

Oversikt over tokt og faste oseanografiske stasjoner tatt i 2008

Report on cruises and fixed oceanographic data stations, 2008

Av Vigdis Rong

Charts made by Karen Gjertsen and Svein Erik Enersen ("G. M. Dannevig")



HAVFORSKNINGSINSTITUTTET
INSTITUTE OF MARINE RESEARCH

PROSJEKTRAPPORT



Nordnesgaten 50, Postboks 1870 Nordnes, 5817 BERGEN
Tlf. 55 23 85 00, Faks 55 23 85 31, www.imr.no

Tromsø
9294 TROMSØ

Flødevigen
4817 HIS

Austevoll
5392 STOREBØ

Matre
5984 MATREDAL

Rapport: Fisken og Havet	Nr. - År 4-2009
------------------------------------	---------------------------

Tittel (norsk/engelsk):

**Oversikt over tokt og faste oceanografiske stasjoner tatt i
2008**

**Report on cruises and fixed oceanographic data stations,
2008**

Forfatter(e):

Vigdis Rong. Charts made by Karen Gjertsen and Svein Erik Enersen
("G. M. Dannevig")

Distribusjon:

Åpen

Prosjektnr.:**Oppdragsgiver(e):****Oppdragsgivers referanse:**

Dato:
20.03.2009

Program:

Faggruppe:
Norsk marint datasenter

Antall sider totalt:
81

Sammendrag (norsk):

Rapporten gir en oversikt over tokt i regi av Havforskningsinstituttet og Universitetet i Bergen. Toktene er utført med forskningsfartøyene "G. O. Sars", "Johan Hjort", "Håkon Mosby", "G. M. Dannevig", "Jan Mayen" samt noen innleide fiskefartøy i 2008. Kartene viser hovedsakelig CTD- og trålstasjonar, men også planktonstasjoner. For de fleste toktene vises kurs- og stasjonskart samt oversikt over når de faste snittene er tatt. Antall observasjoner pr. måned for de faste stasjonene langs kysten er vist i egen tabell. Toktene er innrapporterte til Det internasjonale råd for havforskning (ICES) i skjemaet "Cruise Summary Report". Data fra toktene er tilgjengelig fra Norsk marint datasenter ved Havforskningsinstituttet.

Summary (English):

The report presents cruises carried out by the research vessels "G. O. Sars", "Johan Hjort", "Håkon Mosby", "G. M. Dannevig", "Jan Mayen" and some hired commercial fishing vessels on behalf of the Institute of Marine Research and the University of Bergen during 2008. The charts mainly show CTD and trawl stations. Some charts also include plankton stations. Beside tracks and stations, standard sections observed are listed. A separate table lists the number of observations per month for the fixed stations along the Norwegian coast. The cruises are reported to the International Council for the Exploration of the Sea (ICES) in the "Cruise Summary Report". The data may be requested from the Norwegian Marine Data centre at the Institute of Marine Research.

Emneord (norsk):

1. Kurskart
2. Stasjonskart
3. Toktmetadata

Subject heading (English):

1. Cruise track chart
2. Station chart
3. Cruise metadata

Prosjektleder

Faggruppeleder

Table of content

1 CRUISES 2008.....	7
1.1 G. O. Sars	7
1.2 Johan Hjort	9
1.3 Håkon Mosby	10
1.4 Jan Mayen	11
1.5 G.M. Dannevig	12
1.6 Some cruises carried out by hired fishing vessels.....	14
2 CHARTS – OVERVIEW	16
2.1 CTD stations 2008.....	16
2.2 Oceanographic sections.....	17
2.3 Fixed oceanographic stations	17
3 TABLES – OBSERVATIONS IN 2008	18
3.1 Standard oceanographic sections 2008.....	18
3.2 Other oceanographic sections 2008.....	19
3.3 Fixed oceanographic stations 2008	20
4 CHARTS FOR CRUISES 2008	21
4.1 G.O. Sars	21
4.2 Johan Hjort	36
4.3 Håkon Mosby	47
4.4 Jan Mayen	61
4.5 G.M. Dannevig	67
4.6 Some cruises carried out by hired fishing vessels.....	73

1 Cruises 2008

1.1 G. O. Sars (Ship code no 10)

CRUISE NO	PERIOD OF CRUISES		PURPOSE	AREA	CTD ST		TRAWL ST		PAGE OF CHART	COMMENT
	Start	End			Start	End	Start	End		
2008101	4 Jan	28 Mar	The project "AKES" (Antarctic Krill and Ecosystem Studies). Krill survey.	Southern oceans (Atlantic and Antarctic)	1	124	1	62	20	
2008102	31 Mar	11 Apr	Gobies.	Namibia	125	176	63	104	21–22	
2008103	12 May	30 May	Ecosystem survey Norwegian Sea. The project "HARVEST" (Harvesting at lower tropic levels), plankton.	Norwegian Sea	177	248	106	128	22–23	
2008104	1 June	28 June	The project MAREANO, development of lander, mapping of bottom habitats, including coral reefs.	Nordland	249	306	-	-	23–24	
2008105	2 July	10 Aug	The project "GANS" (Gas Hydrates on the Norway - Barents Sea - Svalbard margin).	Norwegian Sea	307	364	-	-	24	
2008106	19 Aug	30 Sep	Ecosystem survey Barents Sea.	Barents Sea	365	495	129	336	25–26	
2008114	2 Oct	31 Oct	The project "MAREANO". Plankton transect 06.	Norwegian Sea, Barents Sea	496	521	-	-	27–29	
2008108	25 Oct	29 Oct	Development of lander.	Nordland	-	-	-	-	-	Cancelled
2008109	3 Nov	4 Nov	Educational cruise, (MAR310, University of Bergen) "Marine methods".	Western Norway	522	523	338	346	29	
2008110	5 Nov	11 Nov	Educational cruise (GEOL210, University of Bergen). Field course of marine geology and geophysics. Cruise on behalf of Geological Survey of Norway (NGU), bottom corer Trondheimsfjorden.	Western Norway, Trondheimsfjorden	524	530	-	-	30	
2008111	13 Nov	20 Nov	Oceanographic sections.	Bergen–Bodø	531	550	-	-	30	
2008112	20 Nov	10 Dec	Norwegian spring-spawning herring, developing methods for MS70 sonar, development of lander.	Norwegian Sea	-	-	-	-	-	Cancelled
2008107	22 Nov	3 Dec	Environmental influences of bottom trawling.	Varangerfjorden	551	561	347	366	31–32	
2008115	4 Dec	11 Dec	Development of lander (the HERMES-Lander project). Calibrate and use TOPAS (parametric sub bottom profiler) to study resonance and backscattering from overwintering herring (the project LowFreq). Collect data on the MS70 quantitative multi beam sonar on wintering herring (the Promus project)	Vesterålen	562	563	367	370	33	

G. O. Sars (cont.)

CRUISE NO	PERIOD OF CRUISES		PURPOSE	AREA	CTD ST		TRAWL ST		PAGE OF CHART	COMMENT
	Start	End			Start	End	Start	End		
2008116	15 Dec	19 Dec			-	-	-	-	-	Cancelled
2008117	15 Dec	19 Dec	Calibrating acoustic instruments.	Western Norway	564	566	-	-	34	
2008113	16 Dec	20 Dec	Stimuli and reaction on fish from vessel noise.	Western Norway	-	-	-	-	-	Cancelled

1.2 Johan Hjort (Ship code no 12)

CRUISE NO	PERIOD OF CRUISES		PURPOSE	AREA	CTD ST		TRAWL ST		PAGE OF CHART	COMMENT
	Start	End			Start	End	Start	End		
2008201	25 Jan	31 Jan	Plankton transect 01.	Norwegian Sea, Barents Sea	1	13	-	-	35	
2008202	1 Feb	14 Mar	Bottom fish survey, haddock and cod. Plankton transect 02.	Barents Sea	14	105	1	174	35–36	
2008203	17 Mar	5 Apr	Spawning cod survey.	Malangsgrunnen- Røstbanken, Lofoten and Vestfjorden	106	253	175	203	36–37	
2008204	5 Apr	10 Apr	Environmental and plankton investigations on the standard oceanographic transects Gimsøy and Svinøy.	Norwegian Sea, the Gimsøy transect and the Svinøy transect.	254	283	-	-	37	
2008205	12 Apr	19 May	Plankton and sandeel. Transects in the North Sea, April.	North Sea	284	410	204	230	38–39	
2008206	22 May	8 June	The projects "IPY-Nessar" (Norwegian component of the Ecosystem Studies of Subarctic and Arctic Regions) and "PAME-Nor" (DOC turnover in polar microbial food webs).	Norwegian Sea	411	513	231	240	40–41	
2008207	8 July	31 July	International Bottom Trawl Survey (IBTS) 3. quarter. Acoustic herring survey. Surveillance of comb jellies.	North Sea	514	646	241	321	41–42	
2008208	1 Sep	16 Sep	Ecosystem survey, Barents Sea. Plankton transect 05.	Barents Sea	647	708	322	422	43	
2008209	20 Sep	26 Oct	The project "MAREANO". Plankton transect 06.	Nordland (VI and VII) and Vesterålen	-	-	-	-	-	Cancelled. The tasks are carried out by "G. O. Sars", cruise no 2008114.
2008212	17 Oct	27 Oct	Pelagic trawling, cod, haddock and saithe.	Barents Sea	709	709	423	440	44	
2008210	28 Oct	8 Dec	Ecosystem survey, the coast of Norway.	Varanger-Møre	710	804	441	573	44–45	
2008211	14 Dec	18 Dec	Stimuli and reaction on fish from vessel noise.	Western Norway	-	-	-	-	-	Cancelled

1.3 Håkon Mosby (Ship code no 1)

CRUISE NO	PERIOD OF CRUISES		PURPOSE	AREA	CTD ST		TRAWL ST		PAGE OF CHART	COMMENT
	Start	End			Start	End	Start	End		
2008601	5 Jan	31 Jan	International Bottom Trawl Survey (IBTS) 1. quarter.	North Sea	1	55	1	38	46–47	
2008602	4 Feb	21 Feb	Shrimps investigations.	Skagerrak, North Sea.	56	154	39	111	47	
2008603	23 Feb	6 Mar	Educational cruise (GEOF 332, University of Bergen). Oceanography.	Western Norway	155	286	-	-	48	
2008604	7 Mar	9 Mar	Geophysical cruise.	Western Norway	-	-	-	-	-	Cancelled
2008605	10 Mar	13 Mar	Educational cruise (GEOF 231, University of Bergen).	Western Norway	-	-	-	-	-	Cancelled
2008606	14 Mar	15 Mar	Whale observations.	Korsfjorden	287	288	-	-	48	
2008607	25 Mar	29 Mar	The project "DAMOCLES" (Developing Arctic Modeling and Observing Capabilities for Long-term Environmental Studies).	The Svinøy transect	289	292	-	-	49	
2008608	31 Mar	1 Apr	Educational cruise (GEOF 130, University of Bergen). Oceanography.	Byfjorden, Bergen.	293	304	-	-	49	
2008609	2 Apr	18 Apr	Herring larvae survey.	Western Norway	305	477	-	-	50	
2008624	12 May	16 May	A physical oceanography cruise to deploy 11 moorings on the Faroe bank channel to study the mixing of the Faroe bank channel overflow plume.	Faroe bank	-	-	-	-	50	No CTD
2008625	25 May	27 May	Oil spill at Statfjord A.	Western Norway	478	492	112	119	51	
2008610	29 May	8 June	The project "BIAC" (Bipolar Atlantic Thermohaline Circulation).	Faroe bank	493	555	-	-	51	
2008611	9 June	4 July	Mackerel eggs.	North Sea	556	719	119	127	52	
2008612	6 July	7 July	Whale observations.	Korsfjorden	-	-	-	-	-	Cancelled
2008613	8 July	21 July	Hydrographic standard sections. Plankton.	Four standard oceanographic sections: Svinøy, Gimsøy, Fugløya–Bjørnøya and Vardø-N.	720	770	-	-	53	
2008614	23 July	18 Aug	The project "IPY-PETROBAR" (Petroleum-related regional studies of the Barents Sea region).	Svalbard	771	779	-	-	53	
2008615	19 Aug	1 Sep	The project "SVALEX".	Svalbard	780	780	-	-	54	

Håkon Mosby (cont.)

CRUISE NO	PERIOD OF CRUISES		PURPOSE	AREA			TRAWL ST		PAGE OF CHART	COMMENT
	Start	End			Start	End	Start	End		
2008616	3 Sep	15 Sep	Educational cruise (AGF 214, The University Centre in Svalbard). Polar Ocean Climate.	Svalbard	781	957	-	-	54	
2008617	18 Sep	1 Oct	The project "BIAC" (Bipolar Atlantic Thermohaline Circulation). Storfjorden, Lofoten–Barents Sea. Experiment.	Svalbard, Norwegian Sea	958	1006	-	-	55	
2008618	6 Oct	10 Oct	The project "DAMOCLES" (Developing Arctic Modeling and Observing Capabilities for Long-term Environmental Studies). The Svinøy section.	The Svinøy transect	1007	1010	-	-	56	
2008619	16 Oct	22 Oct	Educational cruise (MAR 230, University of Bergen). Fishery ecology.	North Sea	1011	1034	*	*	56–57	*5 trawl st. without no.
2008620	23 Oct	25 Oct	Studies of whale falls.	Korsfjorden	-	-	-	-	57	No CTD
2008621	25 Oct	27 Oct	Geophysical cruise.	Western Norway	-	-	-	-	-	Cancelled
2008622	29 Oct	5 Nov	Oceanographic sections.	North Sea	1035	1090	-	-	58	
2008623	6 Nov	18 Dec	Ecosystem survey.	Norwegian fjords and coast areas from Oslofjorden to Vestfjorden.	1091	1205	124	273	58–59	

1.4 Jan Mayen (Ship code no 19)

CRUISE NO	PERIOD OF CRUISES		PURPOSE	AREA	CTD ST		TRAWL ST		PAGE OF CHART	COMMENT
	Start	End			Start	End	Start	End		
2008701	1 Feb	6 Mar	Ecosystem survey.	Norwegian Sea, Barents Sea.	72	131	256	426	60	
2008702	24 Apr	18 May	The project "IPY-Nessar" (Norwegian component of the Ecosystem Studies of Subarctic and Arctic Regions).	Western Entrance to the Barents Sea, south from Bear Island. Storbanken. Hopen Bank.	132	296	211	222	61–62	
2008704	29 June	12 July	Hooded seal surveys.	Greenland Sea	309	316	226	231	62–64	
2008703	8 Sep	4 Oct	Ecosystem survey Barents Sea.	The area west, north and east of Svalbard.	396	443	245	401	64–65	

1.5 G.M. Dannevig (Ship code no 16)

CRUISE NO	PERIOD OF CRUISES		PURPOSE	AREA	CTD NO		PAGE OF CHART	COMMENT
	Start	End			Start	End		
2008301	8 Jan	15 Jan	Hydrographic standard section “Torungen–Hirtshals”, environmental investigation. Long-term environmental monitoring on a near shore station outside Arendal and in the fjords along the Norwegian Skagerrak coast.	Skagerrak, Norwegian coast of Skagerrak	1	34	67	
2008302	5 Feb	11 Feb	Hydrographic standard section “Torungen–Hirtshals”, environmental investigation. Long-term environmental monitoring on a near shore station outside Arendal and in the fjords along the Norwegian Skagerrak coast.	Skagerrak, Norwegian coast of Skagerrak	35	68	67	
2008303	4 Mar	8 Mar	Hydrographic standard section “Torungen–Hirtshals”, environmental investigation. Long-term environmental monitoring on a near shore station outside Arendal and in the fjords along the Norwegian Skagerrak coast.	Skagerrak, Norwegian coast of Skagerrak	69	92	68	
2008304	27 Mar	10 Apr	Habitate mapping (spawning grounds). Long-term environmental monitoring on a near shore station outside Arendal.	Norwegian coast of Skagerrak	93	101	68	
2008305	11 Apr	2 May	Long-term environmental monitoring on a nearshore station outside Arendal and environmental investigation in the eastern North Sea, the Skagerrak and Kattegat after the spring bloom.	Eastern North Sea, Skagerrak, Kattegat	102	233	69	
2008306	7 June	15 June	Hydrographic standard section “Torungen–Hirtshals”, environmental investigation. Long-term environmental monitoring on a near shore station outside Arendal and in the fjords along the Norwegian Skagerrak coast.	Skagerrak, Norwegian coast of Skagerrak	234	269	69	
2008307	16 June	19 June	Studies of fish populations using beach seine.	Norwegian coast of Skagerrak	-	-	-	No CTD
2008308	27 July	27 July	Hydrographic standard section “Torungen–Hirtshals”, environmental investigation. Long-term environmental monitoring on a near shore station outside Arendal.	Skagerrak	270	281	66	
2008309	12 Aug	12 Aug	Hydrographic standard section “Torungen–Hirtshals”, environmental investigation. Long-term environmental monitoring on a near shore station outside Arendal.	Skagerrak	282	293	66	

G.M. Dannevig (cont.)

CRUISE NO	PERIOD OF CRUISES		PURPOSE	AREA	CTD NO		PAGE OF CHART	COMMENT
	Start	End			Start	End		
2008310	14 Aug	28 Aug	Monitoring lobster/MPA. Habitate mapping. Long-term environmental monitoring in the fjords along the Norwegian coast and on a near shore station outside Arendal.	Norwegian coast of Skagerrak	294	320	70	
2008311	13 Sep	5 Oct	Hydrographic standard section “Torungen–Hirtshals”, environmetal investigation. Studies of fish populations using beach seine. Long-term environmental monitoring on a nearshore station outside Arendal and in the fjords along the Norwegian Skagerrak coast.	Skagerrak, Norwegian coast of Skagerrak	321	388	70	
2008312	6 Oct	7 Oct	Hydrographic standard section “Torungen–Hirtshals”, environmetal investigation. Long-term environmental monitoring on a near shore-station outside Arendal.	Skagerrak	389	400	66	
2008313	4 Nov	5 Nov	Hydrographic standard section “Torungen–Hirtshals”, environmetal investigation. Long-term environmental monitoring on a near shore station outside Arendal.	Skagerrak	401	412	66	
2008314	6 Nov	4 Dec	Contaminants in seafood – Grenland. Fish community studies in marine protected area and resource studies in coastel cod. Long-term environmental monitoring on a near shore station outside Arendal and in the fjords along the Norwegian Skagerrak coast.	Skagerrak, Norwegian coast of Skagerrak	413	434	71	
2008315	5 Dec	6 Dec	Hydrographic standard section “Torungen–Hirtshals”, environmetal investigation. Long-term environmental monitoring on a near shore station outside Arendal.	Skagerrak	435	446	66	

1.6 Some cruises carried out by hired fishing vessels

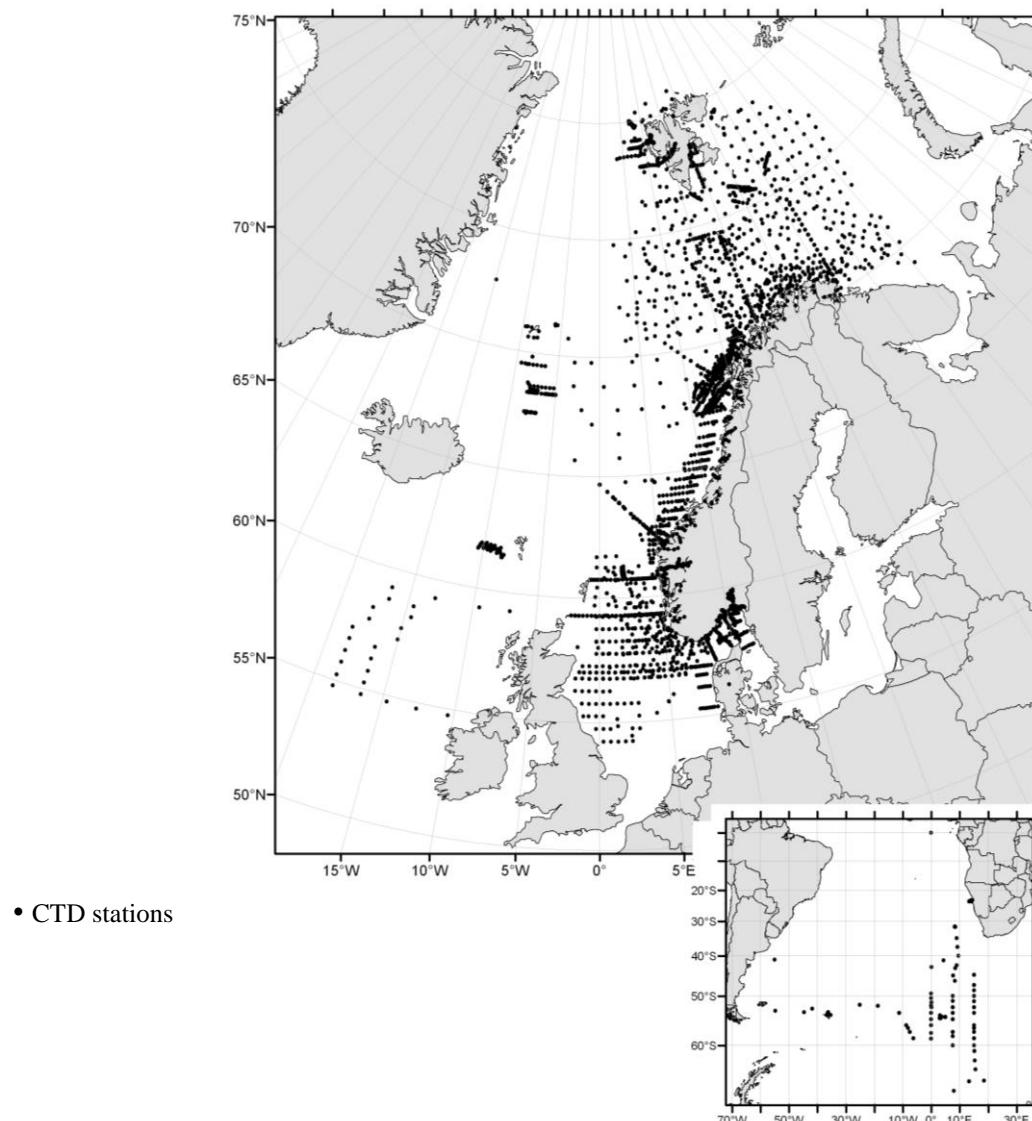
CRUISE NO	PERIOD OF CRUISES		VESSEL	PURPOSE	AREA	CTD ST		TRAWL ST		PAGE OF CHART	COMMENT
	Start	End				Start	End	Start	End		
2008804	1 Feb	29 Feb	Libas	Spawning migration of Atlantic herring and target strength of capelin.	Norwegian coast, Norwegian Sea and Barents Sea	1	32	1	16	72–73	
2008803	2 Feb	2 Mar	Eros	Estimates of spawning capelin.	Barents Sea	1	84	1	42	74	
2008834 Part I	28 Feb	16 Mar	Nybo	Biological sampling of capelin.	North Troms, Finnmark and Barents Sea	-	-	-	-	75	No CTD
2008809	26 Mar	7 Apr	Gardar	Acoustic abundance measurements of blue whiting and measurements of hydrographic conditions.	West of the British isles.	1	26	1	8	75	
2008834 Part II	1 May	25 May	Nybo	Part of the ICES PGNAPES international survey. Trawl acoustic stock estimate of Norwegian spring spawning herring and blue whiting. Hydrographic stations and plankton stations.	Eastern part of the Norwegian Sea.	2	31	1	25	76	
2008823	30 June	9 Aug	Eros	Ecosystem survey. The project “Salsea” (Advancing understanding of Atlantic Salmon at Sea: Merging Genetics and Ecology to Resolve Stock-specific Migration and Distribution patterns).	Norwegian Sea	20	53	26	78	77	
2008822 Part I	1 Aug	9 Aug	Atlantic Star	Distribution and abundance estimation of 0-group fish. Oceanographic observations with CTD sonde.	North eastern part of the Norwegian Sea. Western part of the Barents Sea.	1	39	1	39	78	
2008822 Part II	11 Aug	24 Aug	Atlantic Star	To measure the horizontal and vertical distribution of beaked redfish (<i>Sebastes mentella</i>) in the Norwegian Sea and provide an abundance estimate	From 70°40'N to 74°00'N and from 2°30'E to 17°18'E	1	24	1*	24*	79	* 3 trawl hauls in each position
2008824	1 Sep	15 Sep	Atlantic Viking	Tagging of juvenile Greenland halibut.	Kong Karls Land (east of Spitsbergen), Hinlopen (north of Spitsbergen) and the continental shelf north west of Spitsbergen.	1	62	1	63	80	

Some cruises carried out by hired fishing vessels (cont.)

CRUISE NO	PERIOD OF CRUISES		VESSEL	PURPOSE	AREA	CTD ST		TRAWL ST		PAGE OF CHART	COMMENT
2008826	3 Nov	14 Nov	Atlantic Viking	To examine horizontal and vertical distribution of deepwater redfish (<i>Sebastes mentella</i>) and estimate population abundance of this species.	Norwegian Sea	-	-	1	56	81	No CTD

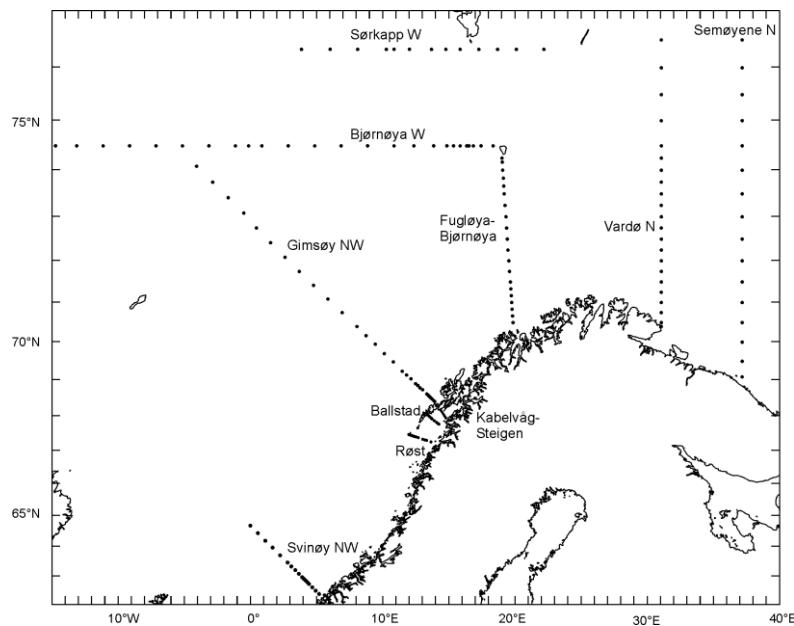
2 Charts – overview

2.1 CTD stations 2008

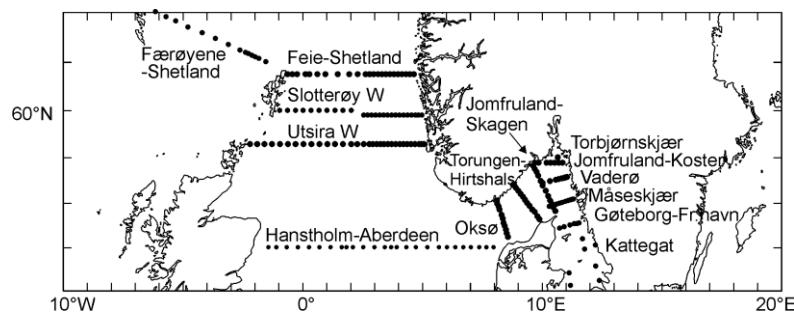


	Ship	Stations
Research vessels		
	G.O. Sars (south)	176
	G.O. Sars (north)	390
	Johan Hjort	804
	Håkon Mosby	1.205
	G. M. Dannevig	446
	Jan Mayen	281
Hired fishing vessels		
	Atlantic Star	63
	Atlantic Viking	62
	Eros	118
	Gardar	26
	Libas	32
	Nybo	30
		3.633

2.2 Oceanographic sections

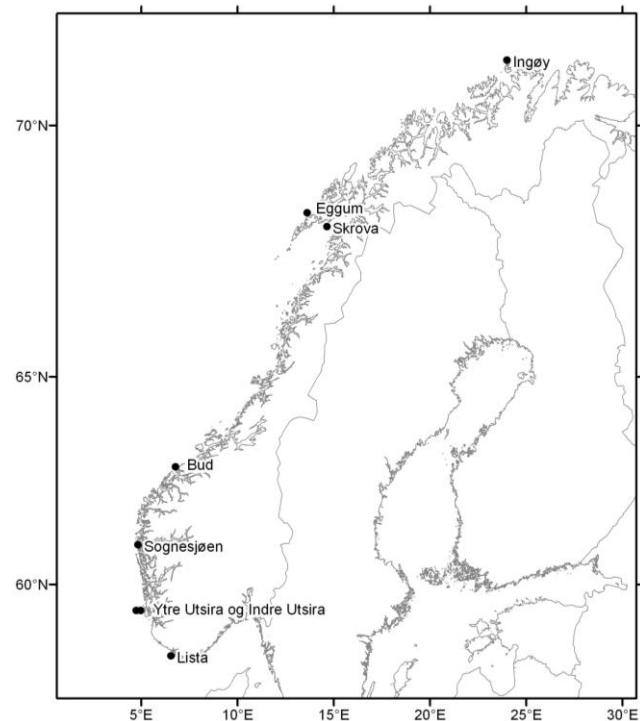


Norwegian Sea and Barents Sea



North Sea, Skagerrak and Kattegat

2.3 Fixed oceanographic stations



3 Tables – Observations in 2008

3.1 Standard oceanographic sections 2008 (Cruise no/ship)

Area	Standard sections	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
North Sea, Skagerrak	Fedje–Shetland				2008205			2008207			2008619		
	Slotterøy-West												
	Utsira-West	2008601			2008205			2008207			2008622		
	Jærens Rev-SW and W				2008205								
	Egerøya-SW				2008205								
	Lista-SW				2008205								
	Lindesnes-SSW				2008205								
	Hanstholm–Aberdeen		2008602		2008205			2008207				2008622	
	Oksøy–Hanstholm											2008622	
Kattegat	Torungen–Hirtshals	2008301	2008302	2008303	2008305	2008305	2008306	2008308	2008309	2008311	2008312	2008313	2008315
	Jomfruland–Skagen				2008305								
	Jomfruland–Koster				2008305								
	Torbjørnskjær				2008305								
	Väderø				2008305								
	Måseskjær				2008305								
	Göteborg–Fredrikshavn				2008305								
	Kattegat												

	Area	Standard sections	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
The Norwegian Sea	Vest-fjord	Røst-Tennholmen				2008203								
		Ballstad-Måløy/Skarholmen				2008203								
		Svinøy-North/West	2008201			2008204	2008206		2008613			2008111		
		Gimsøy-North/West				2008204	2008103		2008613			2008111		
		Bjørnøya-West								2008106				
The Barents Sea		Sørkapp-West												
		Fugløya-Bjørnøya		2008701	2008202	2008702		2008104			2008208			
		Vardø-North			2008202				2008613		2008106			
		Semøyene-North												
		Bjørnøya-Sørkapp												
		Nordkapp-North												

3.2 Other oceanographic sections 2008

Sections	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Færøyene-Shetland												
Kabelvåg-Steigen				2008203								

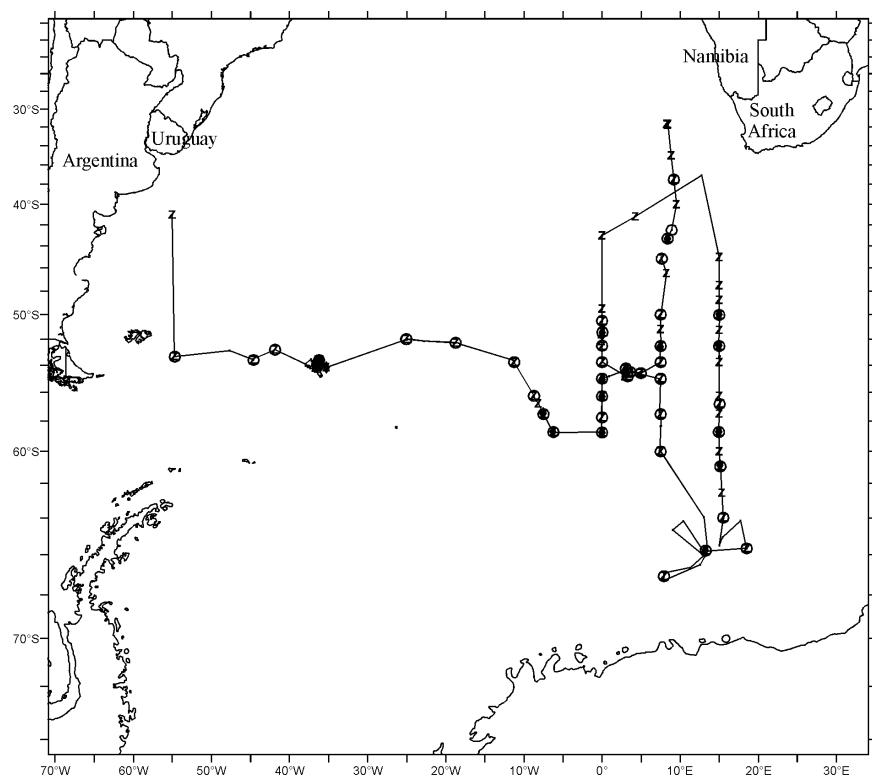
3.3 Fixed oceanographic stations 2008

(No of observations)

Fixed stations	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
LISTA N58° 05,1' E06° 32,5'	2	3	3	3	3	3	3	3	3	3	3	3	35
UTSIRA Y N59° 19' E04° 44'	1	1	0	1	3	1	2	2	2	1	1	3	18
UTSIRA I N59° 19' E04° 59'	1	1	0	1	3	1	2	2	2	1	1	3	18
SOGNESJØEN N61° 01' E04° 50'	1	1	2	3	4	3	2	3	3	1	2	2	27
BUD N62° 56' E06° 47'	0	1	1	2	1	2	2	2	2	0	1	1	15
SKROVA N68° 07' E14° 39'	4	4	4	4	5	5	4	4	5	1	1	3	44
EGGUM N68° 23' E13° 38'	3	3	3	3	2	3	3	3	2	3	2	2	32
INGØY N71° 08' E24° 01'	4	3	3	3	2	2	2	2	3	3	3	1	31

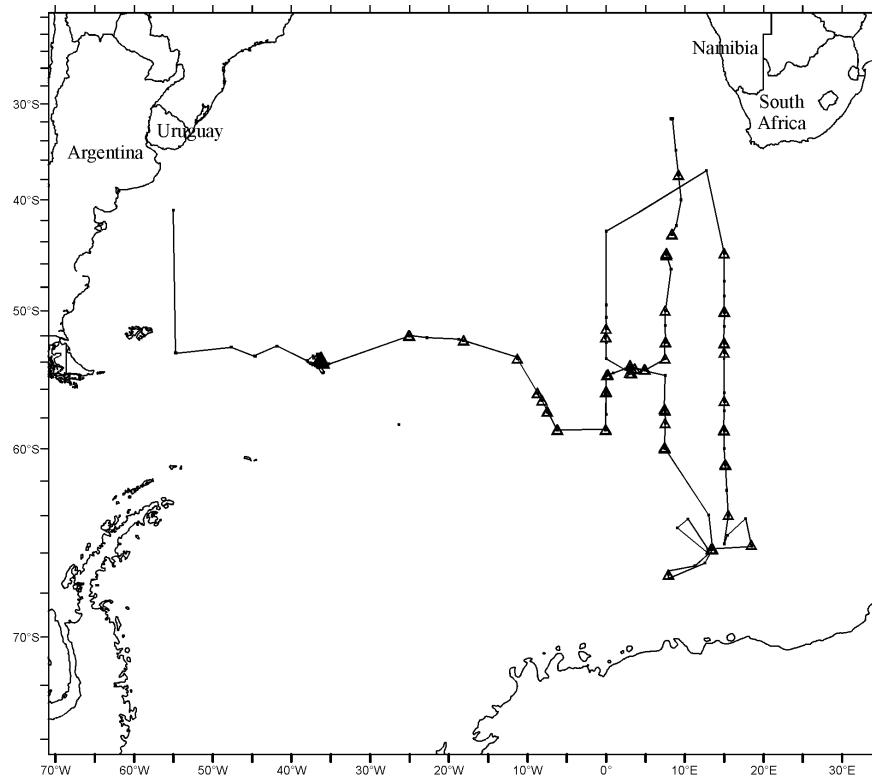
4 Charts for cruises 2008

4.1 G.O. Sars



Cruise no 2008101
“G.O. Sars”

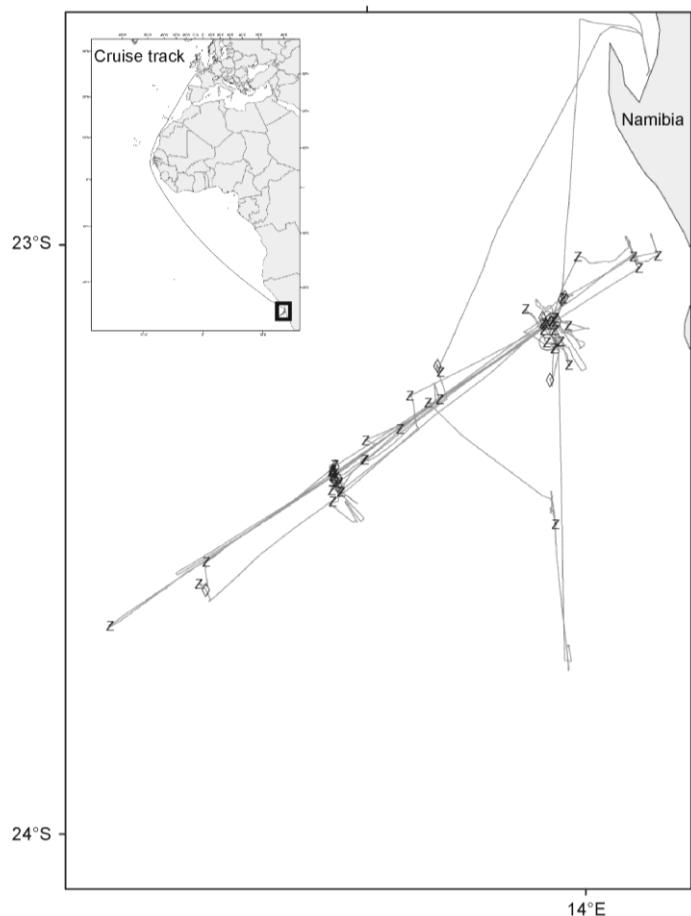
4 Jan–28 Mar 2008
z CTD st.no 1–124
o WP-II-net st.
◊ Mocness st.



Cruise no 2008101
“G.O. Sars”

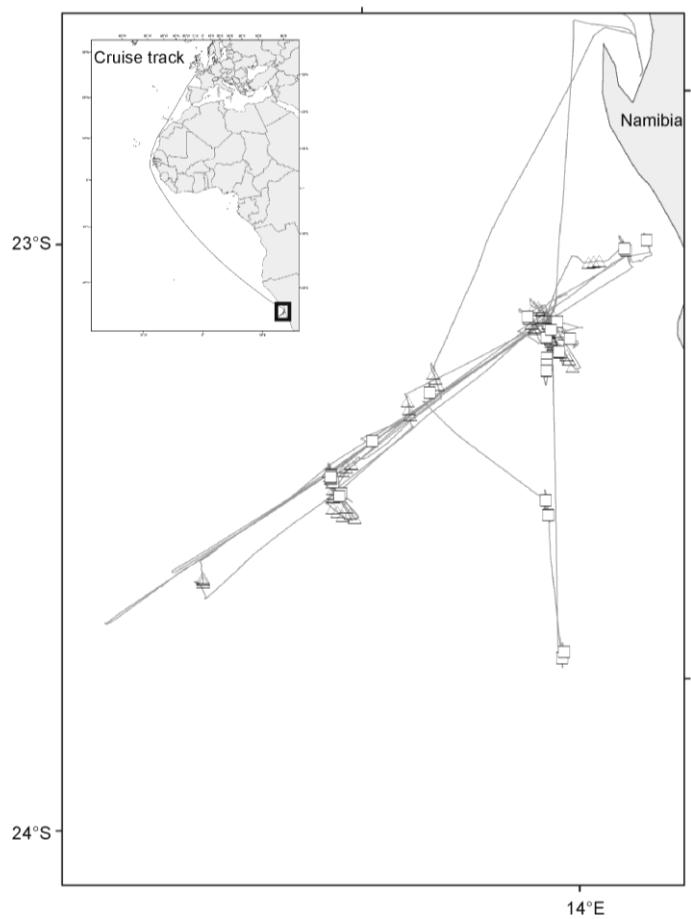
4 Jan–28 Mar 2008

Δ Trawl st. no 1–62



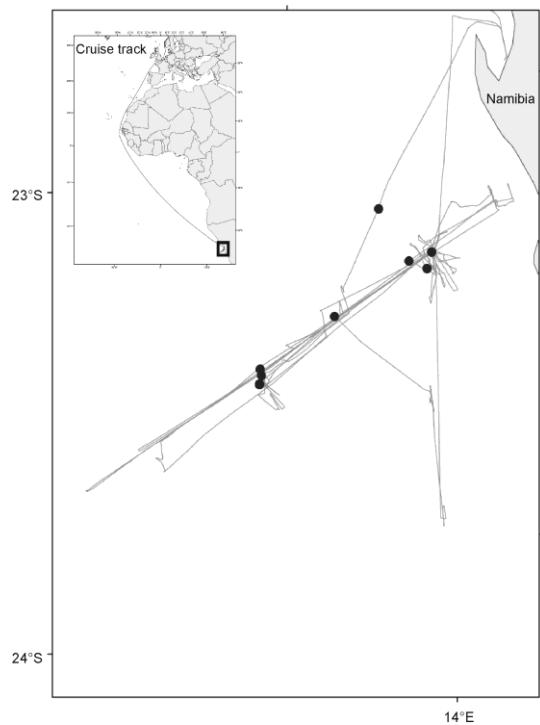
Cruise no 2008102
“G.O. Sars”
31 Mar–11 Apr 2008

z CTD st.no 125–176
o WP-II-net st.
◊ Mocness st.



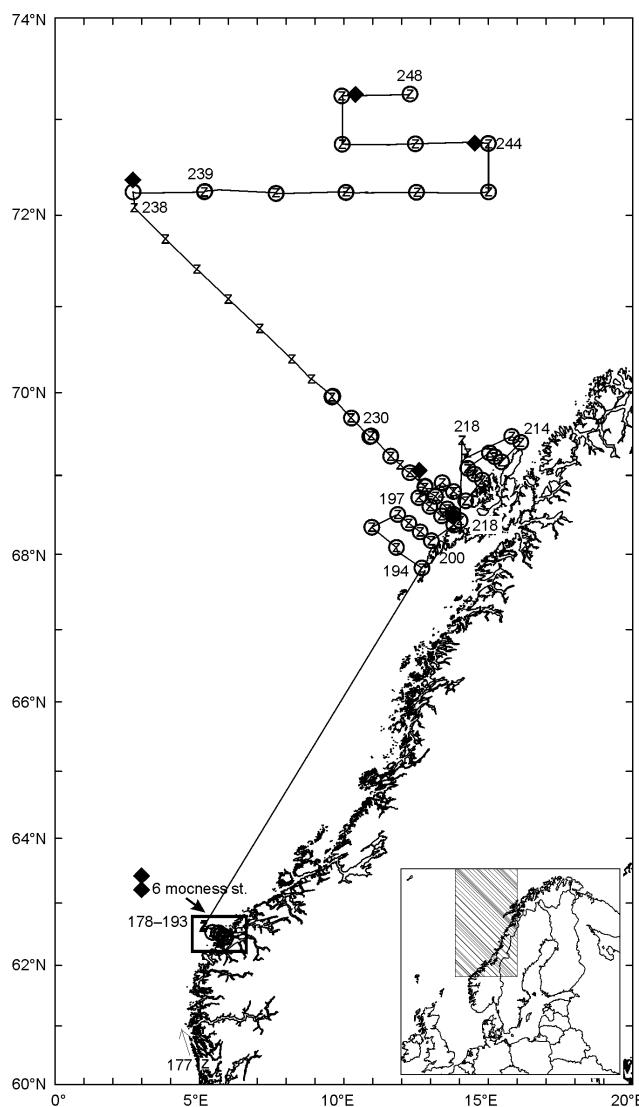
Cruise no 2008102
“G.O. Sars”
31 Mar–11 Apr 2008

Trawl st.no 63–104
Δ Pelagic trawl
□ Bottom trawl



Cruise no 2008102
“G.O. Sars”
31 Mar–11 Apr 2008

● Grab stations



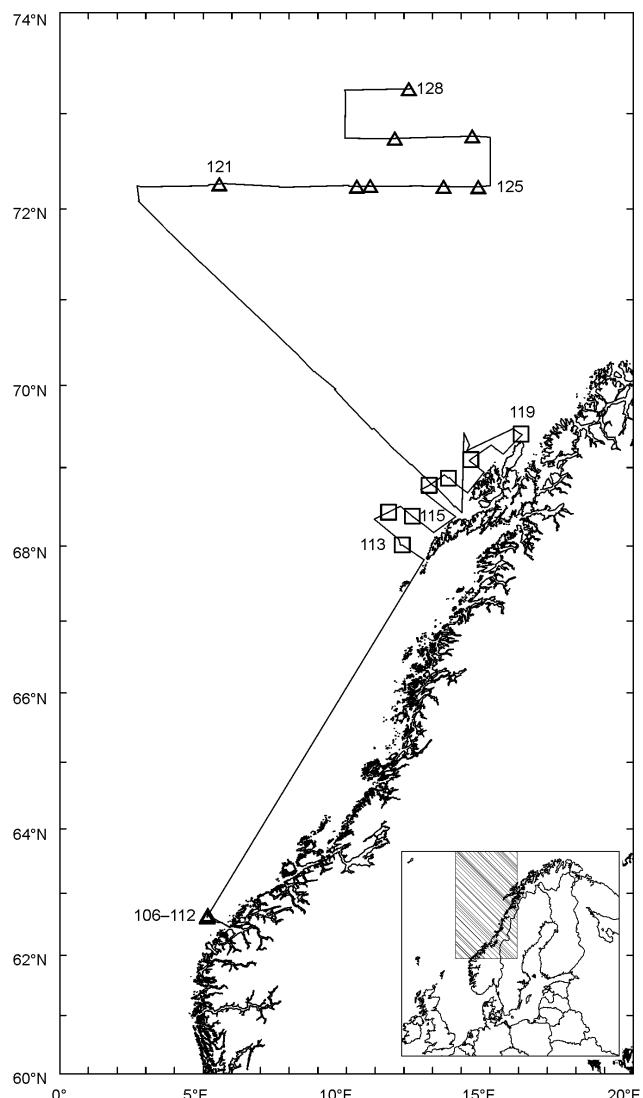
Cruise no 2008103
“G.O. Sars”
12–30 May 2008

z CTD st.no 177–248

○ Plankton st. (WP-II-net)

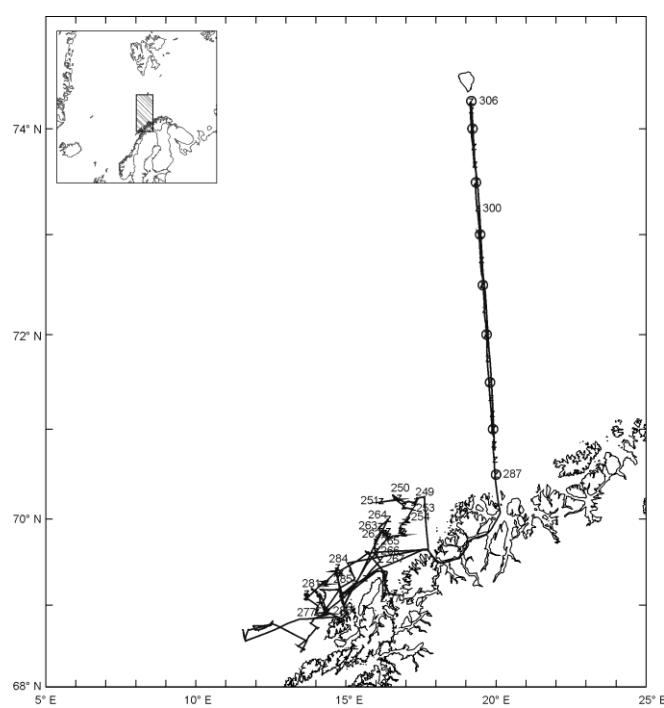
◆ Plankton st. (Mocness)

○ Standard sections
Gimsøy-NW st.no 118–238



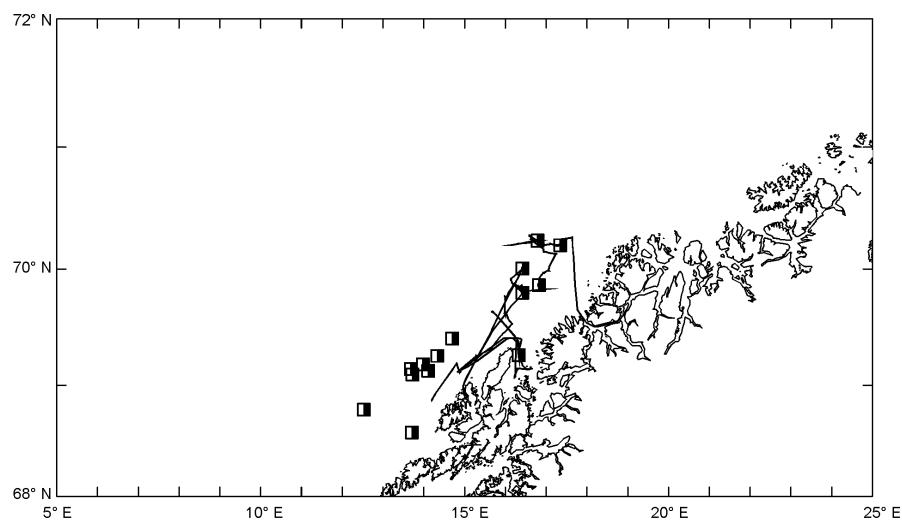
Cruise no 2008103
“G.O. Sars”
12–30 May 2008

Trawl st.no 106–128
Δ Pelagic trawl
□ Bottom trawl



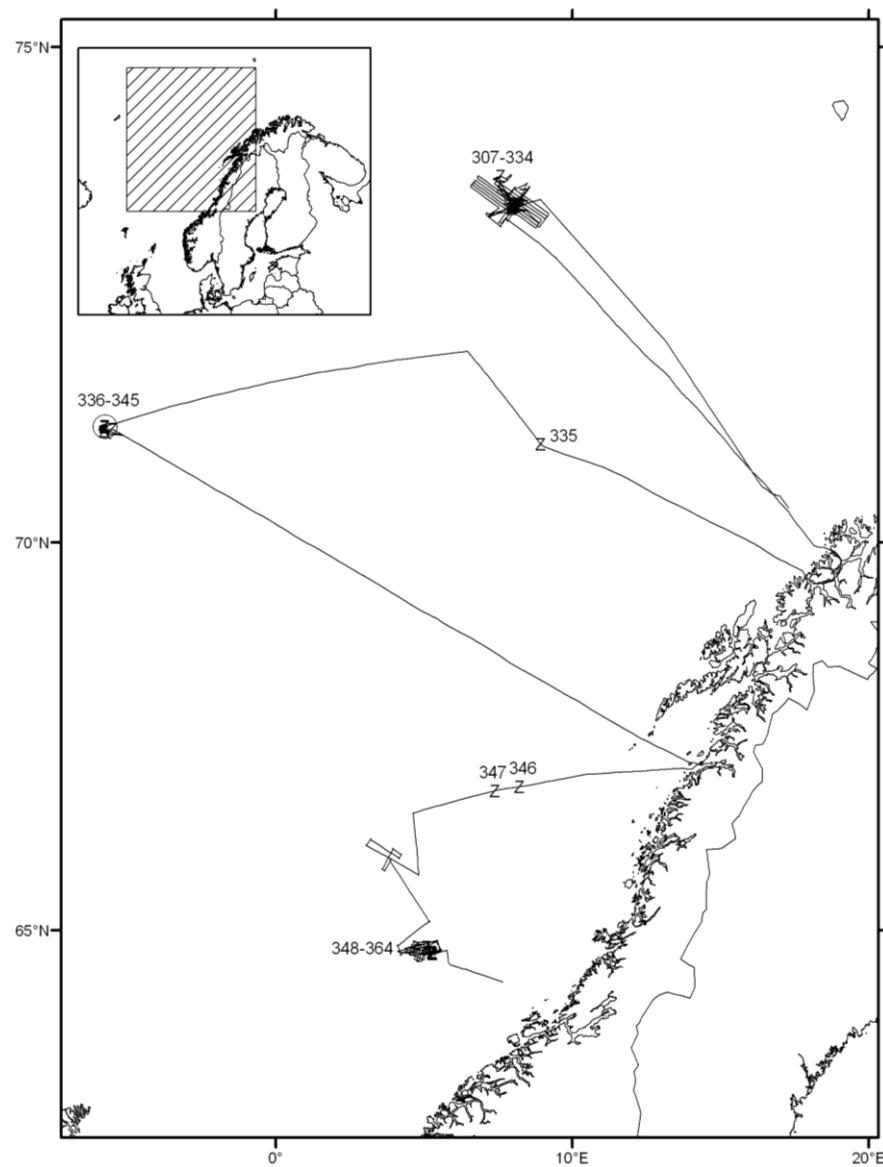
Cruise no 2008104
“G.O. Sars”
1–28 June 2008

z CTD st.no 249–306
○ Plankton st. (WP-II-net)
Standard section
Fugløya–Bjørnøya st.no 287–306



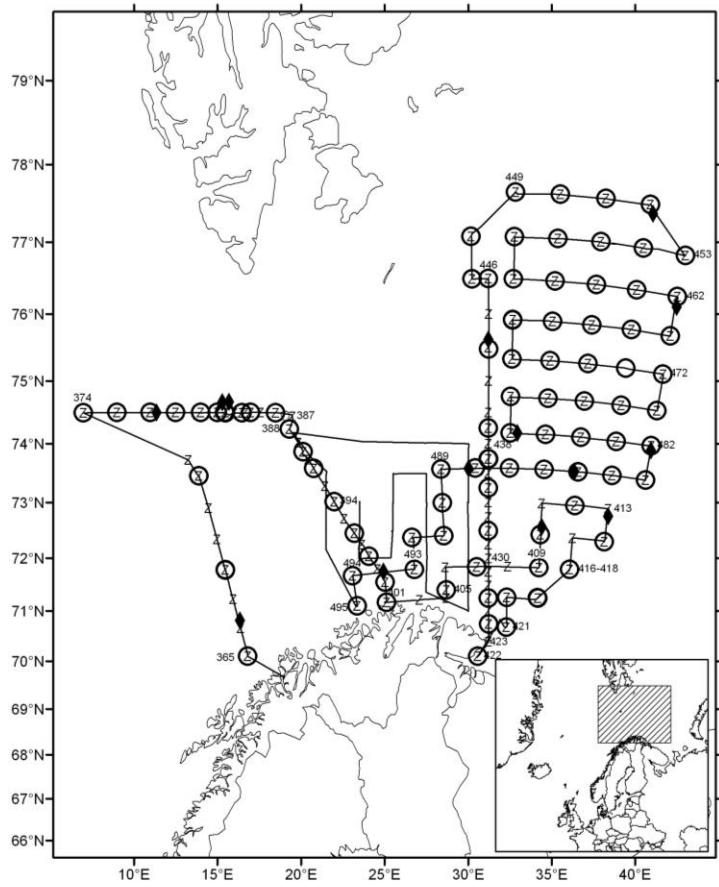
Cruise no 2008104
“G.O. Sars”
1–28 June 2008

□ ■ Grab stations



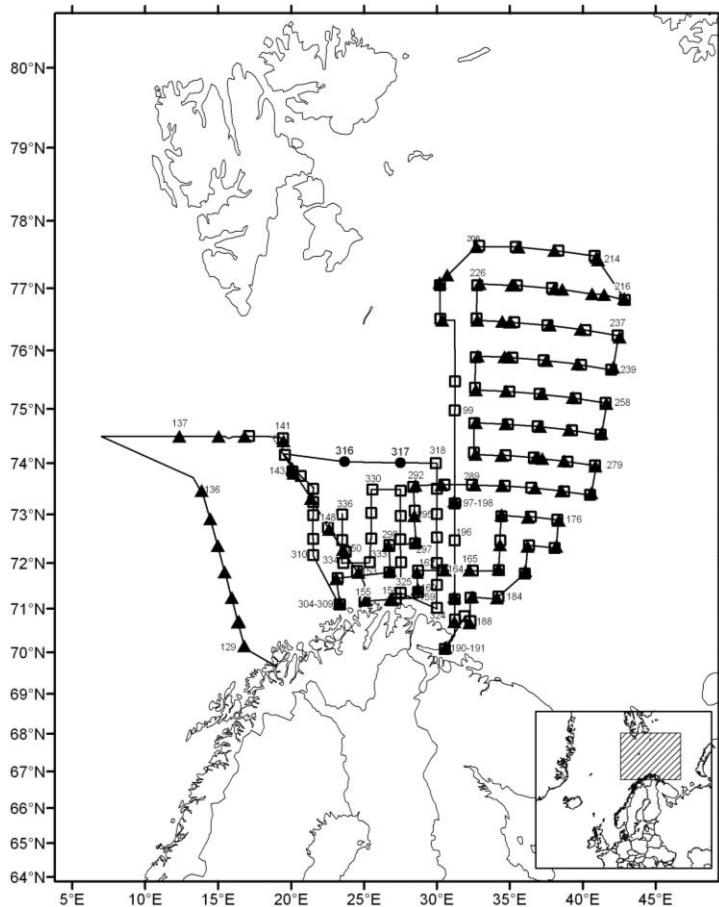
Cruise no 2008105
“G.O. Sars”
2 July–10 Aug 2008

z CTD st.no 307–364
○ Plankton st. (WP-II-net)



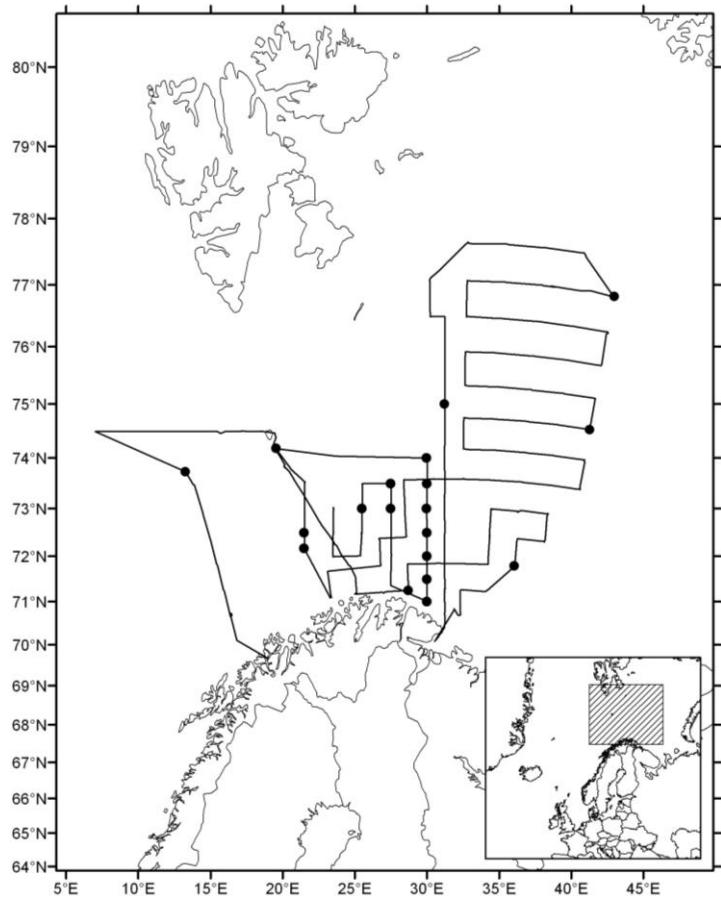
Cruise no 2008106
“G.O. Sars”
19 Aug–30 Sep 2008

z CTD st.no 365–495
○ Plankton st. (WP-II-net)
◆ Plankton st. (Mocness)
Standard sections
Bjørnøya-W: st.no 374–386



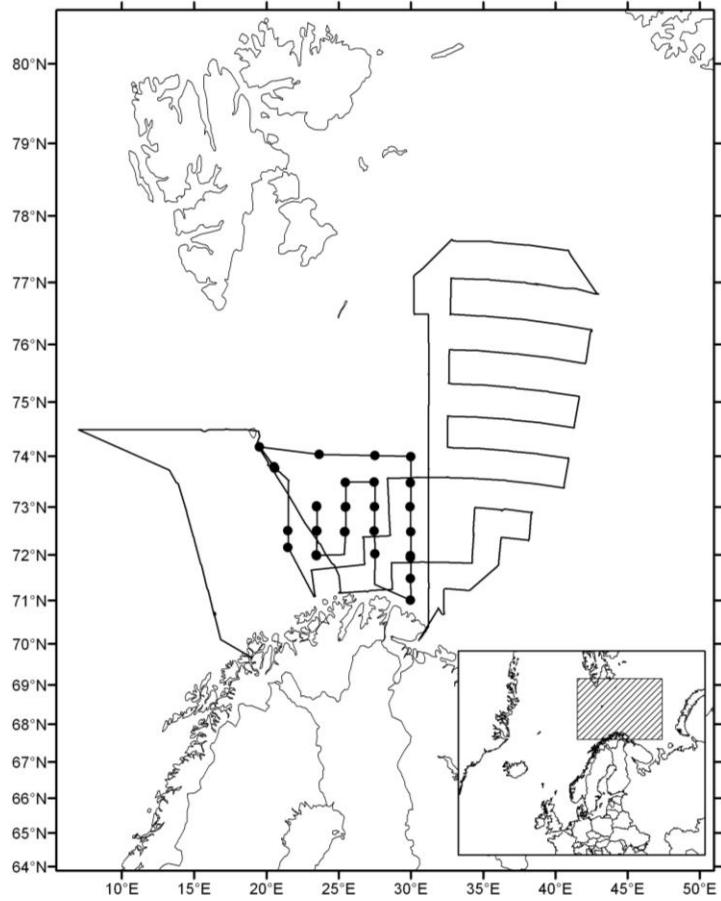
Cruise no 2008106
“G.O. Sars”
19 Aug–30 Sep 2008

Trawl st.no 129–336
▲ Pelagic trawl
□ Bottom trawl
● St.no 316 and 317 are beamtrawl



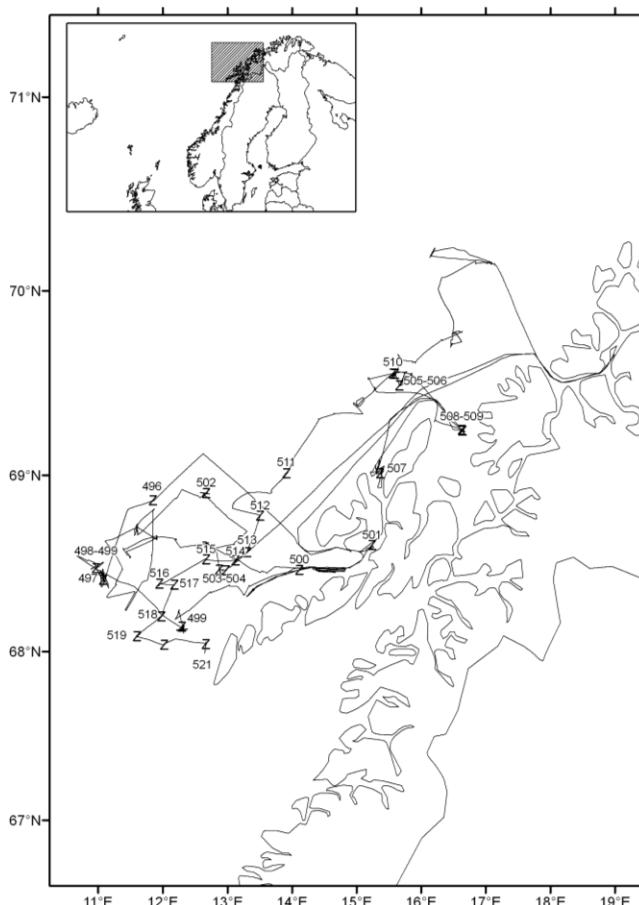
Cruise no 2008106
“G.O. Sars”
19 Aug–30 Sep 2008

● Grab stations



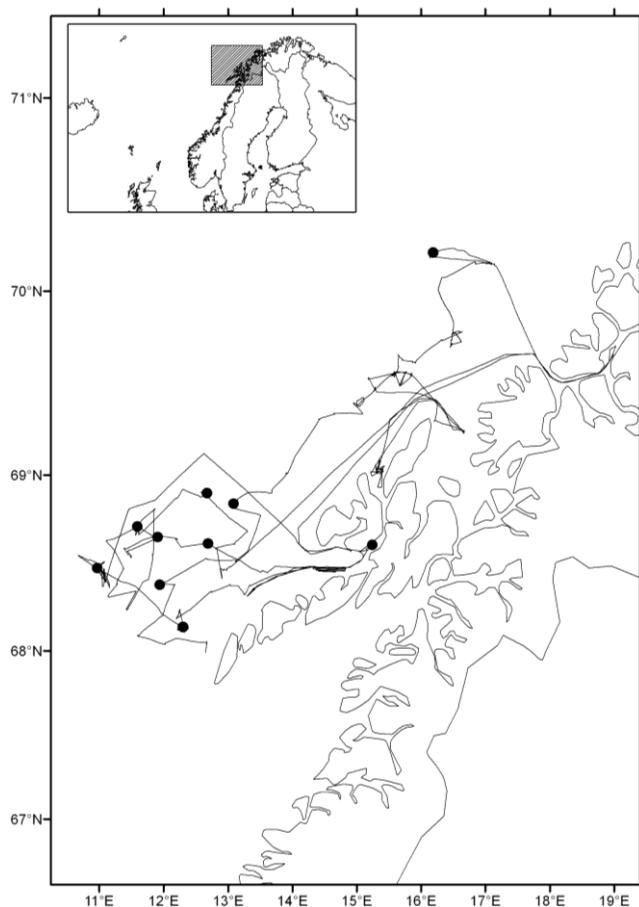
Cruise no 2008106
“G.O. Sars”
19 Aug–30 Sep 2008

● Beam trawl stations



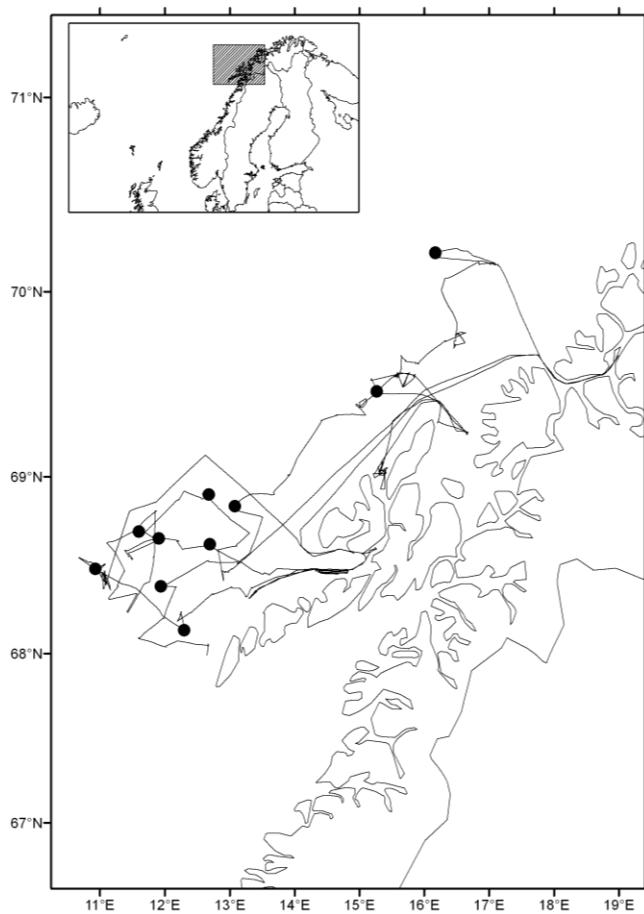
Cruise no 2008114
“G.O. Sars”
2–31 Oct 2008

z CTD st.no 496–521



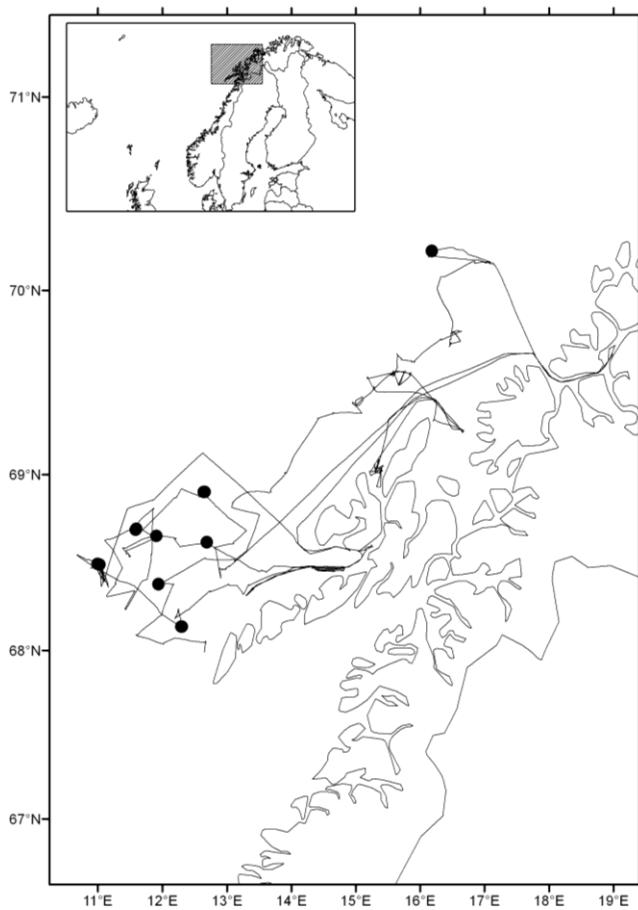
Cruise no 2008114
“G.O. Sars”
2–31 Oct 2008

● Grab stations



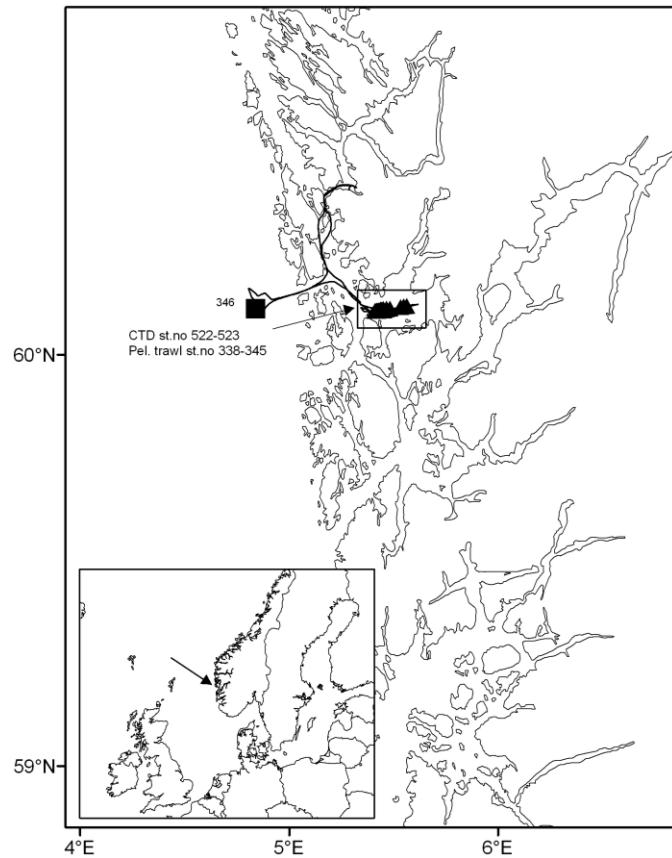
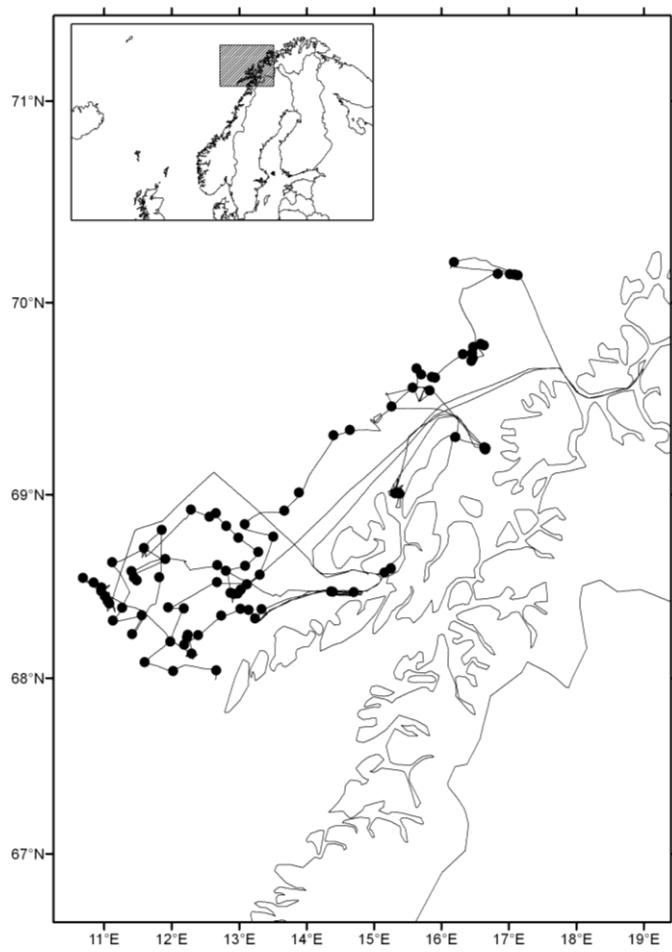
Cruise no 2008114
“G.O. Sars”
2–31 Oct 2008

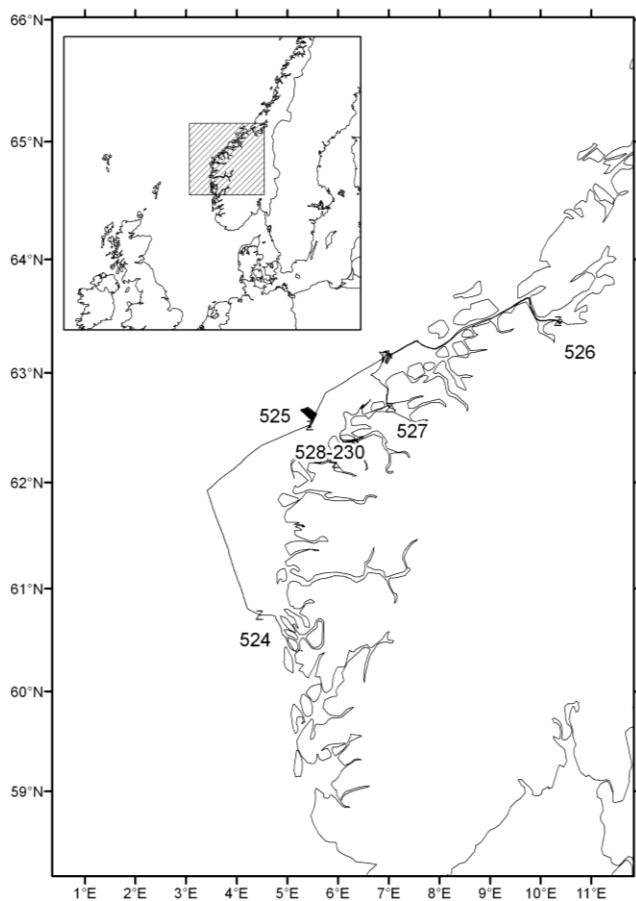
● Beam trawl stations



Cruise no 2008114
“G.O. Sars”
2–31 Oct 2008

● Sled stations



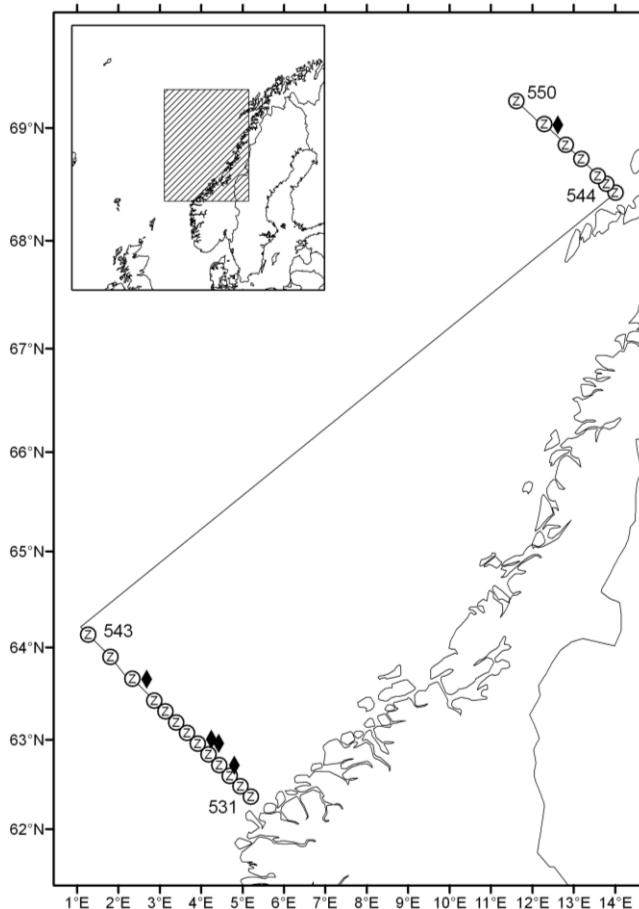


Cruise no 2008110

“G.O. Sars”

5–11 Nov 2008

z CTD st.no 524–530



Cruise no 2008111

“G.O. Sars”

13–20 Nov 2008

z CTD st.no 531–550

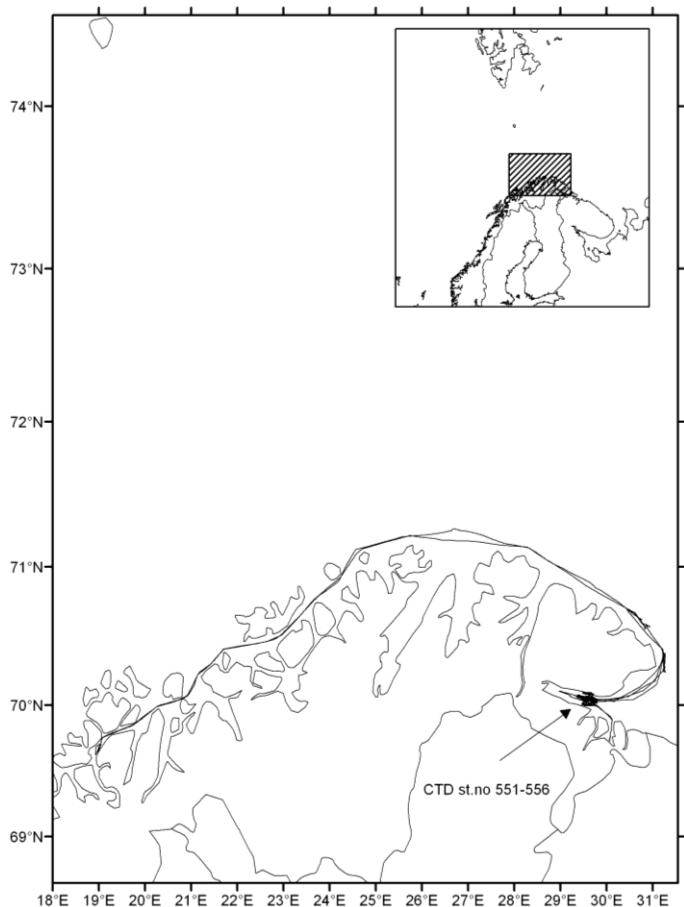
○ Plankton st. (WP-II-net)

◆ Plankton st. (Mocness)

Standard sections:

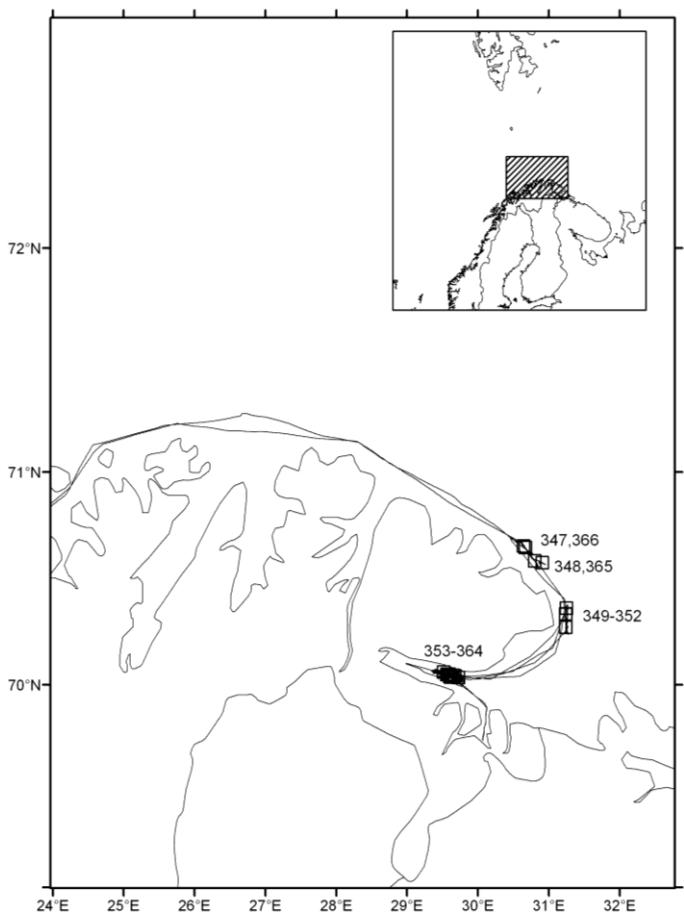
Svinøy-NW: st.no 531–543

Gimsøy-NW: st.no 544–550



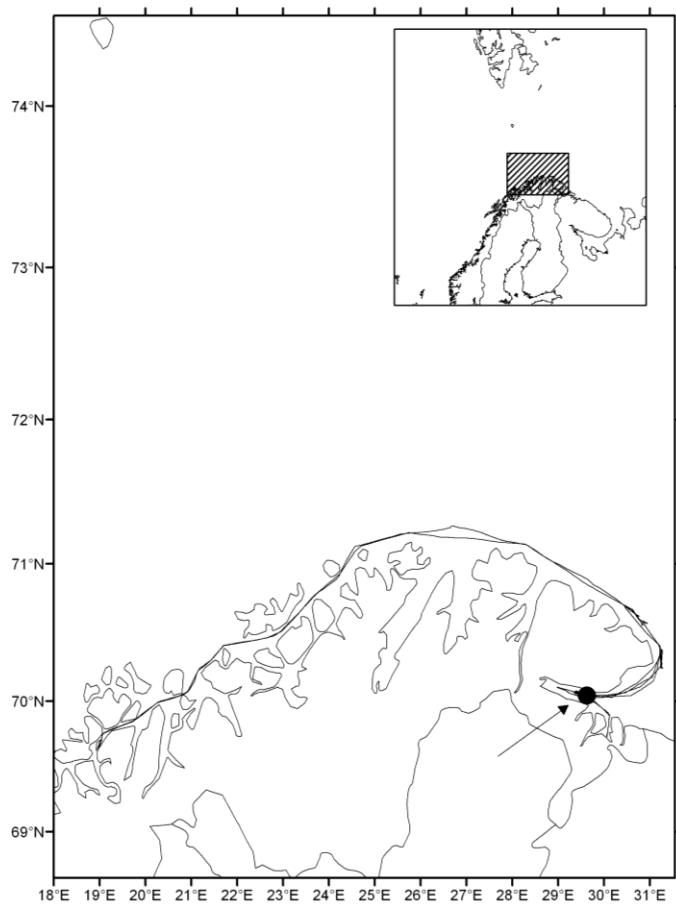
Cruise no 2008107
“G.O. Sars”
22 Nov–3 Dec 2008

z CTD st.no 551–561



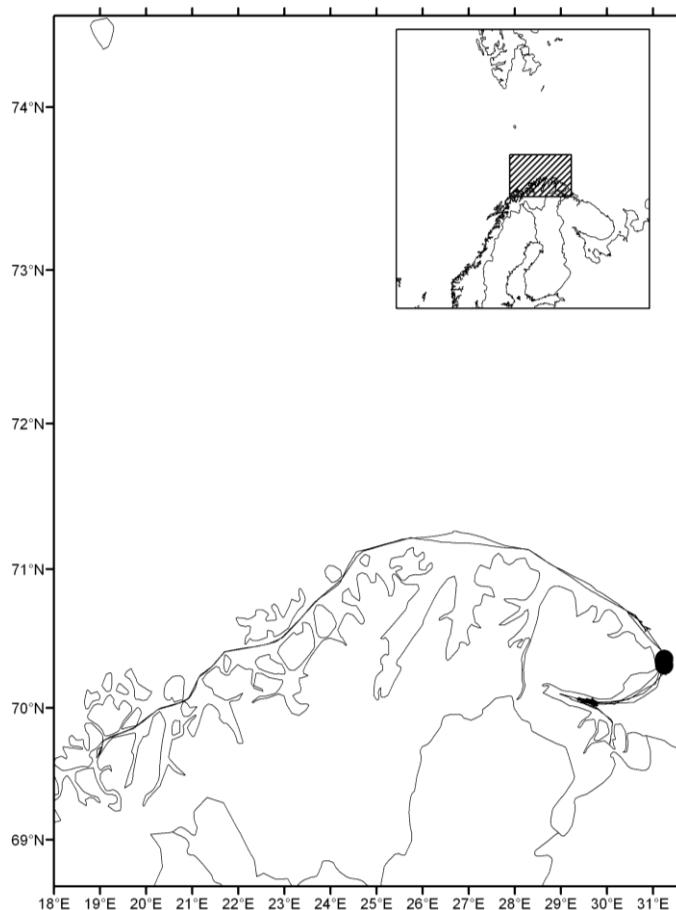
Cruise no 2008107
“G.O. Sars”
22 Nov–3 Dec 2008

□ Bottom trawl st.no 347–366



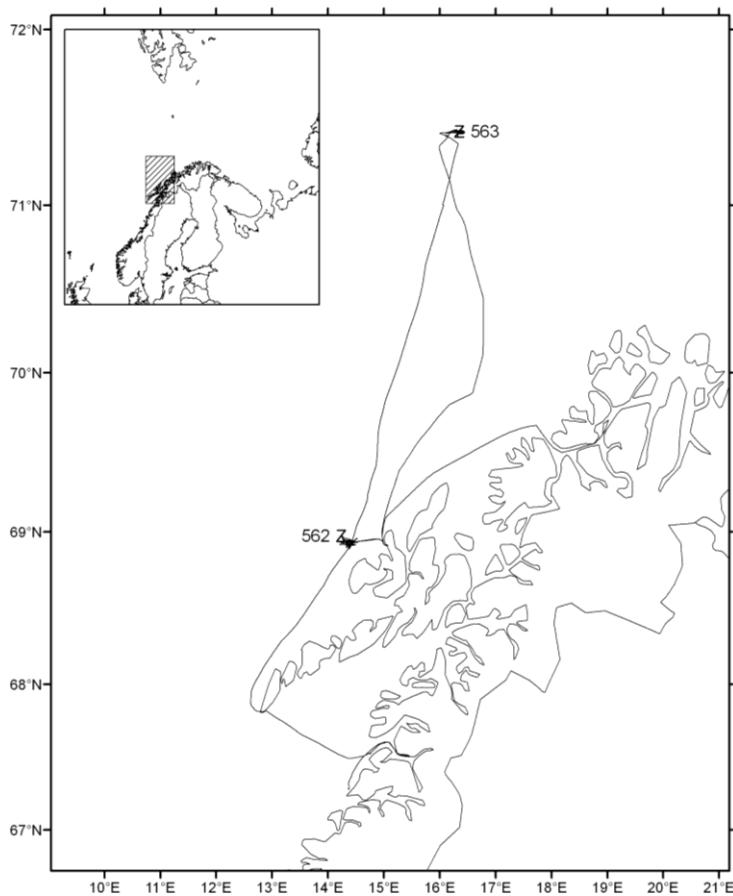
Cruise no 2008107
“G.O. Sars”
22 Nov–3 Dec 2008

● Grab station



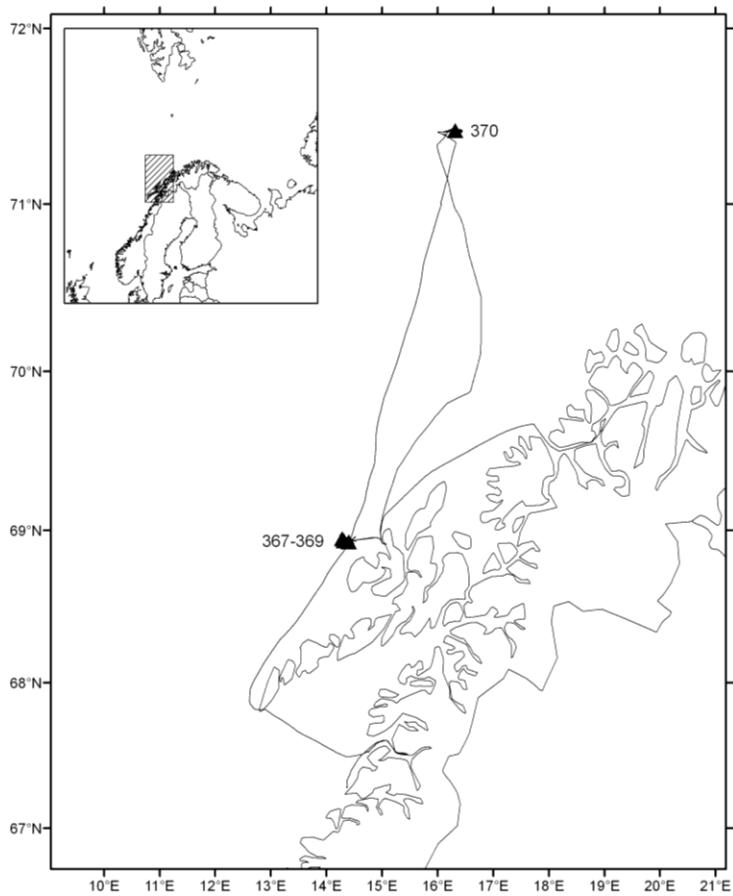
Cruise no 2008107
“G.O. Sars”
22 Nov–3 Dec 2008

● 3 ROV stations



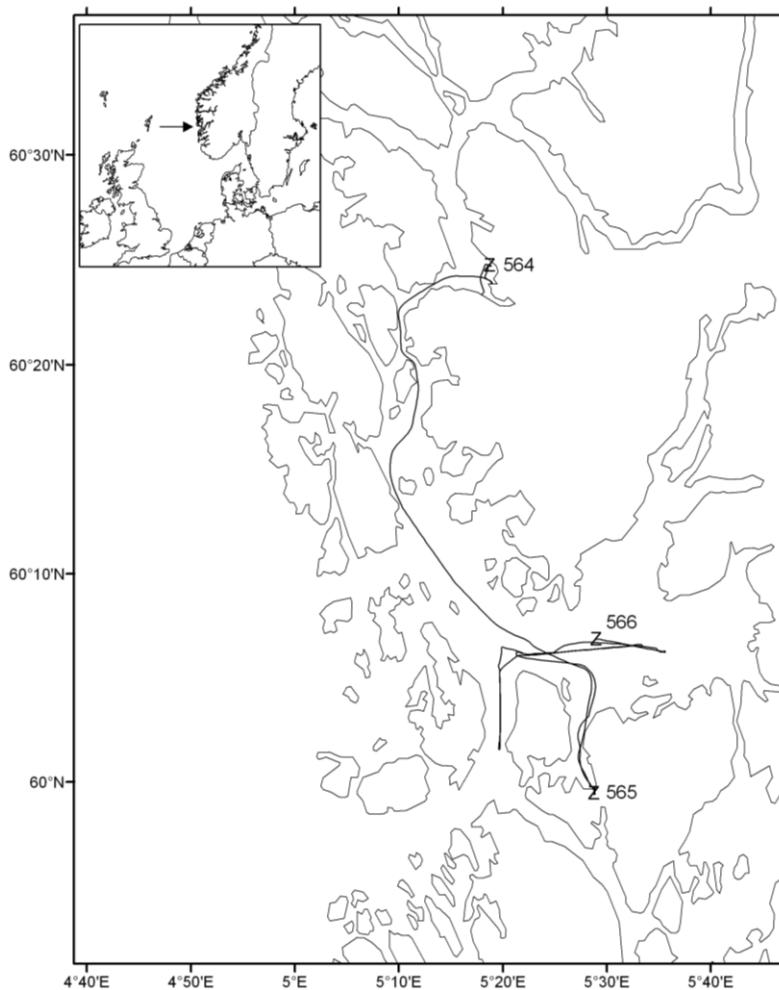
Cruise no 2008115
“G.O. Sars”
4–11 Dec 2008

z CTD st.no. 562–563



Cruise no 2008115
“G.O. Sars”
4–11 Dec 2008

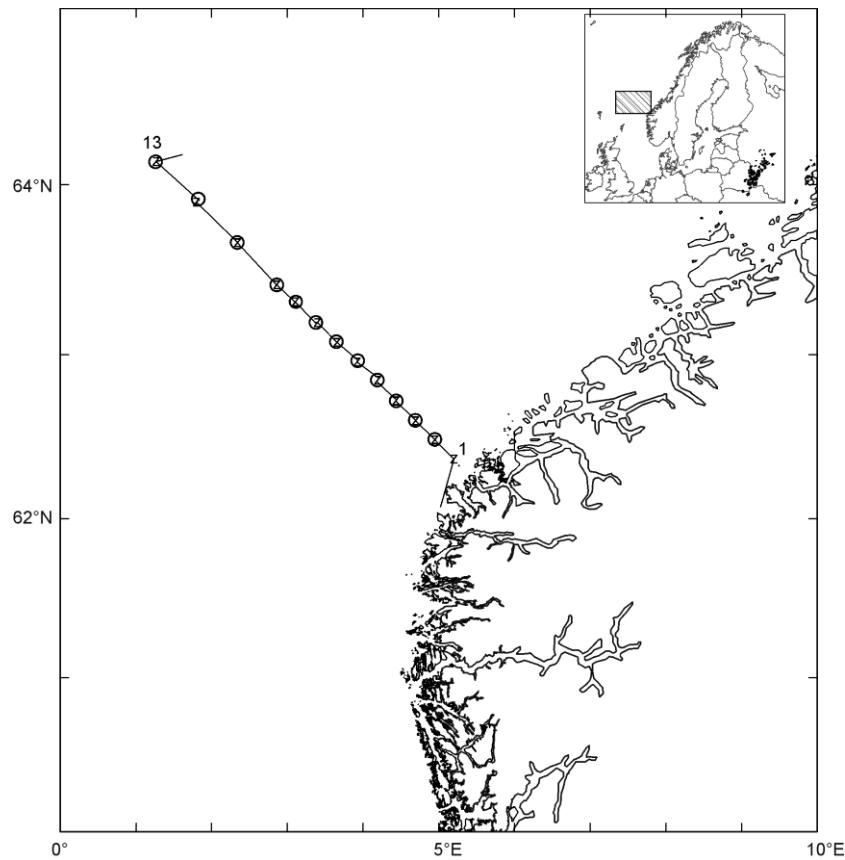
▲ Pelagic trawl st.no 367–370



Cruise no 2008117
“G.O. Sars”
15–19 Dec 2008

z CTD st.no 564–566

4.2 Johan Hjort



Cruise no 2008201

“Johan Hjort”

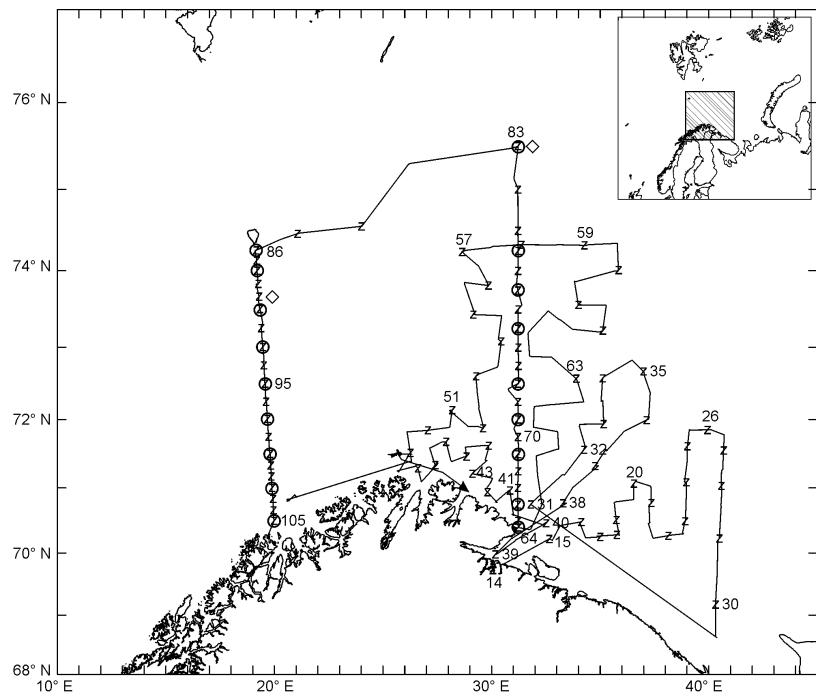
25–31 Jan 2008

z CTD st.no 1–13

o Plankton st. (WP-II-net)

Standard section:

Svinøy-NW: st.no 1–13



Cruise no 2008202

“Johan Hjort”

1 Feb–14 Mar 2008

z CTD st.no 14–105

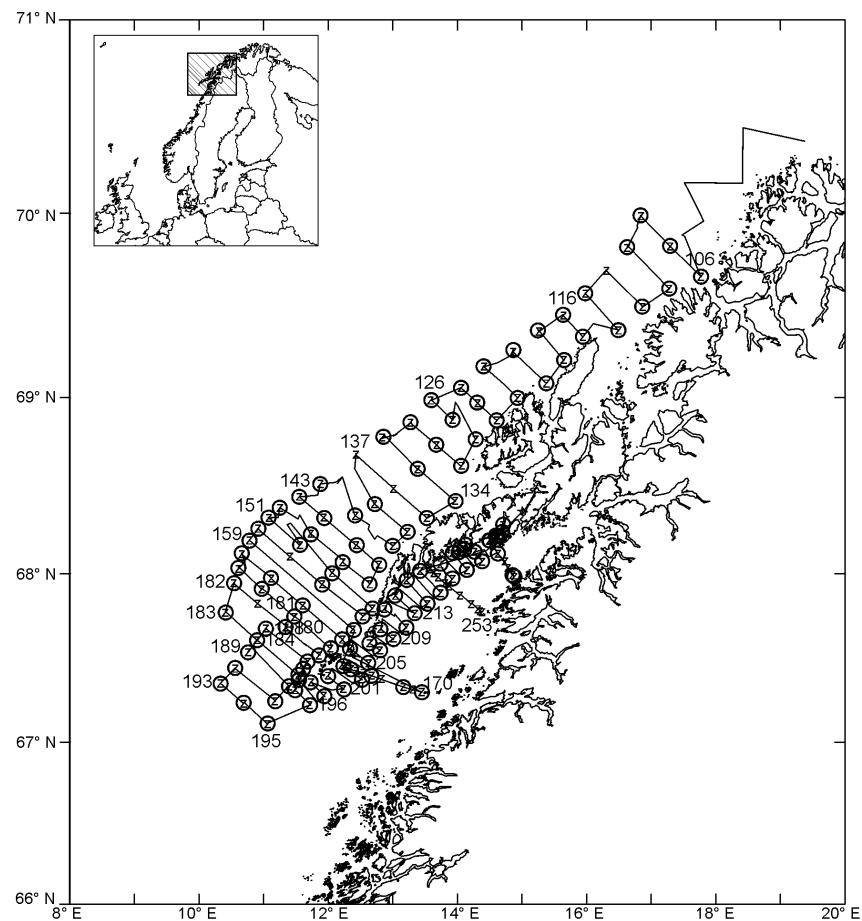
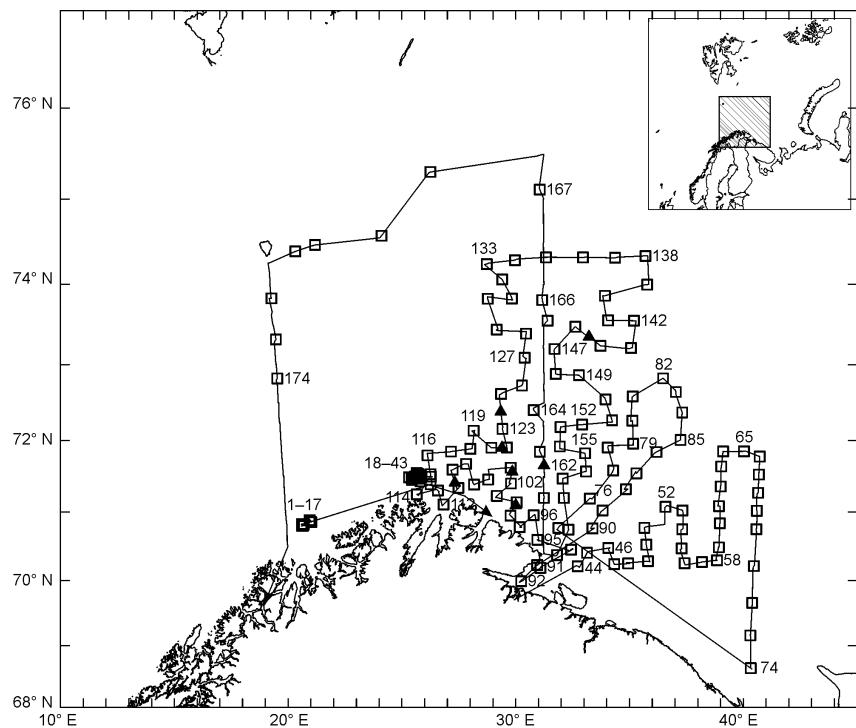
o Plankton st. (WP-II-net)

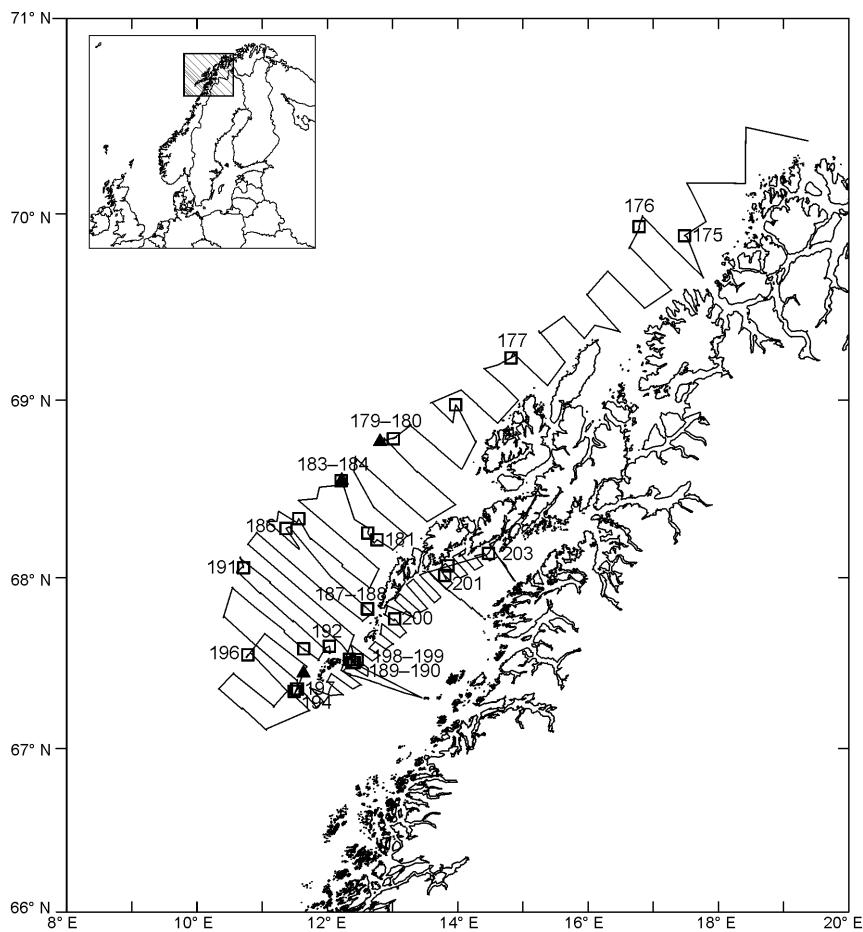
◊ Plankton st. (Mocness)

Standard sections:

Vardø-N: st.no 64–83

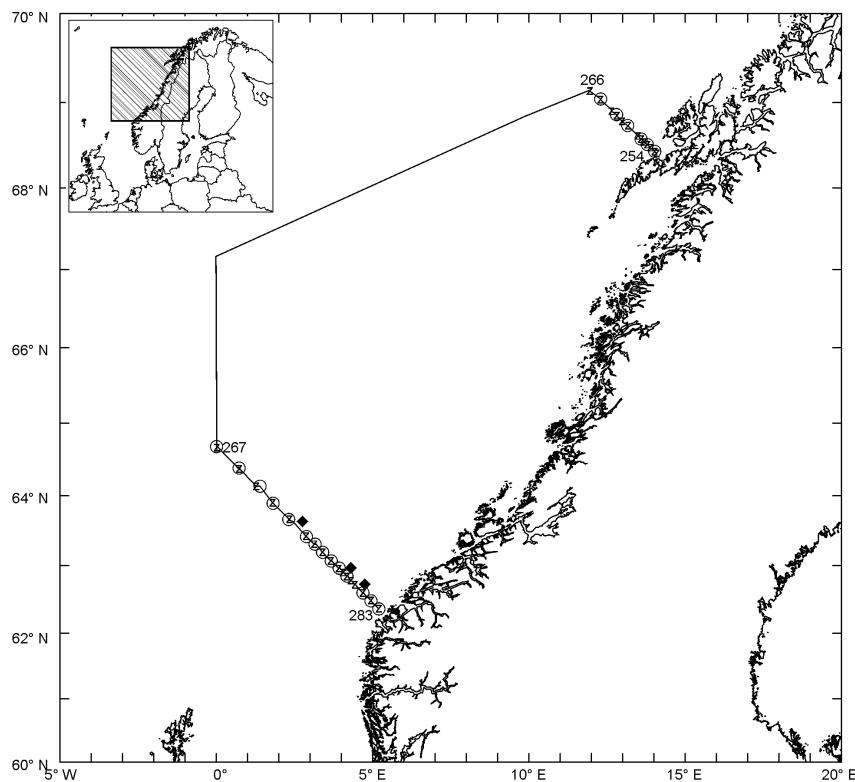
Fugløya–Bjørnøya st.no 86–105





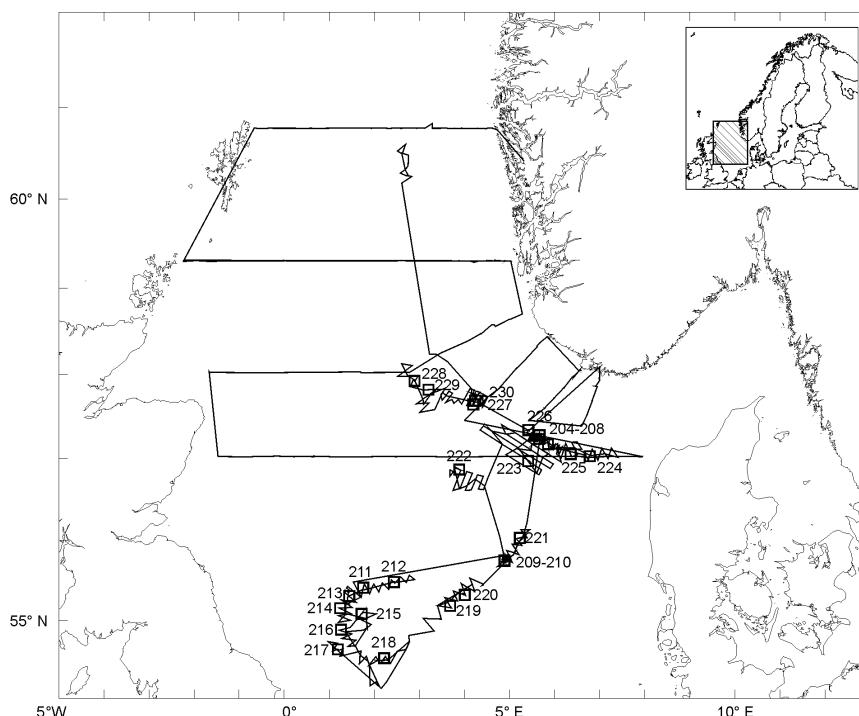
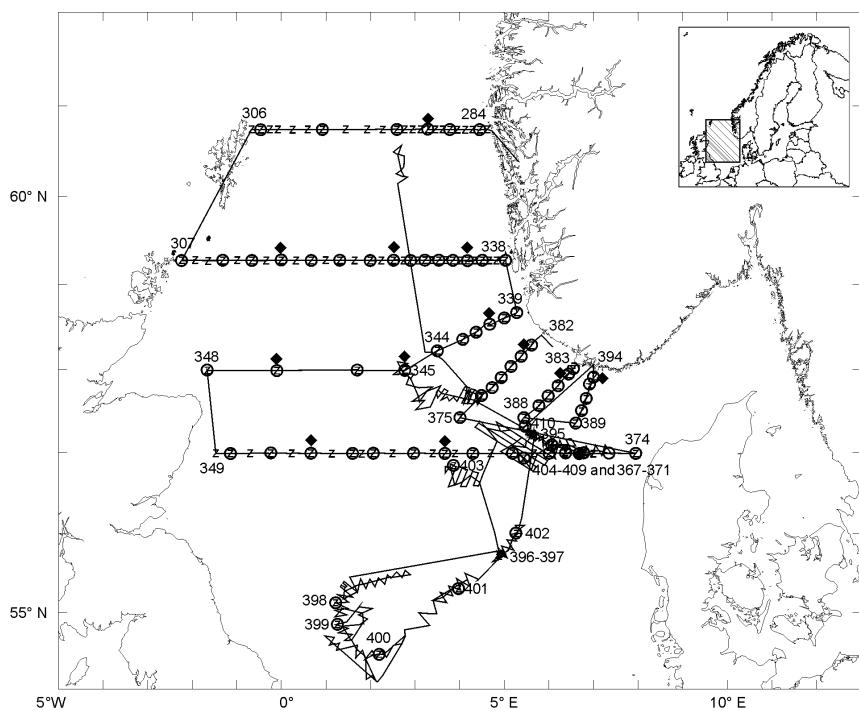
Cruise no 2008203
“Johan Hjort”
17 Mar–5 Apr 2008

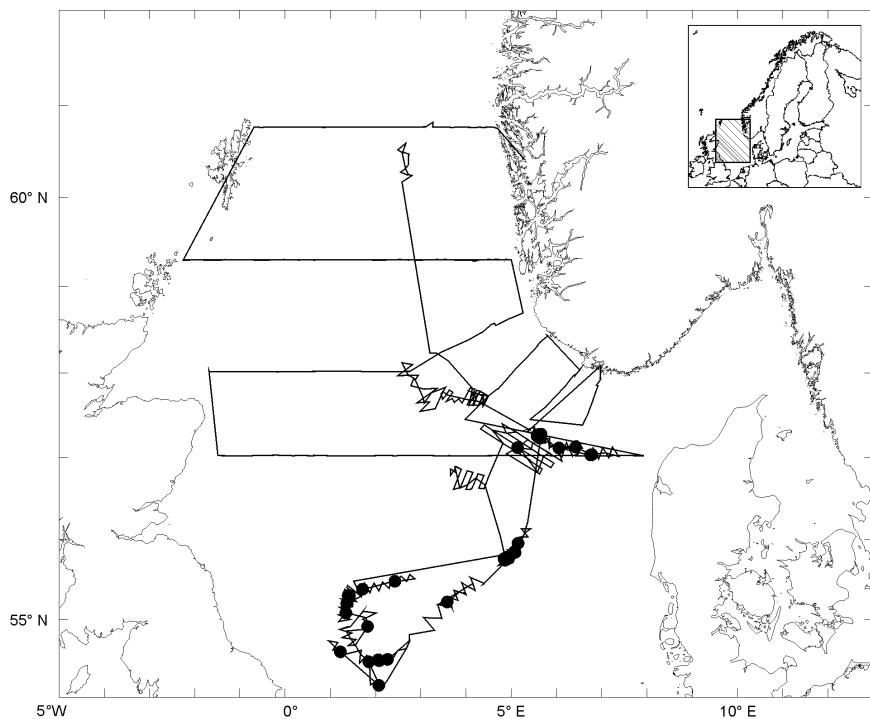
Trawl st.no 175–203
□ Bottom trawl
▲ Pelagic trawl



Cruise no 2008204
“Johan Hjort”
5–10 Apr 2008

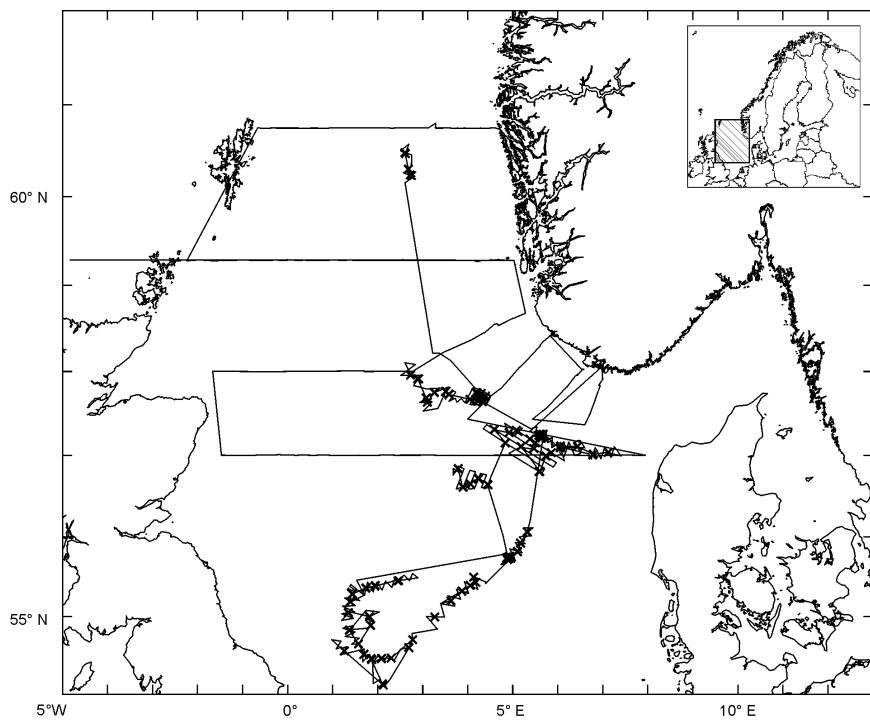
z CTD st.no 254–283
o Plankton st. (WP-II-net)
◆ Plankton st. (Mocness)
Standard sections:
Gimsøy-NW st.no 254–266
Svinøy-NW st.no 267–283





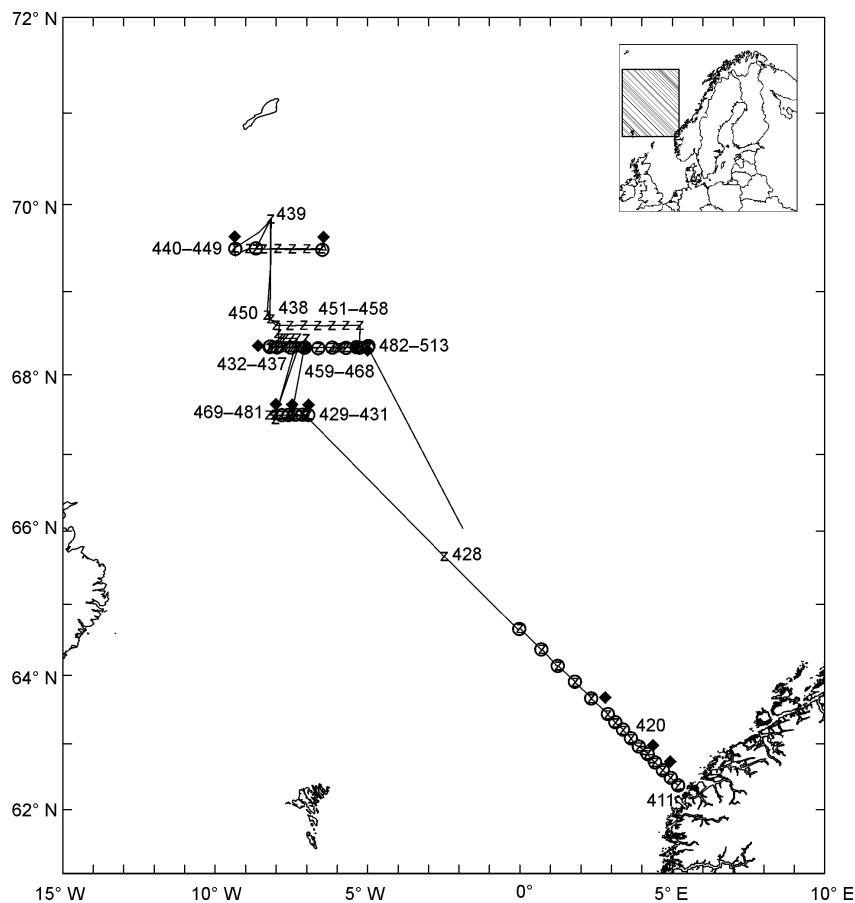
Cruise no 2008205
“Johan Hjort”
12 Apr–19 May 2008

● Grab stations



Cruise no 2008205
“Johan Hjort”
12 Apr–19 May 2008

X Skrake stations



Cruise no 2008206

“Johan Hjort”

22 May–8 June 2008

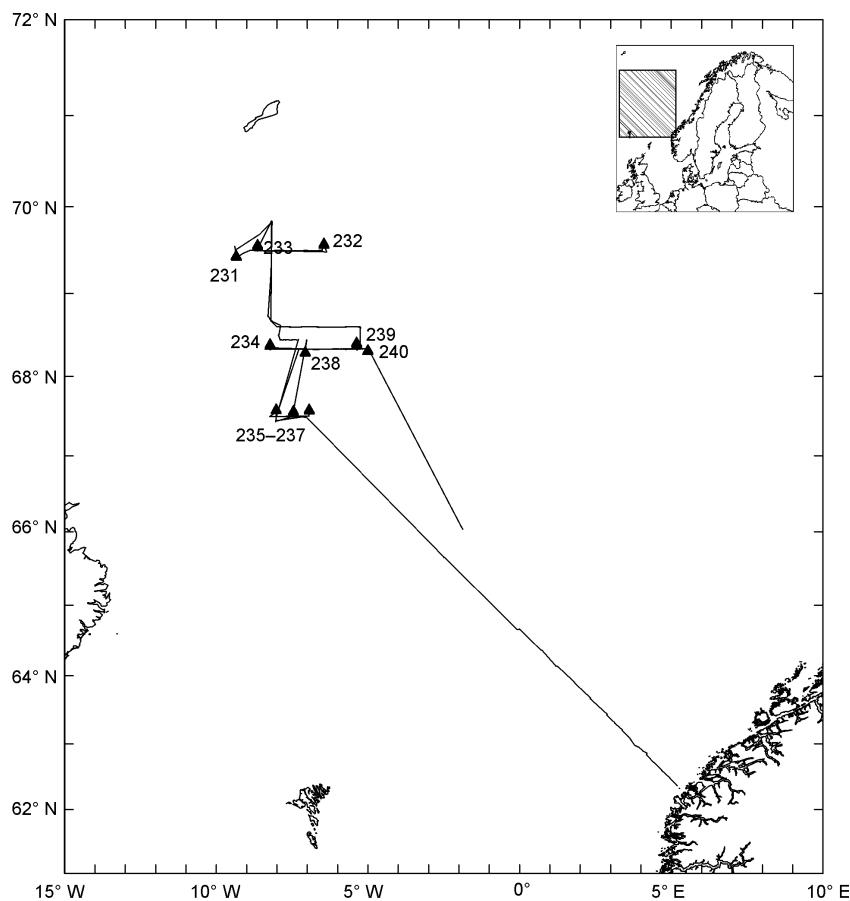
z CTD st.no 411–513

o Plankton st. (WP-II-net)

♦ Plankton st. (Mocness)

Standard sections:

Svinøy-NW st.no 411–427

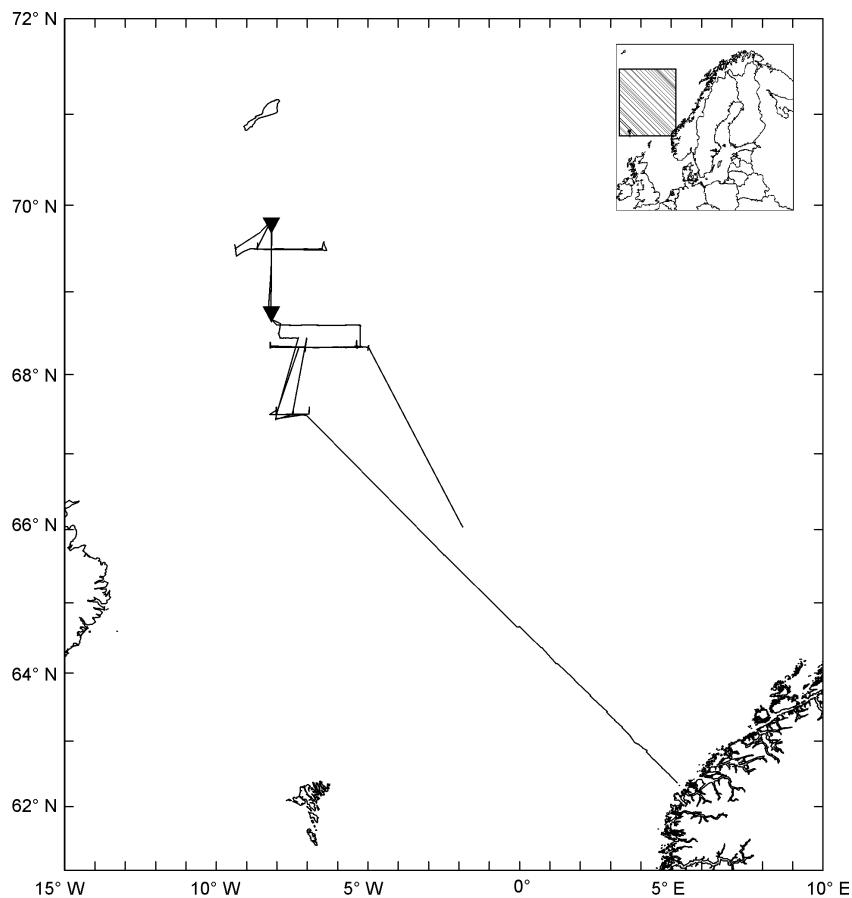


Cruise no 2008206

“Johan Hjort”

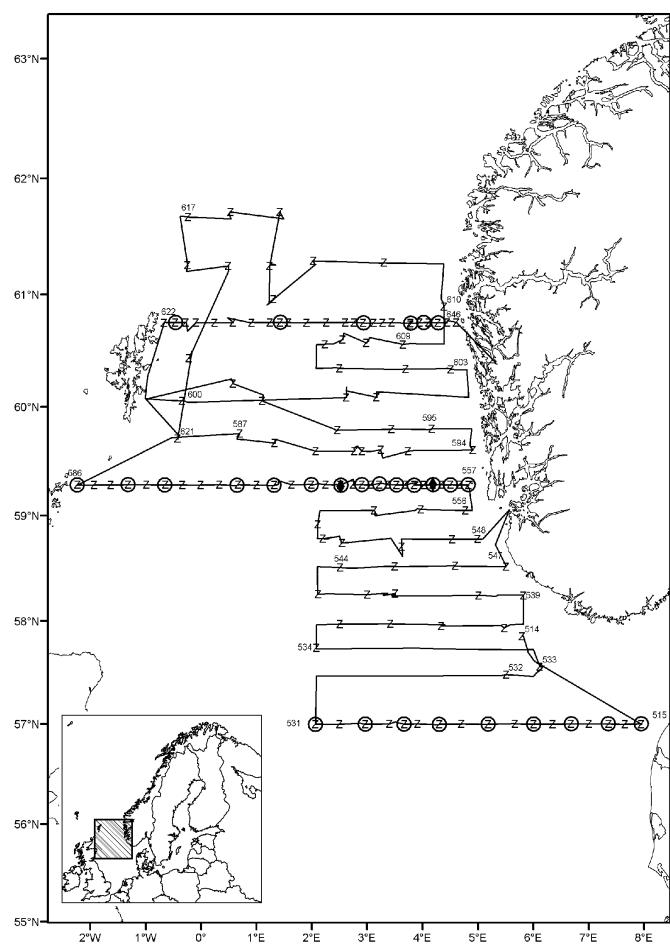
22 May–8 June 2008

▲ Pelagic trawl st.no 231–240



Cruise no 2008206
“Johan Hjort”
22 May–8 June 2008

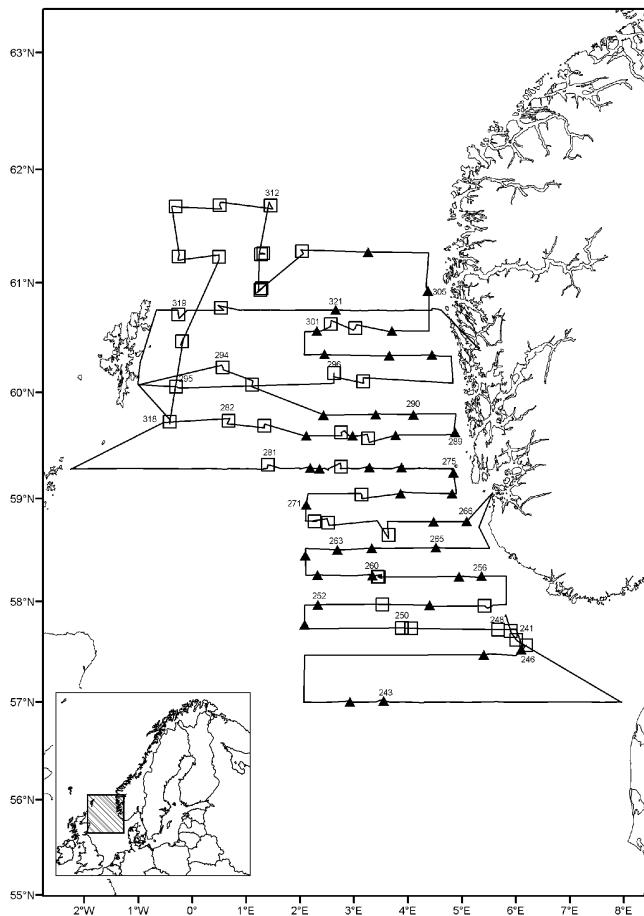
▼ Recovered/deployed moorings



Cruise no 2008207
“Johan Hjort”
8–31 July 2008

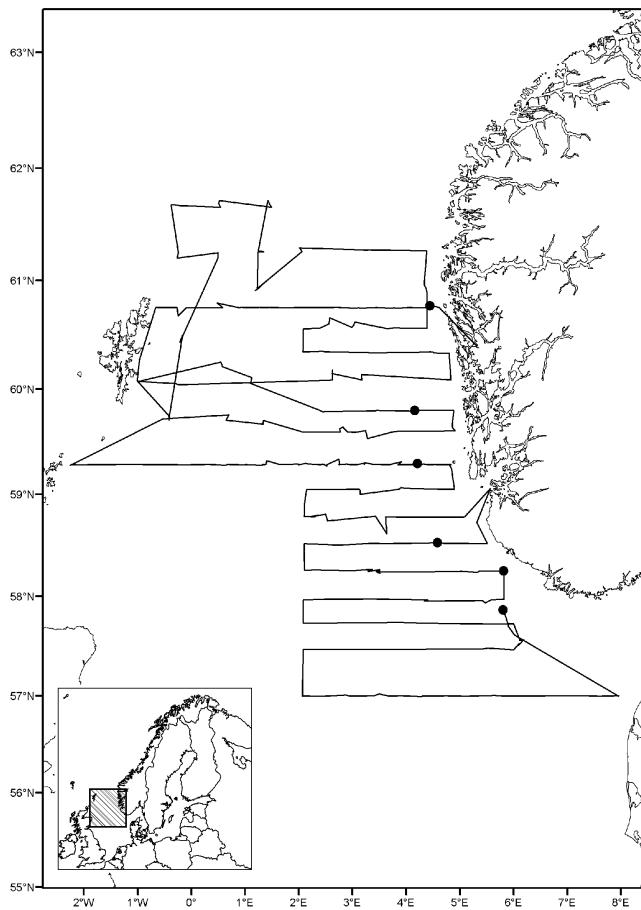
z CTD st.no 514–646
o Plankton st. (WP-II-net)
♦ Plankton st. (Mocness)

Standard sections:
Hanstholm–Aberdeen
(partly) st.no 515–531
Utsira-W st.no 557–586
Fedje–Shetland st.no 622–646



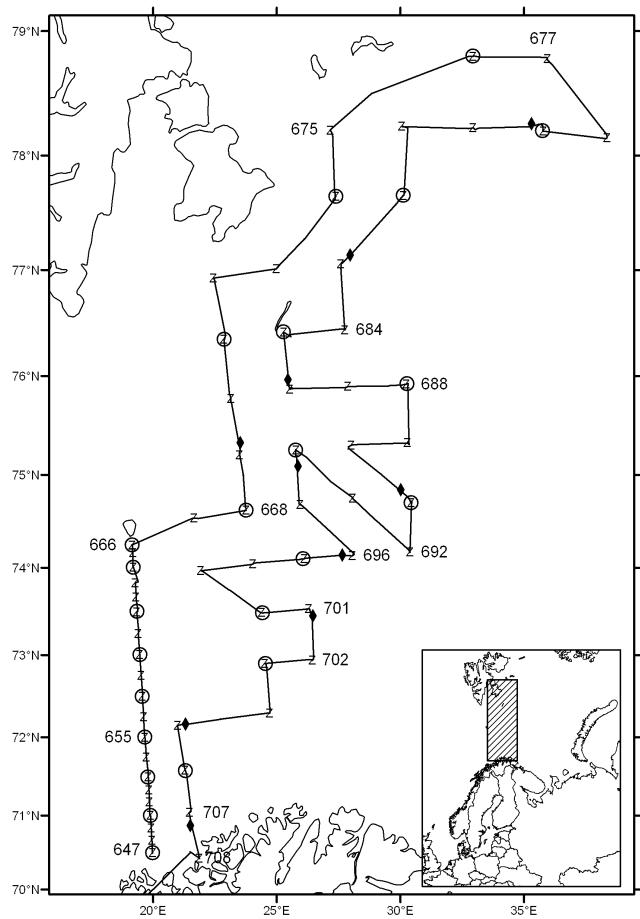
Cruise no 2008207
“Johan Hjort”
8–31 July 2008

Trawl st.no 241–321
▲ Pelagic trawl
□ Bottom trawl



Cruise no 2008207
“Johan Hjort”
8–31 July 2008

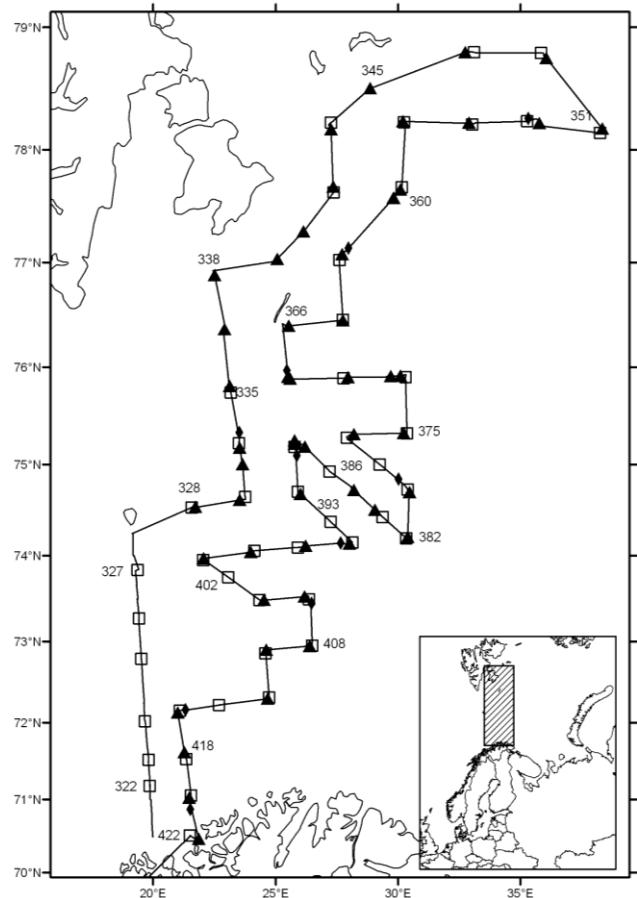
● Grab stations



Cruise no 2008208
“Johan Hjort”
1–16 Sep 2008

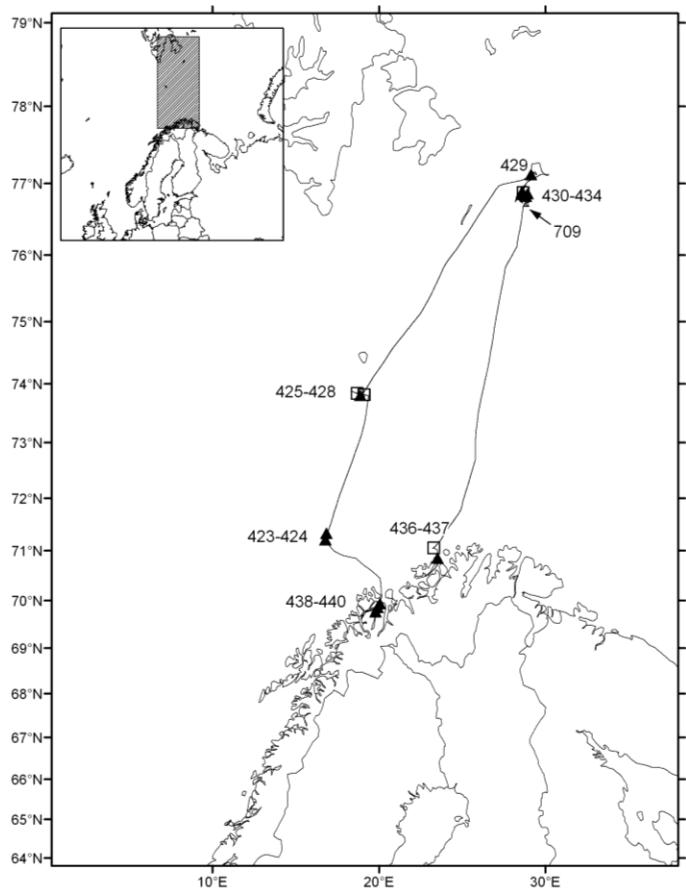
z CTD st.no 647–708
o Plankton st. (WP-II-net)
◆ Plankton st. (Mocness)

Standard sections:
Fugløya-Bjørnøya st.no 647–666



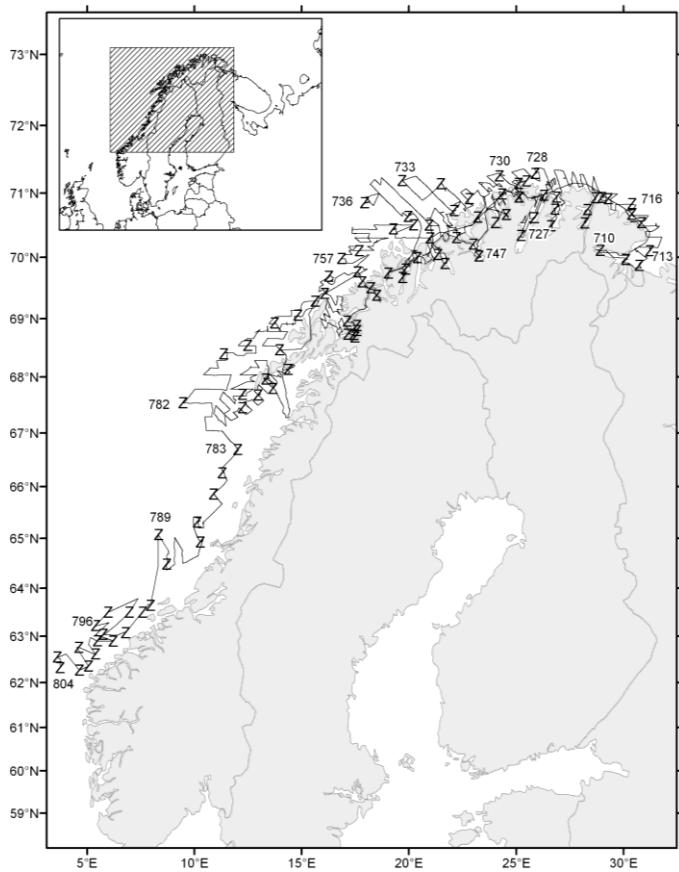
Cruise no 2008208
“Johan Hjort”
1–16 Sep 2008

Trawl st.no 322–422
□ Bottom trawl
▲ Pelagic trawl



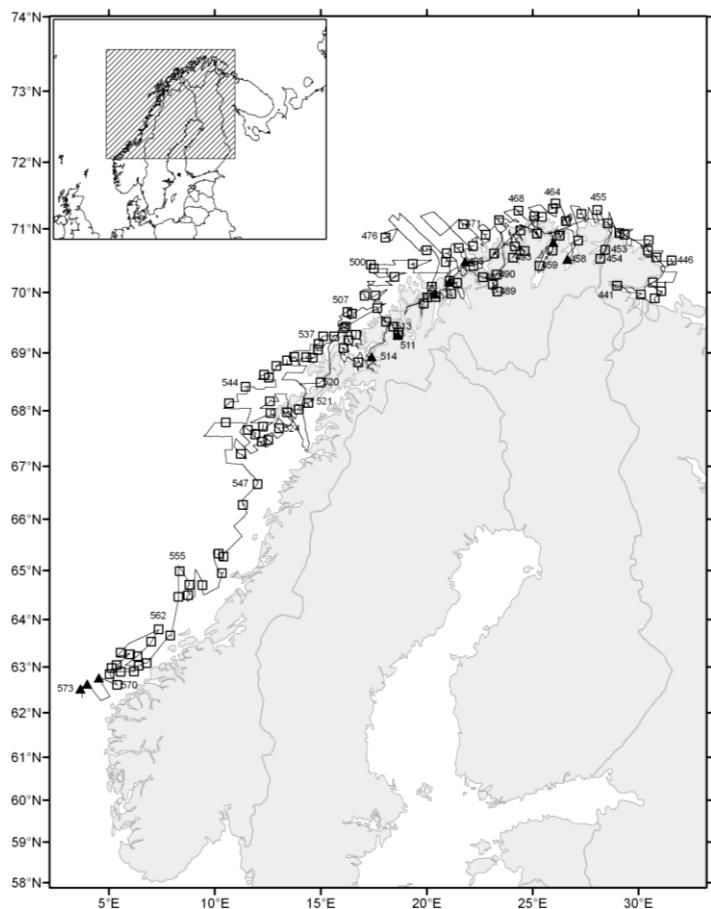
Cruise no 2008212
“Johan Hjort”
17–27 Oct 2008

z CTD st.no 709
Trawl st.no 423–440
□ Bottom trawl
▲ Pelagic trawl



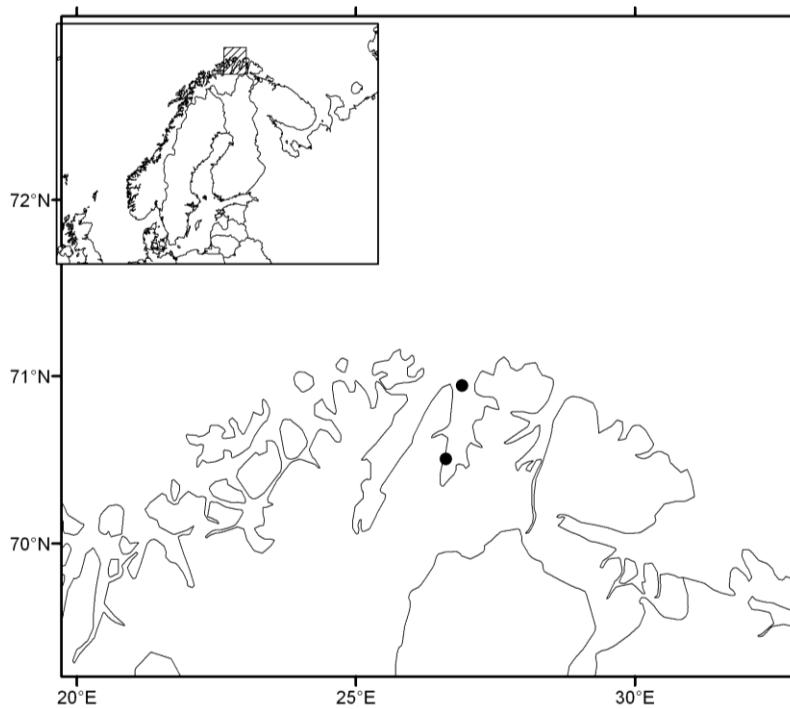
Cruise no 2008210
“Johan Hjort”
28 Oct–8 Dec 2008

z CTD st.no 710–804



Cruise no 2008210
“Johan Hjort”
28 Oct–8 Dec 2008

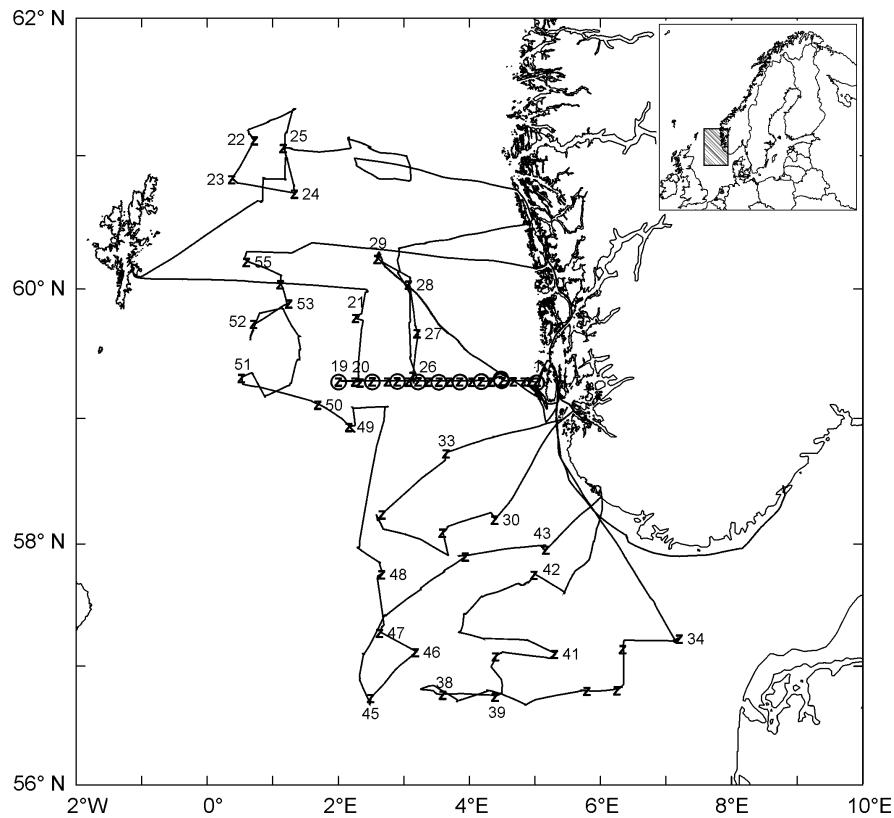
Trawl st.no 441–573
▲ Pelagic trawl
□ Bottom trawl



Cruise no 2008210
“Johan Hjort”
28 Oct–8 Dec 2008

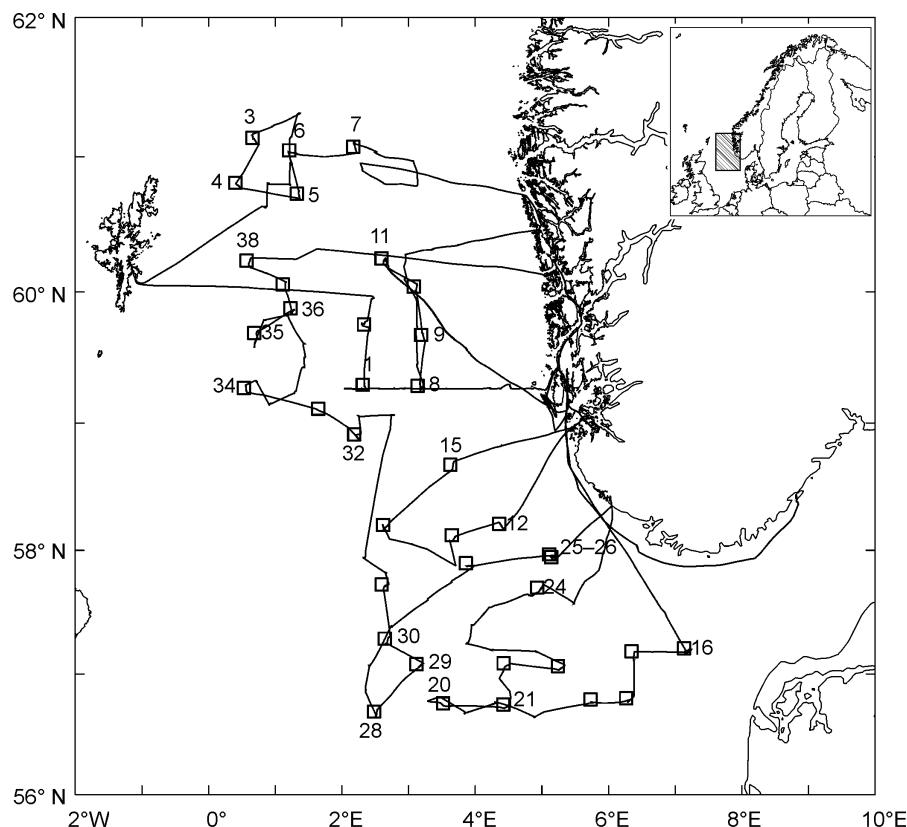
● Grab stations

4.3 Håkon Mosby



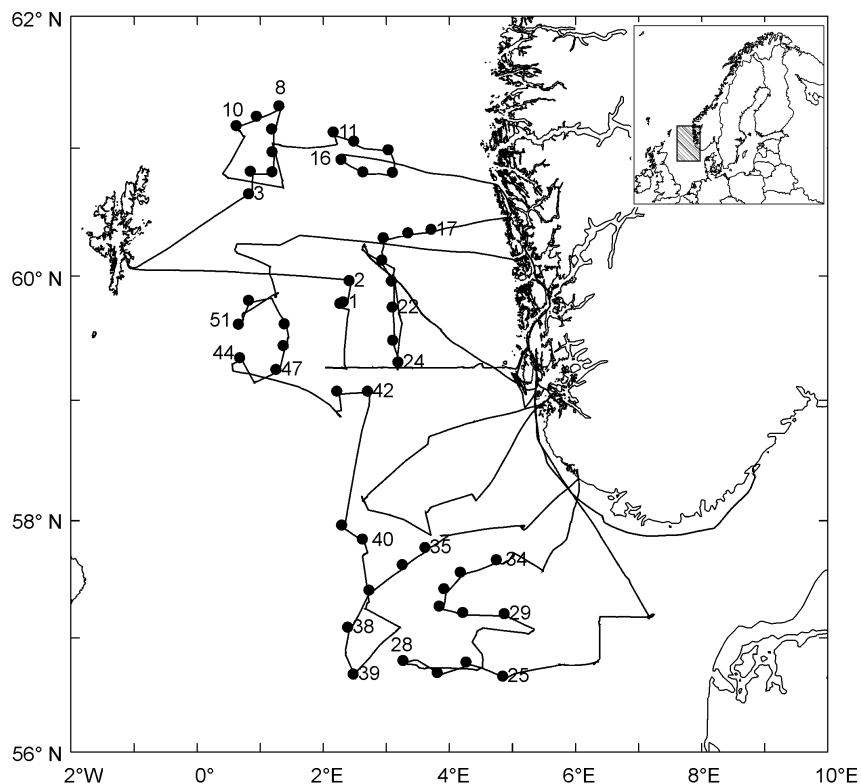
Cruise no 2008601
“Håkon Mosby”
5–31 Jan 2008

z CTD st.no 1–55
○ Plankton st. (WP-II-net)
Standard sections:
Utsira-W st.no 1–20

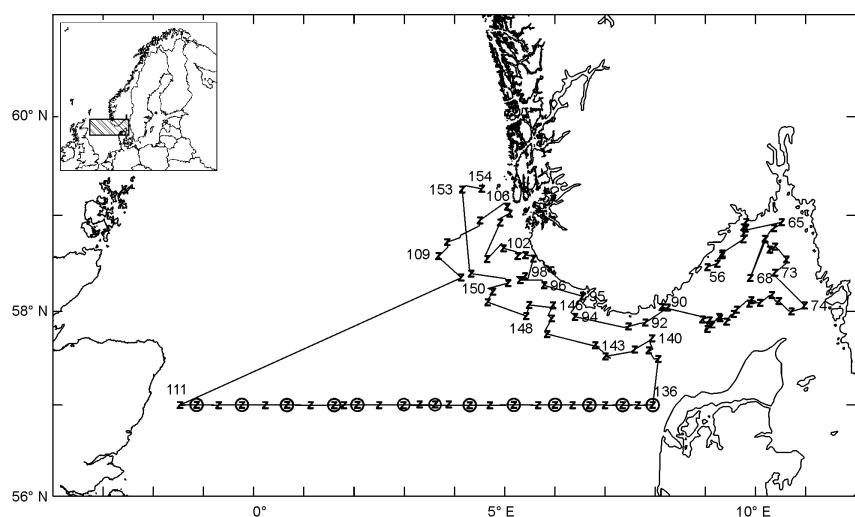


Cruise no 2008601
“Håkon Mosby”
5–31 Jan 2008

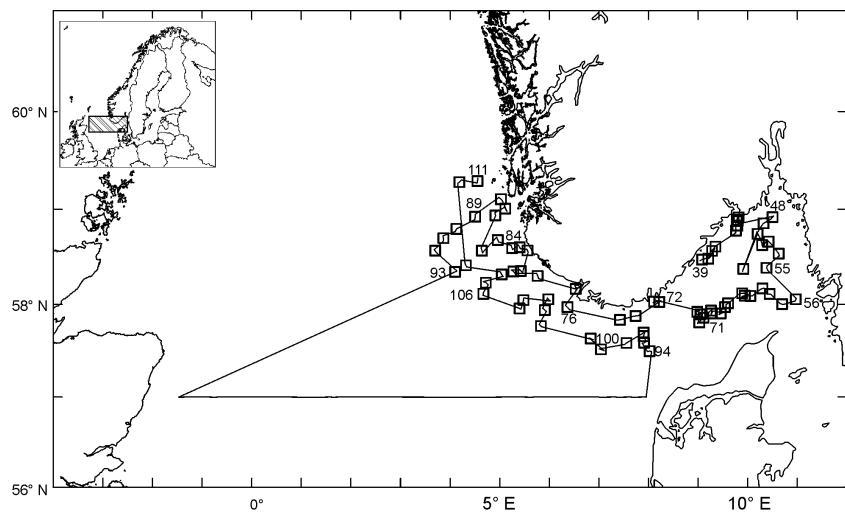
□ Bottom trawl st.no 1–38



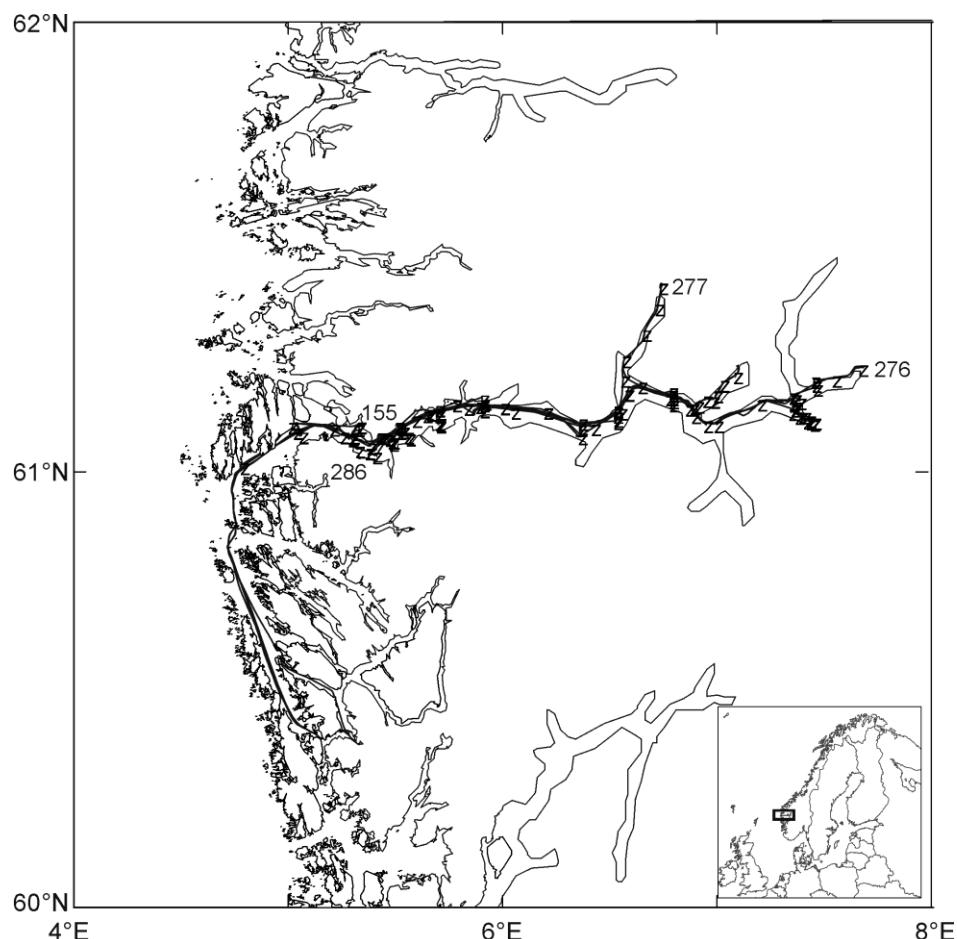
Cruise no 2008601
“Håkon Mosby”
5–31 Jan 2008



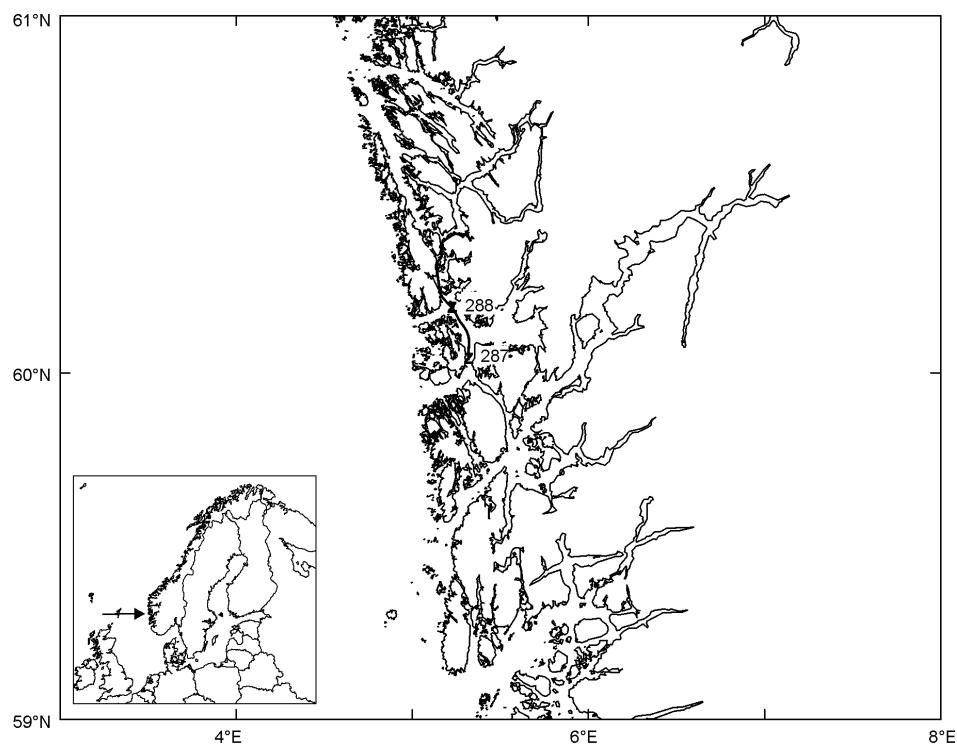
Cruise no 2008602
“Håkon Mosby”
4–21 Feb 2008



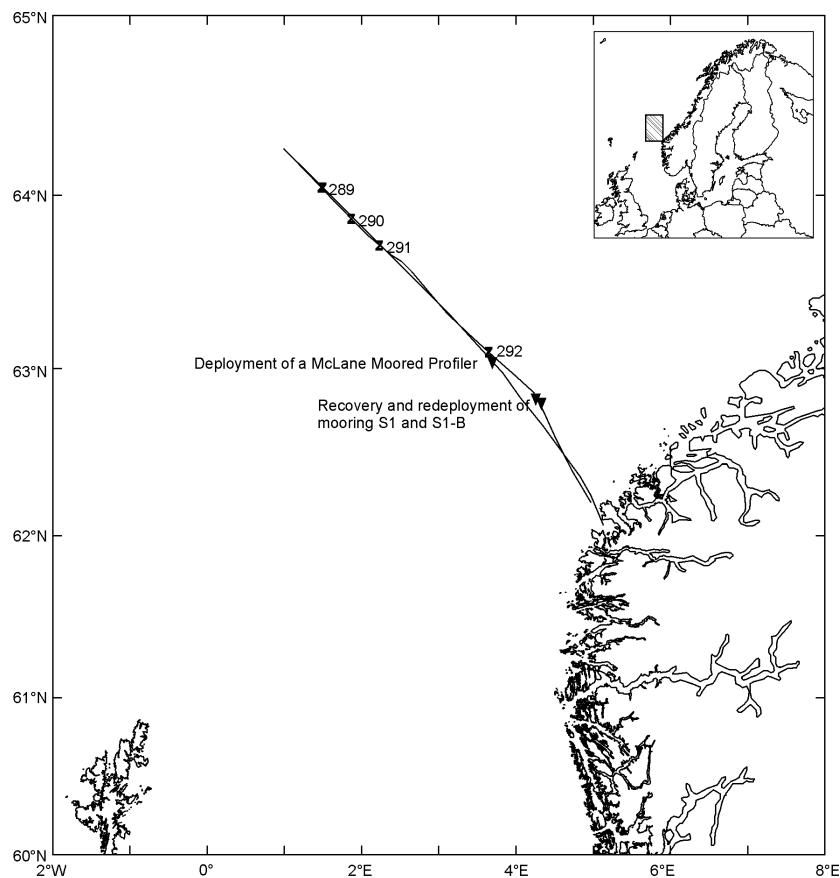
Cruise no 2008602
“Håkon Mosby”
4–21 Feb 2008



Cruise no 2008603
“Håkon Mosby”
23 Feb–6 Mar 2008
z CTD st.no 155–286

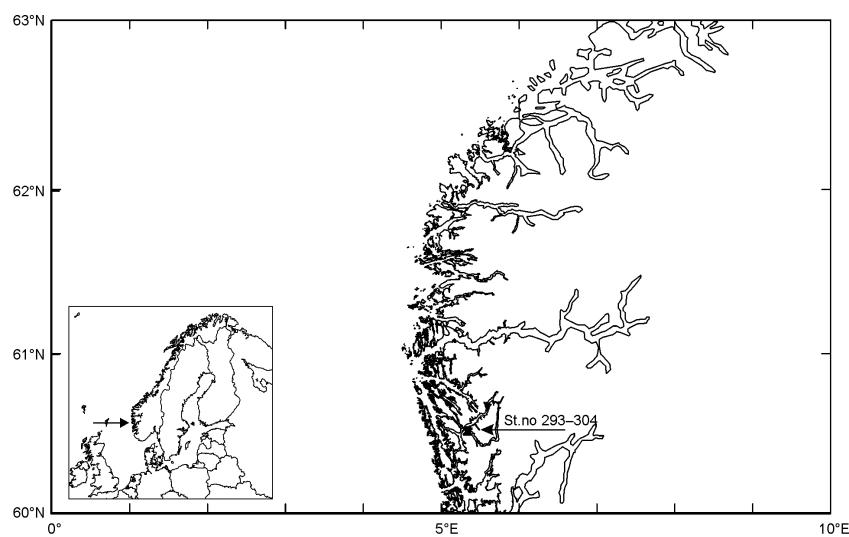


Cruise no 2008606
“Håkon Mosby”
14–15 Mar 2008
z CTD st.no 287–288



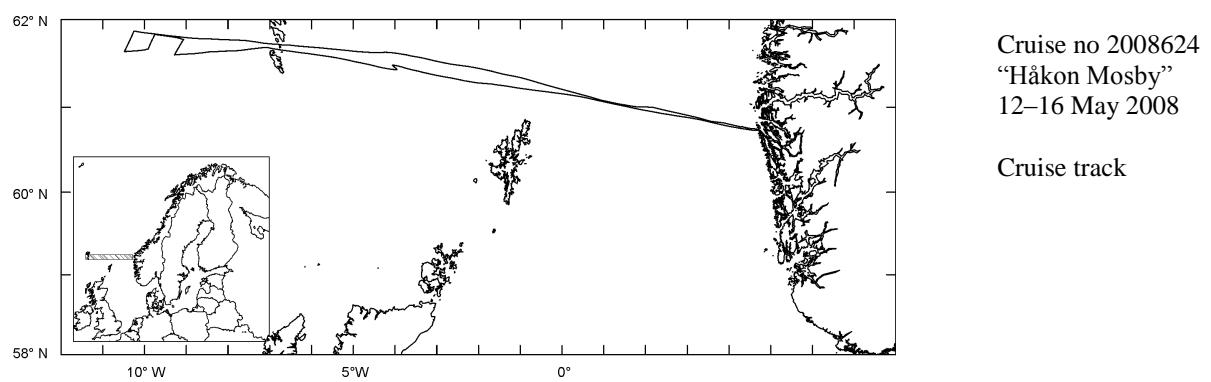
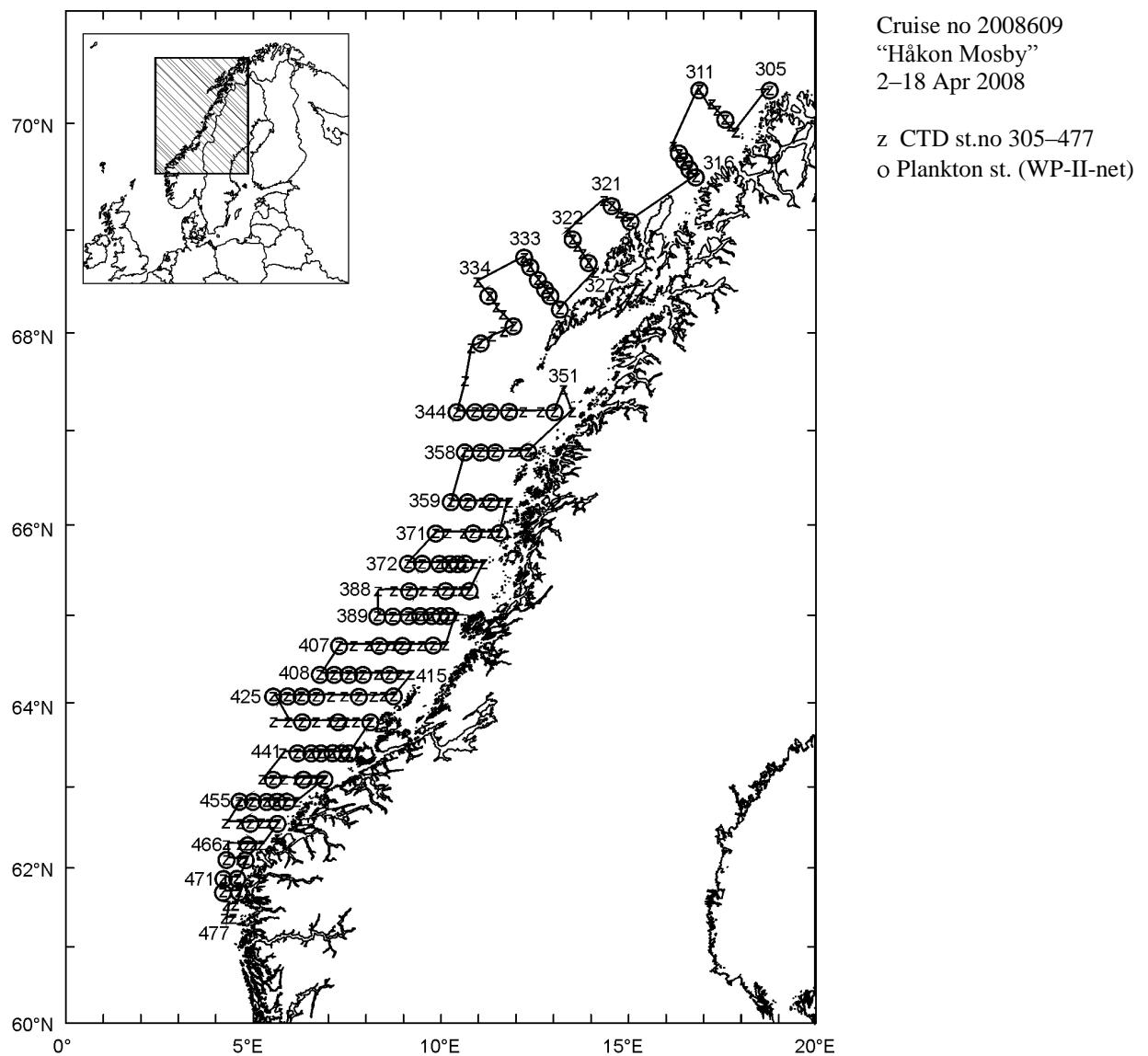
Cruise no 2008607
“Håkon Mosby”
25-29 Mar 2008

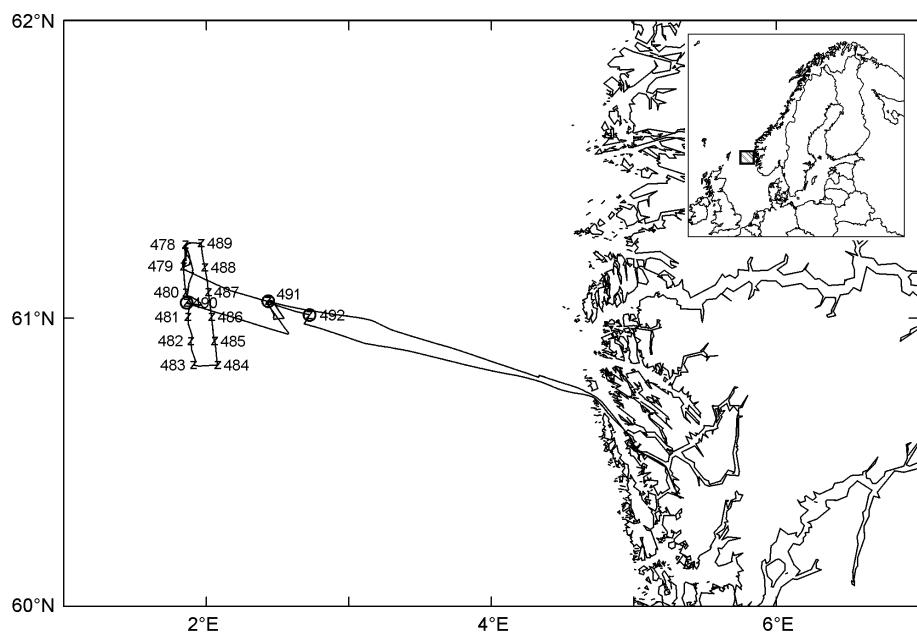
z CTD st.no 289–292
▼ Recovery and
deployment of moorings



Cruise no 2008608
“Håkon Mosby”
31 Mar–1 Apr 2008

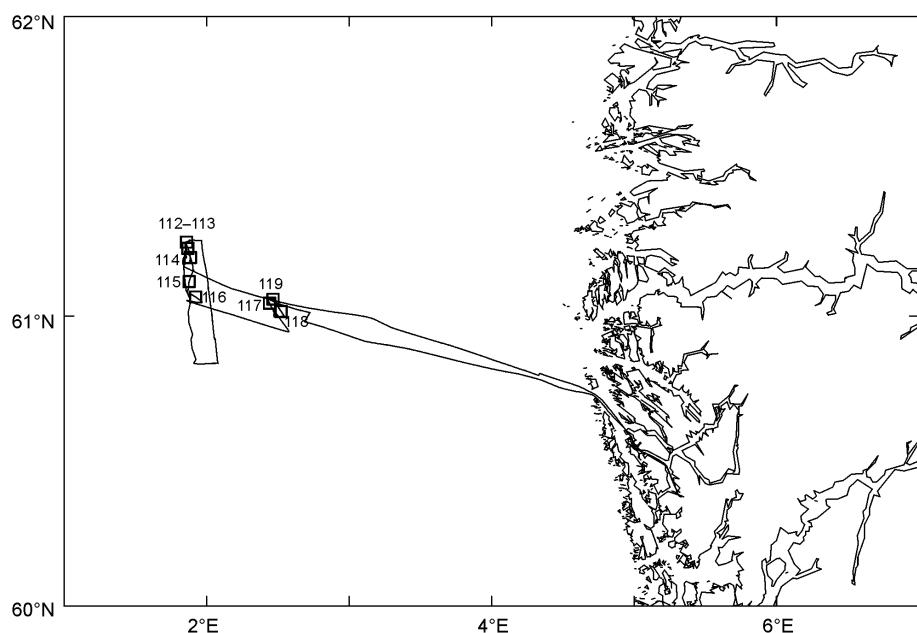
z CTD st.no 293–304





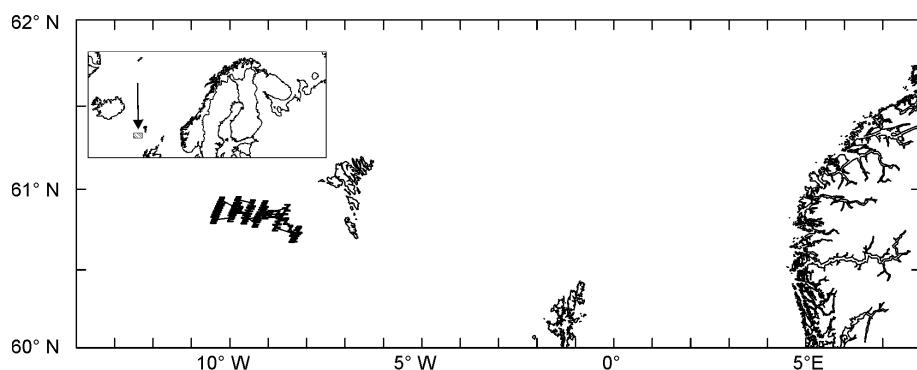
Cruise no 2008625
“Håkon Mosby”
25–27 May 2008

z CTD st.no 478–492
o Plankton st. (WP-II-net)



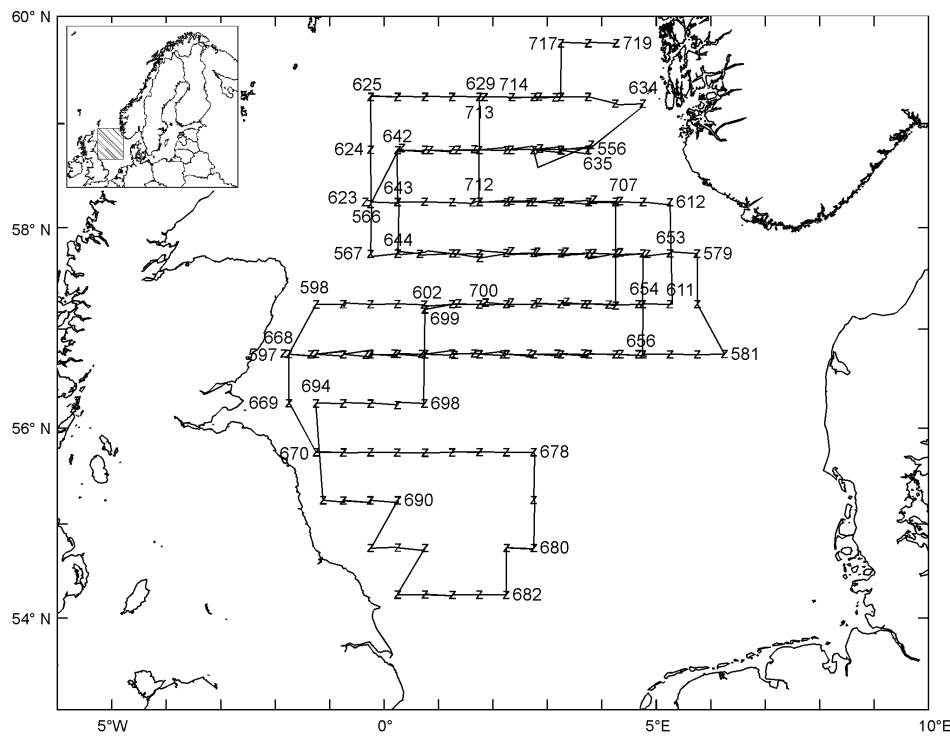
Cruise no 2008625
“Håkon Mosby”
25–27 May 2008

□ Bottom trawl st.no 112–119



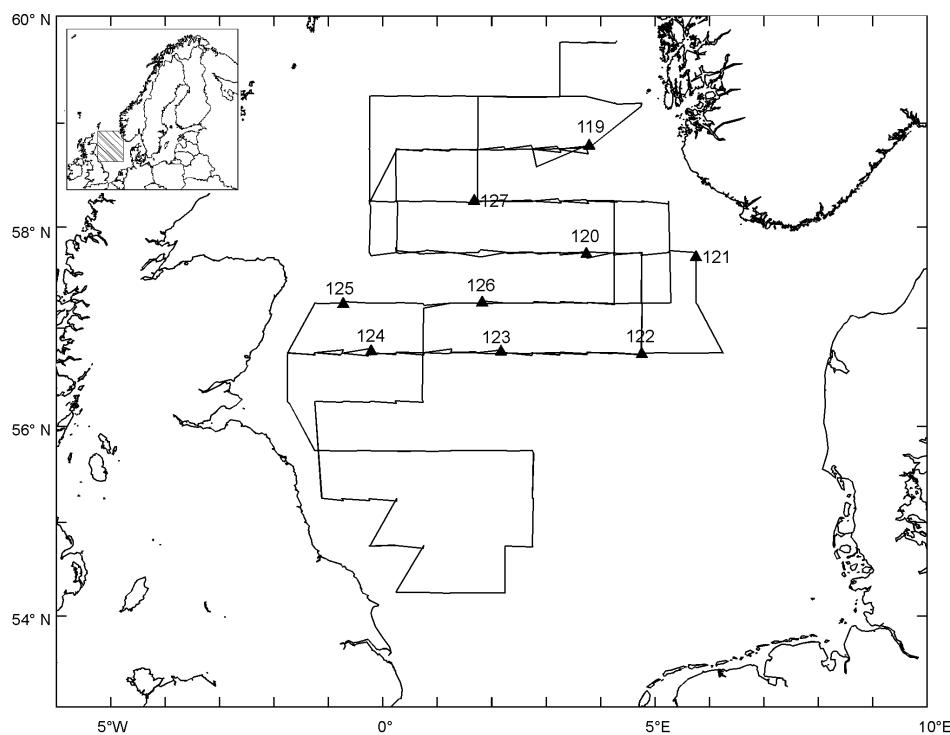
Cruise no 2008610
“Håkon Mosby”
29 May–8 June 2008

z CTD st.no 493–555



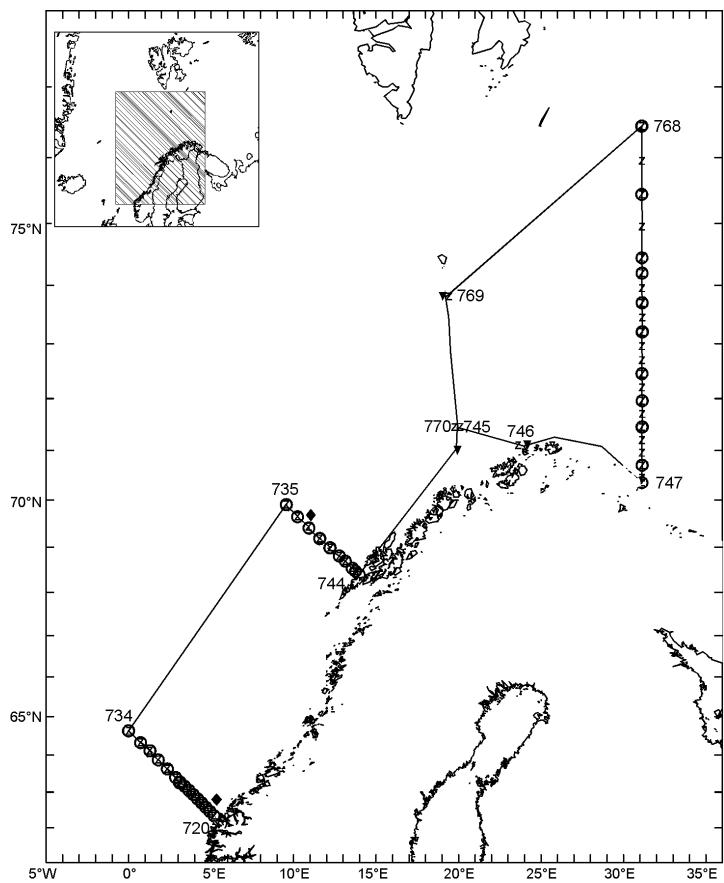
Cruise no 2008611
“Håkon Mosby”
9 June–4 July 2008

z CTD st.no 556–719
Gulf III (plankton) at every
ctd st. except st. no 559 and
640



Cruise no 2008611
“Håkon Mosby”
9 June–4 July 2008

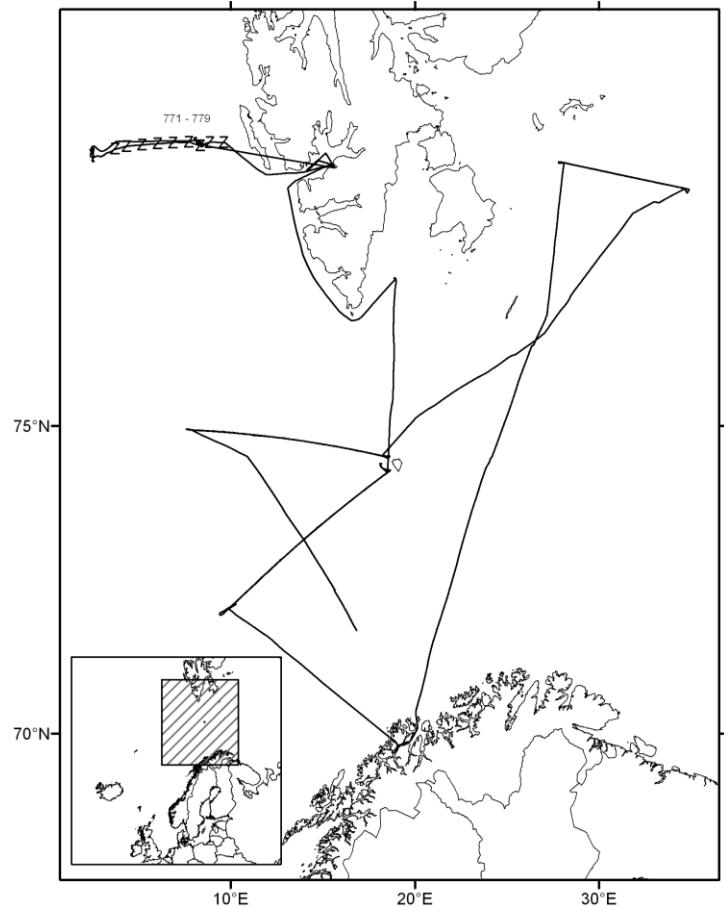
▲ Pelagic trawl st.no 119–127



Cruise no 2008613
“Håkon Mosby”
8–21 July 2008

- z CTD st.no 720–770
- o Plankton st. (WP-II-net)
- ◆ Plankton st. (Mocness)
- ▼ Deployed/recovered moorings

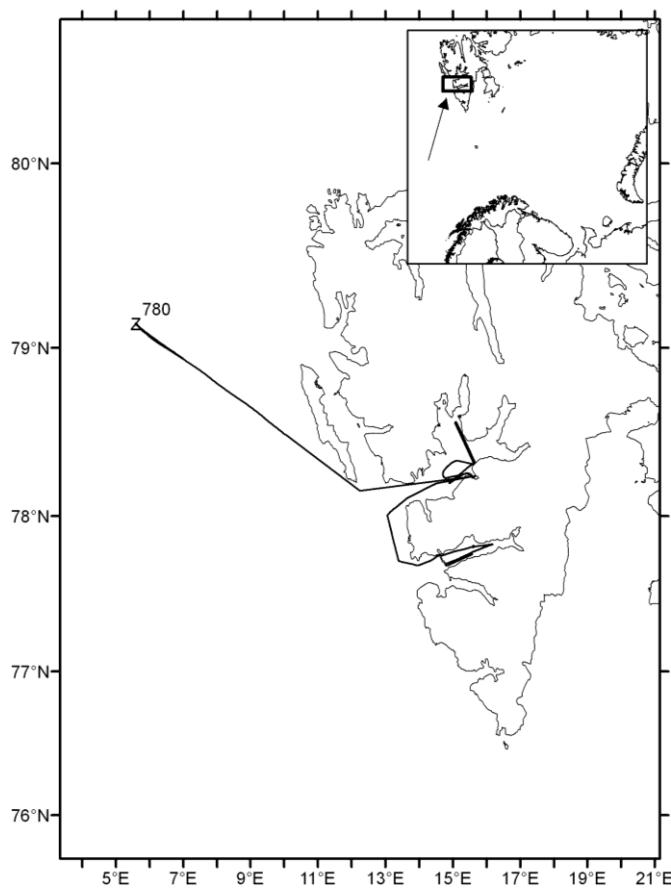
Standard sections:
Svinøy-NW st.no 720–734
Gimsøy-NW st.no 735–744
Vardø-N st.no 747–768



Cruise no 2008614
“Håkon Mosby”
23 July–18 Aug 2008

- z CTD st.no 771–779

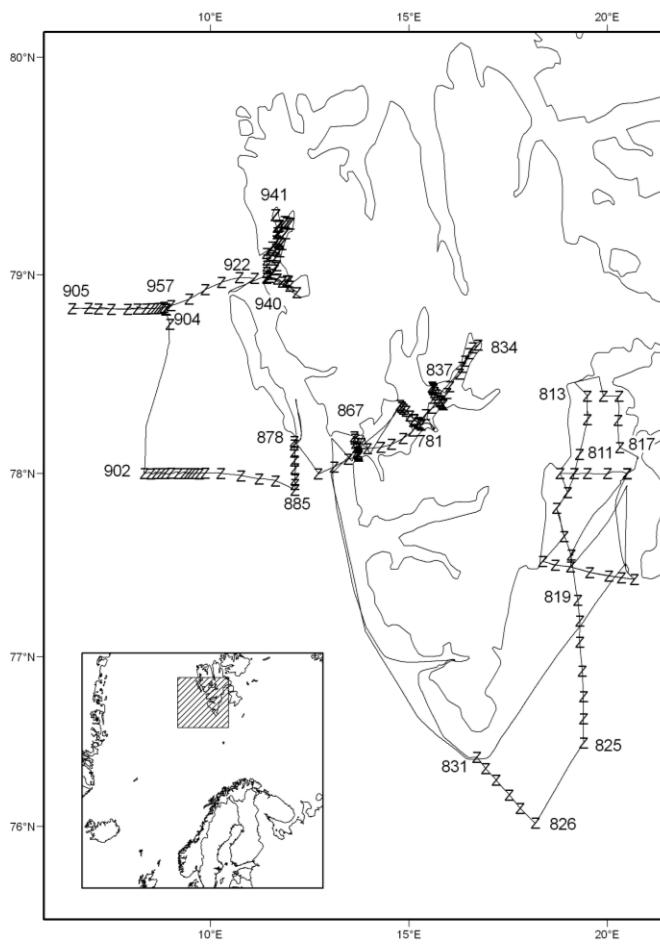
14–18 Aug 2008
Nansen Environmental and Remote Sensing Center:
Deployment of tomography moorings, transponders and McLaine profiler



Cruise no 2008615
“Håkon Mosby”
19 Aug–1 Sep 2008

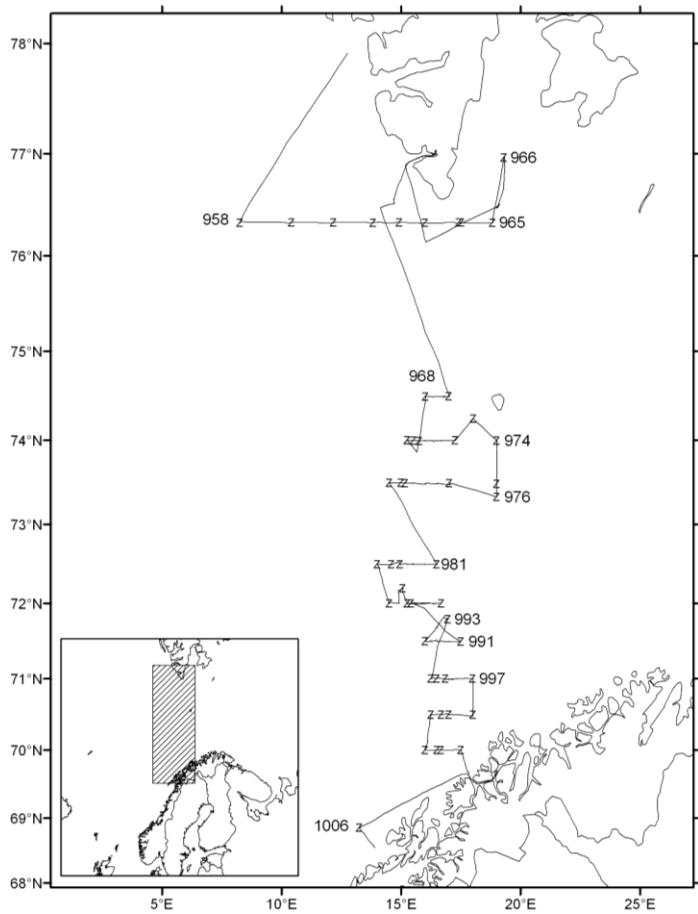
z CTD st.no 780

16 2D profiles of
multichannel seismic data



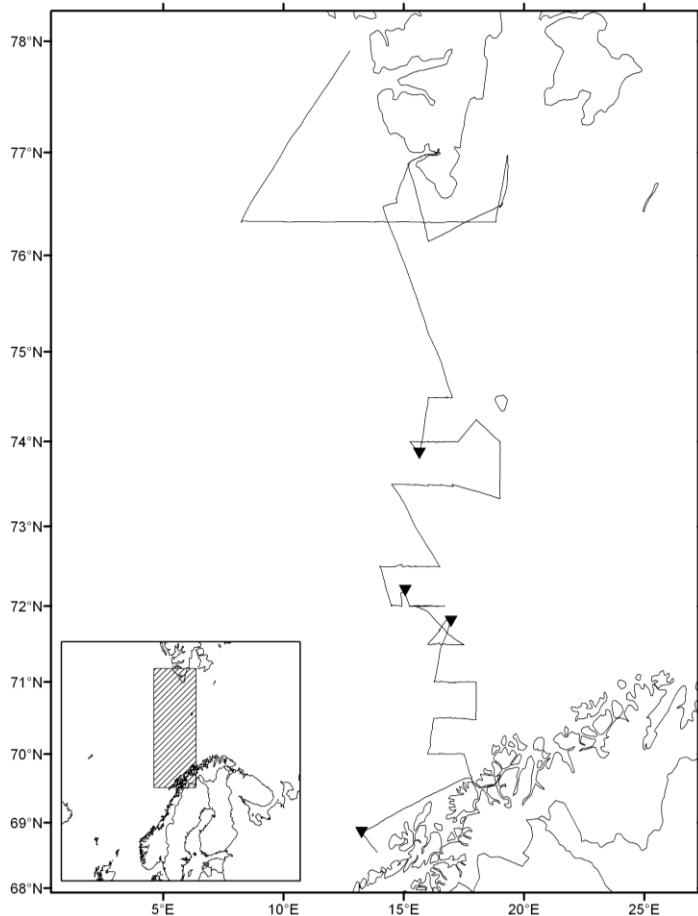
Cruise no 2008616
“Håkon Mosby”
3–15 Sep 2008

z CTD st.no 781–957



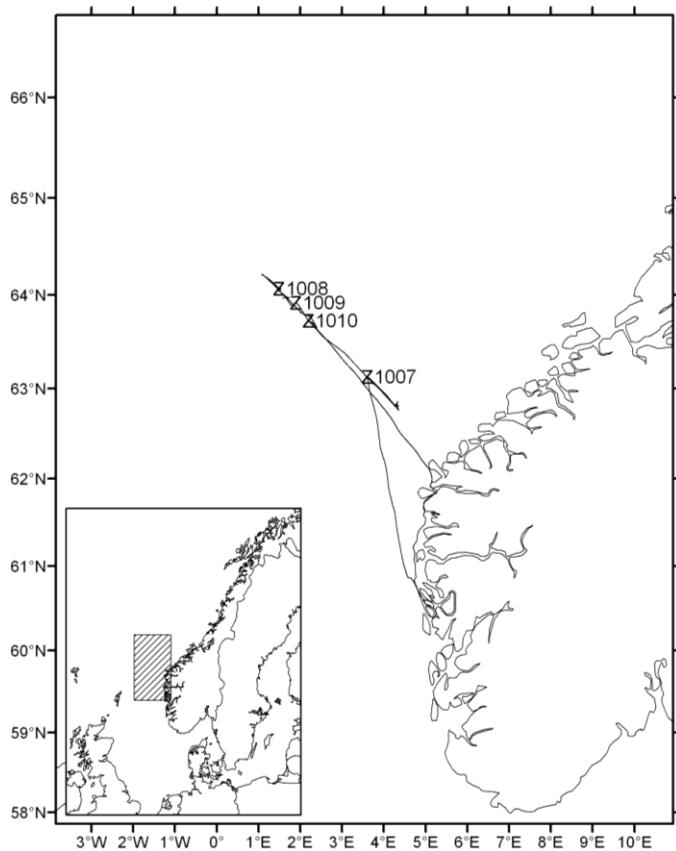
Cruise no 2008617
“Håkon Mosby”
18 Sep–1 Oct 2008

z CTD st.no 958–1006



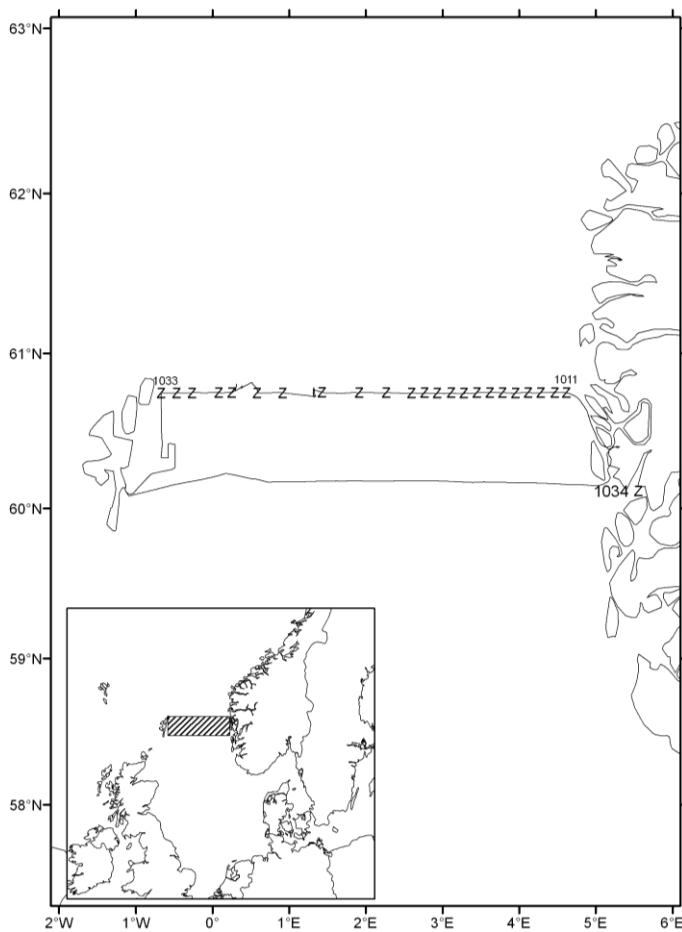
Cruise no 2008617
“Håkon Mosby”
18 Sep–1 Oct 2008

Recovering moorings, gliders –
and bottom frames



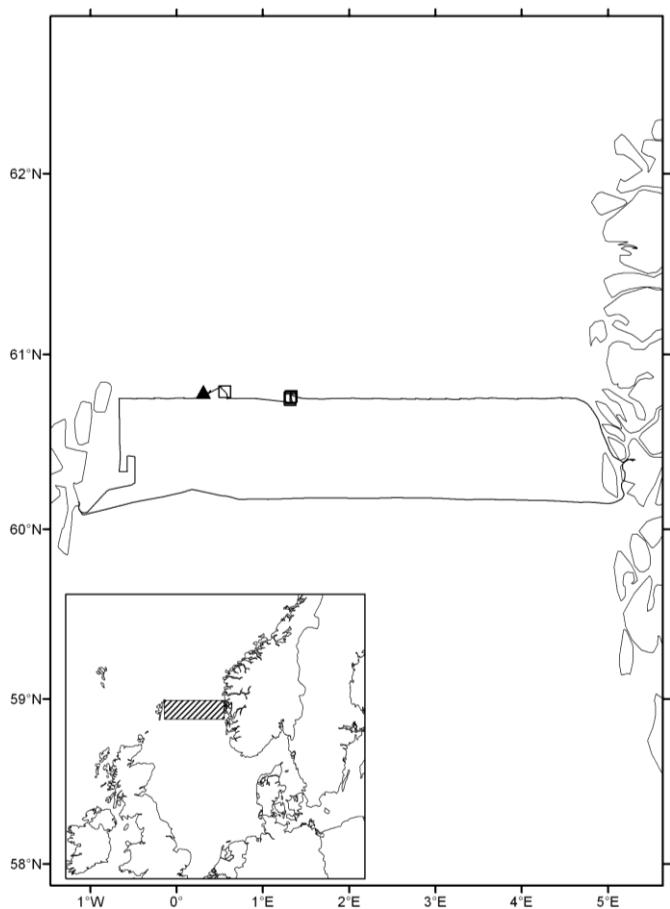
Cruise no 2008618
“Håkon Mosby”
6–10 Oct 2008

z CTD st.no 1007–1010
Service of the current meter array
in the Svinøy section
Recovery of MMP-mooring and
data transmission
Deployment of SVP drifters



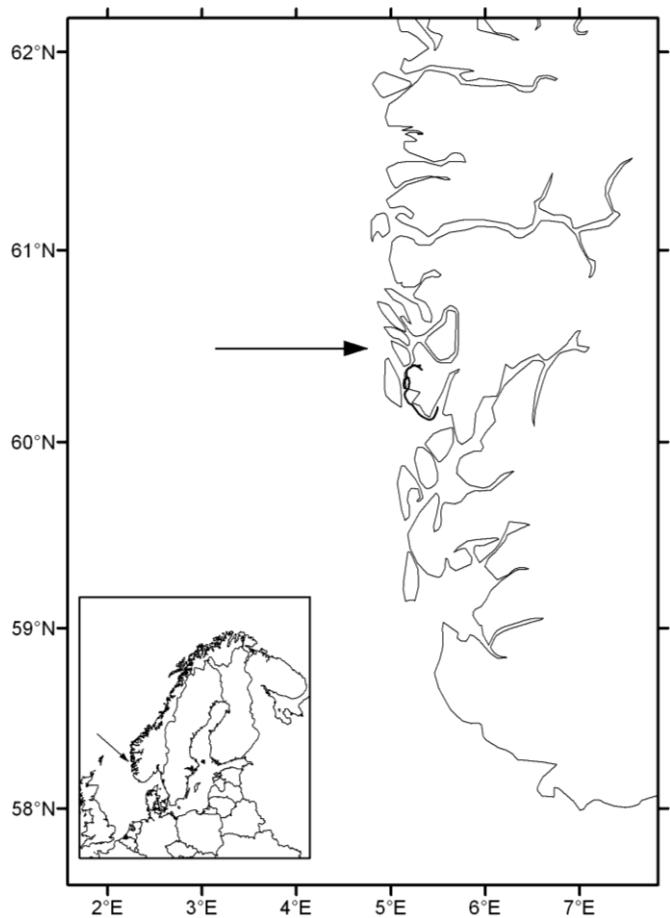
Cruise no 2008619
“Håkon Mosby”
16–22 Oct 2008

Standard section:
Feie–Shetland
z CTD st.no 1011–1034



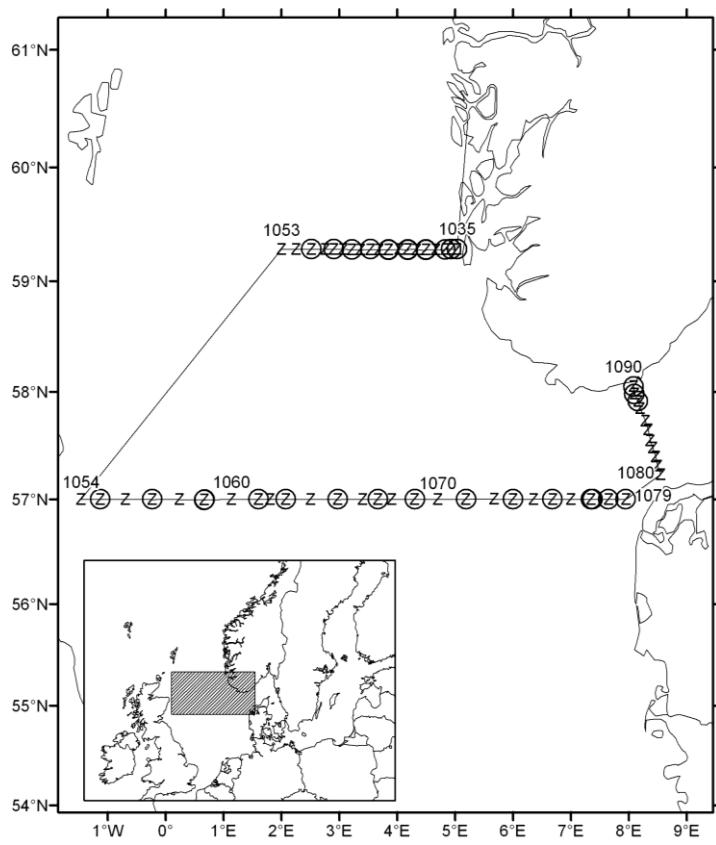
Cruise no 2008619
“Håkon Mosby”
16–22 Oct 2008

5 trawl st. without no.
▲ Pelagic stations
□ Bottom stations



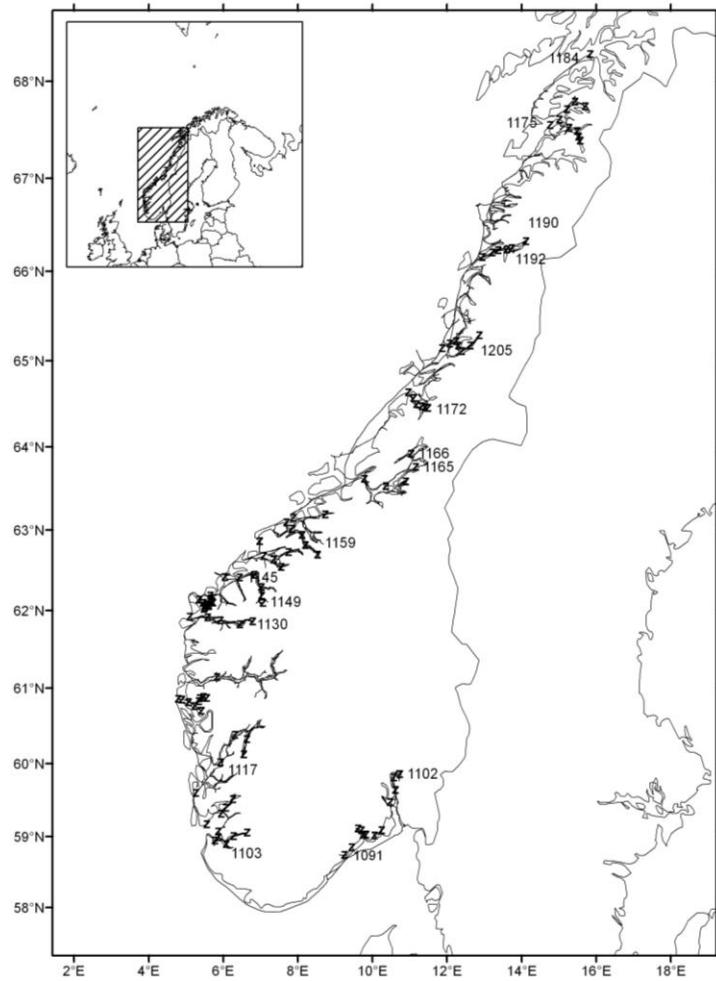
Cruise no 2008620
“Håkon Mosby”
23–25 Oct 2008

Cruise track



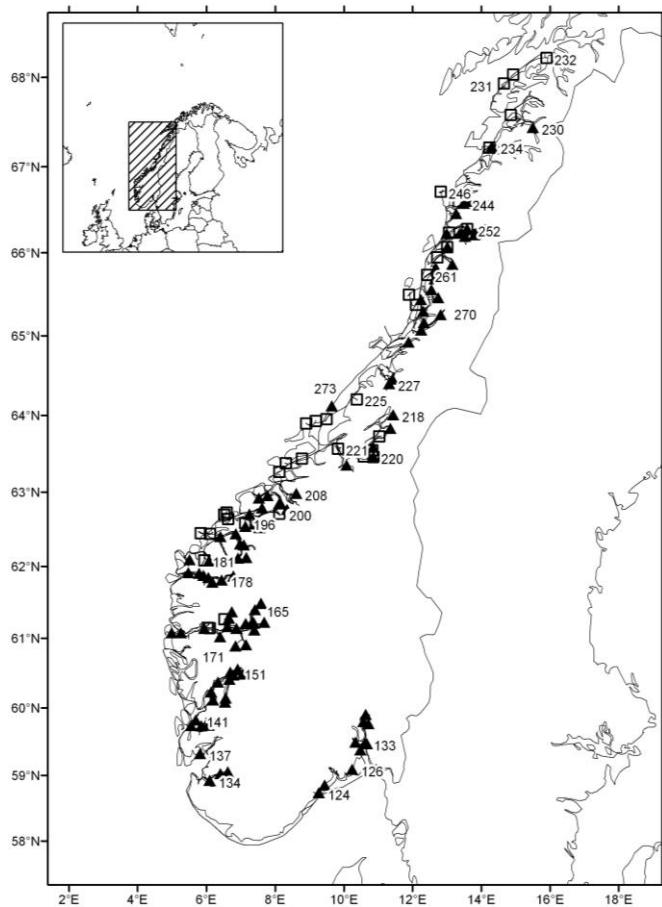
Cruise no 2008622
“Håkon Mosby”
29 Oct–5 Nov 2008

z CTD st.no 1035–1090
o Plankton st. (WP-II-net)
Standard sections:
Utsira-W st.no 1035–1053 (partly)
Hanstholmen–Aberdeen st.no
1054–1079
Oksøy–Hanstholm st.no 1080–
1090



Cruise no 2008623
“Håkon Mosby”
6 Nov–18 Dec 2008

z CTD st.no 1091–1205

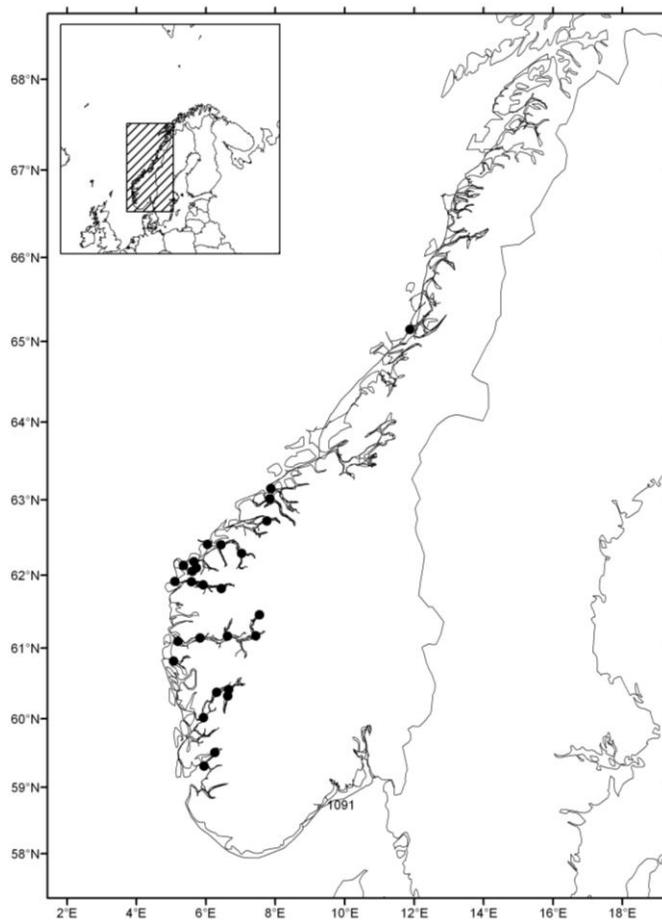


Cruise no 2008623
“Håkon Mosby”
6 Nov–18 Dec 2008

Trawl st.no 124–273

□ Bottom trawl

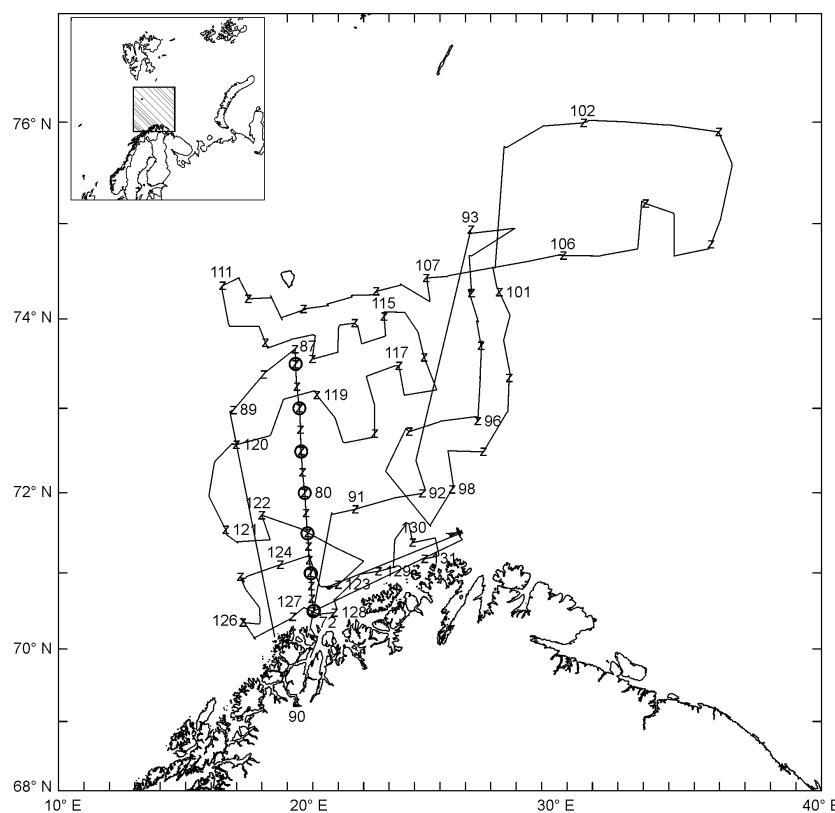
▲ Pelagic trawl



Cruise no 2008623
“Håkon Mosby”
6 Nov–18 Dec 2008

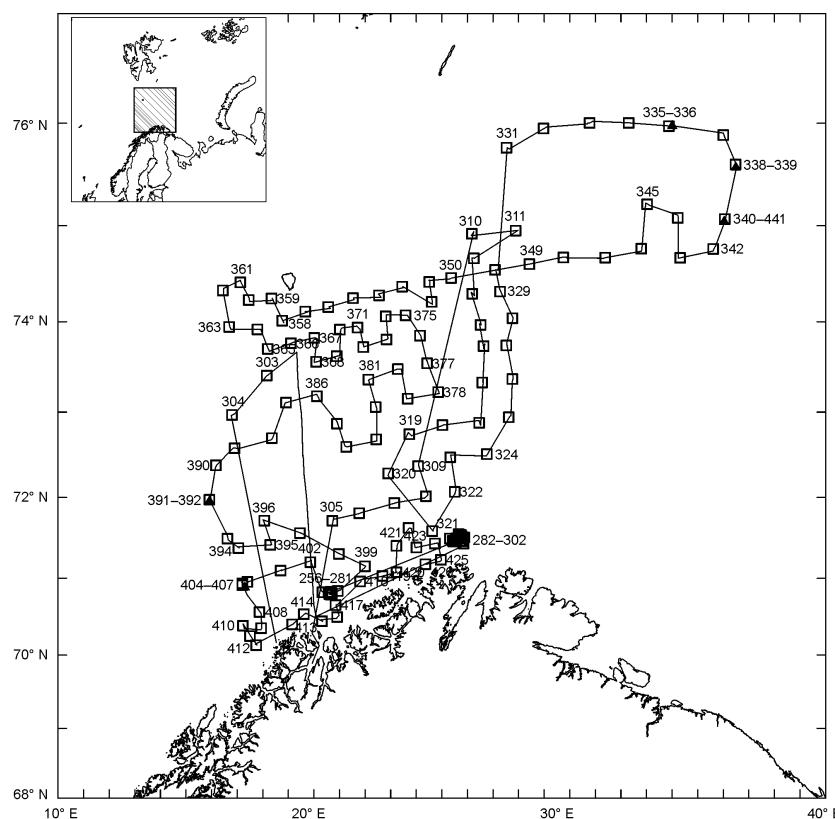
● Plankton st. (WP-II-net)

4.4 Jan Mayen



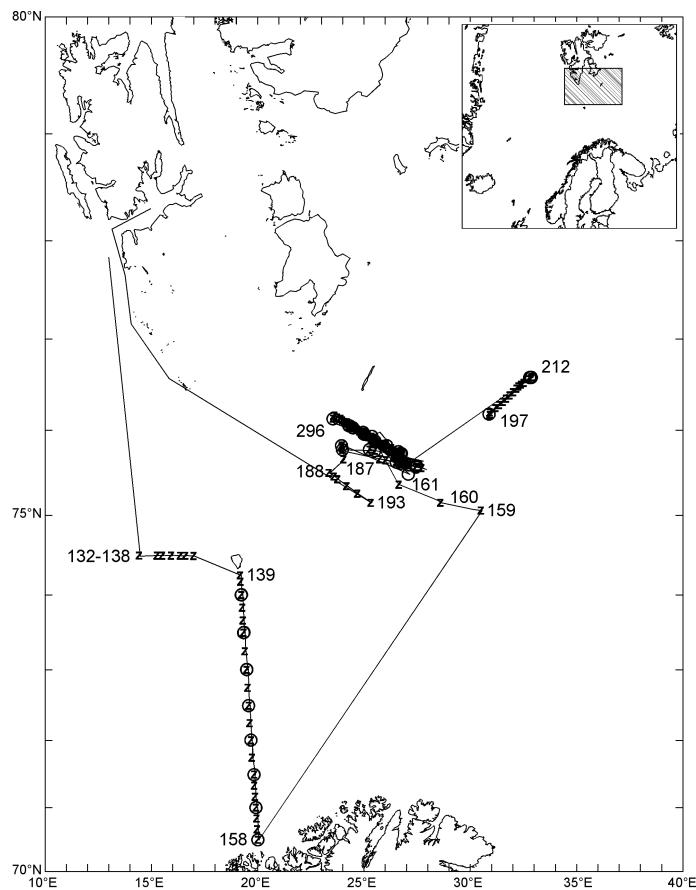
Cruise no 2008701
“Jan Mayen”
1 Feb–6 Mar 2008

z CTD st.no 72–131
○ Plankton st. (WP-II-net)
Standard section:
Fugløya–Bjørnøya st.no 72–87



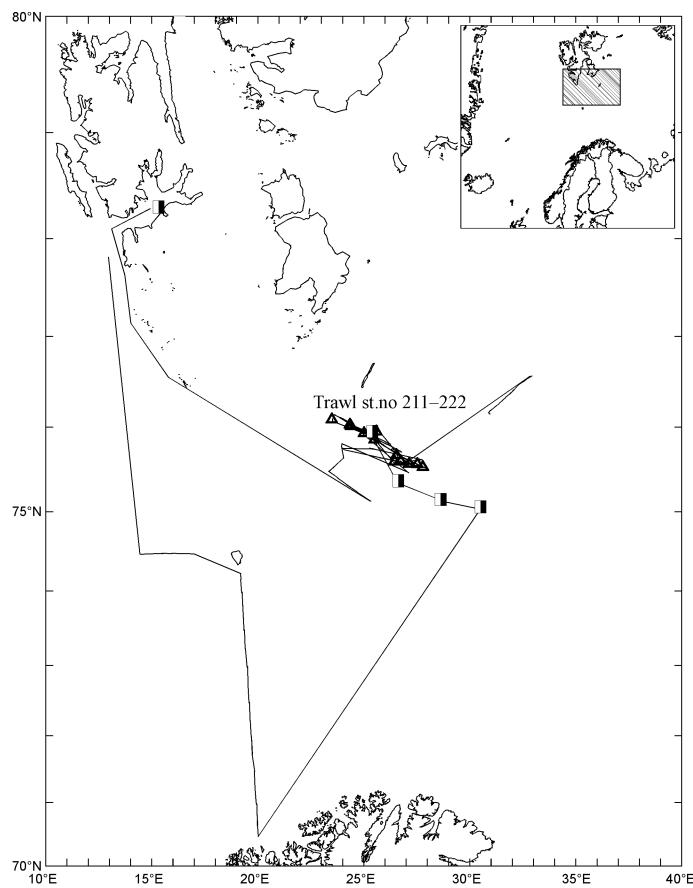
Cruise no 2008701
“Jan Mayen”
1 Feb–6 Mar 2008

Trawl st.no 256–426
□ Bottom trawl
▲ Pelagic trawl



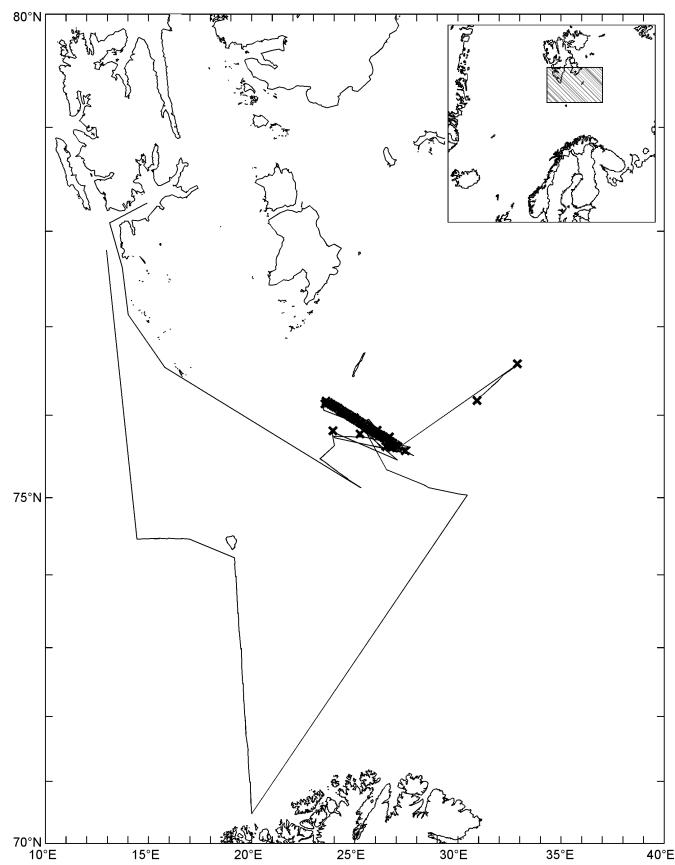
Cruise no 2008702
 "Jan Mayen"
 24 Apr–18 May 2008

z CTD st.no 132–296
 o Plankton stations
 Standard section:
 Fugløya–Bjørnøya st.no 139–158



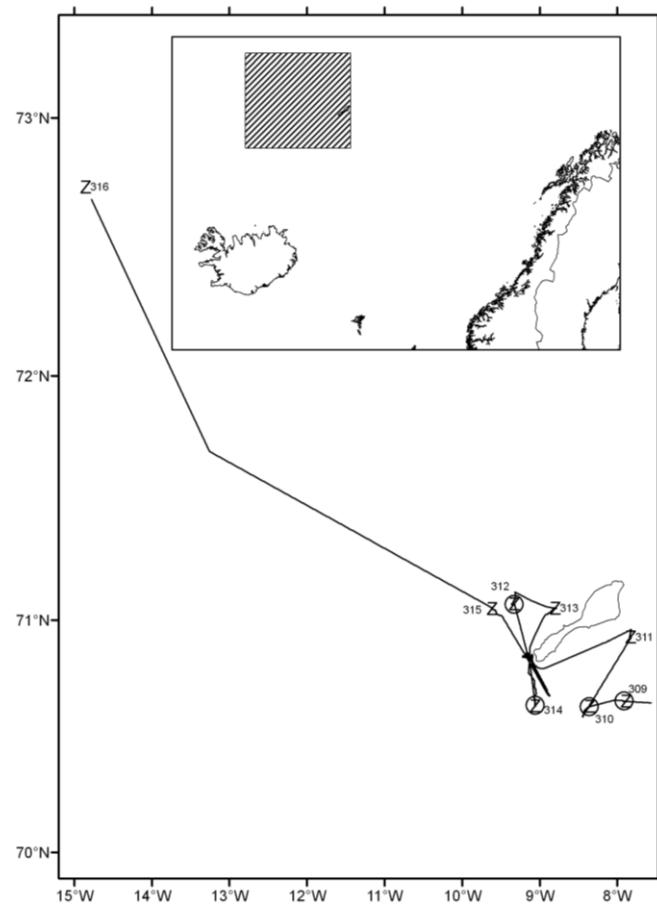
Cruise no 2008702
 "Jan Mayen"
 24 Apr–18 May 2008

Δ Pelagic trawl st.no 211–222
 □■ Grab stations



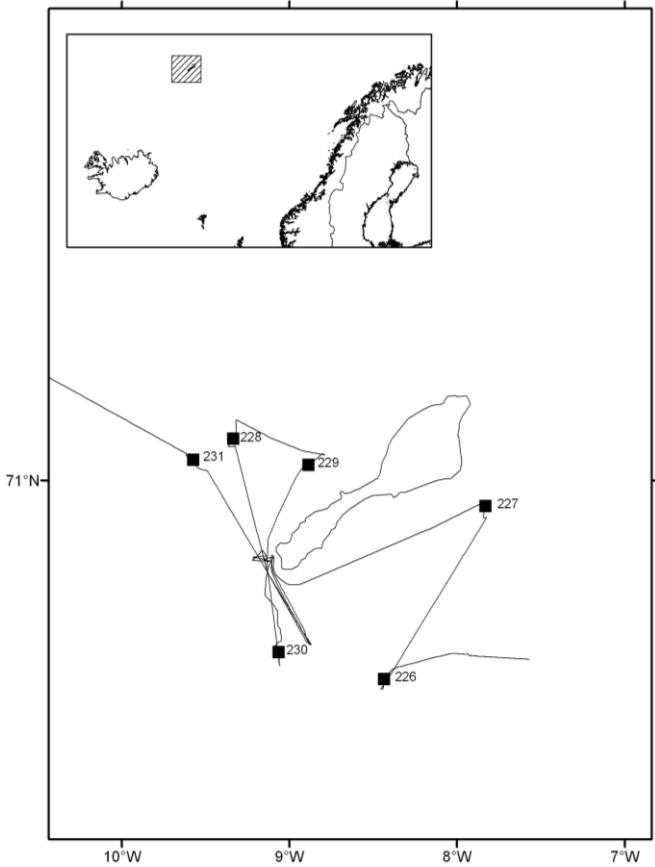
Cruise no 2008702
“Jan Mayen”
24 Apr–18 May 2008

x Light Spectra profiles



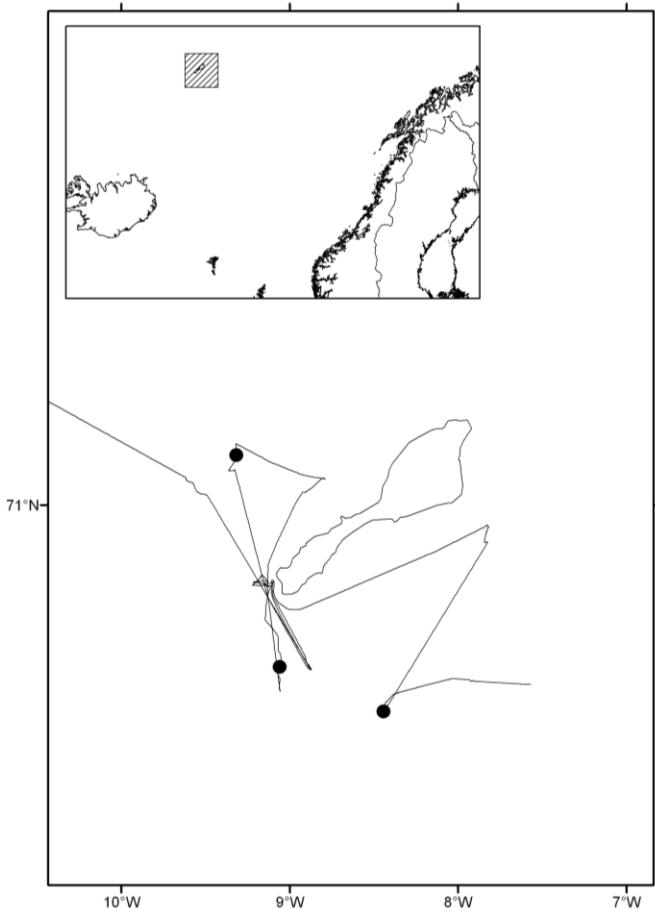
Cruise no 2008704
“Jan Mayen”
29 June–12 July 2008

z CTD st.no 309–316
o Plankton st. (WP-II-net)



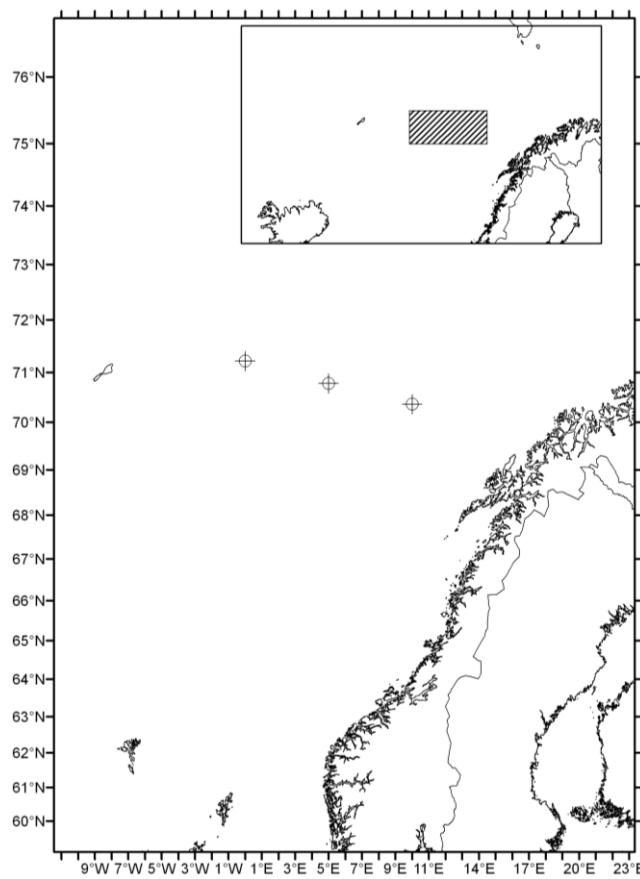
Cruise no 2008704
“Jan Mayen”
29 June–12 July 2008

■ Bottom trawl st.no 226–231



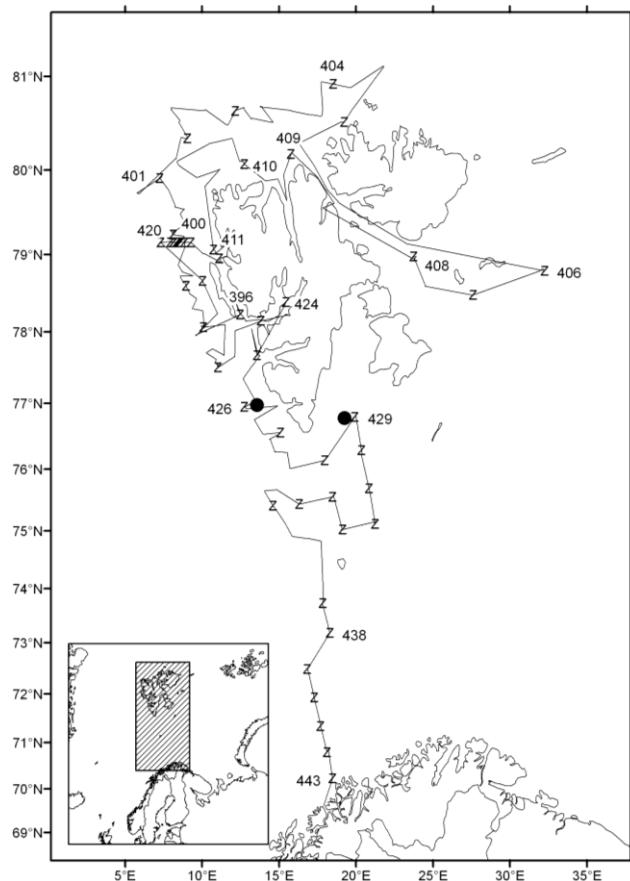
Cruise no 2008704
“Jan Mayen”
29 June–12 July 2008

● Agassiz trawl for benthos



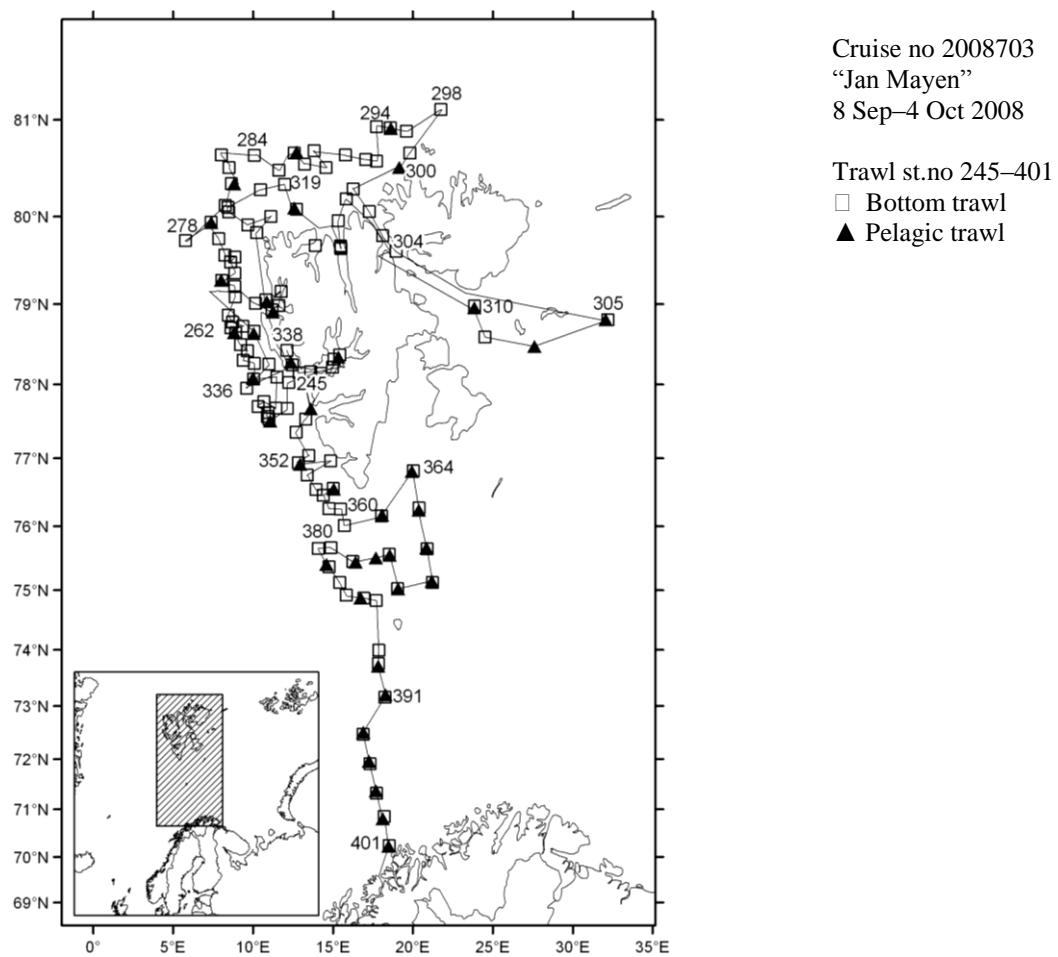
Cruise no 2008704
“Jan Mayen”
29 June–12 July 2008

Drift buoys



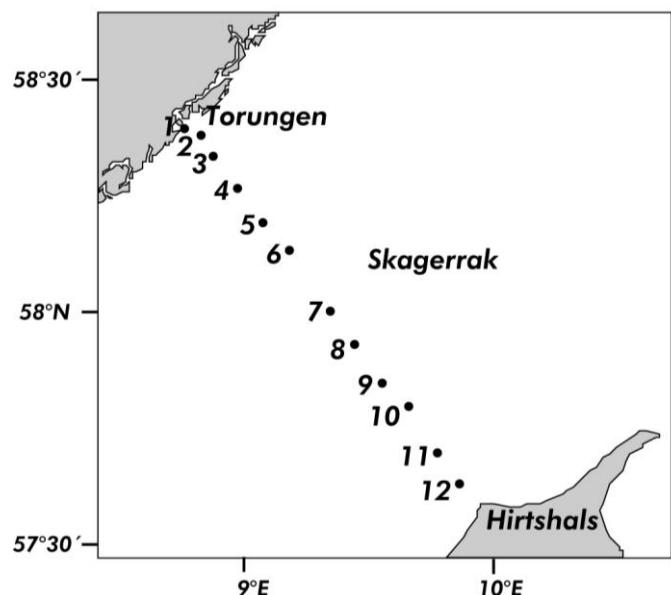
Cruise no 2008703
“Jan Mayen”
8 Sep–4 Oct 2008

z CTD st.no 396–443
● Grab stations

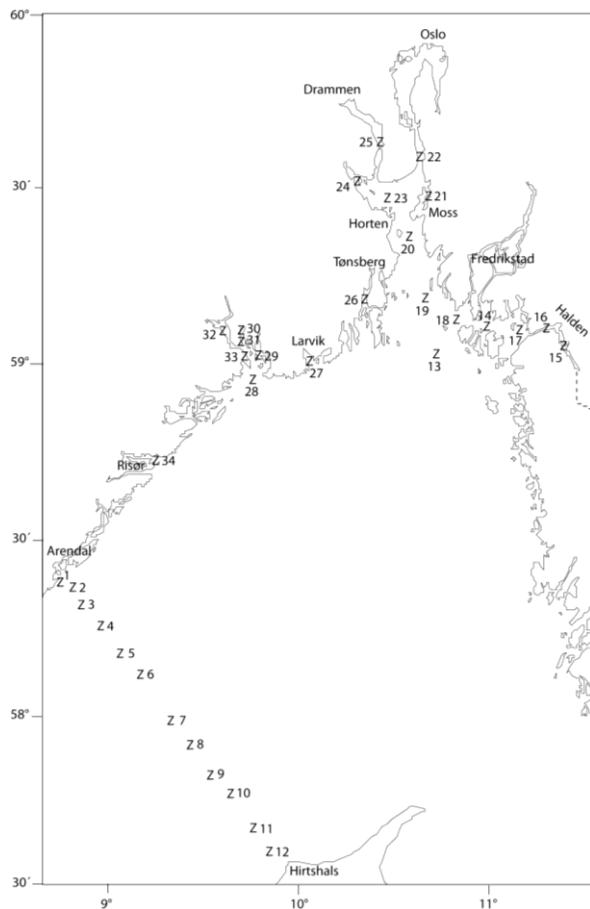


4.5 G.M. Dannevig

Standard section Torungen–Hirtshals 2008

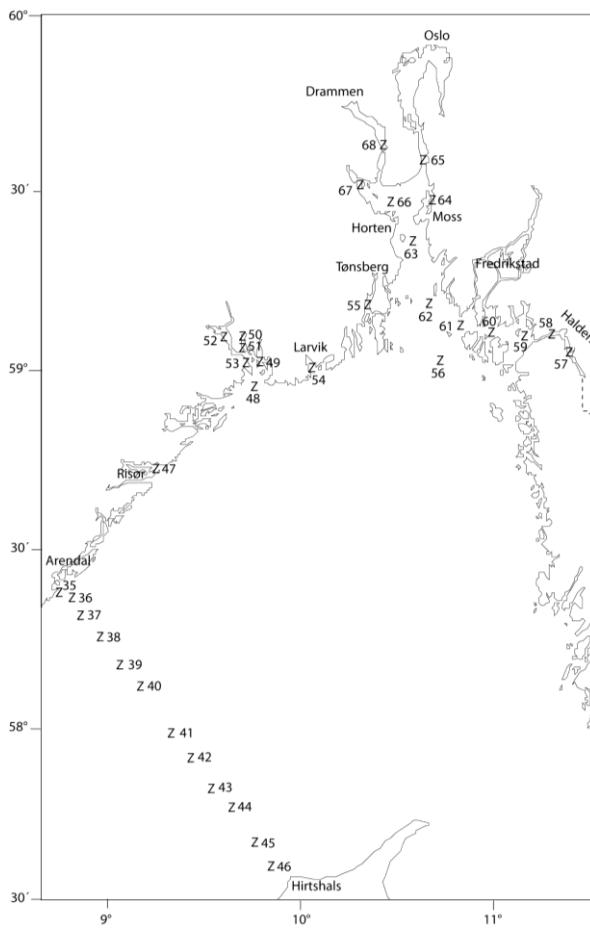


Month	Cruise no	CTD st. no
January	2008301	1–12
February	2008302	35–46
March	2008303	69–80
April	2008304	102–113
May	2008305	222–233
June	2008306	258–269
July	2008308	270–281
August	2008309	282–293
September	2008311	321–332
October	2008312	389–400
November	2008313	401–412
December	2008315	435–446



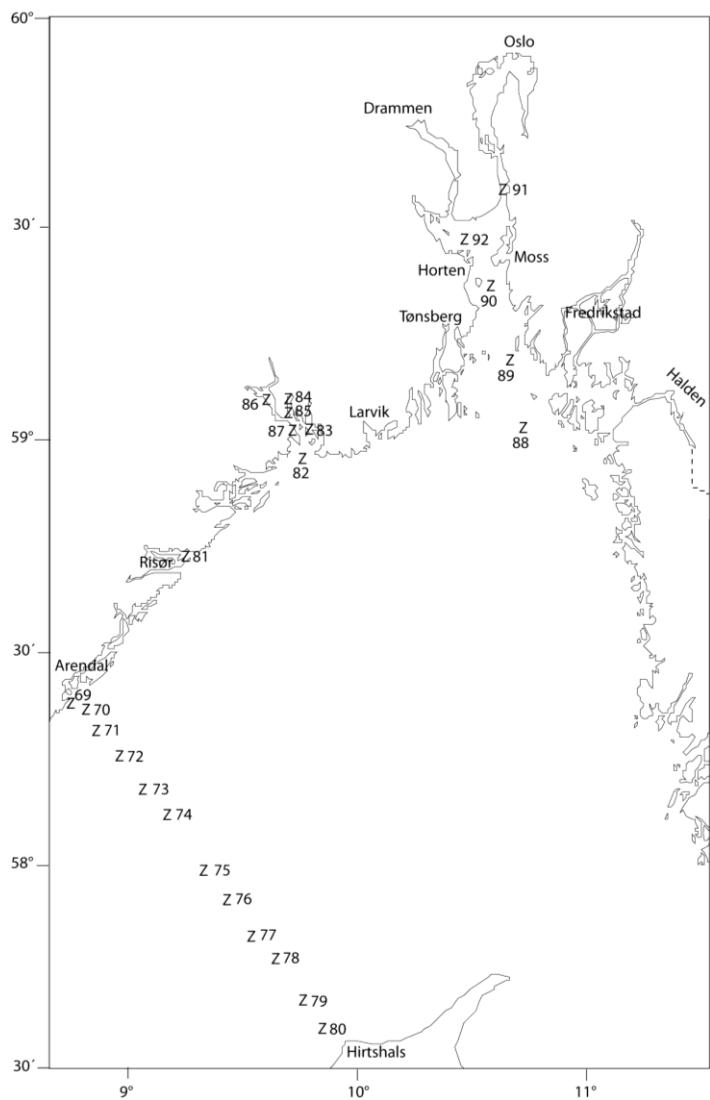
Cruise no 2008301
“G.M. Dannevig”
8–15 Jan 2008

z CTD st.no 1–34



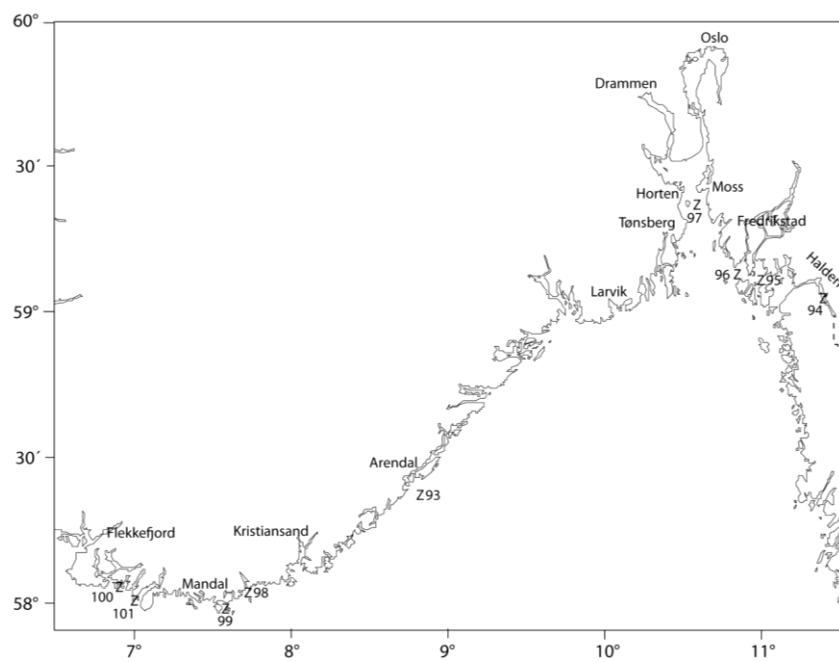
Cruise no 2008302
“G.M. Dannevig”
5–11 Feb 2008

z CTD st.no 35–68



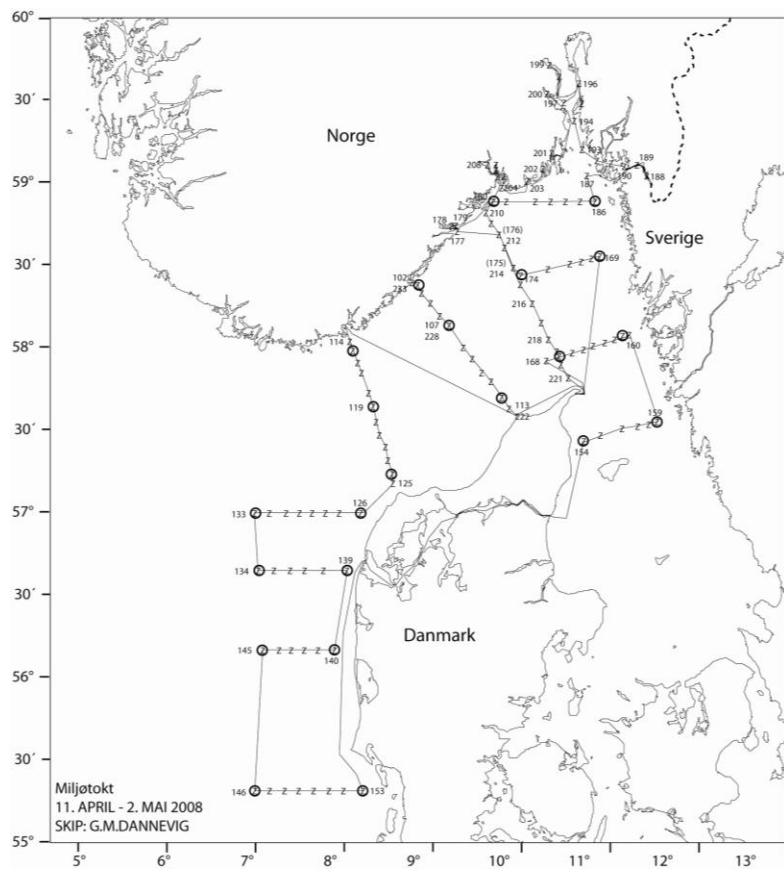
Cruise no 2008303
“G.M. Dannevig”
4–8 Mar 2008

z CTD st.no 69–92



Cruise no 2008304
“G.M. Dannevig”
27 Mar–10 Apr 2008

z CTD st.no 93–101

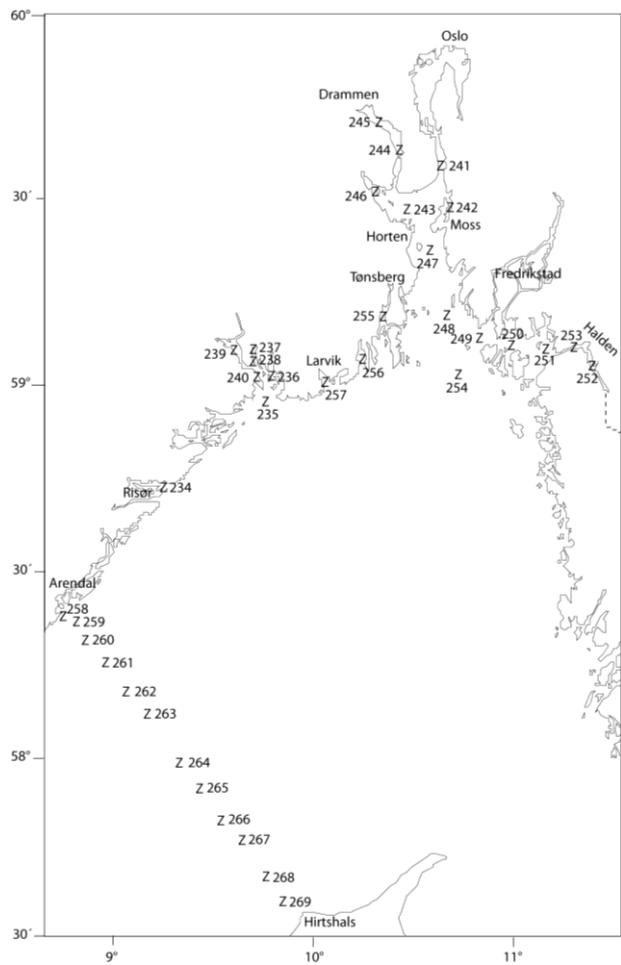


Cruise no 2008305
“G.M. Dannevig”
11 Apr–2 May 2008

z CTD st.no 102–233

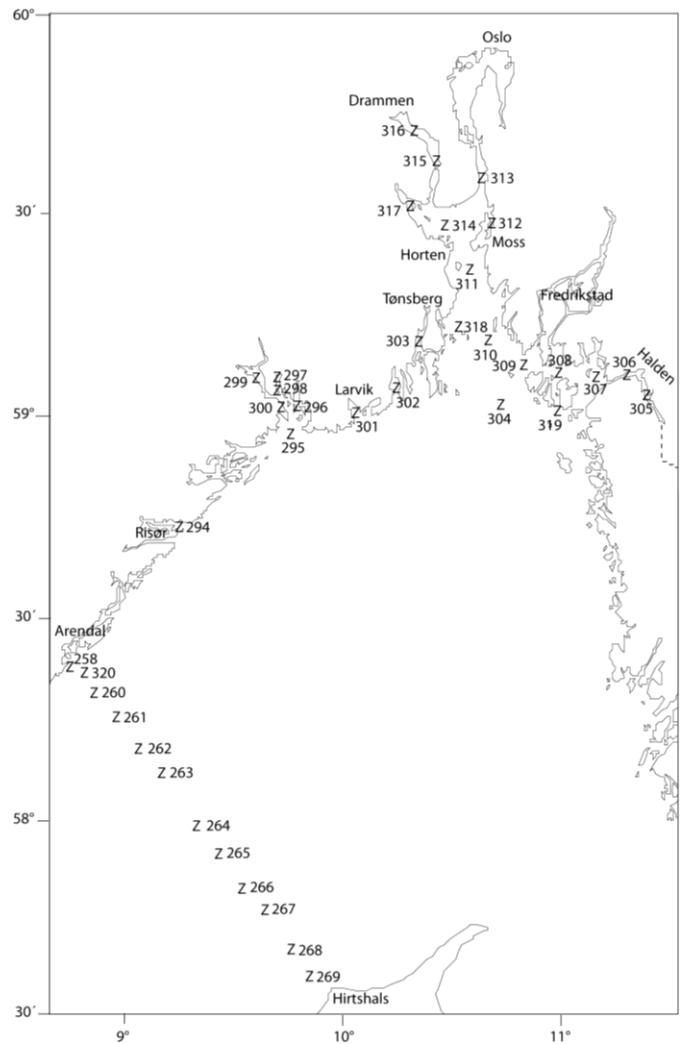
Standard sections:

- Oksøy–Hanstholm st.no 114–125
- Torungen–Hirtshals st.no 102–113, 222–233
- Jomfruland–Skagen st.no 210–221
- Jomfruland–Koster st.no 180–186
- Torbjørnskjær st.no 187
- Väderø st.no 169–174
- Måseskjær st.no 160–168
- Göteborg–Fredrikshavn st.no 154–159



Cruise no 2008306
“G.M. Dannevig”
7–15 June 2008

z CTD st.no 234–269

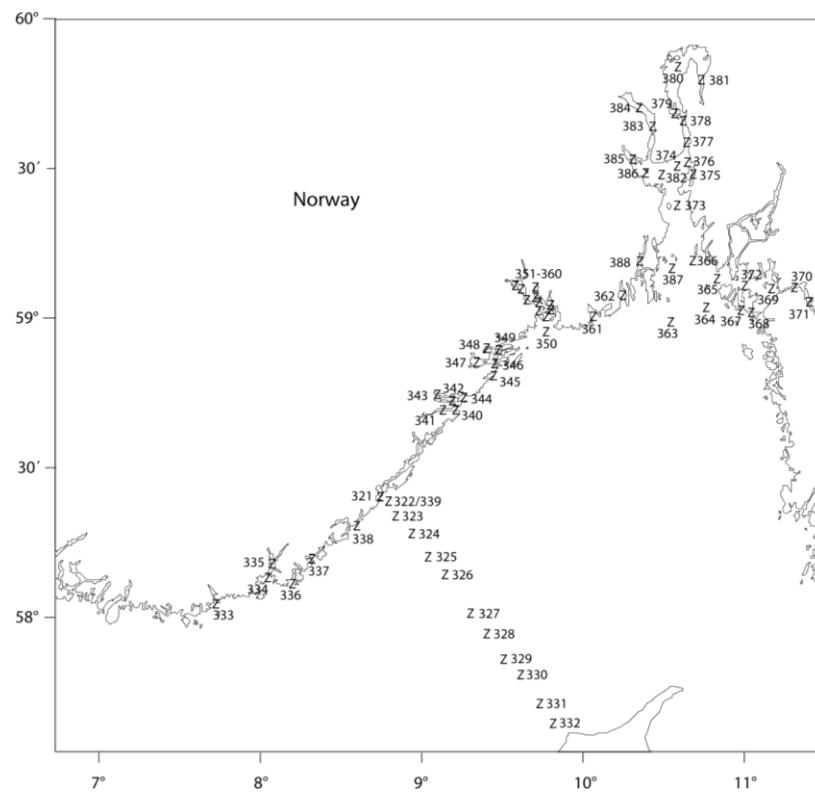


Cruise no 2008310

“G.M. Dannevig”

14–28 Aug 2008

z CTD st.no 294–320

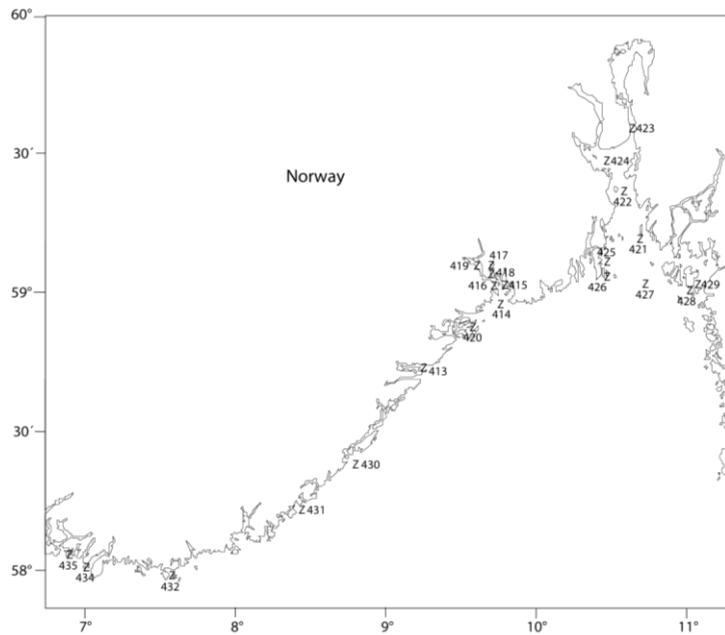


Cruise no 2008311

“G.M. Dannevig”

13 Sep–5 Oct 2008

z CTD st.no 321–388



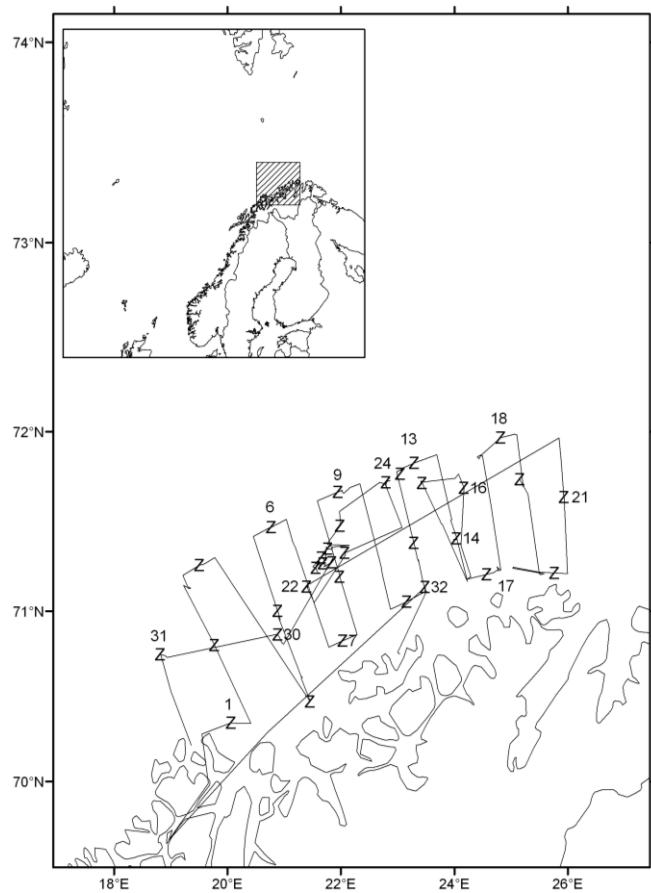
Cruise no 2008314

“G.M. Dannevig”

6 Nov–4 Dec 2008

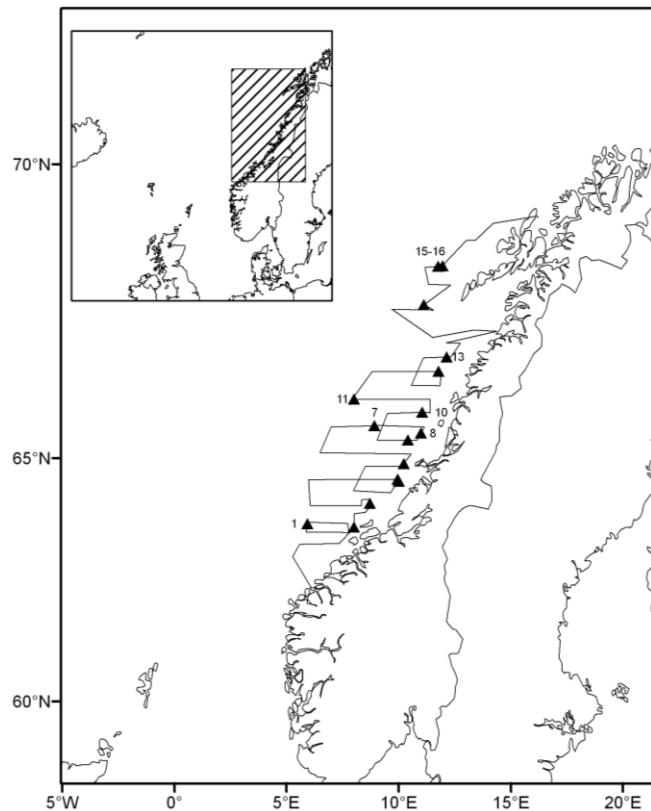
z CTD st.no 413–434

4.6 Some cruises carried out by hired fishing vessels



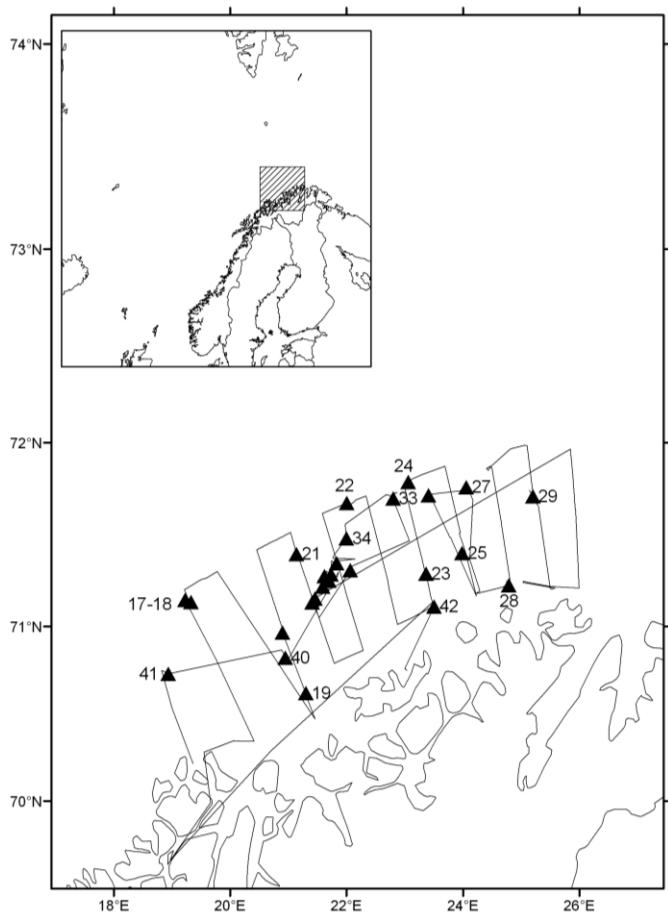
Cruise no 2008804
“Libas”
1–29 Feb 2008

Part II: 15–29 Feb:
z CTD st.no 1–32



Cruise no 2008804
“Libas”
1–29 Feb 2008

Part I: 1–14 Feb:
▲ Pelagic trawl st.no 1–16



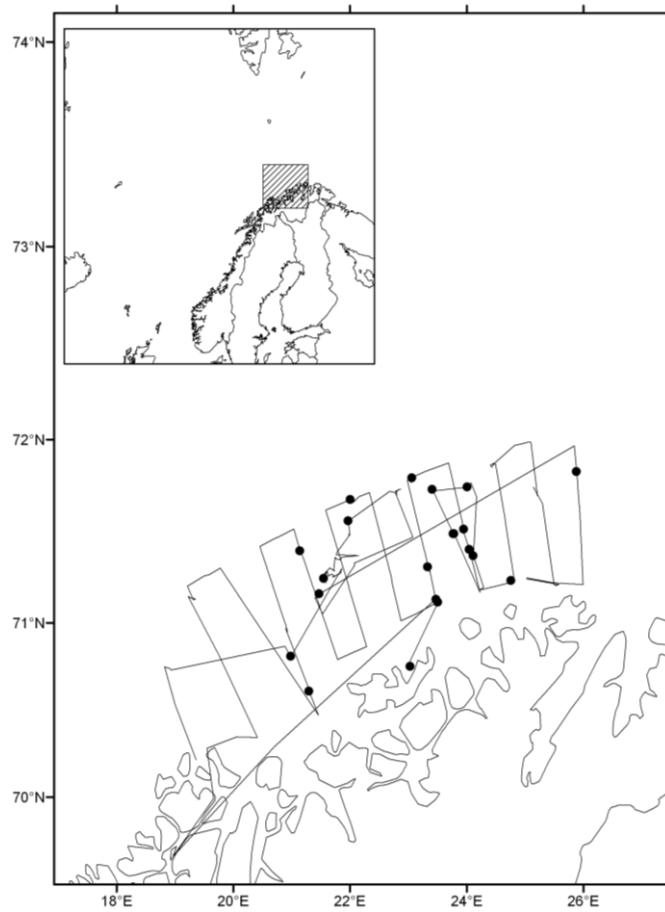
Cruise no 2008804

“Libas”

1–29 Feb 2008

Part II: 15–29 Feb:

▲ Pelagic trawl st.no 17–42



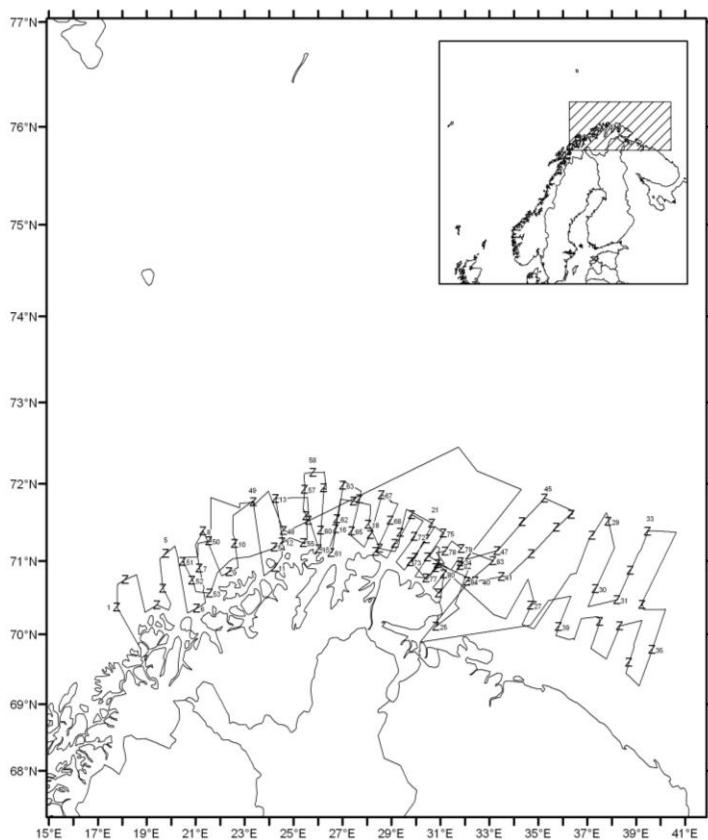
Cruise no 2008804

“Libas”

1–29 Feb 2008

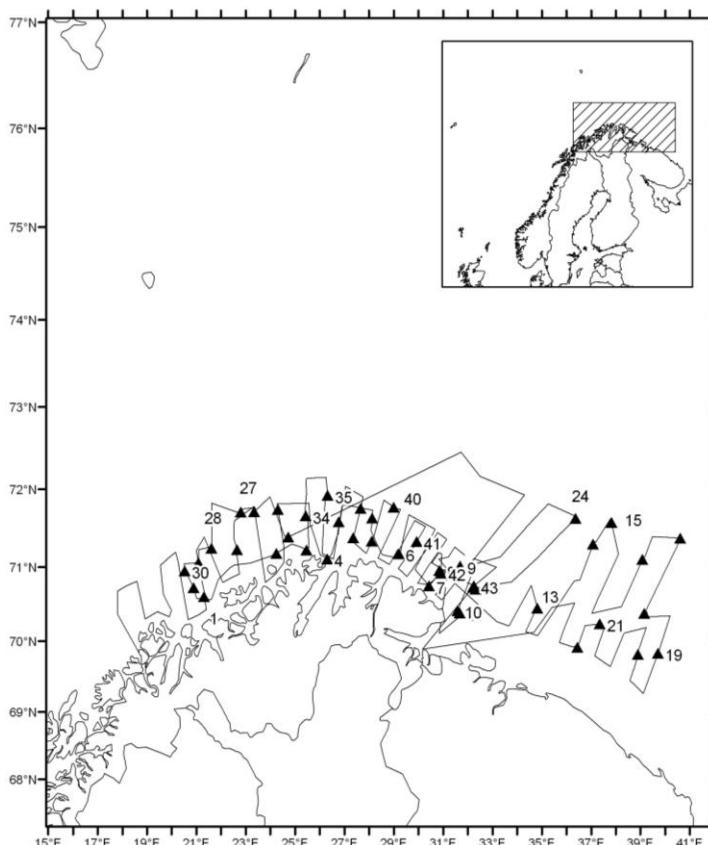
Part II: 15–29 Feb:

- Acoustic target-strength measurements of capelin



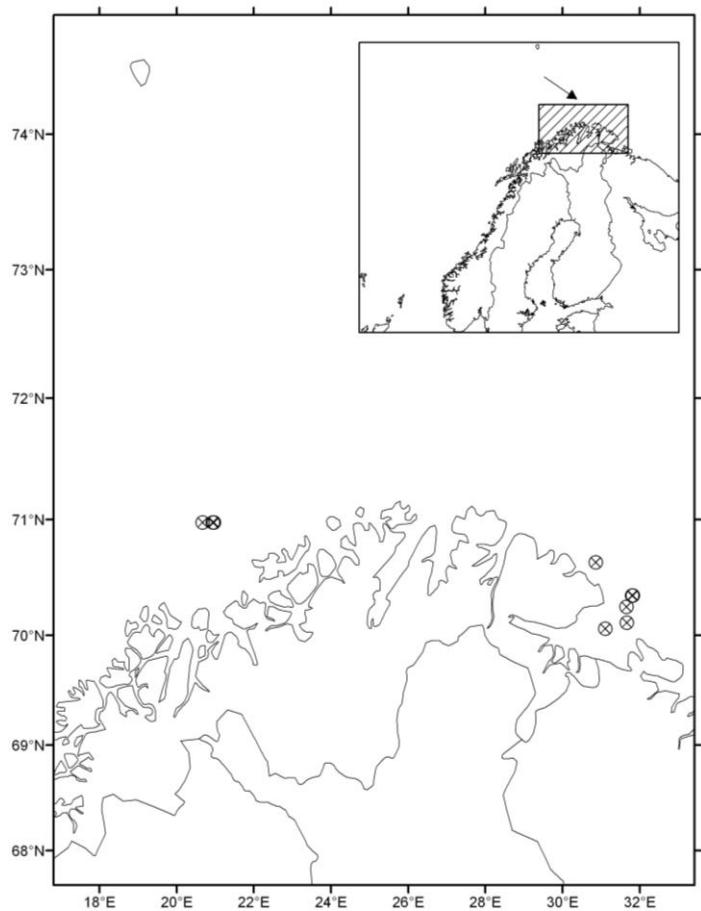
Cruise no 2008803
“Eros”
2 Feb–2 Mar 2008

z CTD st.no 1–84



Cruise no 2008803
“Eros”
2 Feb–2 Mar 2008

▲ Pelagic trawl st.no 1–42

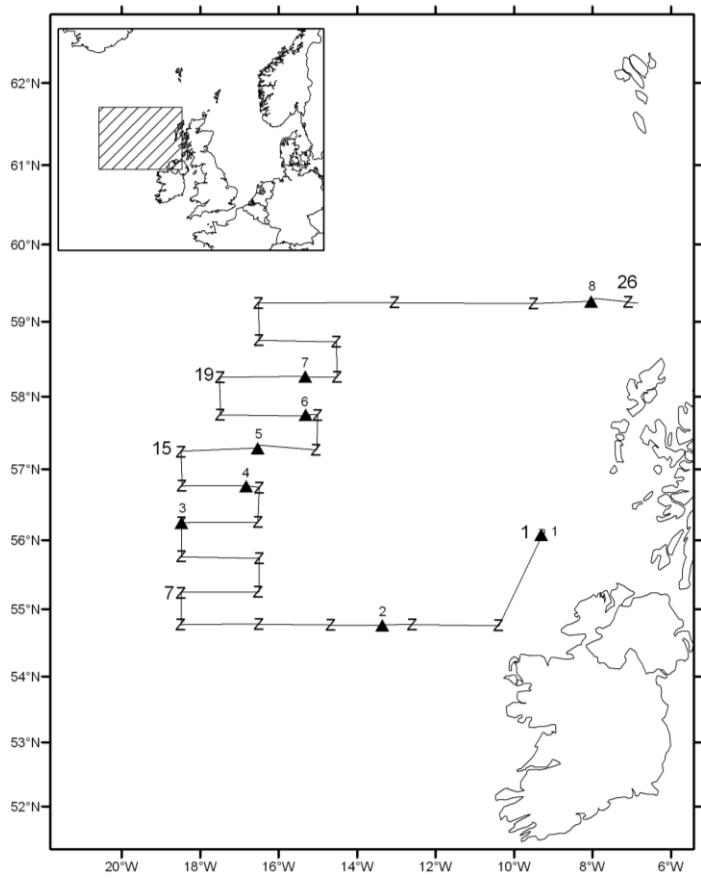


Cruise no 2008834 Part I

“Nybo”

28 Feb–16 Mar

⊗ Purse seine st.no 1–9



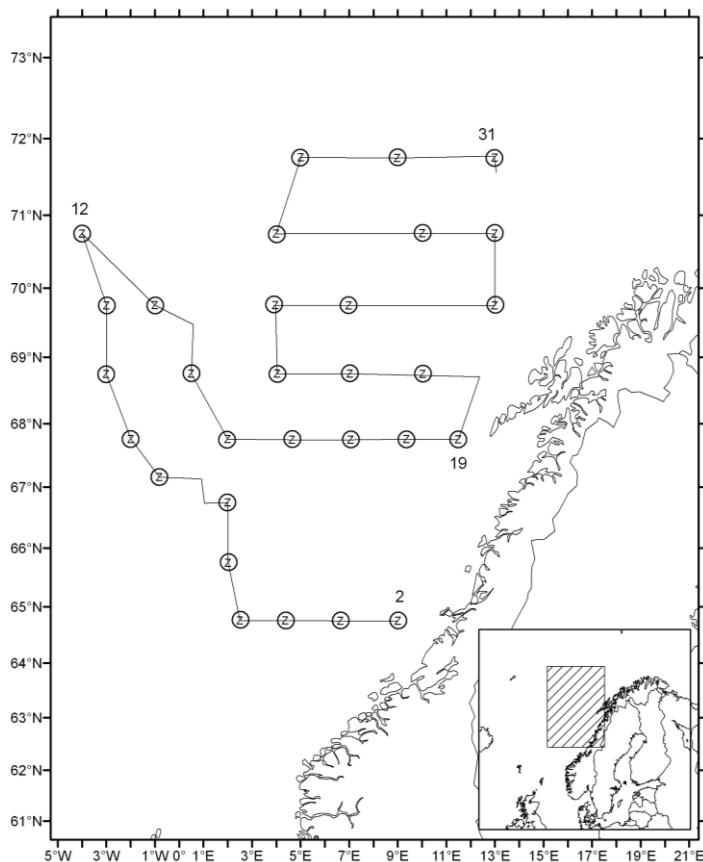
Cruise no 2008809

“Gardar”

26 Mar–7 Apr 2008

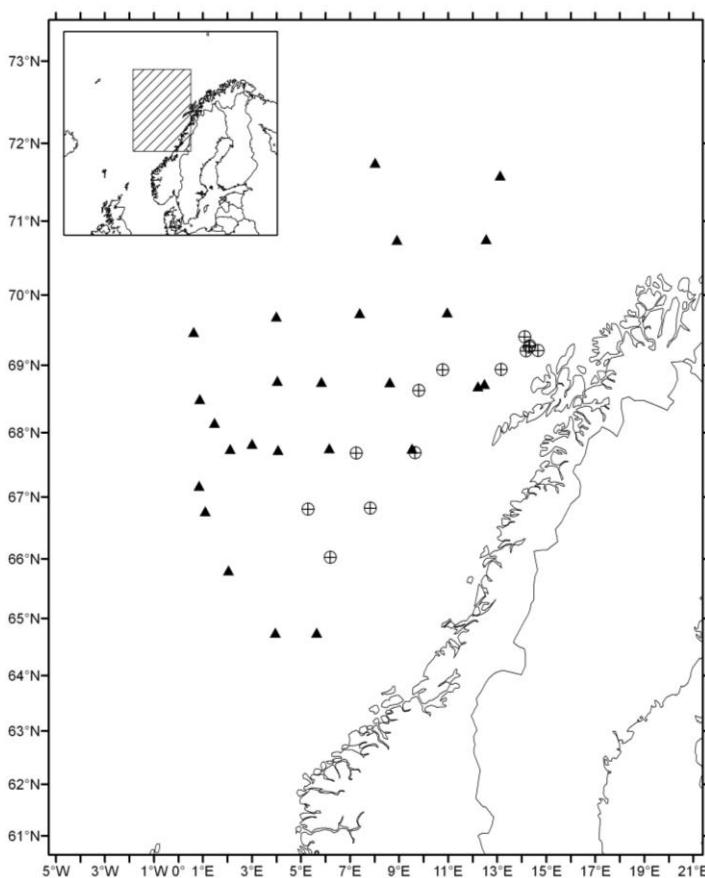
z CTD st.no 1–26

▲ Pelagic trawl st.no 1–8



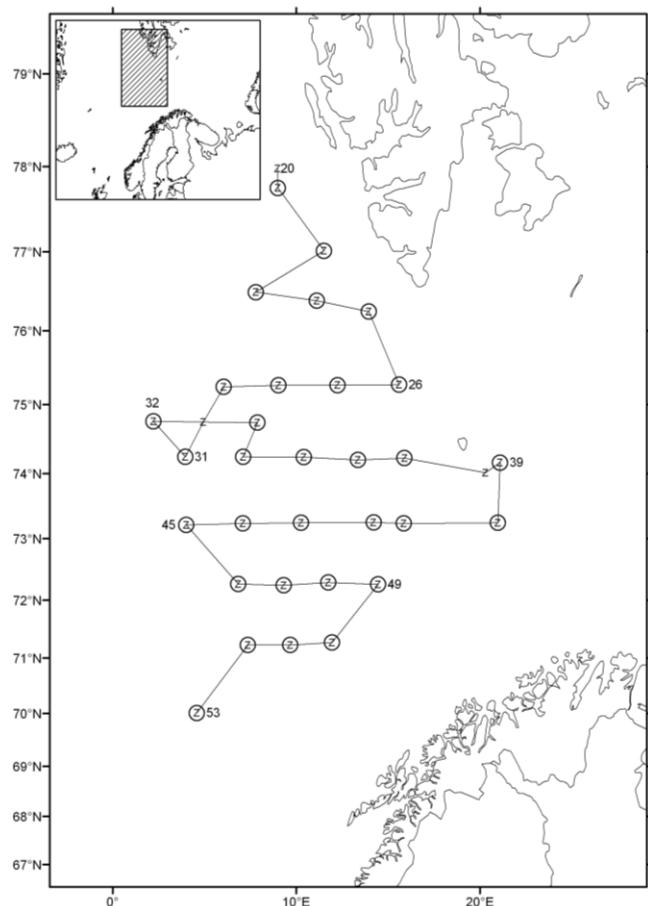
Cruise no 2008834 Part II
“Nybo”
1–25 May 2008

z CTD st.no 2–31
o Plankton st. (WP-II-net)



Cruise no 2008834 Part II
“Nybo”
1–25 May 2008

▲ Pelagic trawl st.no 1–25
⊗ Purse seine st.no 26–38

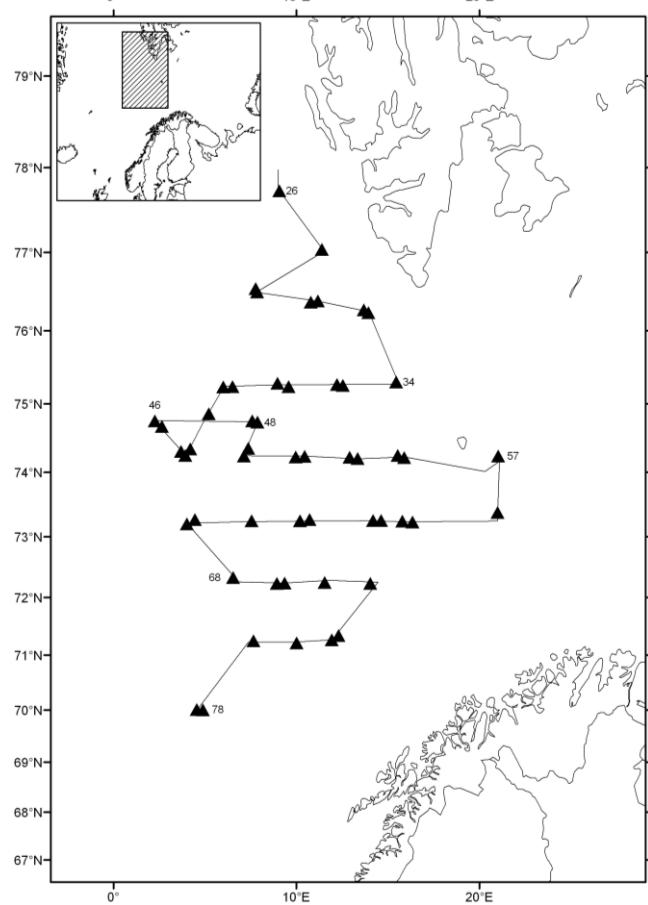


Cruise no 2008823

“Eros”

30 June–9 Aug 2008

z CTD st.no 20–53

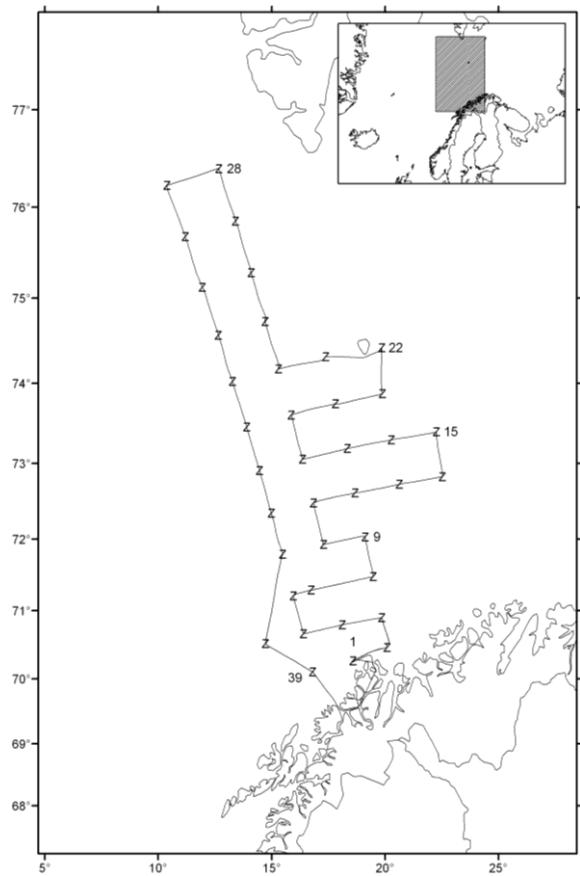


Cruise no 2008823

“Eros”

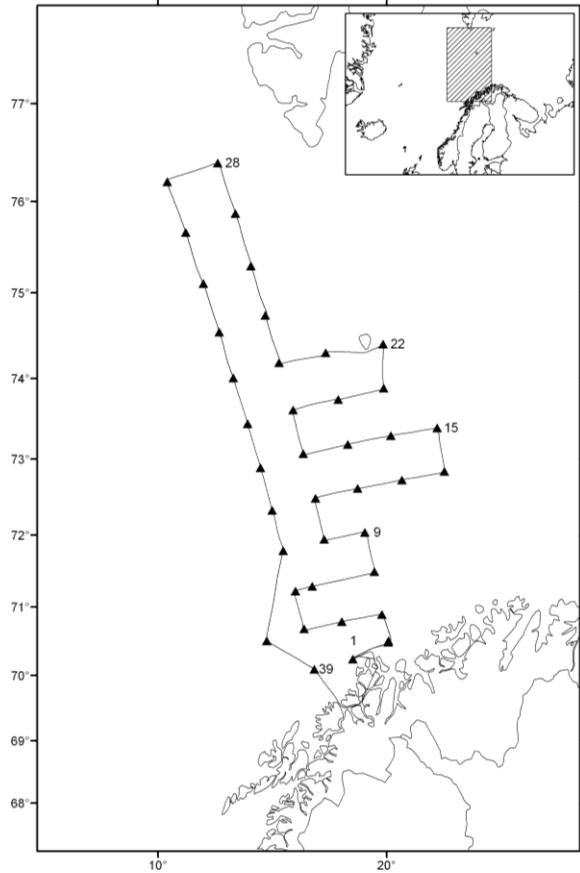
30 June–9 Aug 2008

▲ Pelagic trawl st.no 26–78



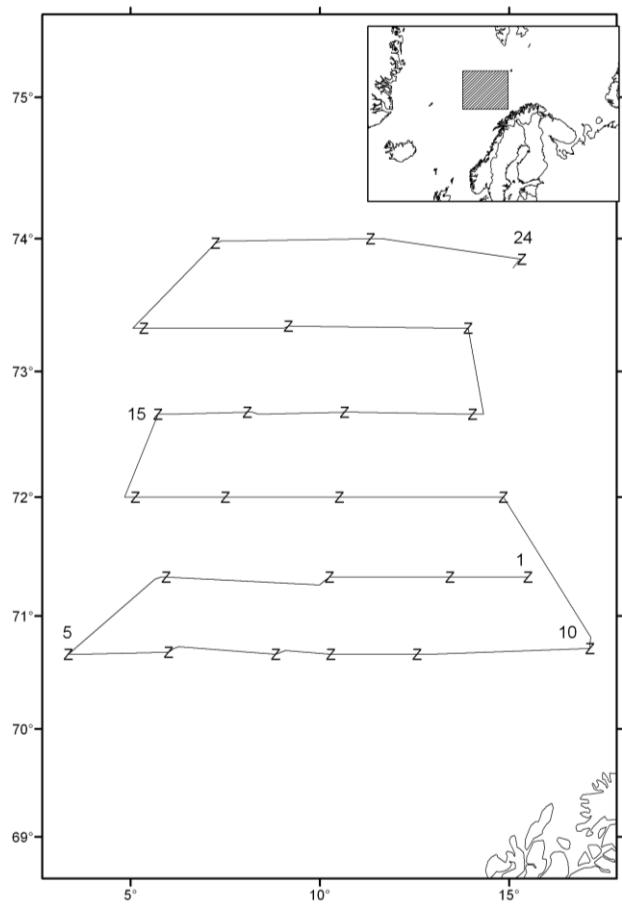
Cruise no 2008822 part I
“Atlantic Star”
1–9 Aug 2008

z CTD st.no 1–39



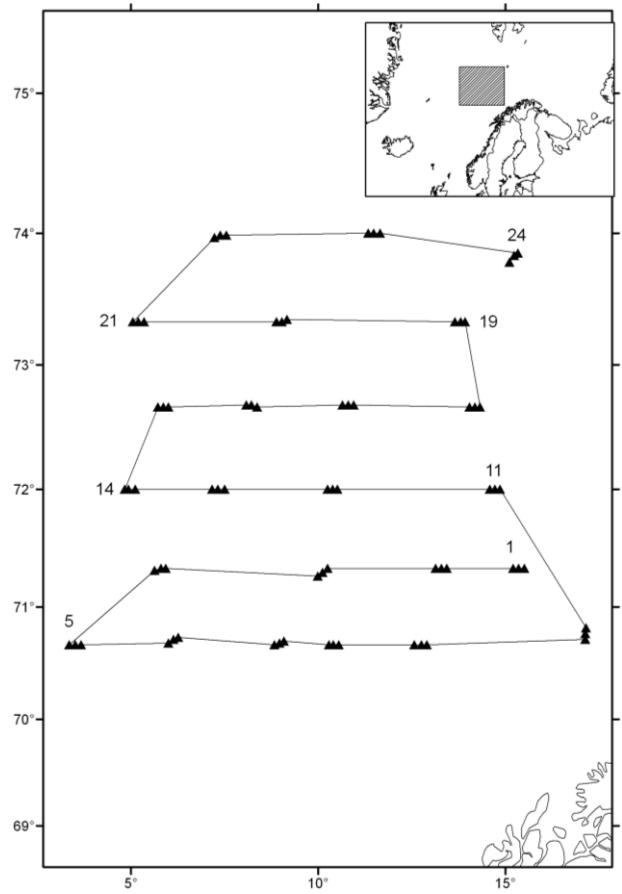
Cruise no 2008822 part I
“Atlantic Star”
1–9 Aug 2008

▲ Pelagic trawl st.no 1–39



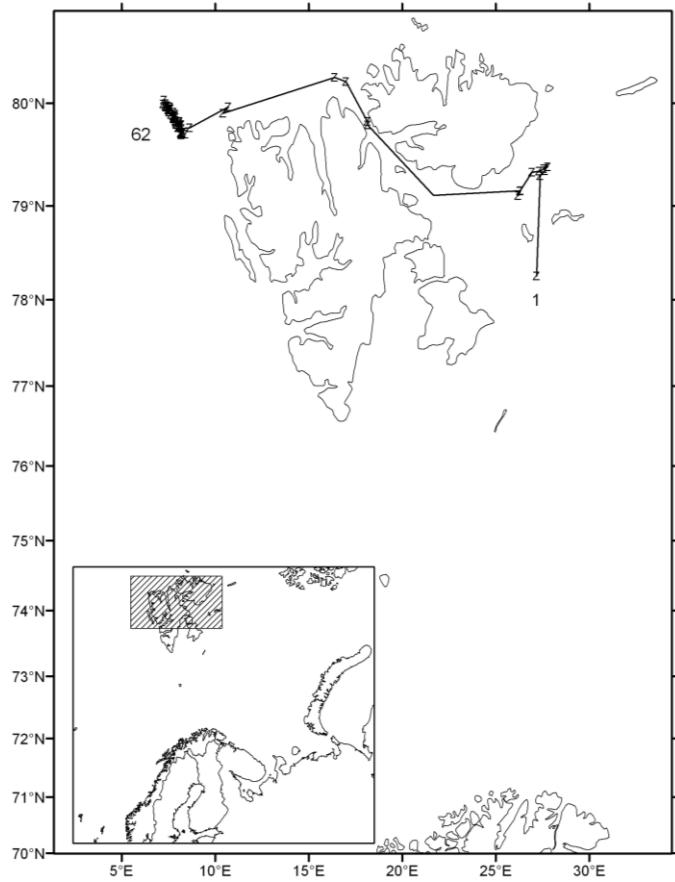
Cruise no 2008822 part II
“Atlantic Star”
11–24 Aug 2008

z CTD st.no 1–24



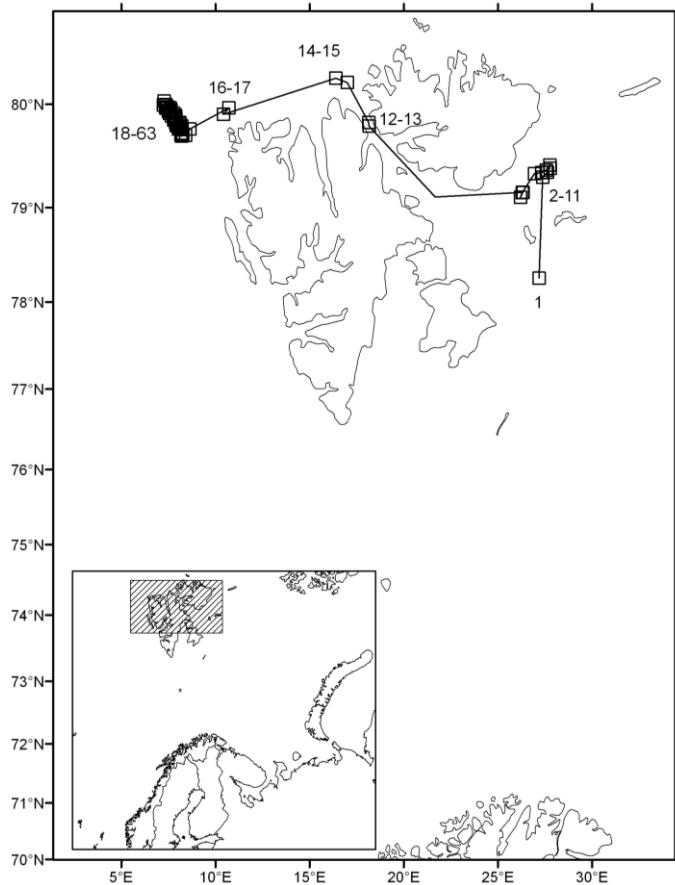
Cruise no 2008822 part II
“Atlantic Star”
11–24 Aug 2008

▲ Pelagic trawl st.no 1–24
(3 trawl hauls in each position)



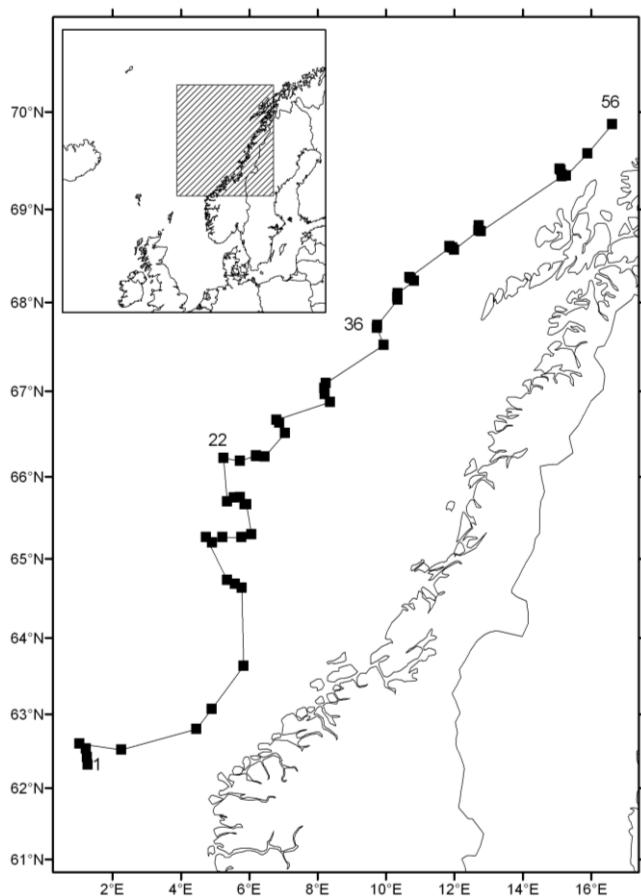
Cruise no 2008824
“Atlantic Viking”
1–15 Sep 2008

z CTD st.no 1–62



Cruise no 2008824
“Atlantic Viking”
1–15 Sep 2008

□ Bottom trawl st.no 1–63



Cruise no 2008826

“Atlantic Viking”

3–14 Nov 2008

■ Bottom trawl st.no 1–56

Retur: Havforskningsinstituttet, Postboks 1870 Nordnes, NO-5817 Bergen



HAVFORSKNINGSIINSTITUTTET

Institute of Marine Research

Nordnesgaten 50 – Postboks 1870 Nordnes

NO-5817 Bergen

Tlf.: +47 55 23 85 00 – Faks: +47 55 23 85 31

E-post: post@imr.no

HAVFORSKNINGSIINSTITUTTET

AVDELING TROMSØ

Sykehusveien 23, Postboks 6404

NO-9294 Tromsø

Tlf.: +47 77 60 97 00 – Faks: +47 77 60 97 01

HAVFORSKNINGSIINSTITUTTET

FORSKNINGSSTASJONEN FLØDEVIGEN

Nye Flødevigveien 20

NO-4817 His

Tlf.: +47 37 05 90 00 – Faks: +47 37 05 90 01

HAVFORSKNINGSIINSTITUTTET

FORSKNINGSSTASJONEN AUSTEVOLL

NO-5392 Storebø

Tlf.: +47 55 23 85 00 – Faks: +47 56 18 22 22

HAVFORSKNINGSIINSTITUTTET

FORSKNINGSSTASJONEN MATRE

NO-5984 Matredal

Tlf.: +47 55 23 85 00 – Faks: +47 56 36 75 85

AVDELING FOR SAMFUNNSKONTAKT

OG KOMMUNIKASJON

Public Relations and Communication

Tlf.: +47 55 23 85 00 – Faks: +47 55 23 85 55

E-post: informasjonen@imr.no

www.imr.no