.2009	10:26:00



# OFOS Protocol

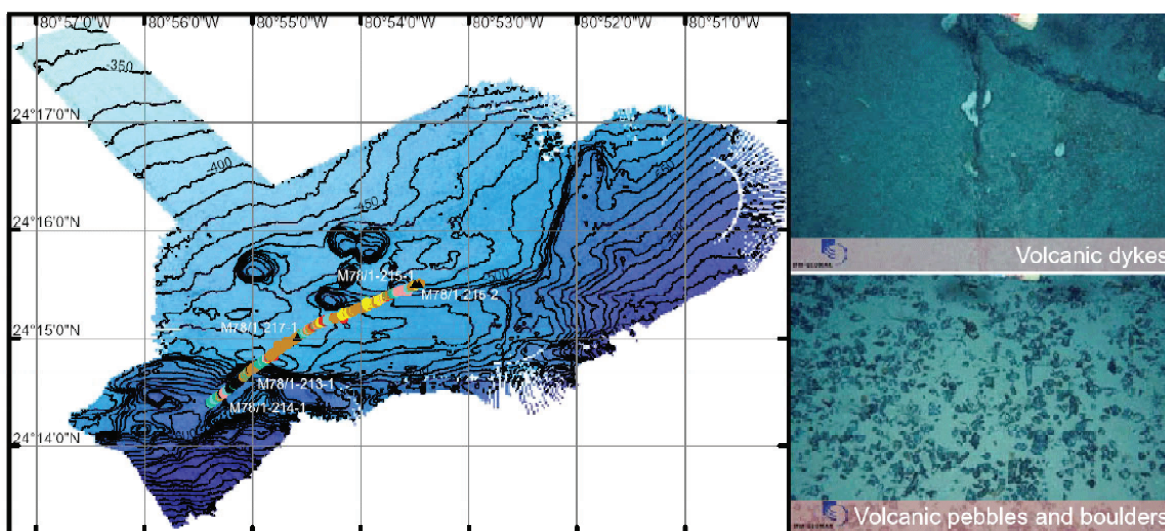
# Station: M78/1-202-1

Operator: Dullo, Flögel, Bannert

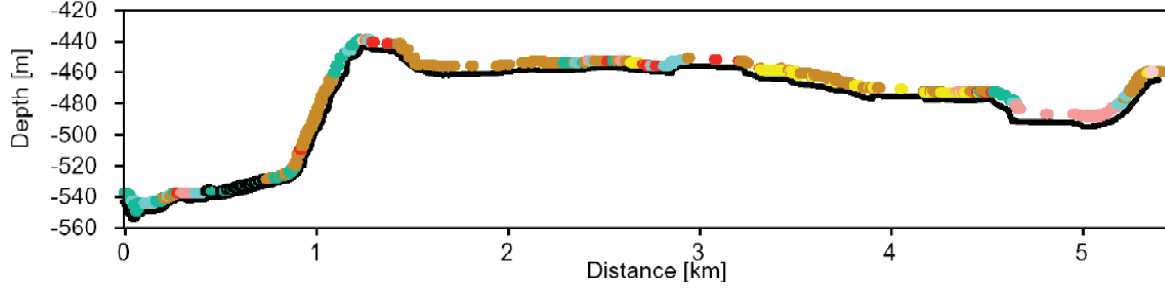
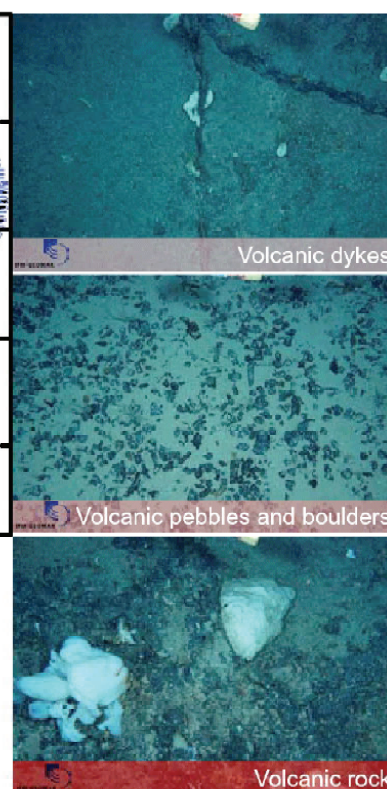
Date [UTC]: 09.03.2009

Working area: Strait of Florida

	Latitude [Dez°]	Longitude [Dez°]	Depth [m]	Date [dd/mm/yyyy]	Time (UTC) [hh:mm]
Start station	24°14.120'	-80°55.797'	554	09.03.2009	10:45:00
At bottom	24°14.401'	-80°55.400'		09.03.2009	11:07:00
Off bottom	24°15.508'	-80°53.073'	467	09.03.2009	13:33:00
End station	24°15.700'	-80°53.073'	456	09.03.2009	13:48:00



- Volcanic dykes
- Volcanic pebbles or boulders
- Volcanic rock
- Harground with volcanic pebbles
- Hardground
- Coarse sand to fine gravel with volcanic clasts
- Coarse sand to fine gravel
- Rippled coarse sand



# OFOS Protocol

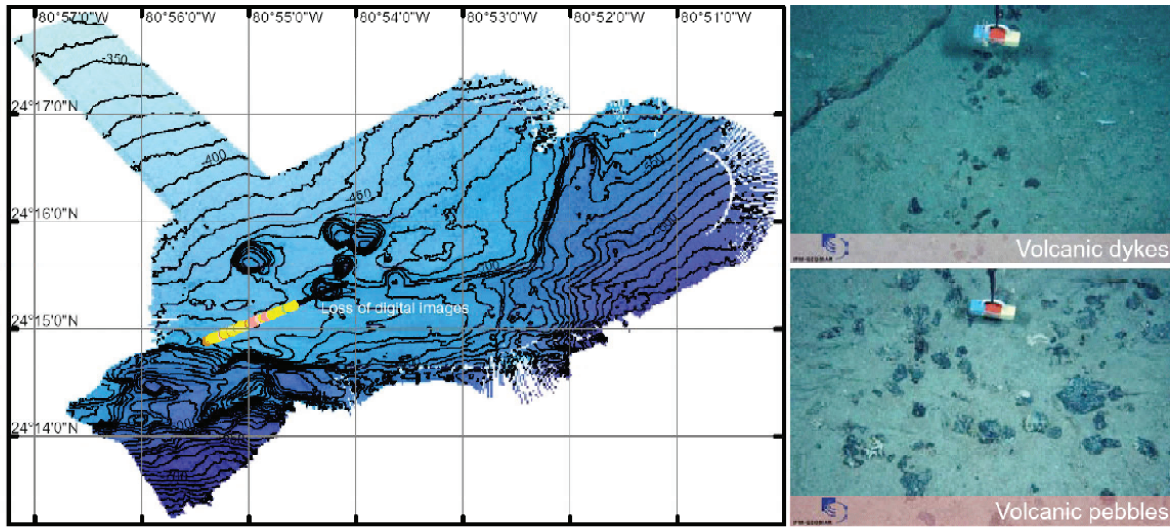
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Operator: Dullo, Flögel, Bannert

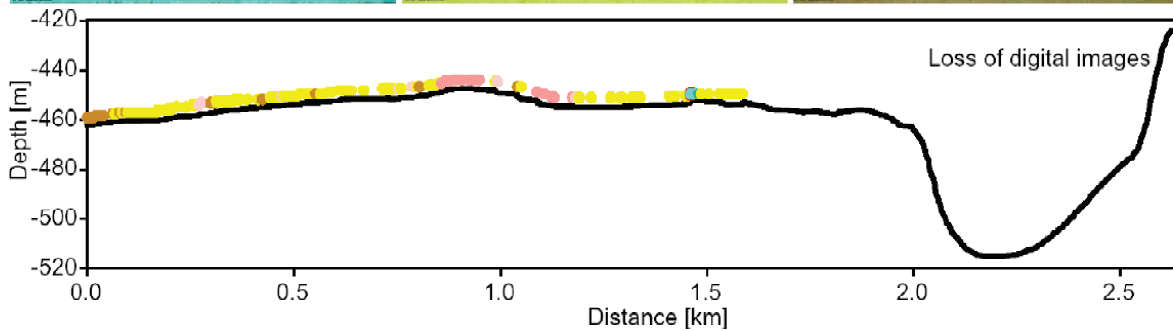
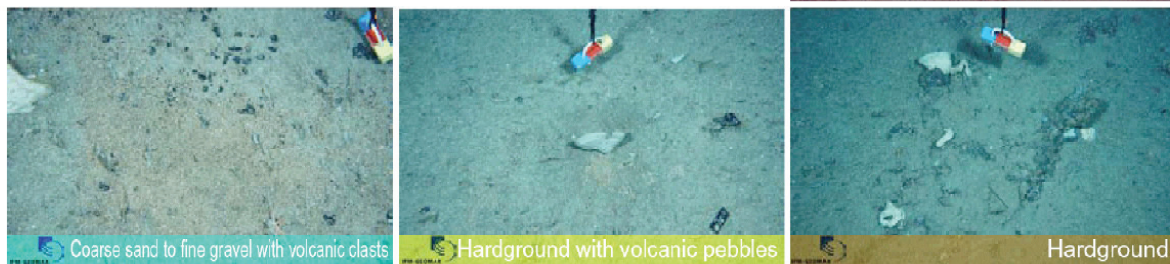
Date [UTC]: 09.03.2009

Working area: Strait of Florida

	Latitude [Dez°]	Longitude [Dez°]	Depth [m]	Date [dd/mm/yyyy]	Time (UTC) [hh:mm]
<b>Start station</b>	24°14.688'	-80°55.754'	523	09.03.2009	14:57:00
<b>At bottom</b>	24°14.885'	-80°55.396'	466.7	09.03.2009	15:14:00
<b>Off bottom</b>	24°15.417'	-80°54.092'	477	09.03.2009	16:47:00
<b>End station</b>	24°15.640'	-80°53.683'	453.5	09.03.2009	17:06:00



- Volcanic dykes
- Volcanic pebbles and boulders
- Volcanic rock
- Hardground with volcanic pebbles
- Hardground
- Coarse sand to fine gravel with volcanic clasts
- Coarse sand to fine gravel



### 5.5.1 Appendix items: Surface sediment samples

**Appendix Table 5.5.1:** Core recovery, subsampling and lithology of surface sediments. Only those deployments are listed where subsamples were taken. Devices: MUC: Multicorer, GKG: USNEL giant box corer, BC: REINECK box corer, BG: VAN VEEN grab, MBG: hand-held grab sampler, MGC: pilot corer.

M78/1-	Device	Recovery (cm) / No. of cores	Archive cores	Benthic foraminifera	Biomarker	Carbonate mineralogy	Clay mineralogy	Coarse-fraction analyses	Foraminiferal proxies	Macroinvertebrates	Organic compounds	Planktonic foraminifera	Physical properties	Pore-water geochemistry	Trace metal geochemistry	Sediment
164-8	BC	n.a.		X				X	X			X	X			Foraminiferal ooze
168-1	BG	n.a.		X		X		X	X				X			Medium carbonate sand
169-1	BG	n.a.		X		X		X	X			X	X			Coarse carbonate sand
170-1	BG	n.a.		X		X		X	X			X	X			Coarse carbonate sand
171-4	BG	n.a.		X		X		X	X			X	X			Medium carbonate sand
172-1	GKG	29	X					X		X						Fine to medium sand
172-2	BG	n.a.		X		X			X			X	X			Medium to fine sand
173-1	GKG	23		X		X		X	X	X		X	X			Silty fine to medium sand
174-1	GKG	32		X		X	X	X	X			X	X	X		Silty clay
180-2	MUC	7-16/4			X				X		X				X	Foraminiferal ooze
181-2	MUC	32-37/5			X				X		X				X	Clay
182-2	MUC	42-47/7			X			X	X		X				X	Clay
183-1	MUC	36-46/7			X				X		X				X	Clay
184-1	MUC	31-40/4			X			X	X		X				X	Silty clay
185-1	MUC	40-42/7			X		X	X	X	X	X				X	Silty clay
186-1	MUC	7-8/3														Foraminiferal sand
192-2	BC	1-8		X				X		X						Coarse sand with coral rubble
193-2	BC	2		X		X		X		X						Medium sand with coral rubble
195-1	BC	7		X		X		X		X						Fine sand and clay
196-1	BC	7		X						X						Fine sand and claystone
197-1	BC	9		X		X		X		X			X			Fine to medium sand
205-1	BG	n.a.		X		X				X			X			Medium to coarse sand
206-1	BC	n.a.		X												Coarse sand
206-2	BG	n.a.														Sand with pebbles
207-1	BC	n.a.														Medium sand
207-2	BG	n.a.		X		X		X					X			Coarse sand
208-1	BG	n.a.								X						Corals and sponges
208-2	BG	n.a.								X						Sponges
209-1	BG	n.a.		X												Coarse sand
212-1	MUC	12-28/6		X					X						X	Foraminiferal ooze

M78/1- Device		Recovery (cm) / No. of cores	Archive cores	Benthic foraminifera	Biomarker	Carbonate mineralogy	Clay mineralogy	Coarse-fraction analyses	Foraminiferal proxies	Macroinvertebrates	Organic compounds	Planktonic foraminifera	Physical properties	Pore-water geochemistry	Trace metal geochemistry	Sediment
213-1	BG	n.a.		X		X		X		X			X			Fine carbonate sand
214-1	BG	n.a.		X		X		X		X			X			Medium sand with coral rubble
215-2	BG	n.a.						X		X						Coral fragmente
217-1	BG	n.a.		X						X						Coral fragmente
218-2	MUC	14/3		X					X						X	Foraminiferal sand
222-8	GKG	43	X	X		X		X		X			X			Fine sandy clay
223-1	MBG	n.a.		X				X								Sand
223-2	MBG	n.a.														Sand with rhodolithes
224-1	MBG	n.a.		X				X		X						Medium sand with corals
226-1	MBG	n.a.								X						Coral fragments
226-2	MBG	n.a.								X						Coral fragments
228-2	MUC	41-51/8		X	X			X	X		X				X	Sandy clayey silt
229-1	MUC	12-20/5		X	X		X	X	X		X			X	X	Sandy clay
230-1	GKG	60	X	X		X		X					X			Clay
231-1	MGC	93	X													Clay
232-1	GKG	46	X	X		X		X		X			X			Clay
234-1	MUC	- /8		X	X		X	X	X	X	X			X	X	Sandy clayey silt
235-2	MUC	-		X	X			X	X		X				X	Sandy silty clay
240-1	MUC	-		X				X								clay
242-1	MUC	28-30/8		X	X		X		X		X			X	X	silty sand
243-2	MUC	-		X				X		X						Sandy clayey silt
244-1	MUC	-		X						X						Sandy clayey silt
246-2	MUC	35/7		X	X		X		X	X	X			X	X	Sandy clayey silt
247-3	MUC	44-45/6		X	X		X	X	X	X	X			X		Sandy clayey silt
248-3	BC	25		X		X	X	X		X			X	X		Clay
250-3	BC	8		X		X		X					X			Clay and silt
250-4	BC	12					X							X		Sand and silt
251-1	GKG	42	X	X			X	X		X			X	X		Sandy clay
252-1	GKG	31	X	X			X	X		X			X	X		Silty coarse sand

## 5.5.2 Appendix items: Sedimentary Facies

Appendix Table 5.5.2: Surface sediment description

M78/1-	Latitude (N)	Longitude (W)	Depth (m)	Gear	Description
164-8	18° 30.48'	83° 37.87'	1187	BC	The Reineck box core surface was almost flat. The sediment consisted of homogeneous foraminiferal ooze with a patchy cover of pteropod hash. As further constituent polychaets, differently shaped pteropods and gastropods were identified on the surface. The colour was pale brown throughout the sediment succession. Grain size fractions > 2 mm and > 1 mm are mainly composed of pteropods, while grain size fraction > 500 µm is dominated by planktonic foraminifers. A solitary coral was found in the coarse fraction.
168-1	21° 41.29'	86° 37.31'	34	BG	The van Veen grab surface was smooth showing only a few wash out structures. The sediment was middle carbonate sand with little coarse sand and shells. At the surface some polychaets, gastropods, shell debris and a shrimp were visible. The shell debris was concentrated at the lower part of the grab, maybe as a result of wash out processes during hieving the device. The sediment was very pale brown coloured. Sieving revealed a high amount of shell debris in all fractions and a free living bryozoan colony.
169-1	21° 41.61'	86° 32.76'	42	BG	The sediment surface recovered in the Van Veen grab showed an irregular topography with small depressions and elevations. The sediment was coarse carbonate sand rich in biodebris. Several gastropods, bivalves, serpulids, echinoids, mainly fragmented in pieces < 1 mm, and rhodoliths with about 2 cm in diameter were visible at the sediment surface. The colour of the sediment was pale yellow. Sieving the sample showed that the sediment was rich in centimetre-sized rhodoliths, which were partly still alive, recognisable on their red colour, when sampled. Furthermore, a red-algal branch and the skeleton of a regular echinoid were found.
170-1	21° 42.54'	86° 27.89'	128	BG	The sediment surface recovered in the Van Veen grab was undulated and showed a few wash out structures. The sediment was a unequally sized well rounded coarse carbonate sand with a high content of fine carbonate sand. The surface showed polychaet tubes, small bivalves, and fragments of gastropods, corals and other organisms. The sediment colour was pale yellow.
171-1	21° 42.68'	86° 26.98'	164	BG	The van Veen grab was extremely washed out. No samples were taken.
171-2	21° 42.68'	86° 26.98'	163	BG	The van Veen grab was washed out. No samples were taken.
171-3	21° 42.68'	86° 26.98'	163	BG	The van Veen grab was washed out. No samples were taken.

M78/1-	Latitude (N)	Longitude (W)	Depth (m)	Gear	Description
171-4	21° 42.68'	86° 26.98'	164	BG	The Van Veen grab surface was undulated with patches of coarse sand and slightly washed out. The sediment was coarse grained biogenic middle sand. A few polychaet tubes were visible at the surface. The colour was pale olive.
172-1	21° 42.75'	86° 26.48'	180	GKG	The box core surface was slightly irregular and washed at the upper left corner and at the bottom right corner. No organisms were visible at the surface. The sediment colour was olive. The sediment succession was subdivided into an upper 13 cm thick fine to middle sand horizon and a lower 14 cm thick coarse sand horizon. Some burrows were visible at the sediment surface. The sediment colour was olive throughout the section.
172-2	21° 42.74'	86° 26.48'	180	BG	The sediment surface recovered in the Van Veen grab was flat to slightly irregular and showed washed structures. The surface showed patches, where pteropod shells, and coral detritus of several millimetres in size concentrated. Furthermore, some polychaets, foraminifers, and mud balls were identified. The sediment colour was olive.
173-1	21° 43.65'	86° 21.71'	382	GKG	The sediment surface recovered in the box core was slightly irregular with some morphological depressions. It was washed, in particular in a 10 cm wide strip at the frontal lid. The sediment was a silty fine to middle sand bearing polychaets, pteropods, foraminifers, echinoid spines and sponge spiculae. The sediment colour was light olive grey.
174-1	21° 44.24'	86° 16.62'	738	GKG	The sediment surface recovered in the box core was irregular showing a topography with depressions and elevations (5 to 10 cm in high), which originated from bioturbation. On the surface some foraminifers (textulariids), scaphopods, polychaets, a pogonophore as well as some fecal pellet accumulations, partly with a central burrow were visible. Most of the foraminifers were located in the lower left part of the box corer. The sediment was coloured pale yellow.
191-6	26° 12.52'	84° 46.24'	850	BC	failed
192-1	26° 11.80'	84° 43.95'	549	BC	failed
192-2	26° 11.80'	84° 43.95'	551	BC	The sediment surface recovered in the Reineck box core was washed out. The sediment was sandy coral rubble and clay. At the surface a polychaet tube consisting of shell fragments, corals and some pteropods were visible. The sediment colour was pale brown.
193-1	26° 11.78'	84° 43.97'	549	BC	failed
193-2	26° 11.77'	84° 43.97'	549	BC	The surface sediment recovered in the Reineck box core was washed out. The sediment was a well rounded medium sand consisting of 1/3 foraminifers, 1/3 biotritus and 1/3 quartz. Several coral fragments ( <i>Lophelia</i> ) of 3-10 cm size, partly encrusted by hydrozoans and serpulids, brachiopods, gastropod fragments and seaweed were found. The sediment colour was light brownish grey.



M78/1-	Latitude (N)	Longitude (W)	Depth (m)	Gear	Description
195-1	26° 11.20'	84° 44.05'	572	BC	The sediment surface recovered in the Reineck box core was irregular with ripples. The sediment consisted of slightly silty clay, covered by fine sand composed of foraminifers and well-rounded siliciclastics (dominantly quartz). Some coral fragments ( <i>Lophelia</i> ), pteropods, polychaets with shell nests were randomly distributed on the surface. The sediment colour was light yellowish brown.
196-1	26° 11.07'	84° 44.05'	580	BC	The sediment surface was irregular. The recovered sediment was partly Fe/Mn impregnated and consisted of silty clay clasts in a fine sand matrix. Some corals ( <i>Lophelia</i> ) and pteropods were visible at the surface. The sediment colour was light greenish gray.
197-1	26° 10.81'	84° 44.07'	597	BC	The surface sediment was rippled and consisted of silty fine to middle sand with pteropods, polychaets, shell debris and foraminifers (e.g. <i>Jacuelia obtusa</i> )
205-1	24° 28.55'	81° 2.04'	195	BG	The sediment surface recovered in the Van Veen grab was washed. The remaining sediment was a homogeneous middle to coarse sand with carbonate clasts. The larger carbonate clasts were concentrated on the left side of the grab. They were populated by serpulids and polychaets. Furthermore, hydrozoans, bryozoans, a sponge, a decapod, gastropods, seaweed and <i>Haliotis</i> were found at the surface. The sediment colour was light yellow brownish.
206-1	24° 26.15'	81° 0.40'	201	BC	The Reineck box corer was washed out only a small amount of coarse sand and shell was recovered. Therefore the sampling was repeated with the Van Veen grab (M78/1-206-2).
206-2	24° 26.26'	80° 59.81'	213	BG	The Van Veen grab was nearly empty. It was assumed that the bottom sediment is pebbly sand and further sampling would not be successful.
207-1	24° 21.95'	80° 58.04'	269	BC	The Reineck box corer was washed out. Only a small amount of middle sand was recovered. Therefore the sampling was repeated with the Van Veen grab (M78/1-207-2).
207-2	24° 22.22'	80° 57.34'	260	BG	The sediment surface recovered with the Van Veen grab slightly washed on one side. The sediment was biotrititic coarse sand consisting of quartz and foraminifers, bivalve fragments, pteropods and echinoid spines. The surface showed arched accumulations of slightly coarser fragments. The sediment colour was light yellowish brown. Examination of the 15 cm high sediment succession revealed some burrows in the homogeneous coarse sand.
208-1	24° 18.50'	80° 56.46'	313	BG	The Van Veen grab was nearly empty, only a few fragments of pteropods, gastropods, a brachiopod fragment and some coral rubble were recovered. A hardground with corals and sponge was expected. Sampling was repeated with the same tool (M78/1-208-2).

M78/1-	Latitude (N)	Longitude (W)	Depth (m)	Gear	Description
208-2	24° 18.79'	80° 55.70'	320	BG	The Van Veen grab was washed out. Only a few shell fragments, some sponge fragments and <i>Homotrema rubra</i> were recovered.
209-1	24° 16.75'	80° 55.67'	381	BG	The Van Veen grab was washed out. Only some coarse sand with pteropod shells was recovered.
213-1	24° 14.61'	80° 55.07'	540	BG	The sediment surface recovered with the Van Veen grab was slightly waved. The sediment was carbonate fine sand with patches of carbonate coarse sand. Pteropod bearing shell was distributed at the surface from the upper left part to the middle right part of the grab. Among pteropods, echinoid fragments, otoliths, bivalves and echinoid spines, some heavily bioeroded corals, possibly <i>Lophelia</i> , were found. In the upper right part of the grab a volcanic lithoclast was recovered. The sediment colour was light yellowish brown. The sediment succession consisted of homogeneous middle sand throughout.
214-1	24° 14.41'	80° 55.26'	544	BG	The sediment surface recovered by the Van Veen grab was washed. The sediment was coral rubble with fine sand and gravel. The coarser components, mainly coral rubble, were accumulated in the wash-out structures. Beside some carbonate and volcanic clasts, pteropods and shell debris were found. The sediment colour was light yellowish brown. Sieving revealed in the > 2 mm fraction a large piece of a keratois coral.
215-1	24° 15.50'	80° 53.48'	468	BG	The Van Veen grab was empty.
215-2	24° 15.50'	80° 53.52'	476	BG	The Van Veen grab was washed. Only a few coral fragments, probably <i>Lophelia</i> , echinoid spines, pteropods, gastropods and some foraminifers were recovered.
217-1	24° 15.00'	80° 54.60'	461	BG	The Van Veen grab was washed. Only one coral fragment and a clast encrusted by a sponge, a hydrozoan and an octocoral were recovered.
222-8	12° 1.48'	64° 28.50'	1019	GKG	The sediment surface recovered in the box core was flat to slightly irregular. The sediment consisted of clay with some fine sand. At the surface some scaphopods, pteropods, polychaets, tube-shaped textulariids, tree-shaped textulariids, <i>Rhabdammina</i> and Gromiidea were visible. The colour was olive.
223-1	11° 48.90'	64° 35.84'	15	MBG	The sediment consisted of carbonate sand.
223-2	11° 48.90'	64° 35.84'	15	MBG	The sediment consisted of carbonate sand with rhodoliths.
224-1	11° 49.06'	64° 35.94'	5	MBG	The sediment consisted of medium carbonate sand with coral debris.
225-1	11° 48.94'	64° 35.97'	35	MBG	failed
226-1	11° 48.95'	64° 35.95'	27	MBG	Three coral fragments were recovered.
226-2	11° 48.91'	64° 35.97'	40	MBG	Two rhodoliths were recovered.
230-1	11° 1.84'	62° 5.61'	100	GKG	The sediment surface recovered in the box core was flat with small depressions with a depth of 1 cm. The sediment consisted of homogeneous very soft clay with crumpy structures and burrows filled with foraminifers and shell fragments. At the surface tree-like textulariids and polychaets were visible. The sediment colour was olive.

<b>M78/1-</b>	<b>Latitude (N)</b>	<b>Longitude (W)</b>	<b>Depth (m)</b>	<b>Gear</b>	<b>Description</b>
232-1	10° 59.00'	61° 31.49'	122	GKG	The sediment surface revealed mud ripples that were 40 cm long and 3 cm high. The sediment consisted of soft clay with crumpy structures. Large burrows of 3-4 cm in diameter, partly filled with sediment, pogonophors (up to 20 cm long), fine shell fragments and tree-shaped textulariids were visible at the surface. The sediment colour was olive.
248-2	8° 58.00'	60° 5.00'	37	BC	Reineck box core was to full, no useable surface, therefore repetition.
248-3	8° 58.00'	60° 5.00'	51	BC	The sediment surface recovered in the Reineck box core was slightly irregular and disturbed due to overpenetration. The sediment consisted of very soft clay with a dark greyish brown colour. Some burrows were visible at the sediment surface.
250-2	8° 57.37'	60° 13.97'	15	BC	The sediment surface recovered in the Reineck box core was disturbed, therefore repetition.
250-3	8° 57.37'	60° 13.95'	14	BC	The sediment surface recovered in the Reineck box core was flat and consisted of soft clay covered by a thin layer of silt. Some fractures developed during sampling. The sediment colour was very dark grey. At the surface some polychaets and decapods were visible. The section revealed dark clay interbedded with thin layers of silt, which is typical for deltaic sedimentation.
250-4	8° 57.38'	60° 13.93'	14	BC	Repetition of station 250-3, samples for Troccoli.
251-1	9° 22.00'	60° 2.98'	68	GKG	The sediment recovered in the box core showed about 2 cm high mud ripples at the surface. The sediment consisted of slightly sandy clay of dark greyish brown colour. At the surface fecal pellets, some burrows of polychaets and crustaceans and an actiniaria (anemone) were found. The section revealed fine sandy clay of dark grey colour with some burrows.
252-1	9° 43.00'	60° 4.01'	81	GKG	The sediment surface recovered in the box core was undulated. The sediment was a silty, shell debris containing coarse sand. At the surface several burrows were found, the brighter ones seemed to belong to worms. Furthermore graze tracks, some polychaet nests, gastropods and bivalve shells were found. The colour of the sediment was olive brown. The section revealed coarse sand with shill, no bedding was visible but some burrows. The colour of the sediment was olive.