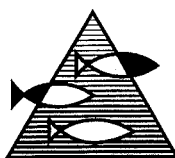


PROSJEKTRAPPORT

ISSN 0071-5638



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FISKEN OG HAVET

NR. 6 - 2001

Tittel:

REPORT ON OCEANOGRAPHIC CRUISES
AND DATA STATIONS 2000

Senter:

Marint miljø

Seksjon:

Norsk Marint Datasenter

Forfatter(e):

Karen Gjertsen

Antall sider, vedlegg inkl.:

71

Dato:

29.03.2001

Sammendrag:

Rapporten gir en oversikt over toktene til Havforskningsinstituttets forskningsfartøy "G.O. Sars", "Johan Hjort", "Michael Sars" og "G.M. Dannevig" i 2000. Figurene viser hovedsakelig CTD og trålstasjoner.

Først vises oversikt over tidsrom for tokt og toktnummer. For de fleste toktene vises kurs- og stasjonskart. Tabellene på side to og tre viser når de faste snittene er tatt og antall observasjoner pr måned for de faste stasjonene. På side fire vises dekning av CTD-stasjoner tatt i 2000.

Disse oversiktene er også innrapportert til Det internasjonale råd for havforskning (ICES) sammen med "Cruise Summary Report".

Data fra toktene er tilgjengelig fra Havforskningsinstituttet, Norsk Marint Datasenter. Rapporten kan brukes til å identifisere båt og stasjonsnummer man ønsker data for.

Digitale versjoner av toktene er tilgjengelig via Havforskningsinstituttets intranett.

Emneord - norsk:

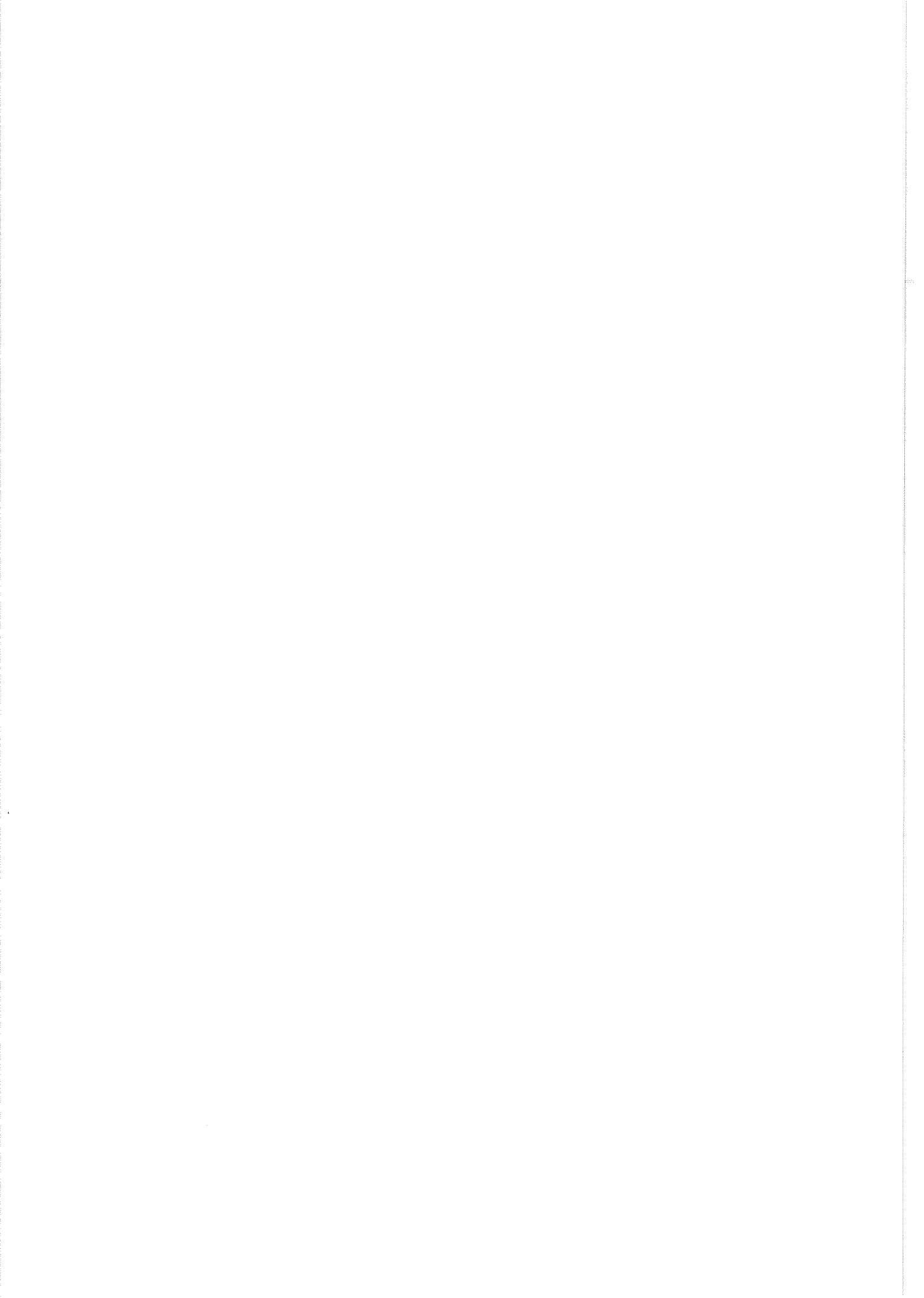
1. Kurskart
2. Stasjonskart

Emneord - engelsk:

1. Cruise track chart
2. Stations chart

Prosjektleder

Seksjonsleder



Summary:

The present report shows the course tracks and stations occupied by the research vessels "G.O. Sars", "Johan Hjort", "Michael Sars" and "G.M. Dannevig" during 2000.

The first tables shows the cruise number and the periods for each cruise. The next page shows the standard sections worked out by the Institute of Marine Research and the position of the fixed stations in the coast water. The following tables (page 2 and 3) indicate when the standard sections are worked out, and shows the number of observations per month of each of the fixed stations. An overview of CTD stations 2000 is given at page 4.

The data is available on request. This report may be used to indentify ship and station numbers.

| | Page |
|---|------|
| CHART oceanographic stations and sections | 1 |
| STANDARD sections | 2 |
| STANDARD stations | 3 |
| CHART ctd stations 2000 | 4 |

"G. O. SARS" 2000

(Ship no 15)

| Cruise no | Period of cruises | CTD no | Page of track chart |
|-----------|-------------------|-------------|---------------------|
| 2000002 | 29 Jan - 24 Feb | 1 - 141 | 5 |
| 2000003 | 25 Feb - 14 Mar | 142 - 155 | 6 |
| 2000004 | 17 Mar - 9 Apr | 156 - 323 | 7 |
| 2000005 | 10 Apr - 27 Apr | 324 - 533 | 8 |
| 2000006 | 28 Apr - 2 Jun | 534 - 648 | 9-11 |
| 2000007 | 30 Jun - 18 Jul | 649 - 747 | 12-13 |
| 2000008 | 20 Jul - 15 Aug | 748 - 827 | 14-16 |
| 2000009 | 19 Aug - 6 Sep | 828 - 912 | 17-18 |
| 2000010 | 8 Sep - 2 Oct | 913 - 1026 | 19 |
| 2000011 | 5 Oct - 12 Oct | | |
| 2000012 | 15 Oct - 5 Nov | 1027 - 1065 | 20 |
| 2000014 | 20 Nov - 22 Dec | 1068 - 1462 | 21 |

"JOHAN HJORT" 2000

(Ship no 12)

| Cruise no | Period of cruises | CTD no | Page of track chart |
|-----------|-------------------|-----------|---------------------|
| 2000201 | 12 Jan - 30 Jan | 1 - 60 | 22 |
| 2000202 | 1 Feb - 29 Feb | 61 - 177 | 23-24 |
| 2000203 | 1 Mar - 20 Mar | 178 - 239 | 25 |
| 2000204 | 22 Mar - 24 Apr | 240 - 355 | 26 |
| 2000206 | 8 May - 24 May | 356 - 358 | 27 |
| 2000207 | 27 May - 20 Jun | 359 - 478 | 28-30 |
| 2000208 | 22 Jun - 30 Jun | 497 - 501 | 31 |
| 2000209 | 1 Jul - 19 Jul | | no chart |
| 2000210 | 21 Jul - 15 Aug | 502 - 653 | 32 |
| 2000211 | 18 Aug - 6 Sep | 654 - 749 | 33-35 |
| 2000212 | 8 Sep - 3 Oct | 750 - 861 | 36-37 |
| 2000213 | 6 Oct - 13 Oct | 862 | 38 |
| 2000214 | 15 Oct - 5 Nov | 863 - 962 | 39-40 |
| 2000215 | 29 Nov - 3 Dec | 963 - 978 | 41 |
| 2000216 | 3 Dec - 19 Dec | 979 - 989 | 42 |

"MICHAEL SARS" 2000

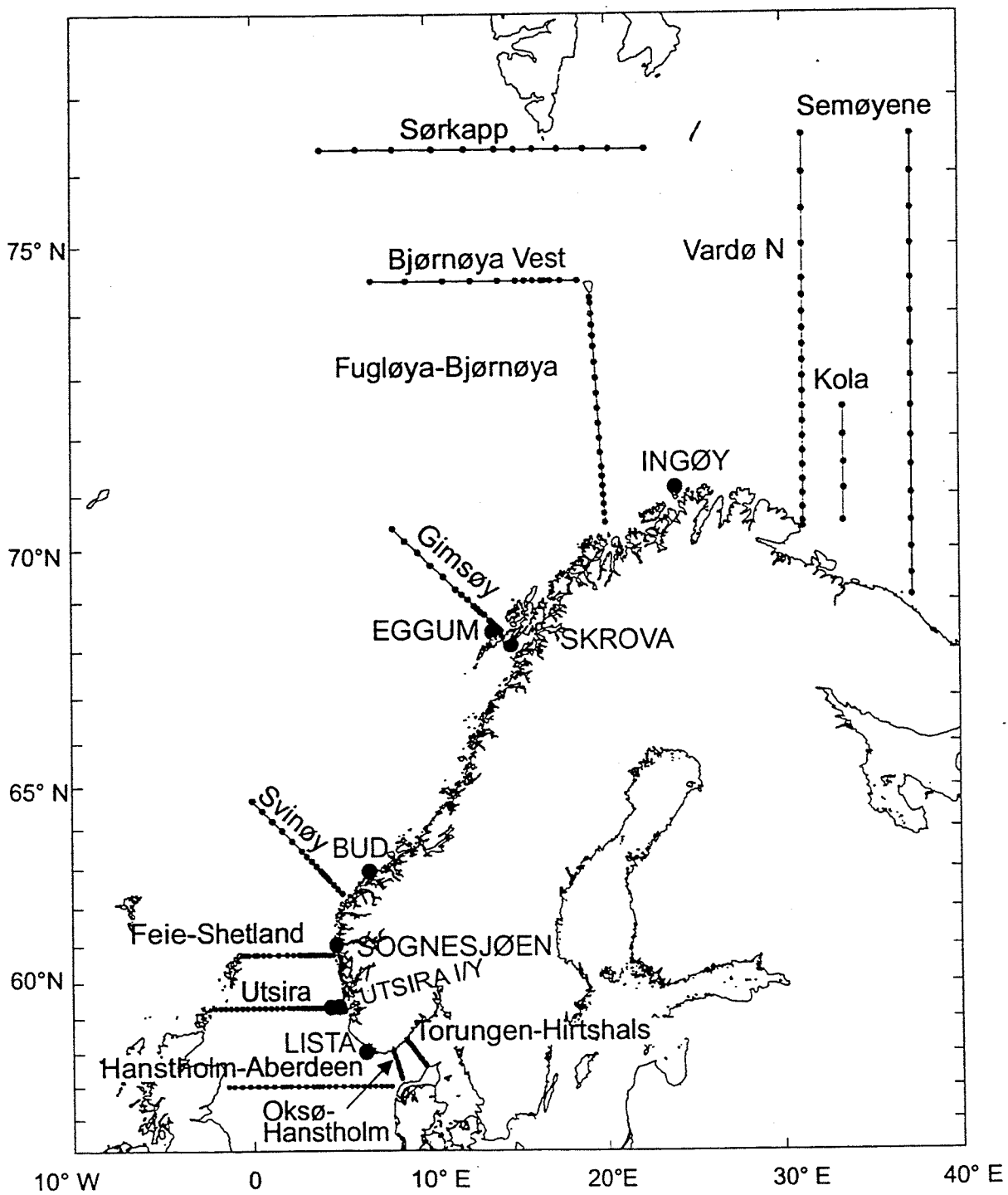
(Ship no 11)

| Cruise no | Period of cruises | CTD no | Page of track chart |
|-----------|-------------------|------------|---------------------|
| 2000101 | 8 Jan - 12 Feb | 1 - 133 | 43-44 |
| 2000102 | 15 Feb - 19 Mar | 134 - 246 | 45-48 |
| 2000103 | 28 Mar - 9 Apr | 247 - 267 | 49 |
| 2000104 | 10 Apr - 14 Apr | | 50 |
| 2000105 | 26 Apr - 9 May | 268 - 362 | 51-52 |
| 2000106 | 11 May - 31 May | 363 - 632 | 53 |
| 2000107 | 2 Jun - 27 Jun | 633 - 696 | 54-55 |
| 2000108 | 28 Jun - 24 Jul | 697 - 990 | 56 |
| 2000110 | 25 Jul - 20 Aug | 991 - 1106 | 57-58 |

| | | | |
|---------|-----------------|-------------|-------|
| 2000111 | 23 Aug - 16 Sep | 1107 - 1177 | 59-60 |
| 2000112 | 19 Sep - 4 Oct | 1178 - 1282 | 61-62 |
| 2000113 | 6 Oct - 21 Oct | 1283 - 1381 | 63 |
| 2000114 | 3 Nov - 17 Dec | 1382 - 1519 | 64-65 |

"G. M. DANNEVIG" 2000

| (Ship no 16) | | | Page of |
|--------------|-------------------|-----------|-------------|
| Cruise no | Period of cruises | CTD no | track chart |
| 2000302 | 16 Jan | 7 - 16 | 66 |
| | 17 Jan - 12 Feb | | |
| 2000303 | 12 Feb - 13 Feb | 17 - 28 | 66 |
| 2000339 | 14 Feb - 16 Feb | 29 - 34 | 67 |
| 2000308 | 5 Mar - 7 Mar | 35 - 40 | 68 |
| 2000307 | 8 Mar - 9 Mar | 41 - 52 | 66 |
| 2000310 | 3 Apr - 10 Apr | 53 - 58 | |
| 2000309 | 11 Apr - 13 Apr | 59 - 66 | 68 |
| 2000311 | 14 Apr - 28 Apr | 67 - 78 | 66 |
| 2000312 | | 79 - 148 | 69 |
| 2000304 | 2 May - 4 May | | |
| 2000314 | 8 May - 11 May | | |
| 2000315 | 13 May - 16 May | 149 - 172 | |
| 2000316 | 17 May - 18 May | 173 - 184 | 66 |
| 2000317 | 19 May - 21 May | 185 - 190 | 70 |
| 2000318 | 22 May - 25 May | 191 - 214 | |
| 2000319 | 26 May | 215 | |
| 2000340 | 4 Jun - 8 Jun | | |
| 2000320 | 10 Jun - 11 Jun | 216 - 227 | 66 |
| 2000321 | 12 Jun - 21 Jun | | |
| 2000322 | 22 Jun | 228 | |
| 2000323 | 23 Jun - 30 Jun | 229 - 234 | |
| 2000324 | 1 Jul - 3 Jul | 235 - 240 | 70 |
| 2000325 | 4 Jul - 5 Jul | 241 - 252 | 66 |
| 2000326 | 7 Aug - 12 Aug | | |
| 2000327 | 14 Aug - 18 Aug | 253 - 264 | 66 |
| 2000340 | | 265 - 277 | 71 |
| 2000328 | 28 Aug - 1 Sep | | |
| 2000329 | 11 Sep - 12 Sep | 278 - 289 | 66 |
| 2000330 | 13 Sep - 15 Sep | 290 - 295 | 71 |
| 2000331 | 16 Sep - 4 Oct | 296 - 331 | |
| 2000332 | 5 Oct | 332 | |
| 2000333 | 21 Oct - 22 Oct | 333 - 344 | 66 |
| 2000334 | 23 Oct - 25 Oct | | |
| 2000335 | 26 Oct - 2 Nov | 345 - 350 | |
| 2000336 | 2 Nov | 351 - 353 | 66 |
| 2000338 | 4 Dec - 5 Dec | 354 - 365 | 66 |



**STANDARD
SECTIONS**

2000

Ship/cruise no

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | No |
|----------------------|-----------|---------|-----------|-----------|------------------------|-----------|-----------|-----------|-----------|---------|-----------|-----------|----|
| Torungen - Hirtshals | "G.M.D" | "G.M.D" | "G.M.D" | "G.M.D" | "G.M.D" | "G.M.D" | "G.M.D" | "G.M.D" | "G.M.D" | "G.M.D" | "G.M.D" | "G.M.D" | 12 |
| Oksø - Hanstholm | MS2000101 | | | | | | GS2000007 | | | | | GS2000014 | 3 |
| Hanstholm - Aberdeen | MS2000101 | | | | | | GS2000007 | | | | | GS2000014 | 3 |
| Utsira West | MS2000101 | | | | | | | | | | | GS2000014 | 2 |
| Feie - Shetland | MS2000101 | | | | | | GS2000007 | | | | GS2000014 | | 3 |
| Svinøy - North/West | JH2000201 | | JH2000203 | | GS2000006 | | GS2000008 | | | | JH2000215 | | 5 |
| Gimsøy - North/West | | | JH2000203 | | GS2000006 JH2000207 | JH2000207 | GS2000008 | | | | | | 5 |
| Sørkapp | | | | | | | | JH2000211 | | | | | 1 |
| Fugløy - Bjørnøya | JH2000201 | | JH2000203 | GS2000005 | | JH2000207 | | JH2000211 | GS2000010 | | | | 6 |
| Bjørnøya West | | | | | | JH2000207 | | | | | | | 1 |
| Vardø - North | JH2000201 | | JH2000203 | | | MS2000107 | | | GS2000009 | | | | 4 |
| Semøyene - North | | | | | | | | | | | | | |

2

2

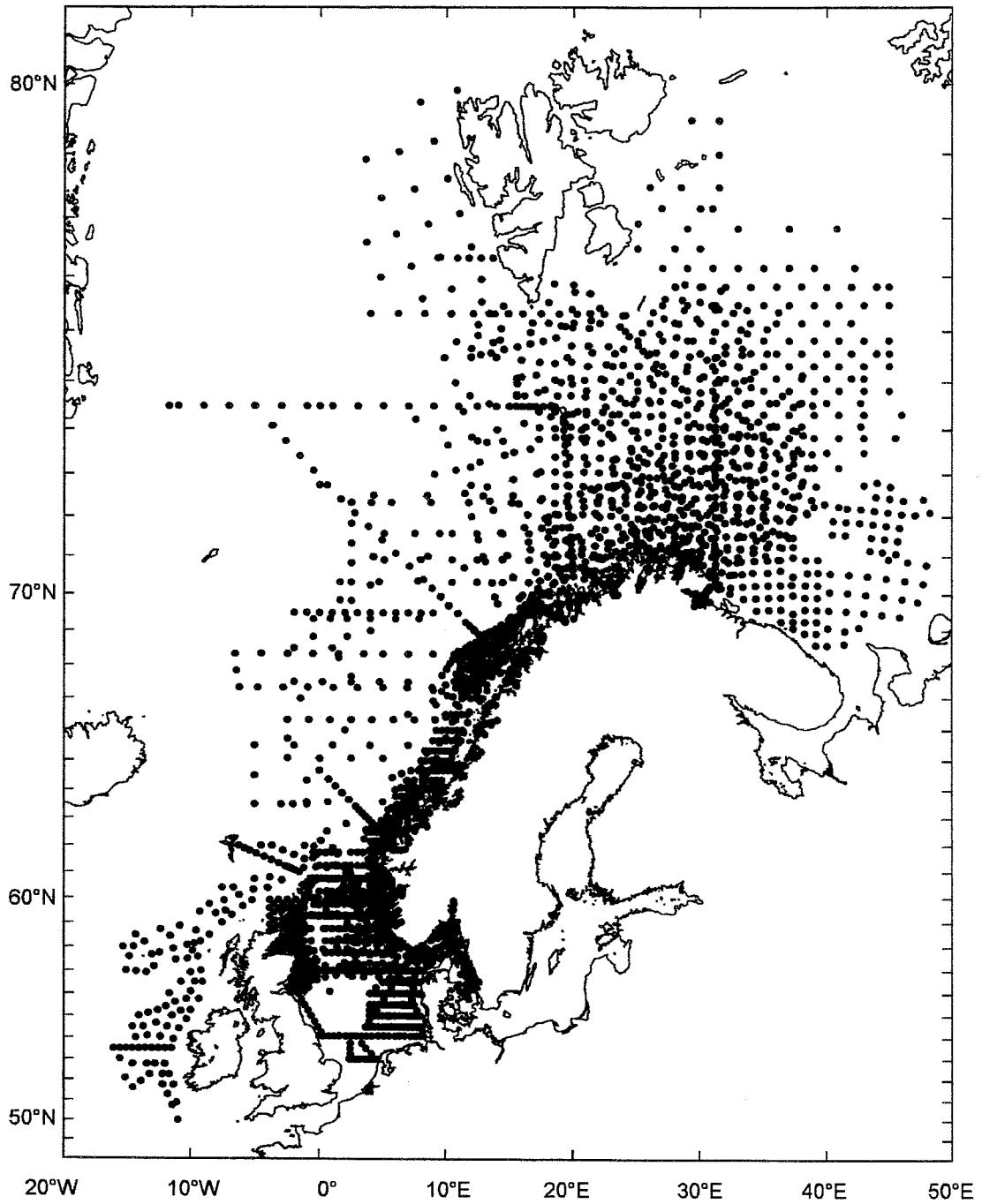
No of observations in 2000

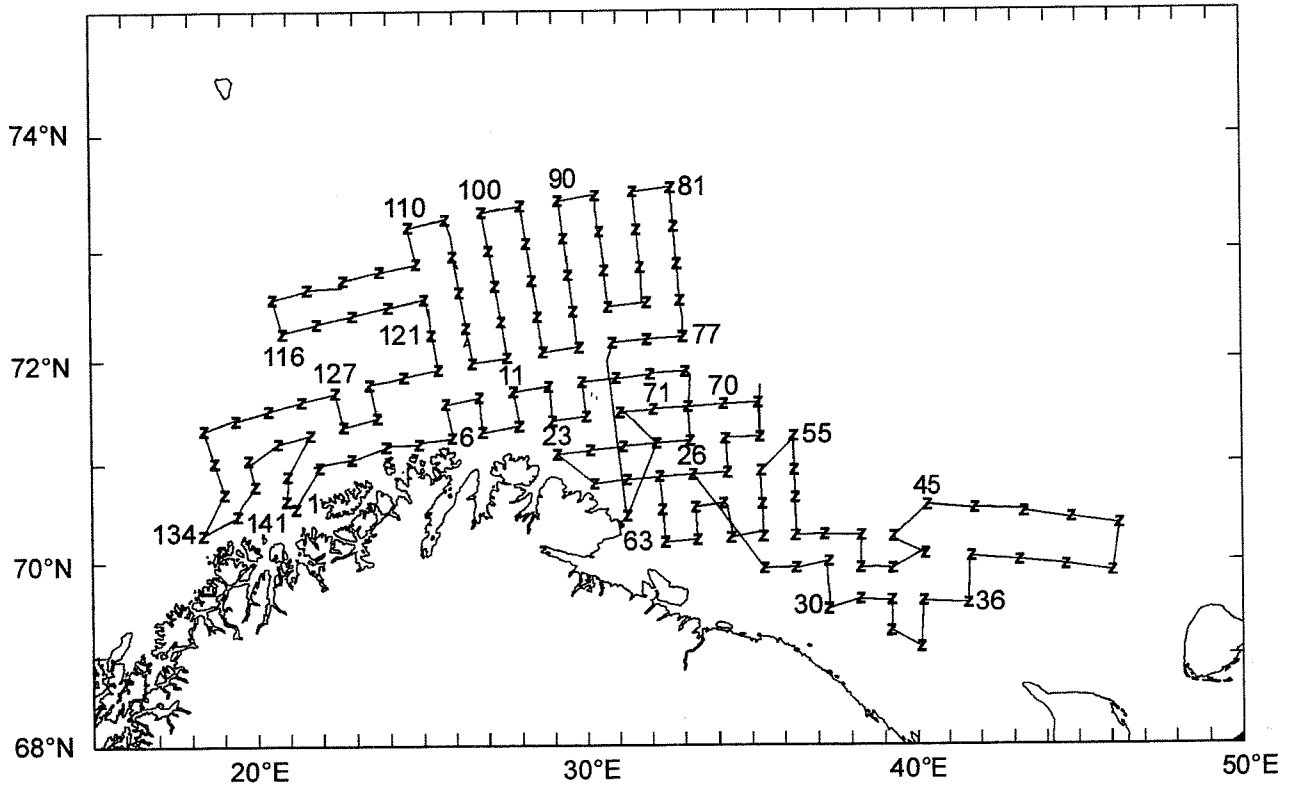
STANDARD

| 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 | 4 | 3 | 36 |
| UTSIRA Y N59° 19' E04° 44' | 1 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 34 |
| UTSIRA I N59° 19' E04° 59' | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 35 |
| SOGNESJØEN N61° 01' E04° 50' | 1 | 2 | 4 | 3 | 3 | 2 | 1 | 4 | 3 | 2 | 2 | 1 | 28 |
| BUD N62° 56' E 06° 47' | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 1 | 29 |
| SKROVA N68° 07' E14° 39' | 3 | 3 | 4 | 4 | 5 | 4 | 4 | 5 | 4 | 3 | 5 | 3 | 47 |
| EGGUM N 68° 23' E13° 38' | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 32 |
| INGØY N71° 08' E 24° 01' | 3 | 4 | 4 | 3 | 4 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 41 |

CTDstations in 2000

3970 stasjoner



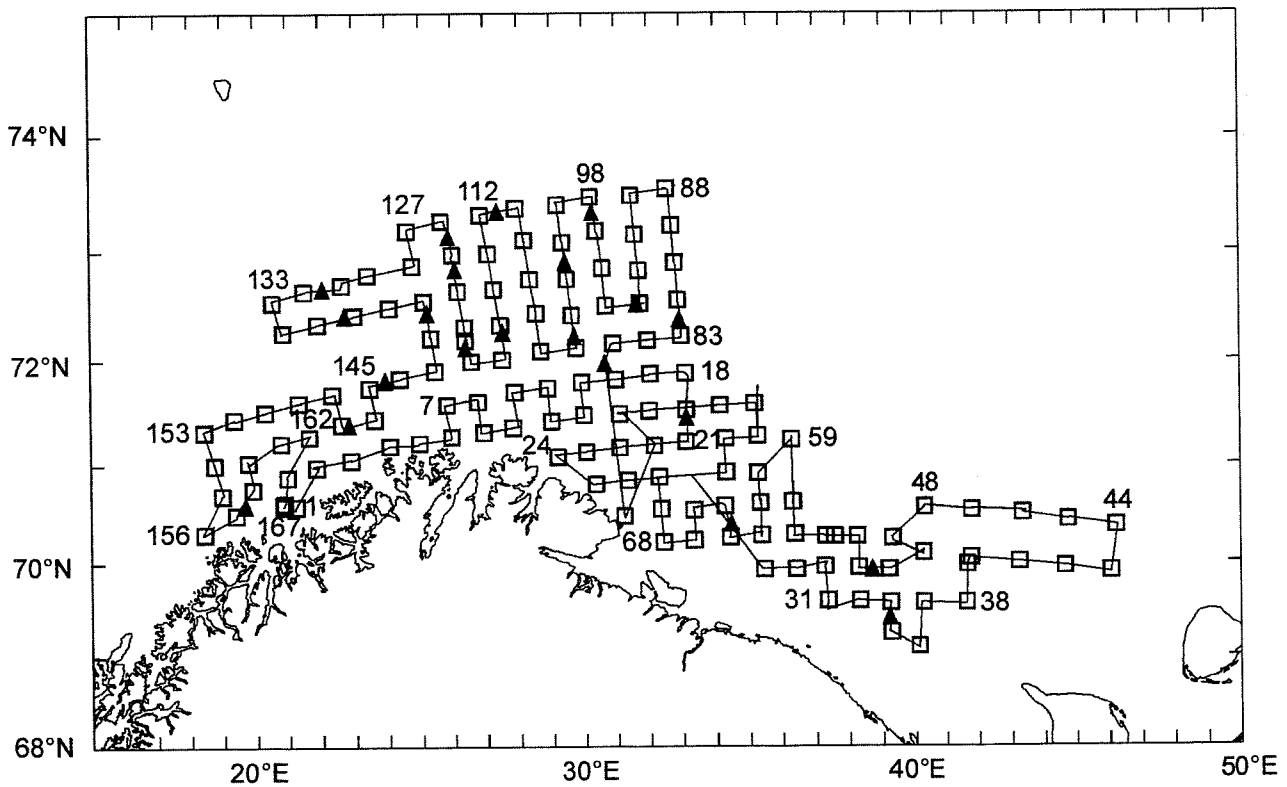


29 Jan - 24 Feb 2000

z CTD st.no 1-141

"G.O. Sars"

Cruise no 2000002



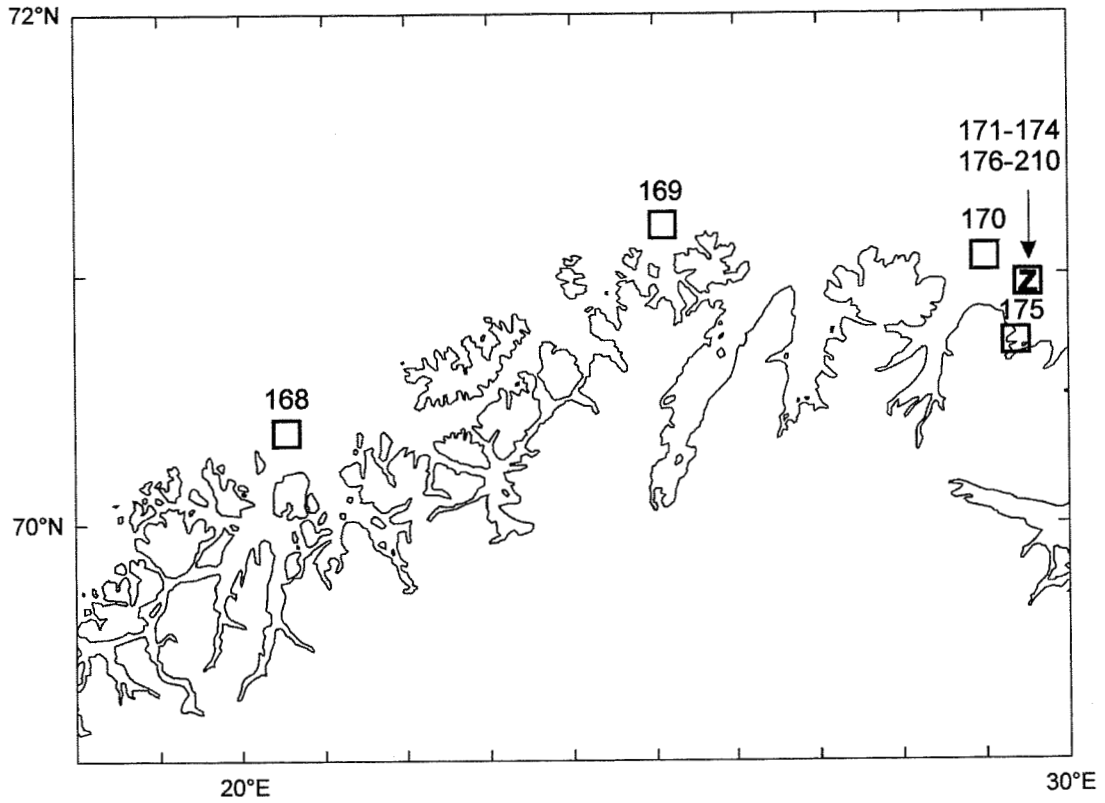
29 Jan - 24 Feb 2000

TRAWL st.no 1-167

"G.O.Sars"

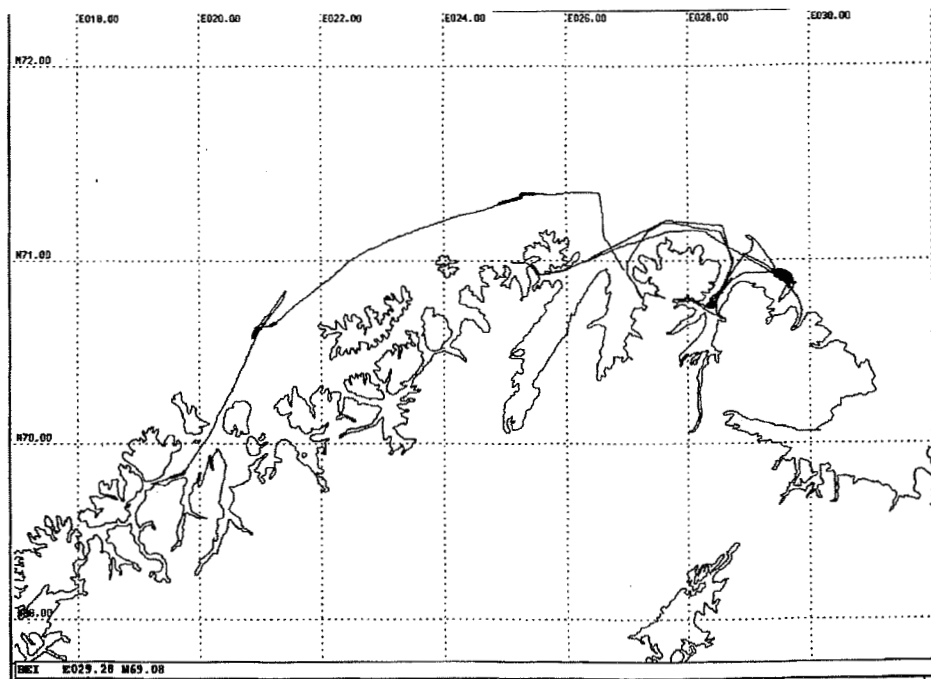
Cruise no 2000002

□ Bottom tr.
▲ Pel tr.

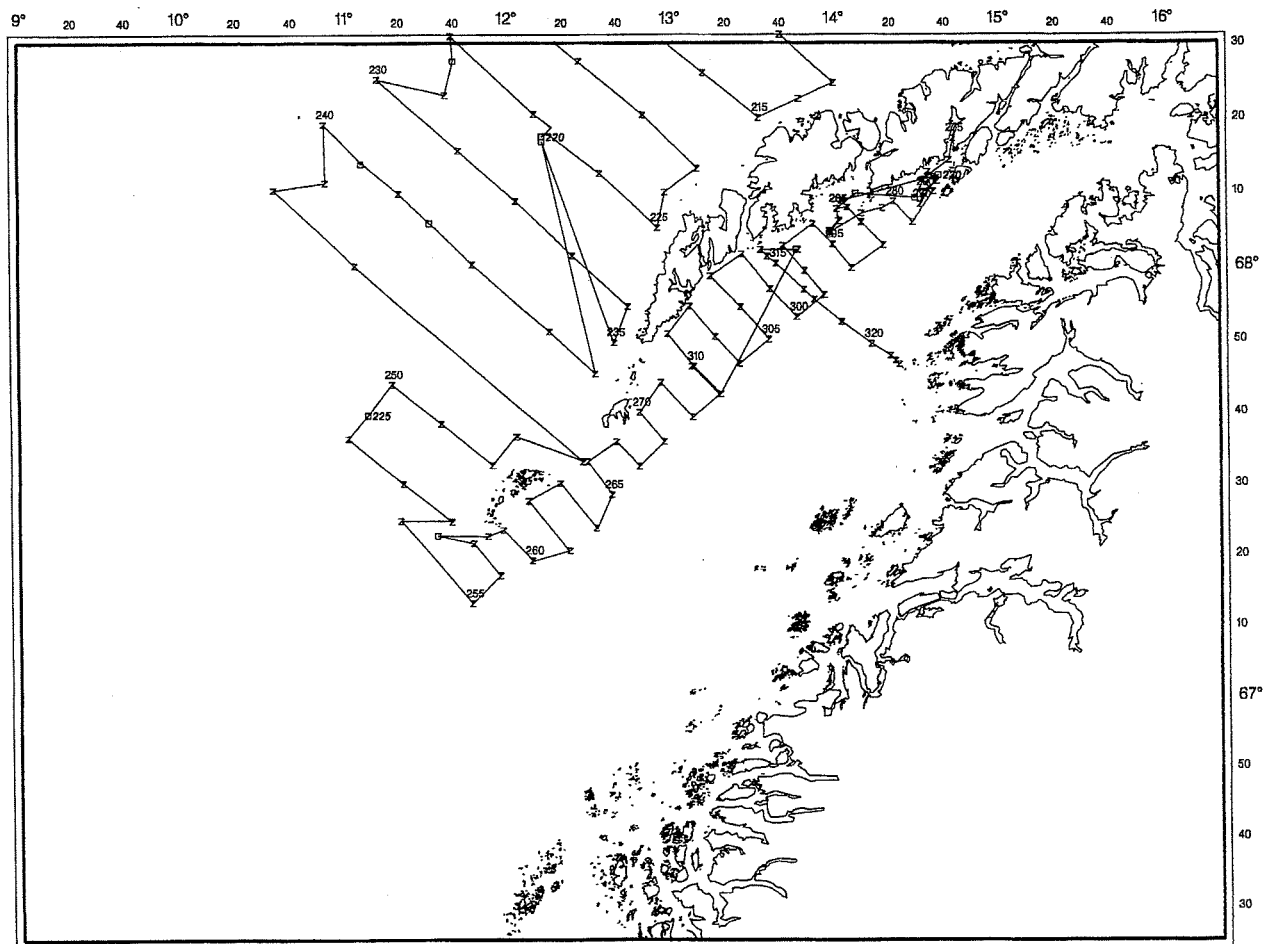
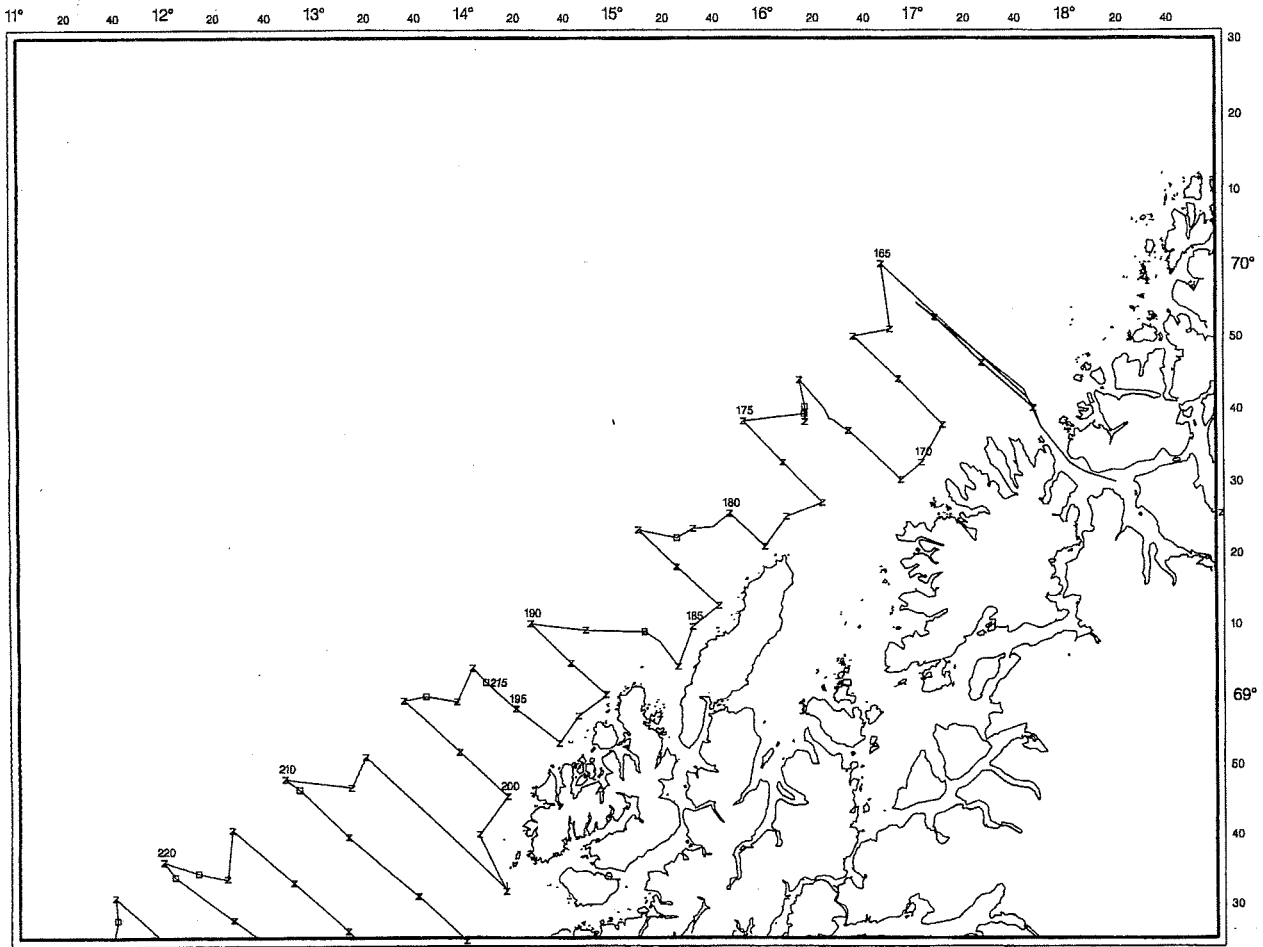


25 Feb - 14 Mar 2000 Z CTD st.no 142-155
 Cruise no 2000003 □ TRAWL st.no 168-210

“G.O. Sars”



Track chart

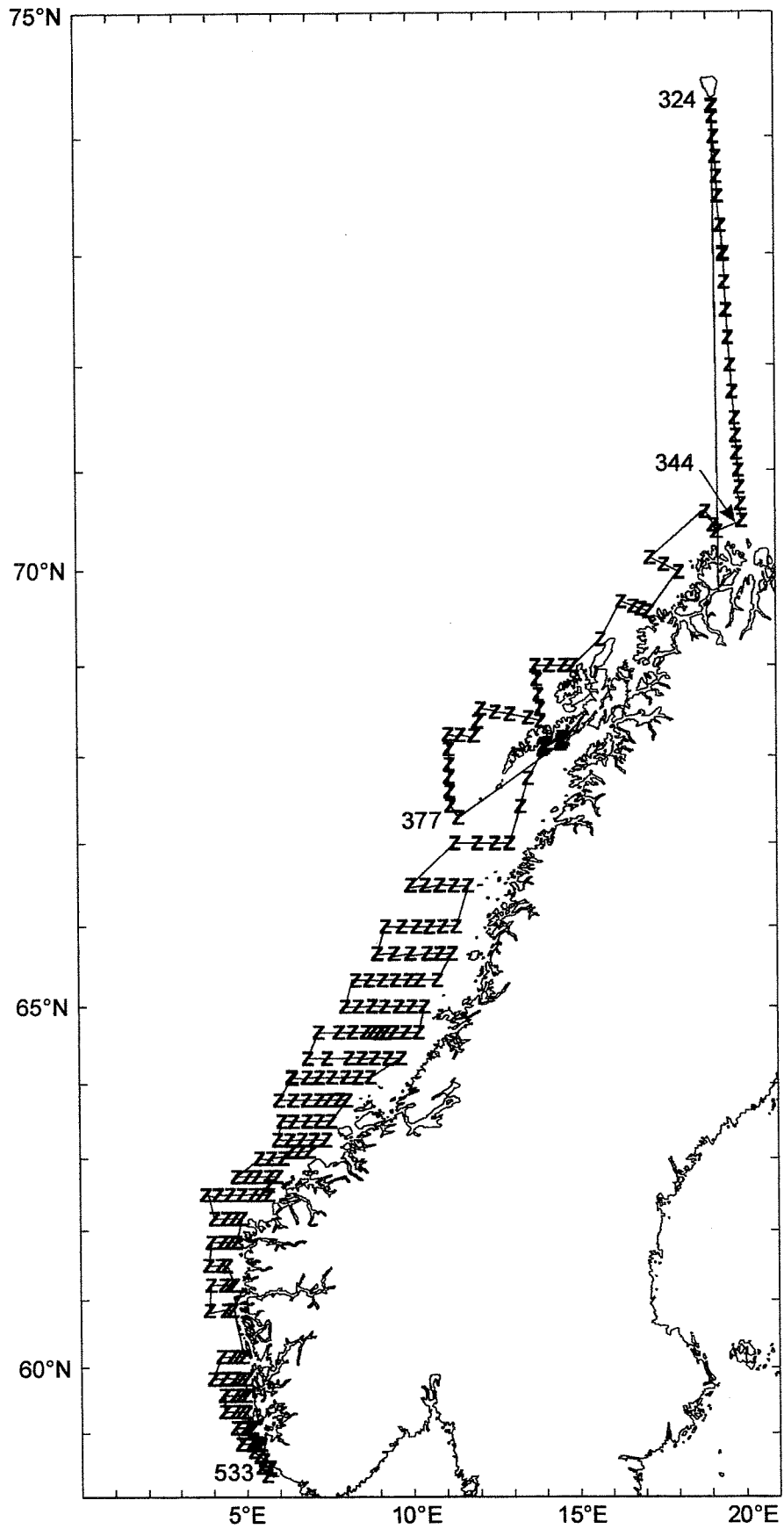


17 Mar - 9 Apr 2000

z CTD st.no 156-323

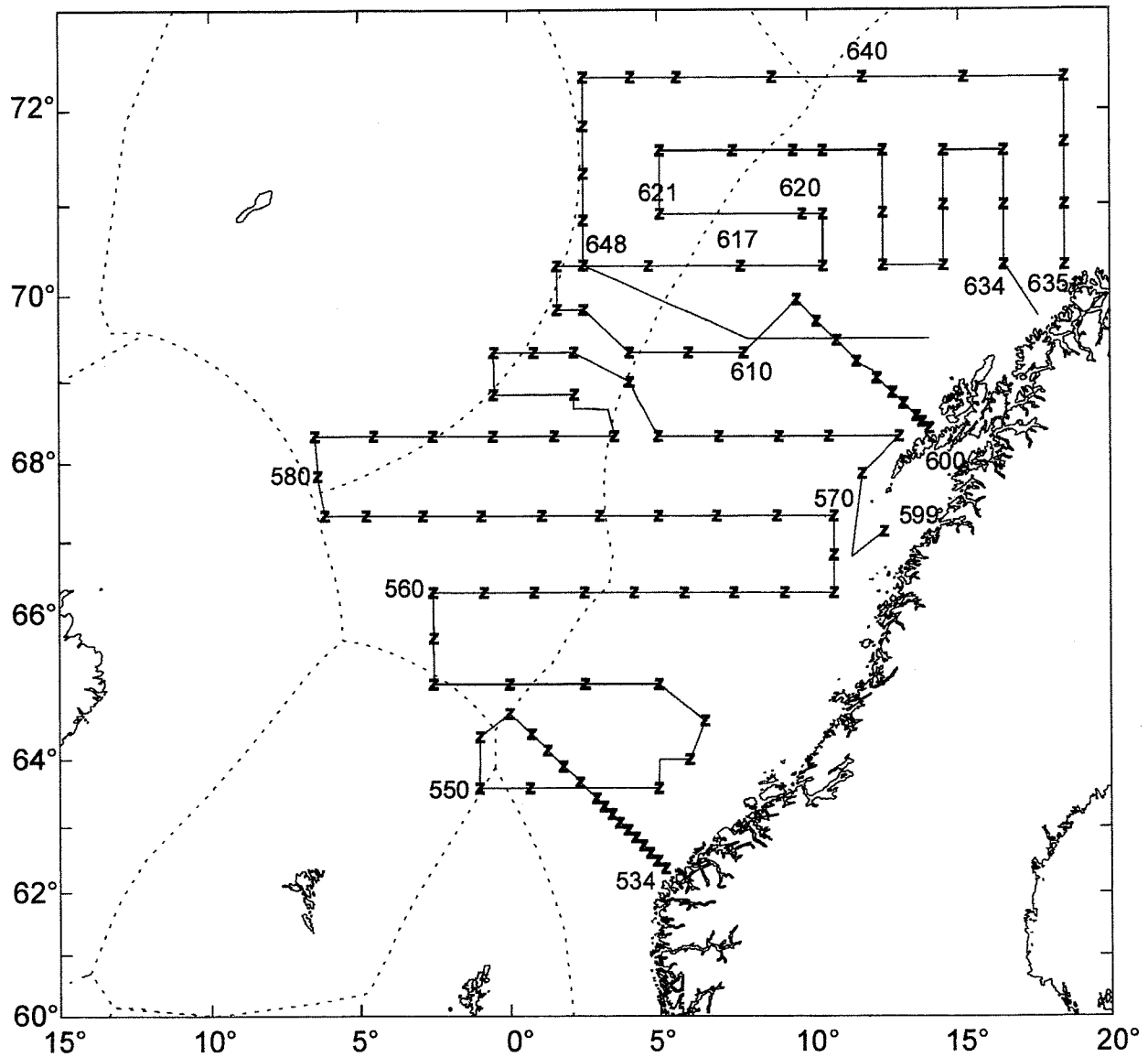
"G.O. Sars"

Cruise no 2000004



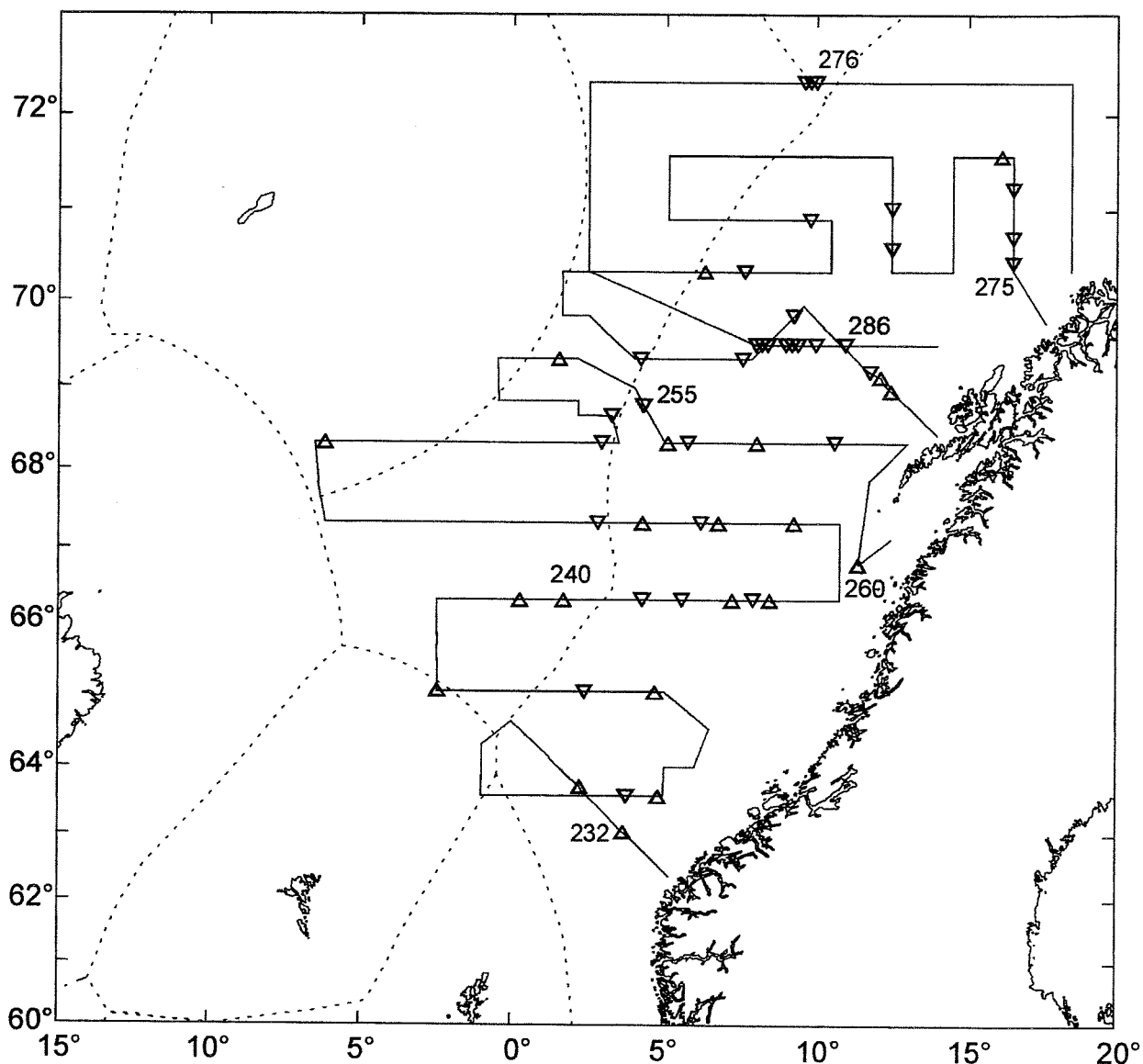
10 - 27 Apr 2000
 Cruise no 2000005

z CTD st.no 324-533 "GO. Sars"
 Plankton sampling performed on all station
 apart from a few at the F-B section
 Standard section:
 Fugløya - Bjørnøya st.no 324 - 344



28 April - 2 June 2000
 Cruise no 2000006

z CTD st.no 534 - 648 "G. O. Sars"
 Standard section Svinøy NW: st.no 534-548
 Gimsøy NW: st.no 600-609

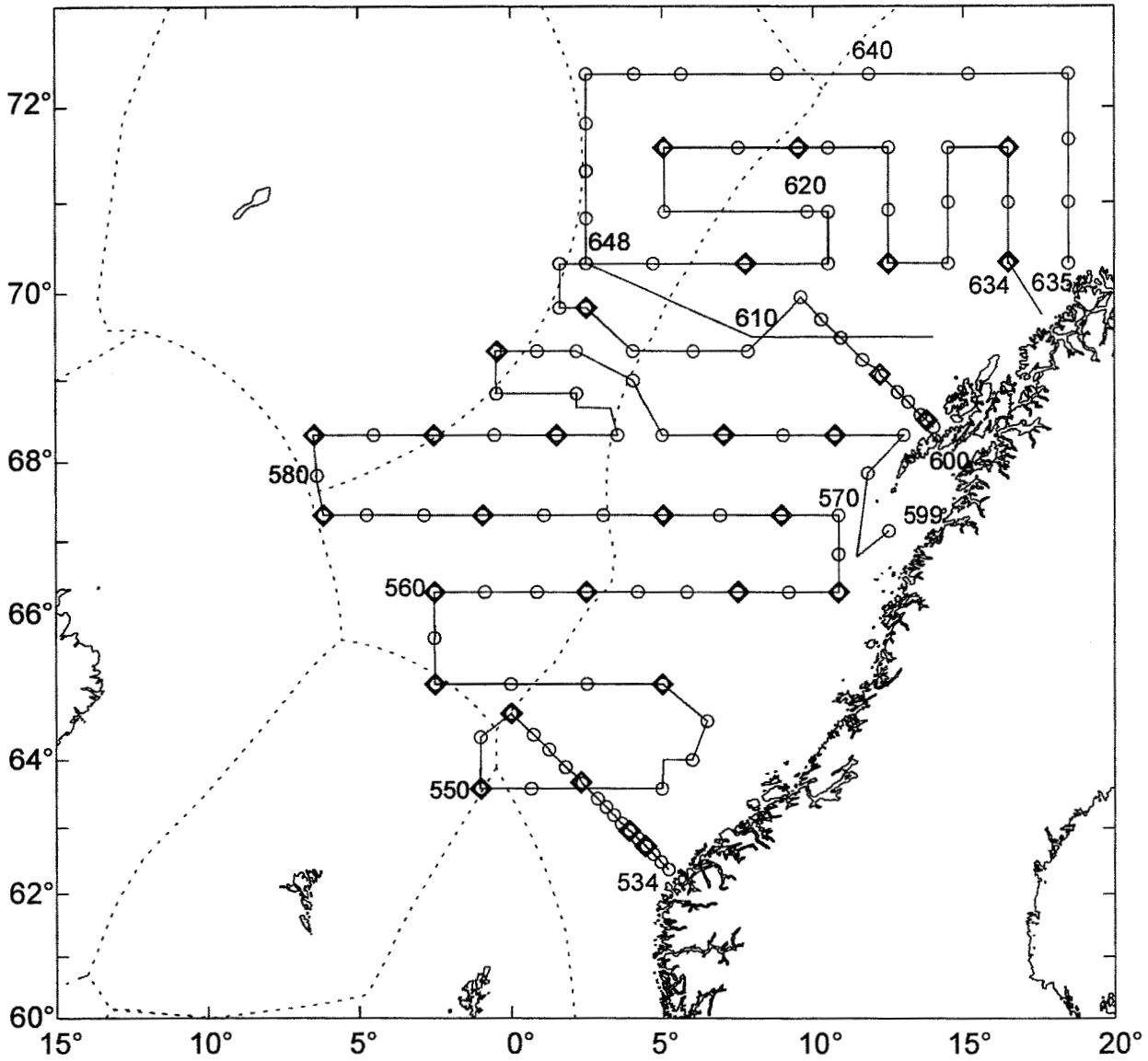


28 April - 2 June 2000
Cruise no 2000006

TRAWL st.no 232-286

"G. O. Sars"

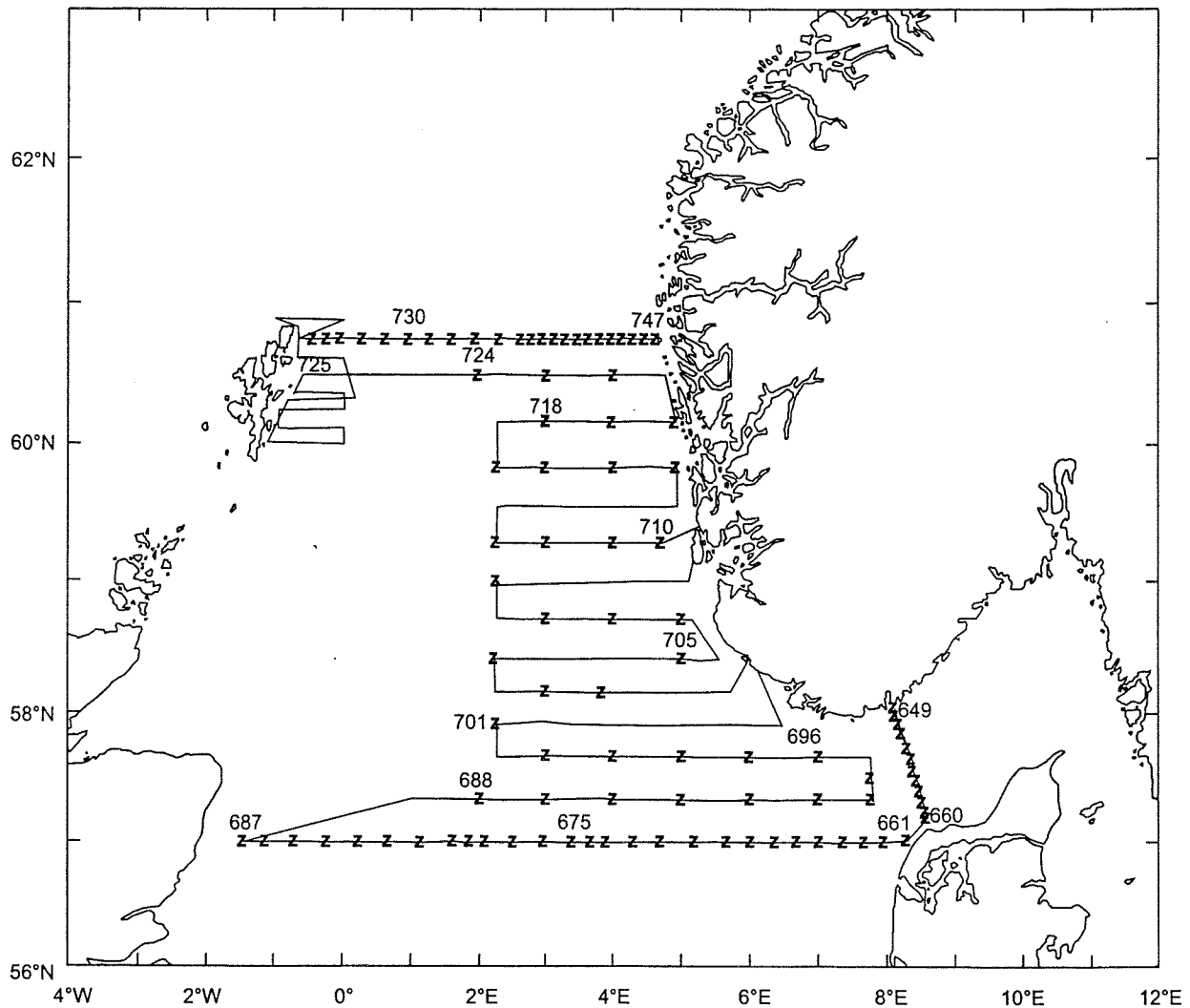
△ Surface
▽ Mesopelagic



28 April - 2 June 2000
 Cruise no 2000006

PLANKTON stations
 ○ WP2
 ◇ MOC

"G.O.Sars"



30 June - 18 July 2000
Cruise no 2000007

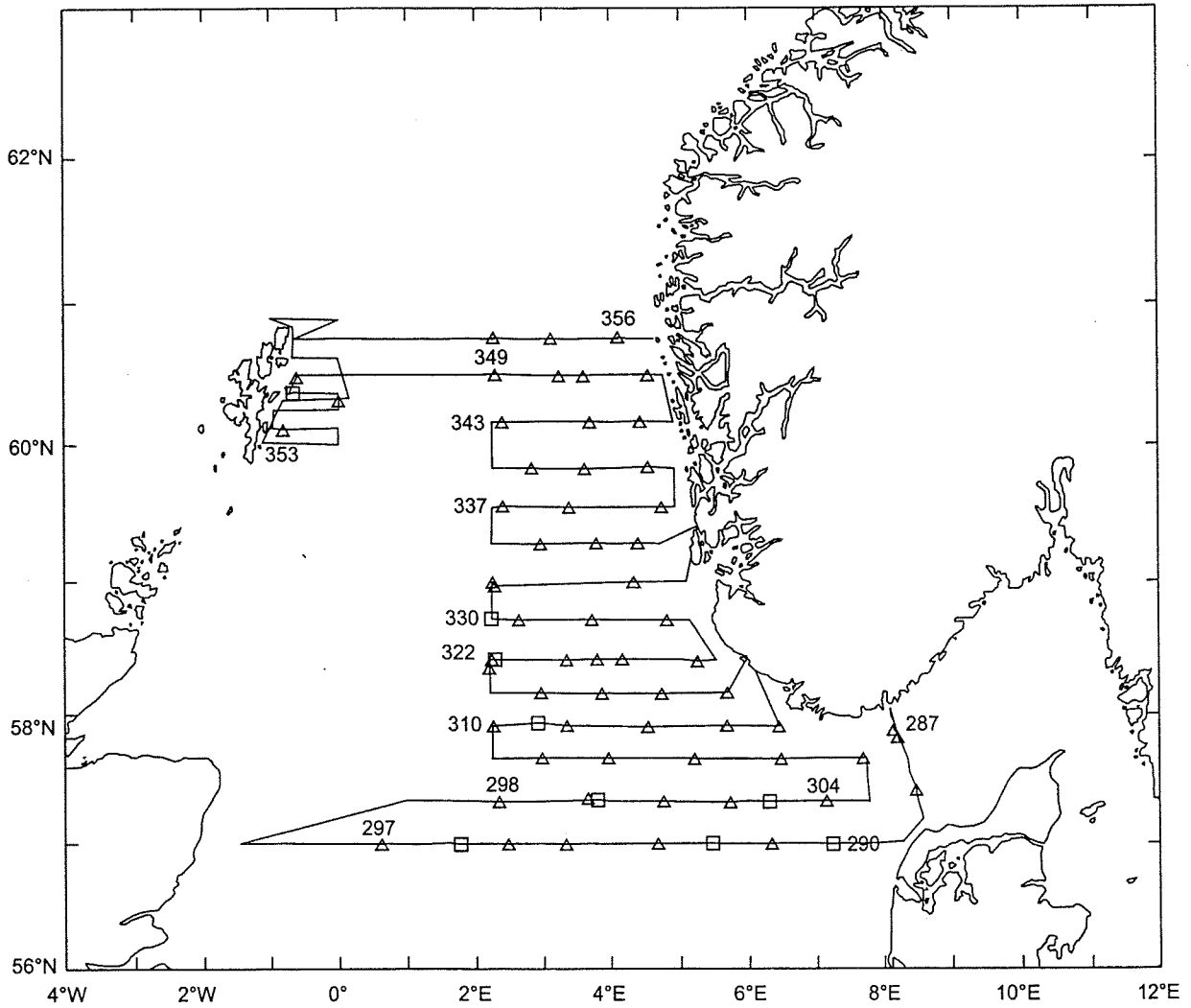
z CTD st.no 649-747

"G.O. Sars"

Standard sections: Oksø-Hanstholm st.no 649-660

Hanstholm-Aberdeen st.no 661-687

Feie Shetland st.no 725-747

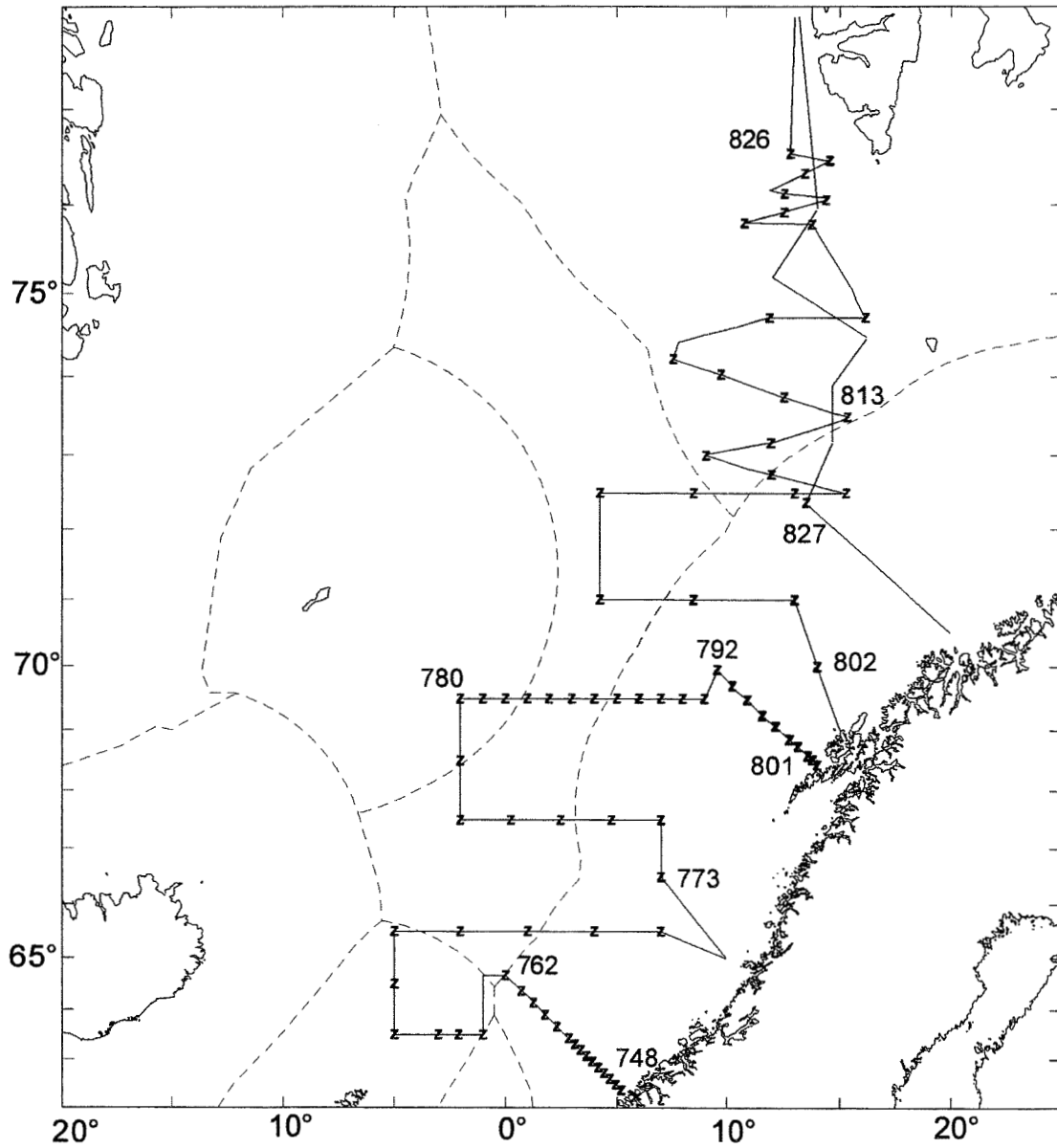


30 June - 18 July 2000
Cruise no 2000007

TRAWL st.no 287 - 356

"G.O. Sars"

□ Bottom tr.
△ Pel tr.

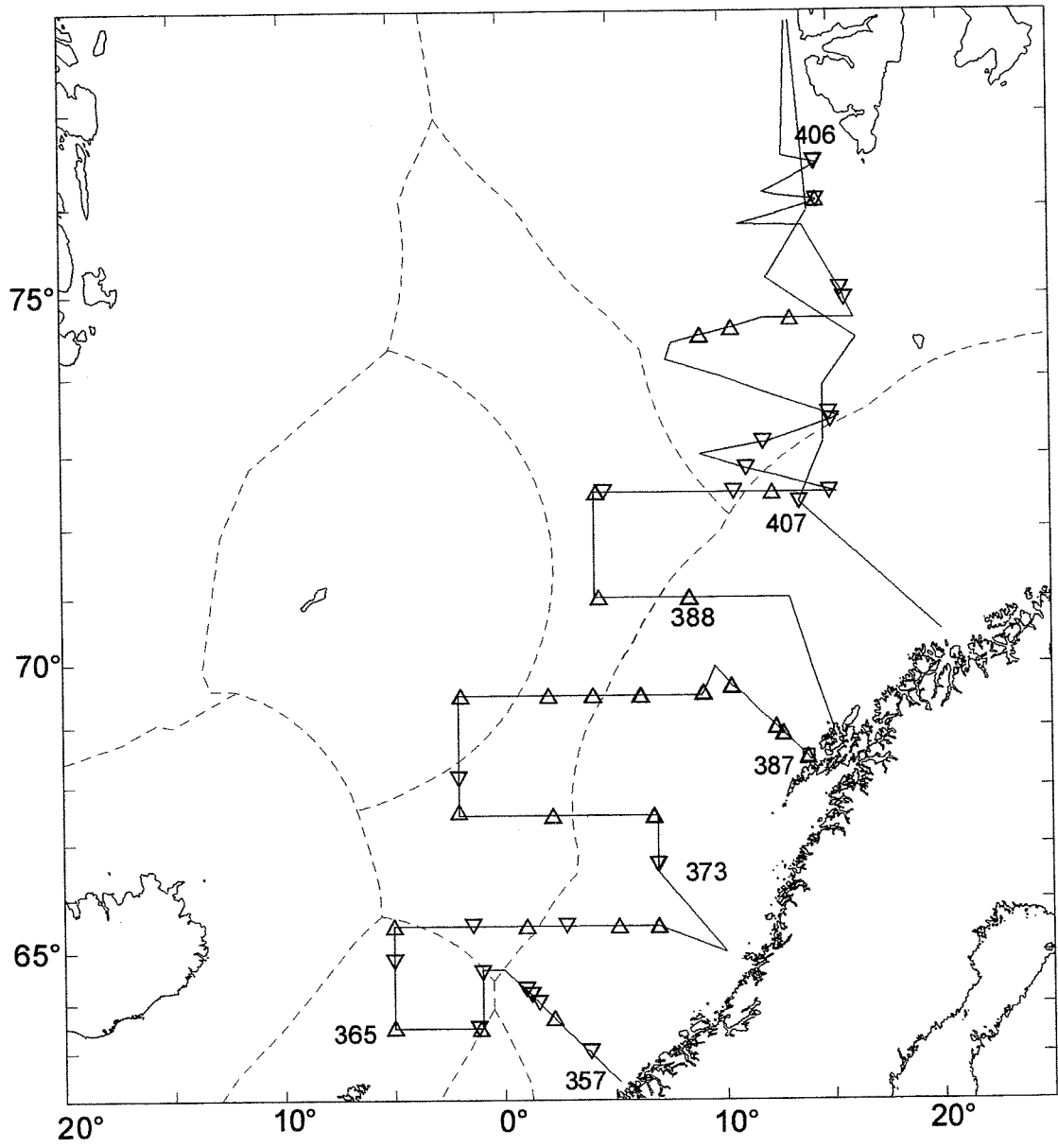


20 Jul - 15 Aug 2000
Cruise no 2000008

CTD st.no 748-827

"G .O. Sars"

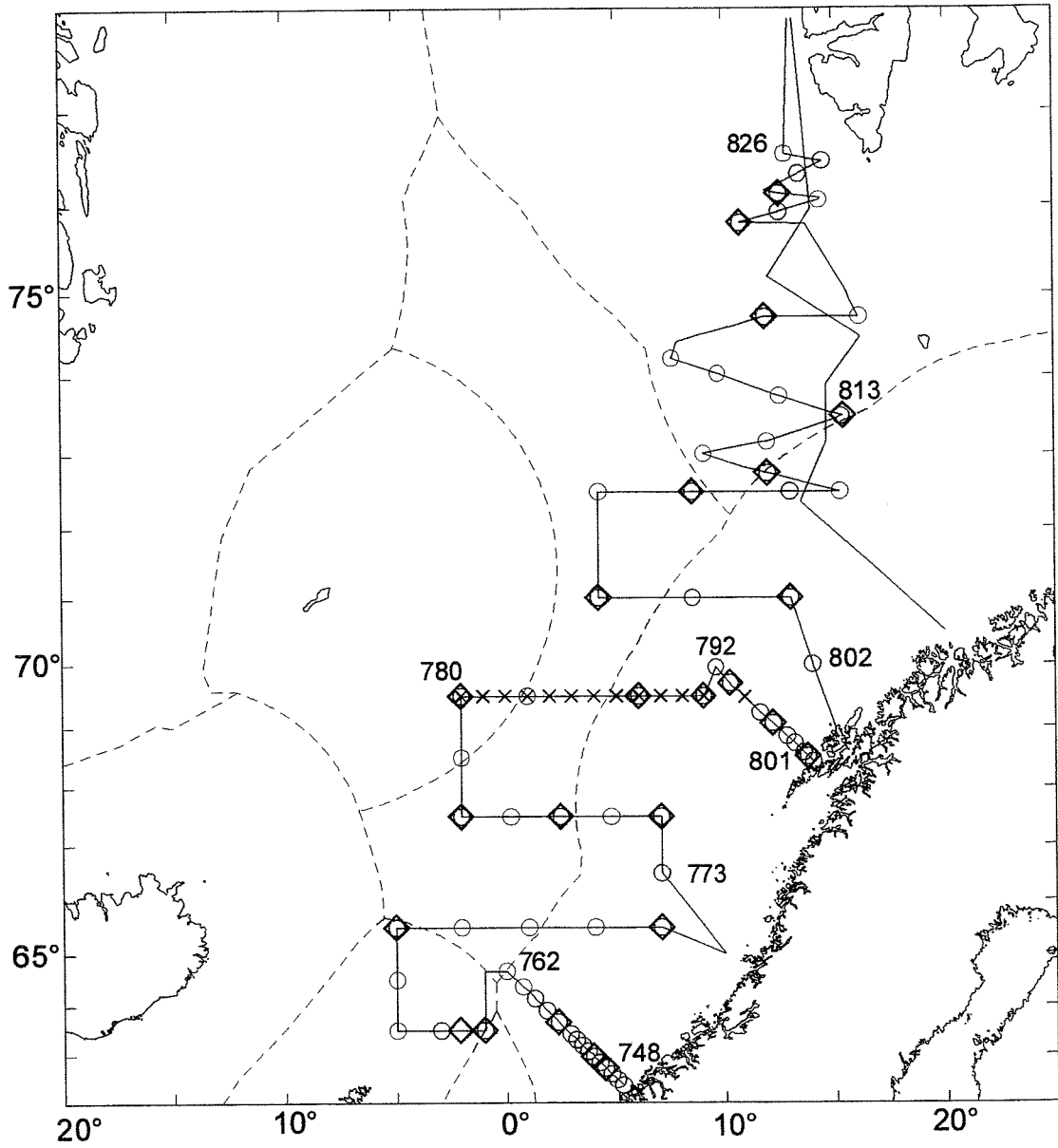
Standard sections Svinøy NW: st.no 748-762
Gimsøy NW st.no 792-801



20 Jul - 15 Aug 2000
 Cruise no 2000008

Pel. TRAWL st.no 357-407
 △ Surfacer.
 ▽ Mesopel. tr
 □ Bottom tr.

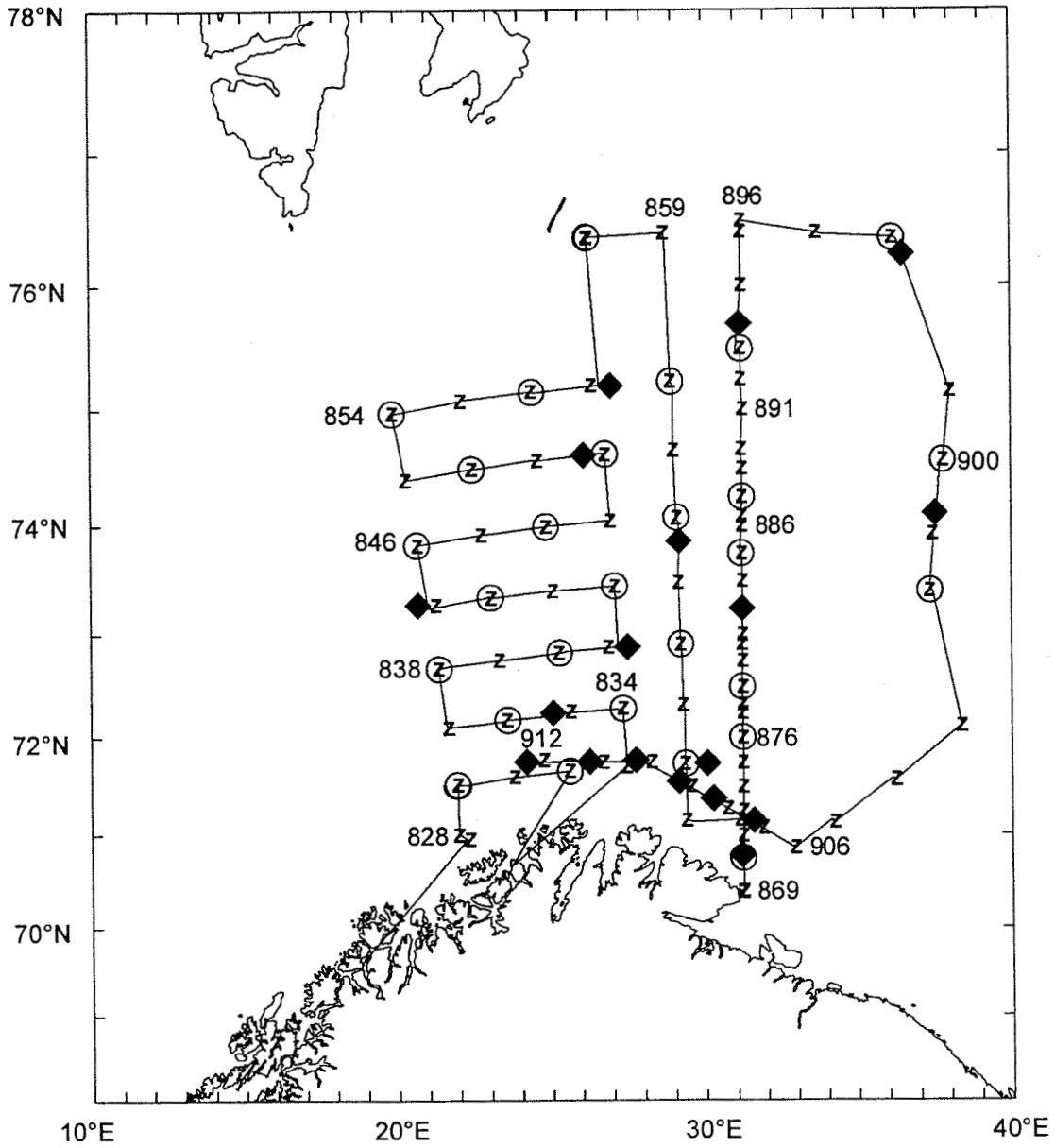
"G.O. Sars"



20 Jul - 15 Aug 2000
 Cruise no 2000008

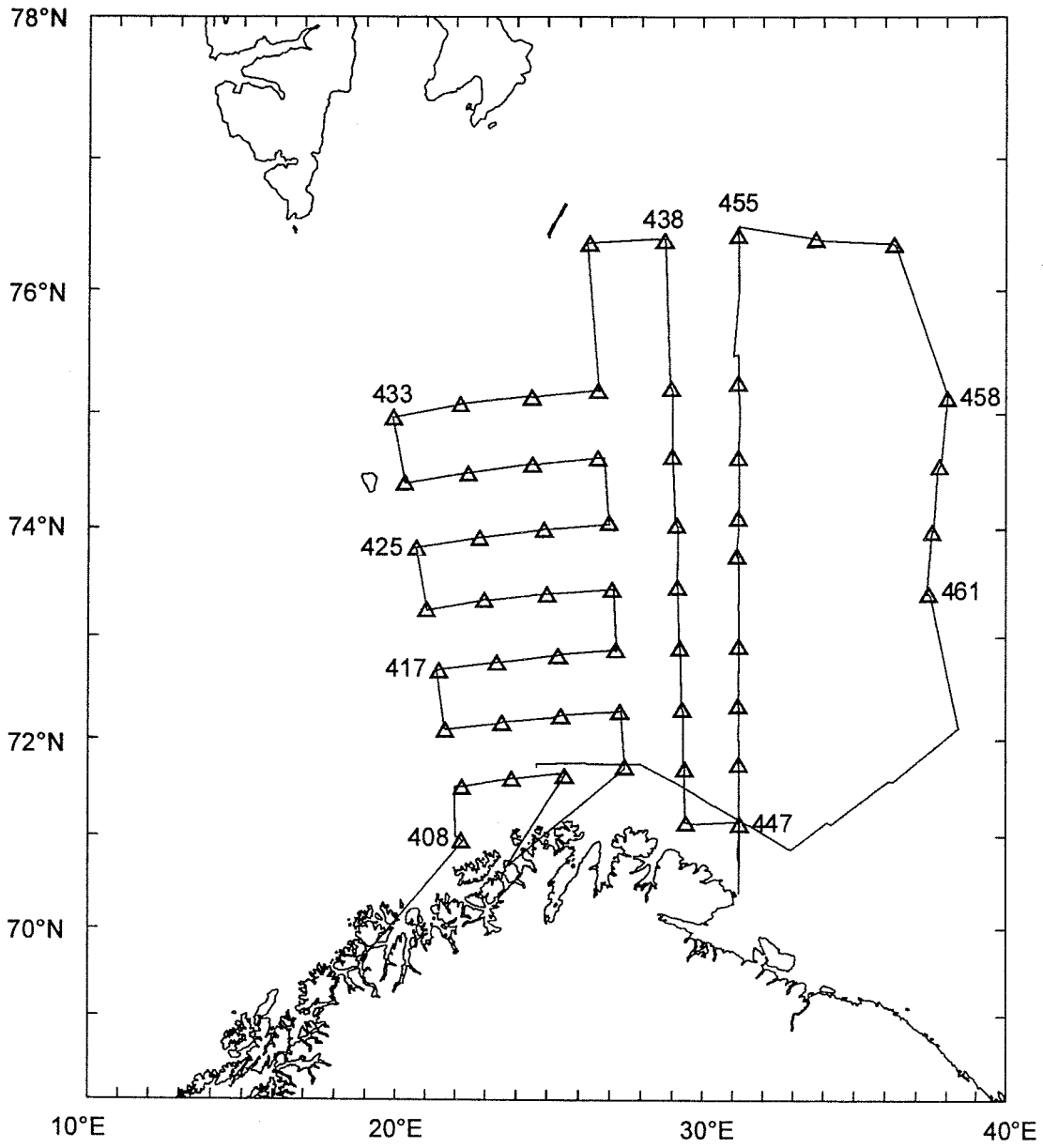
○ PLANKTON st. (WP II)
 ◇ PLANKTON st. (Mocness)
 × Juday

"G.O. Sars"



19 Aug - 6 Sep 2000
Cruise no 2000009

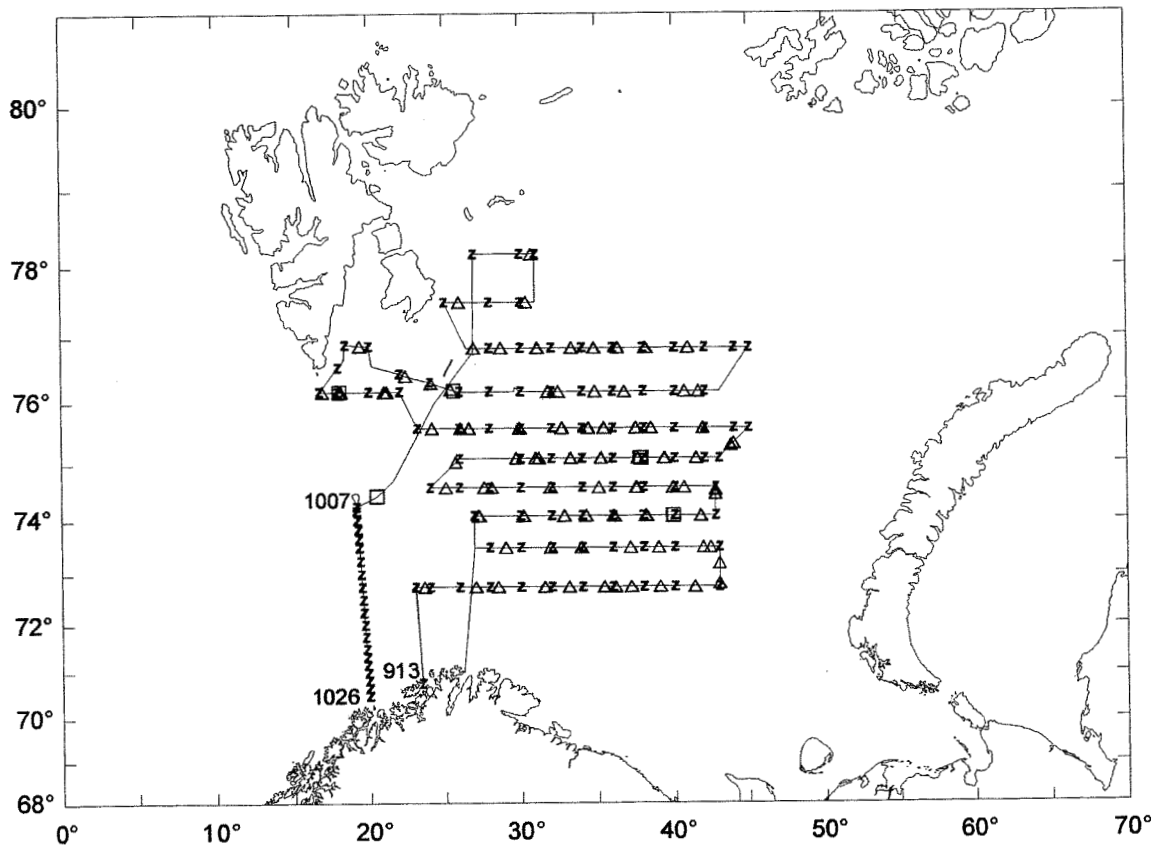
z CTD st.no 828-912 "G. O. Sars"
 ⓪ CTD and PLANKTON st. (WP-II)
 ◆ Mocness st.
 Standard section Vardø N: st.no 869-896



19 Aug - 6 Sep 2000
Cruise no 2000009

Pel. TRAWL st.no 408-461

"G. O. Sars"



8 Sep - 2 Oct 2000

Cruise no 2000010

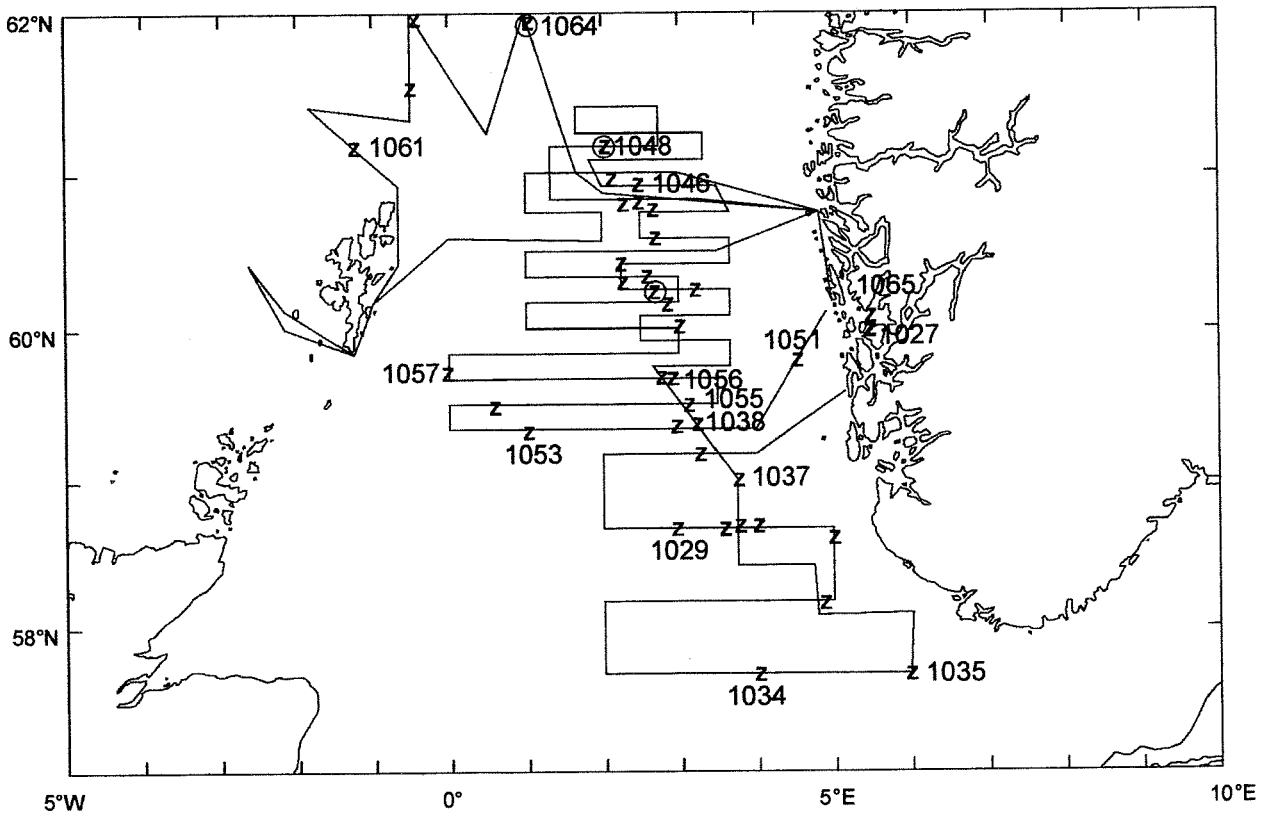
z CTD st.no 913 - 1026

△ Pel. TRAWL

□ Bottom TRAWL

Standard section Fugløya-Bjørnøya st.no 1007-1026

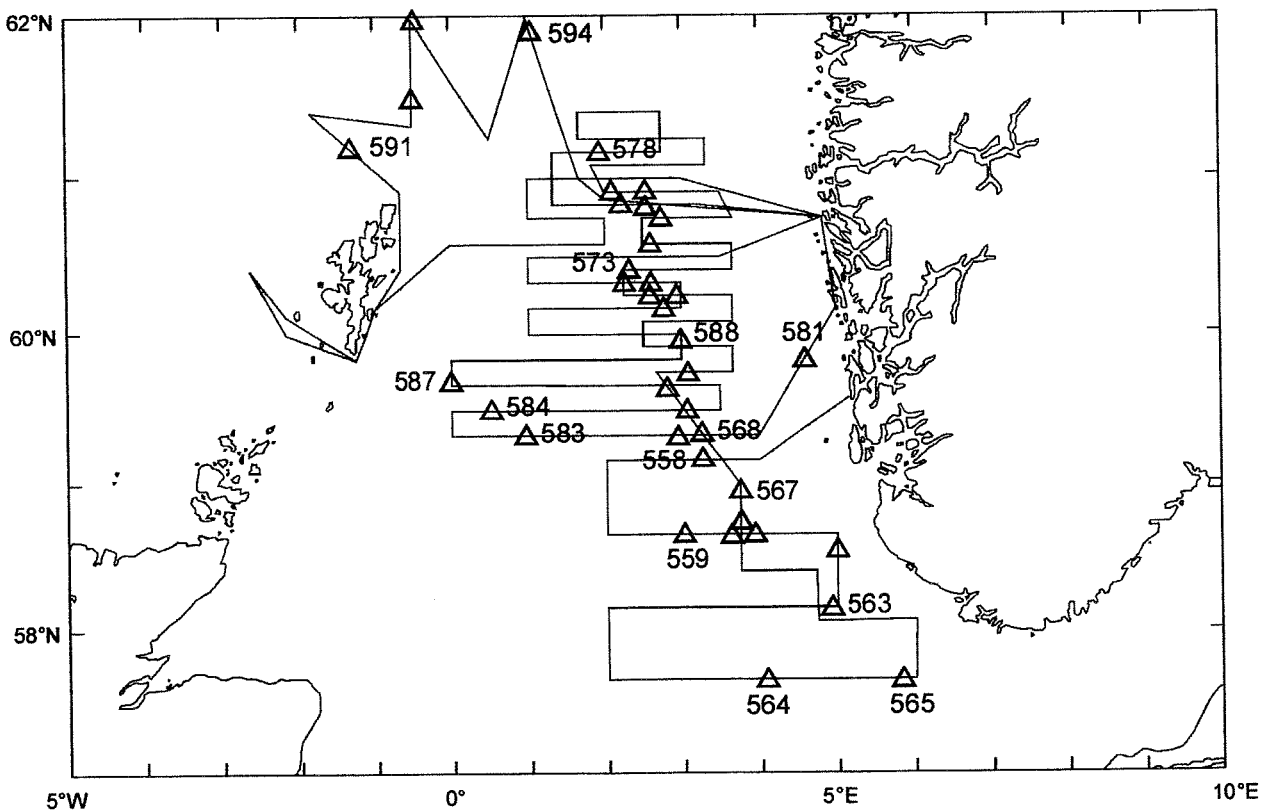
"G.O. Sars"



15 Oct - 5 Nov 2000
Cruise no 2000012

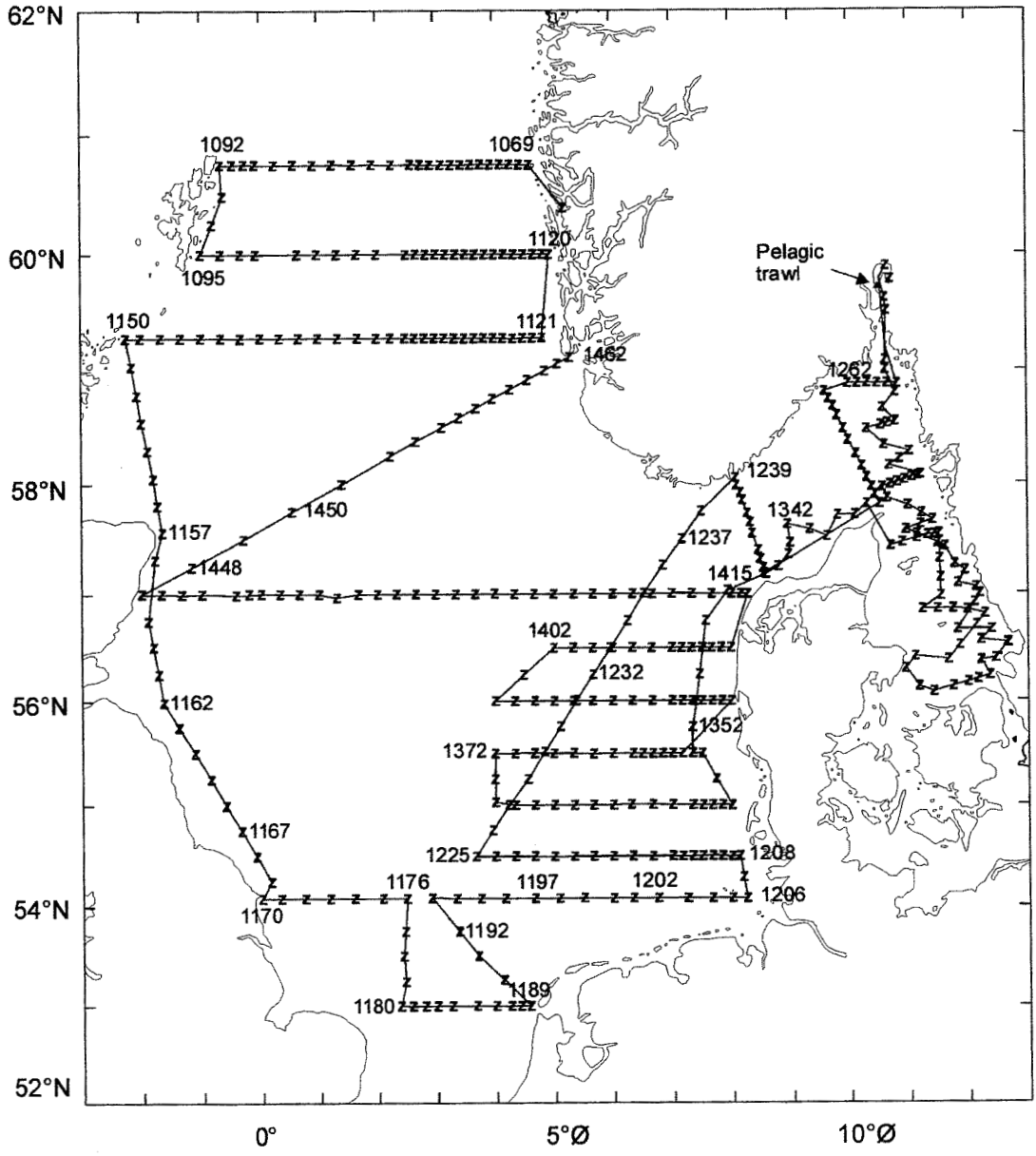
z CTD no st.no 1027-1065
Ⓢ CTD and WP II net

"G.O.Sars"



△ Pel. TRAWL st.no 558-594

"G.O.Sars"



20 Nov - 22 Dec 2000

Cruise no 2000014

z CTD st.no 1068 - 1462

Standard section Feie-Shetland st.no 1069-1092

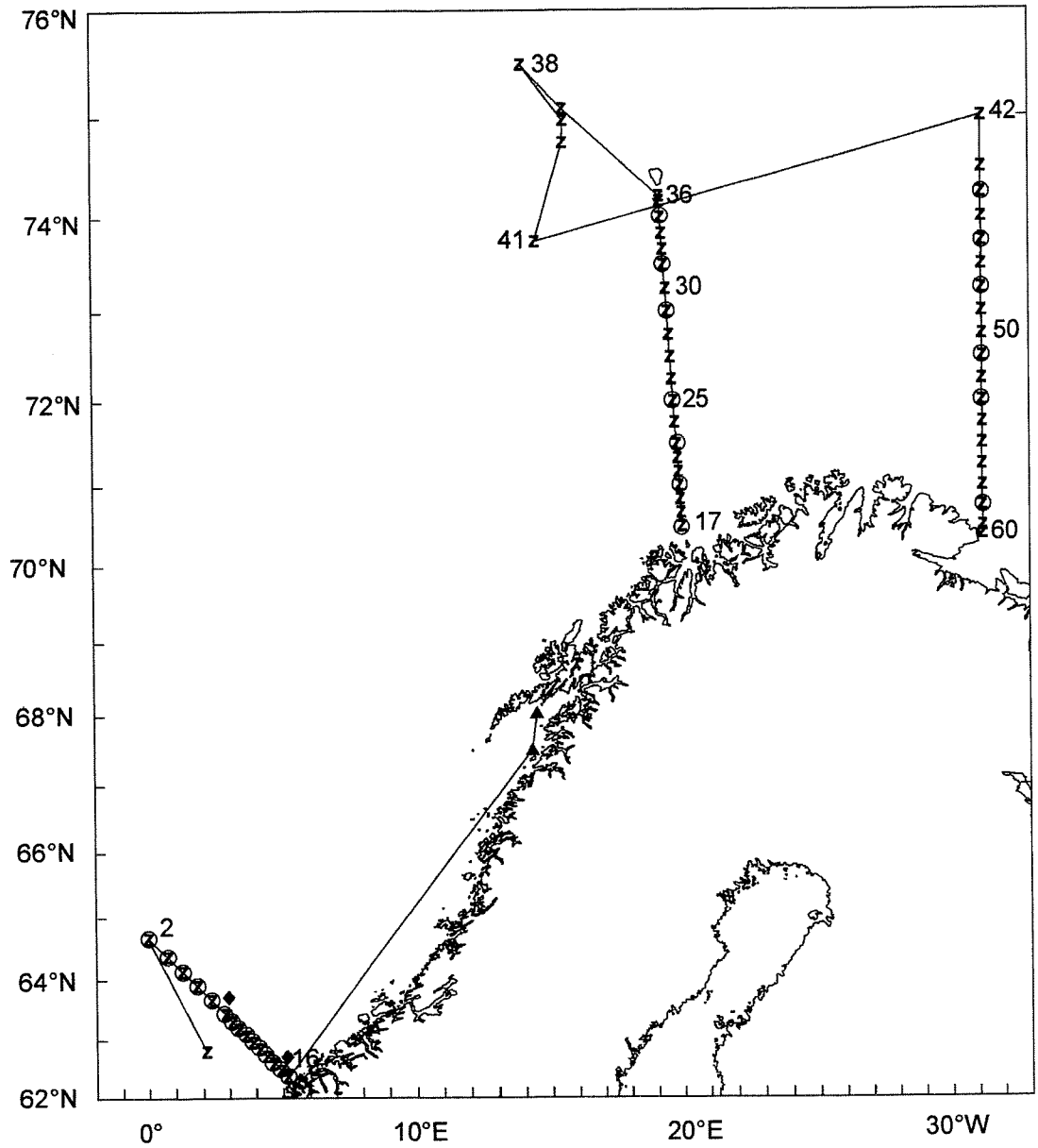
Slotterøy W st.no 1095-1120

Utsira W st.no 1121-1150

Oksø-Hanstholm:st.no 1239-1249

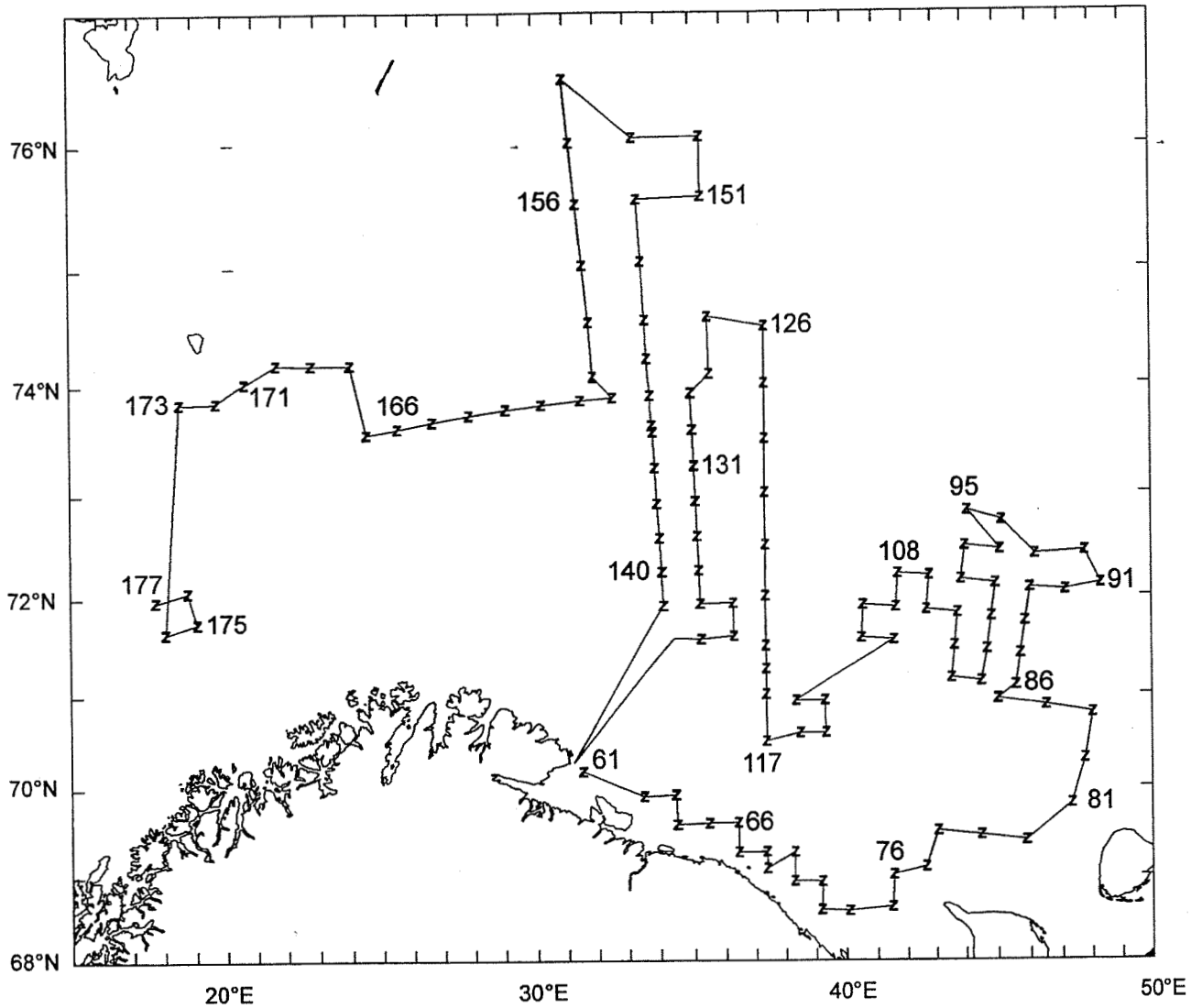
Hanstholm-Aberdeen st.no 1415-1447

"G.O. Sars"



12 - 30 Januar 2000
Cruise no 1999201

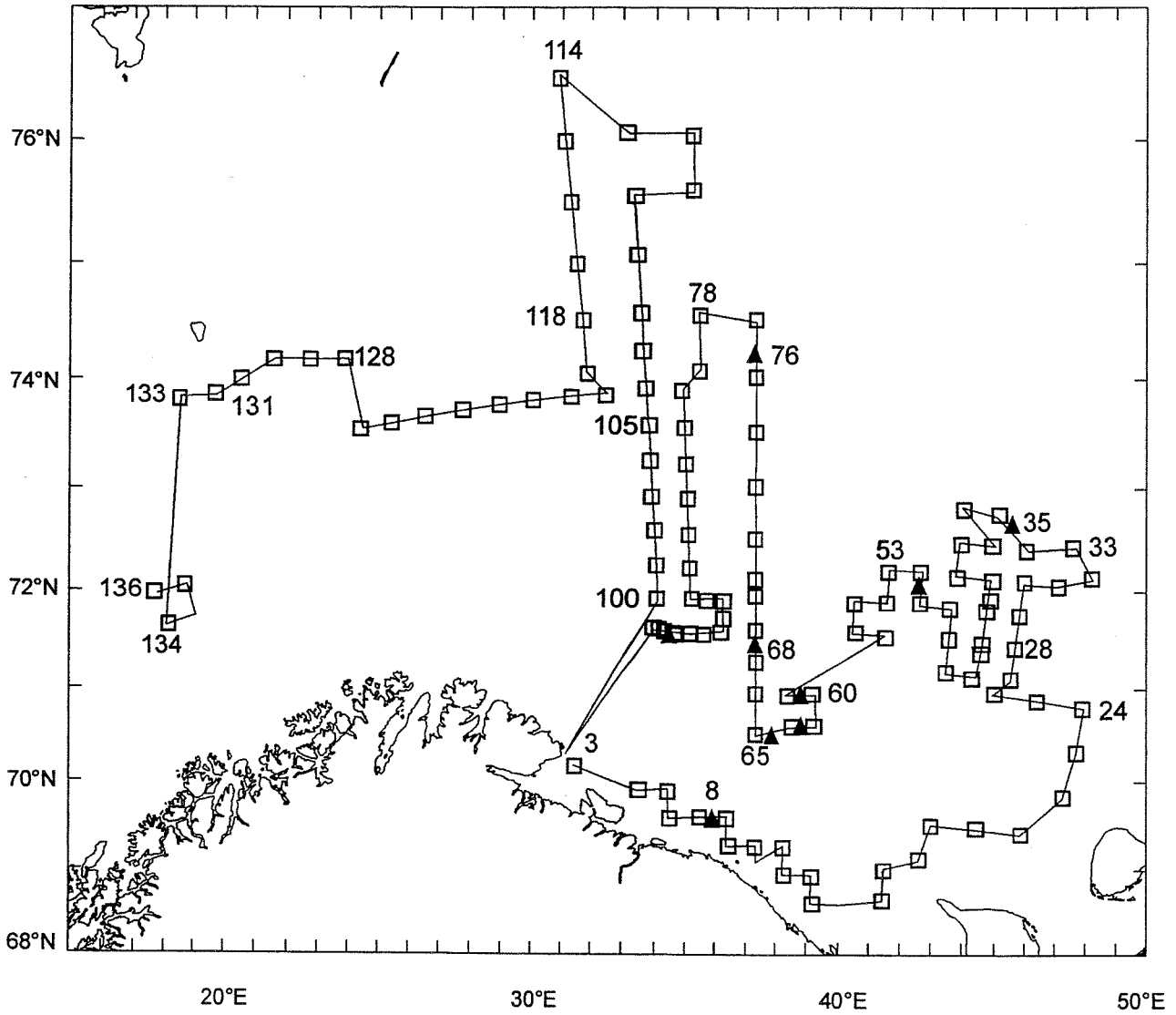
z CTD st.no 1-60 "Johan Hjort"
 ⊙ CTD and PLANKTON st. (WP-II net)
 ◆ MOCNESS st.
 ▲ Pel. TRAWL st. 1-2
 Standards sections Svinøy NW st.no 2-16
 Fugløya-Bjørnøya st.no 17-36
 Vardø N st.no 42-60



1 - 29 Feb. 2000
Cruise no 2000202

z CTD st.no 61- 177

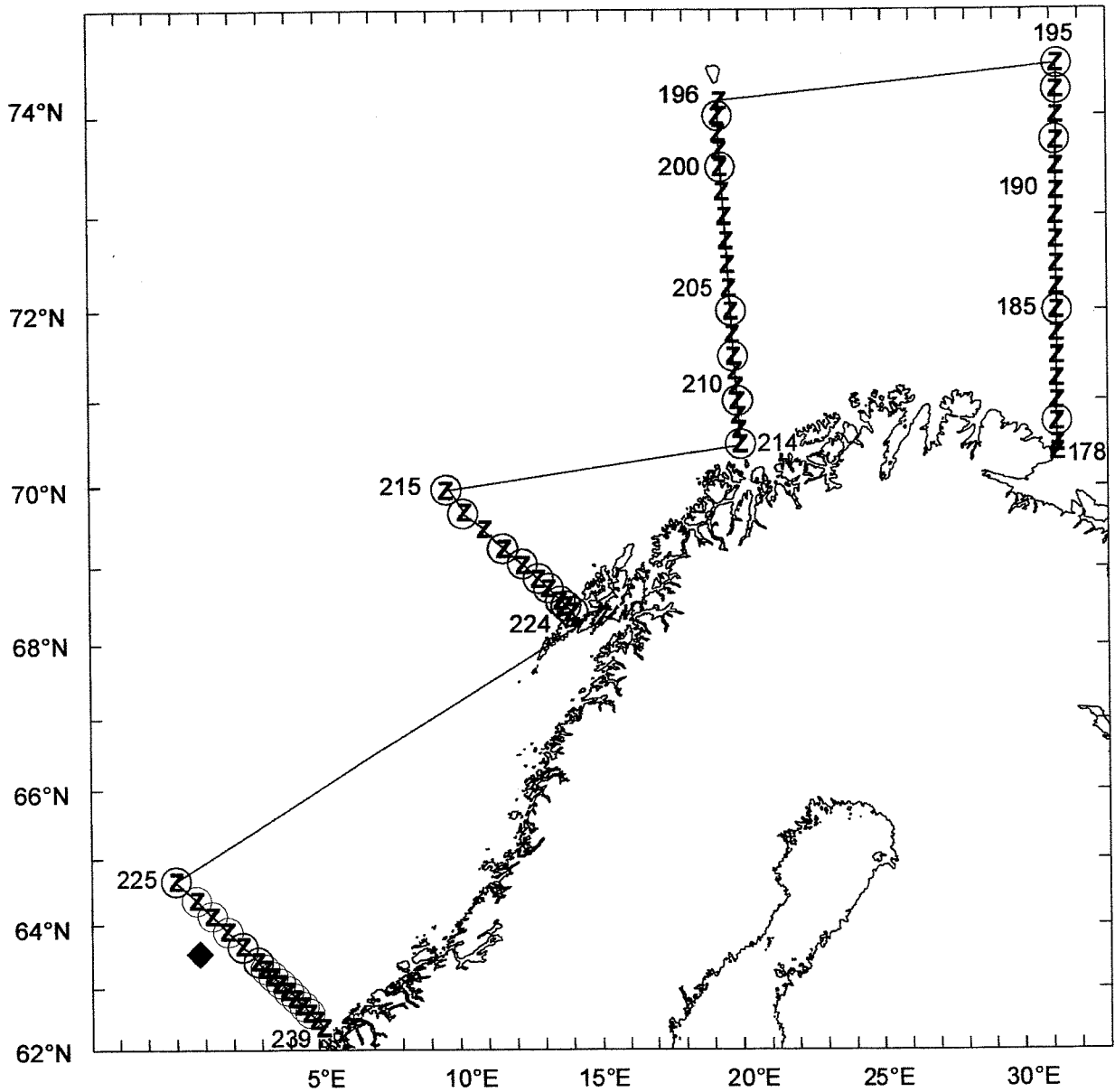
"Johan Hjort"



1 - 29 Feb. 2000
 Cruise no 2000202

TRAWL st.no 3 - 136
 □ Bottom trawl
 ▲ Pel. trawl

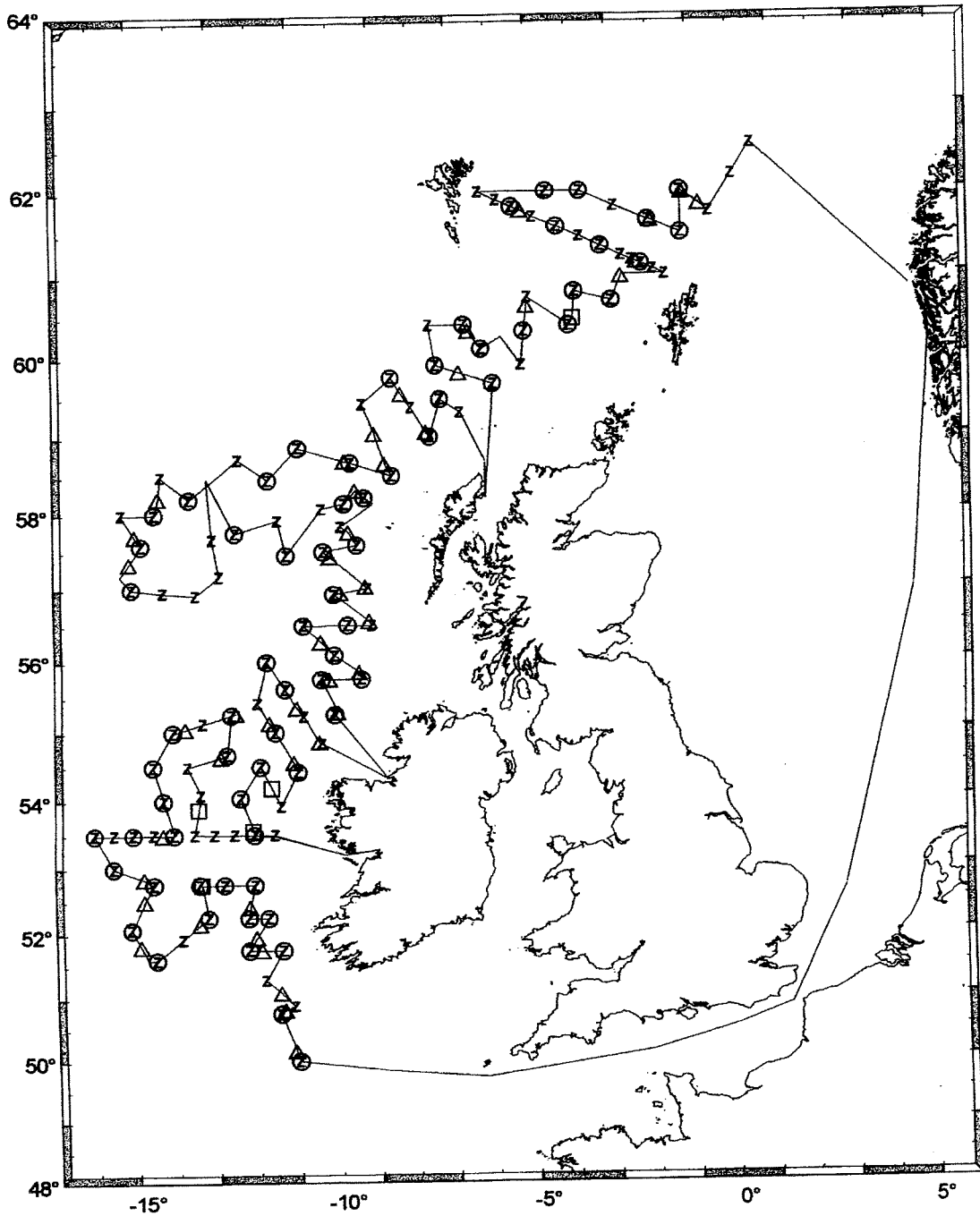
"Johan Hjort"



1 - 20 March 2000
Cruise no 2000203

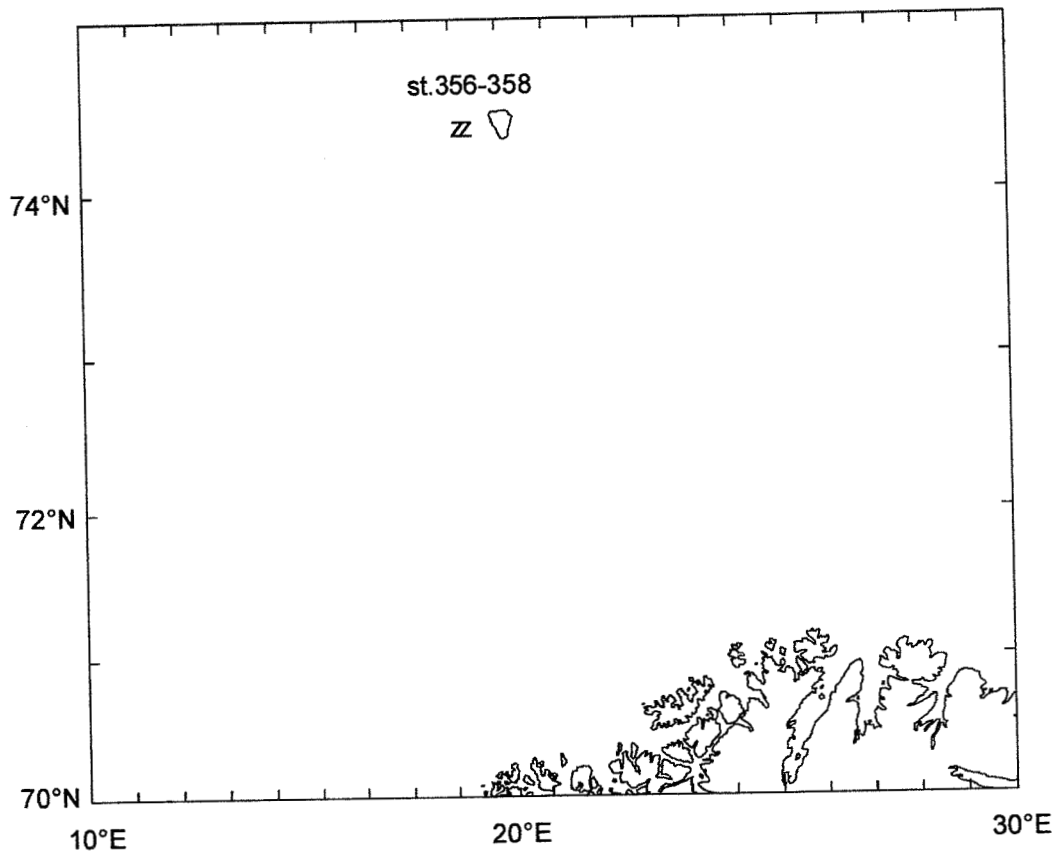
- z CTD st.no 178 - 239
- ⊗ CTD and PLANKTON st. (WP -II net)
- ◆ Mocness st.

Standard sections Vardø N st.no 178-195
Fugløya - Bjørnøya st.no 196-214
Gimsøy NV st.no 215-224
Svinøy NV st.no 225-239



22 Mar - 24 Apr 2000
 Cruise no 2000204

z CTD st.no 240 - 355 "Johan Hjort"
 ⊙ CTD and PLANKTON st.
 □ Pel. TRAWL
 △ Bottom TRAWL



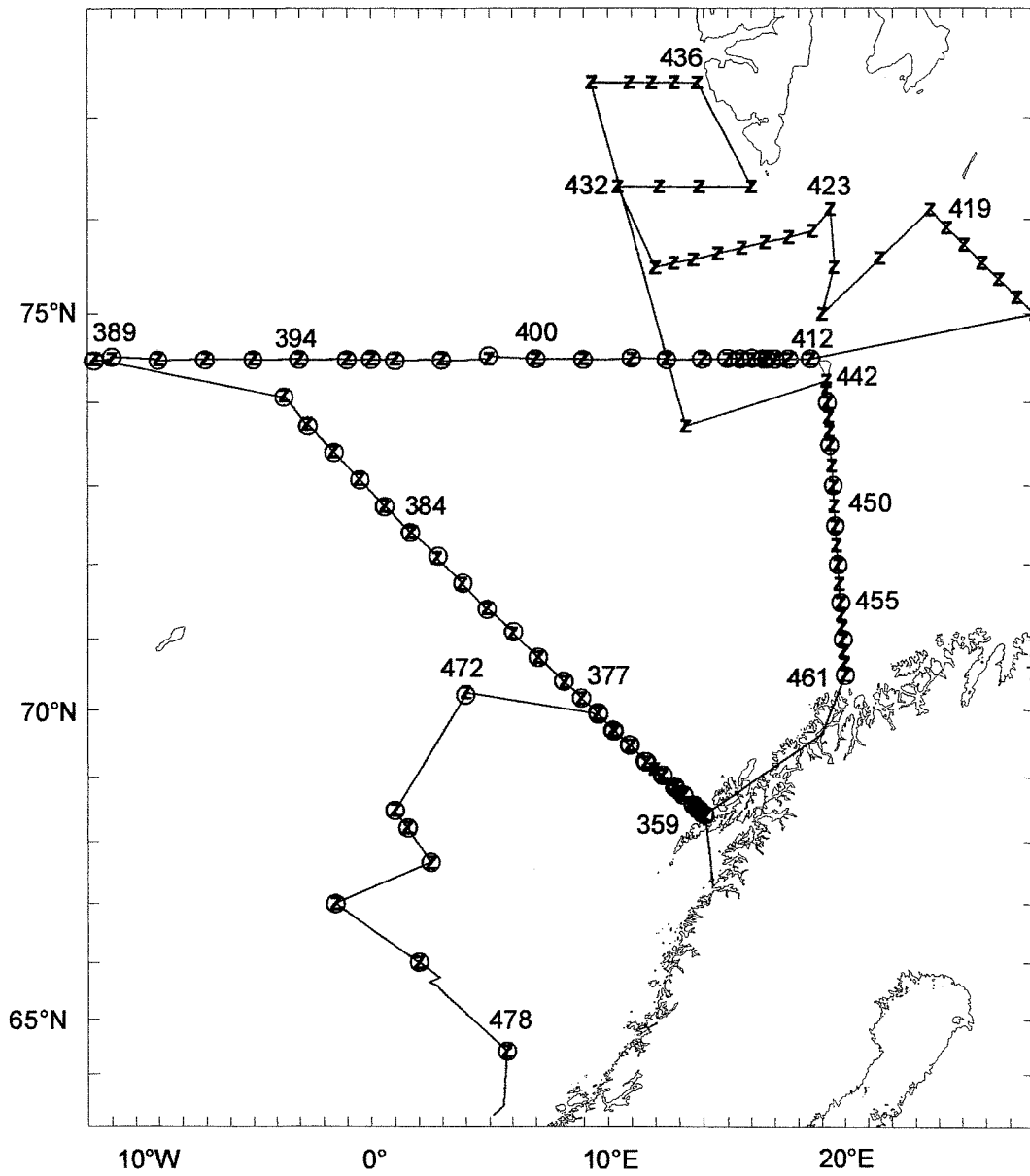
8 - 24 May 2000

Cruise no 2000206

z CTD st.no 356-358

Intensively trawled areas -
Bjørnøy bank

"Johan Hjort"



27 May - 20 Jun 2000
Cruise no 2000207

z CTD st.no 359-478

"Johan Hjort"

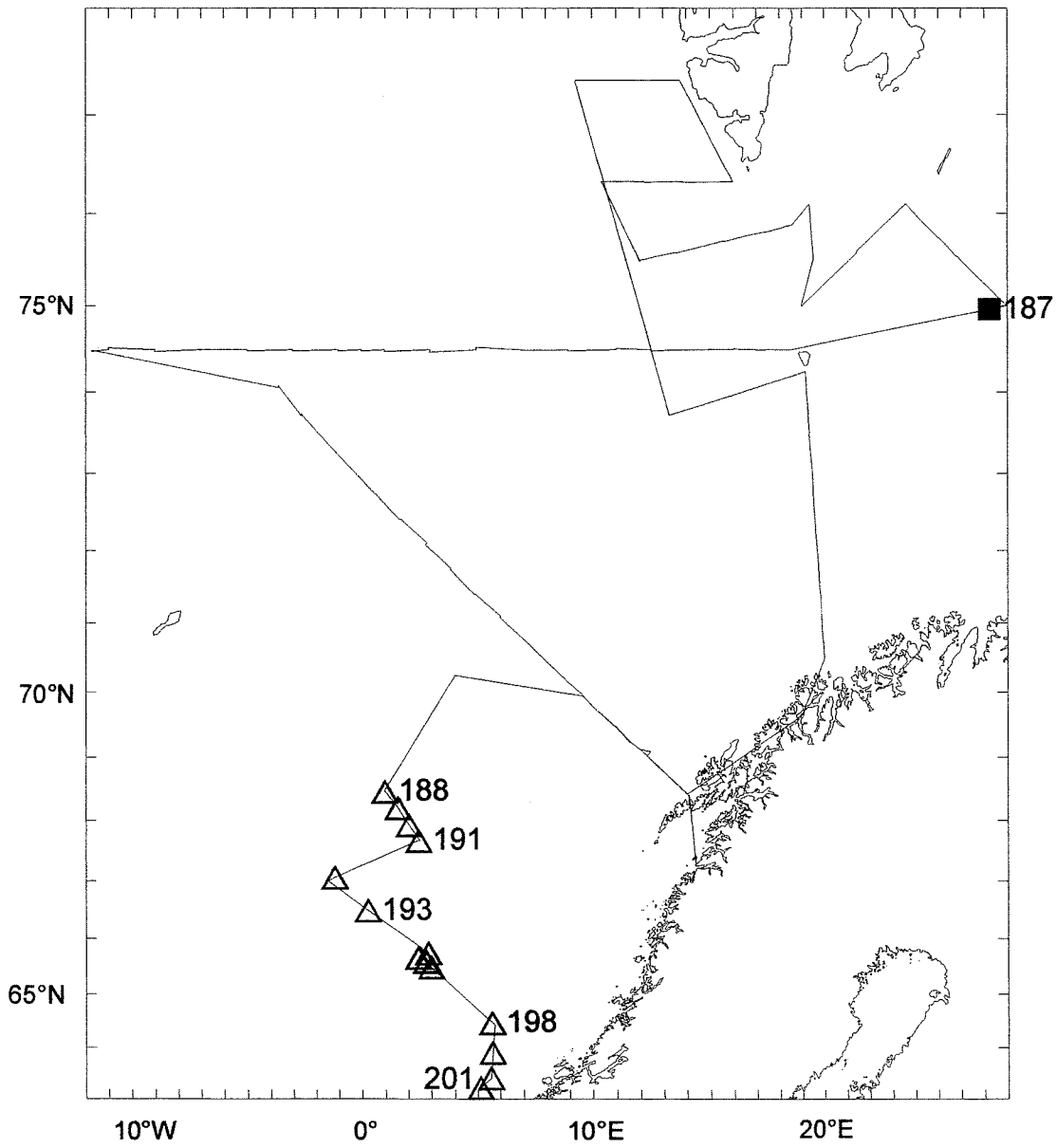
⓪ CTD and PLANKTON st. (WP-II-net)

Standard sections: Gimsøy NW st.no 359-377

" " 462-471

Fugløya-Bjørnøya st.no 442-461

Bjørnøya W: st.no 400-412



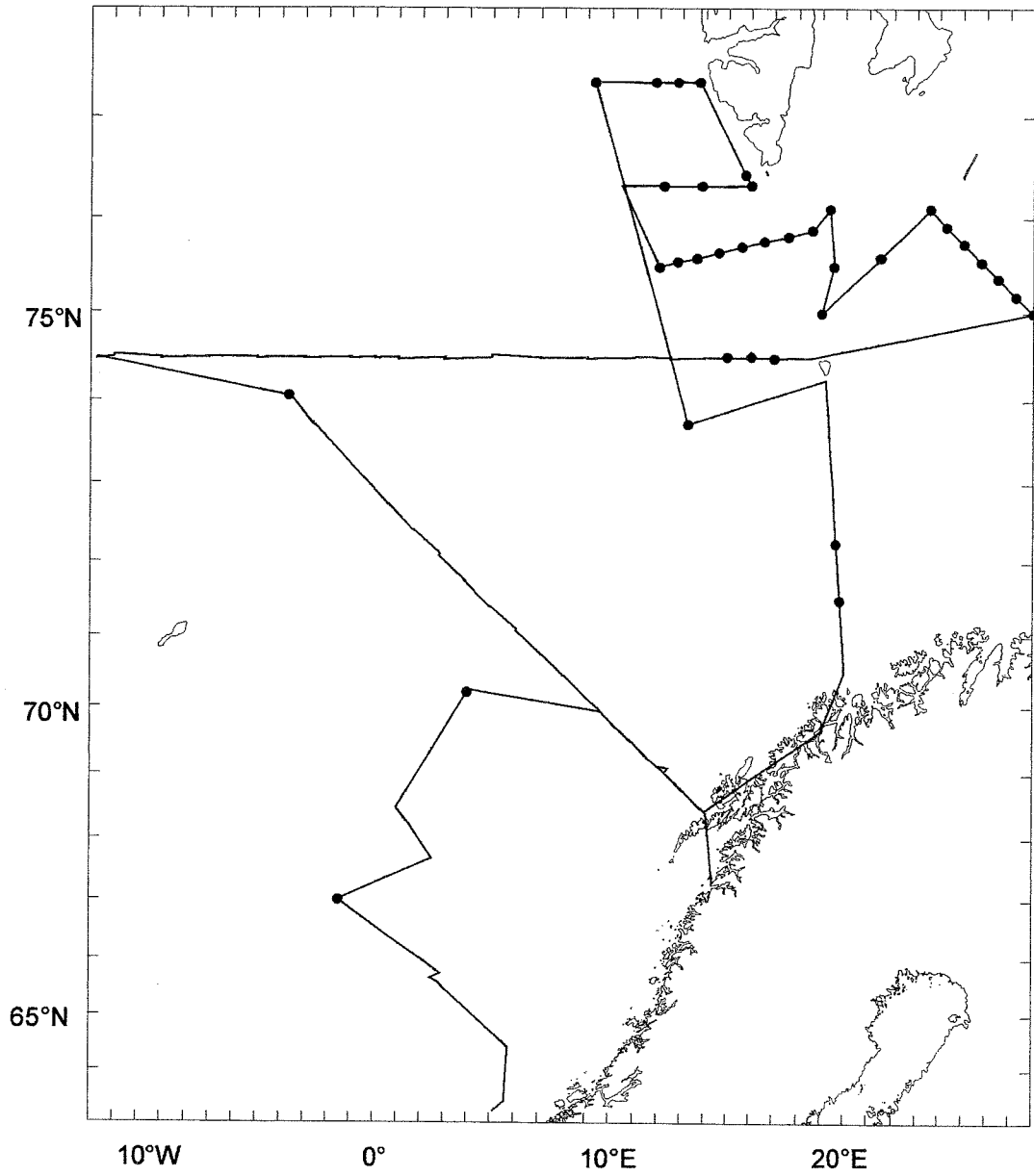
27 May - 20 Jun 2000
 Cruise no 2000207

TRAWL st.no 187-201

"Johan Hjort"

■ Bottom tr.

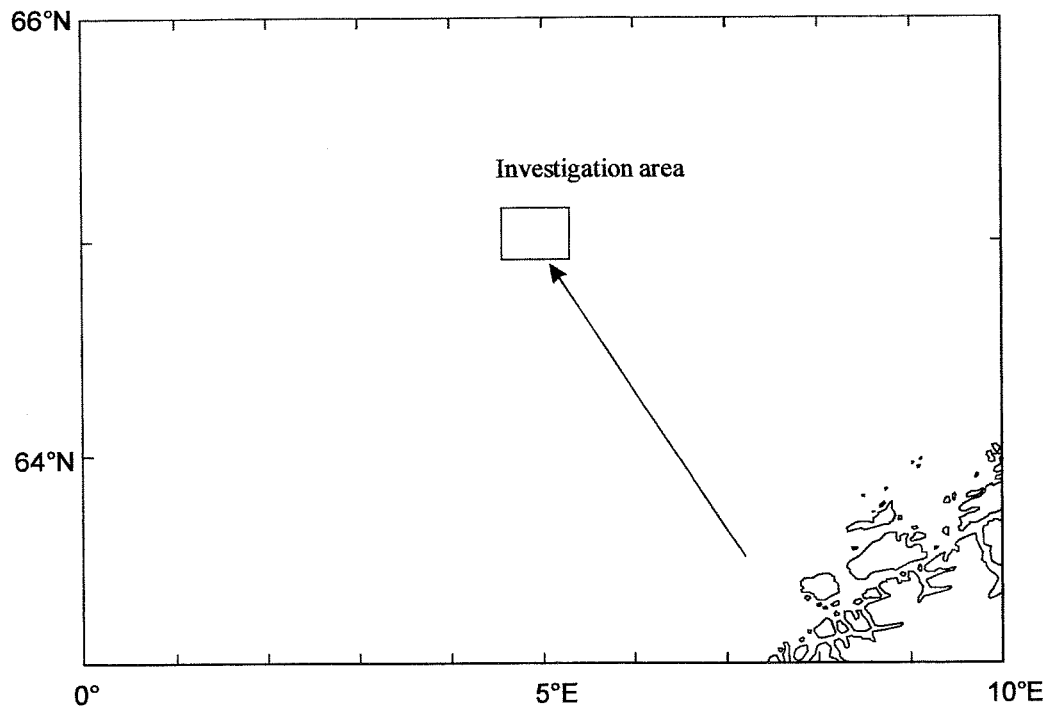
△ Pel. tr.



27 May - 20 Jun 2000
 Cruise no 2000207

• GRAB station

"Johan Hjort"

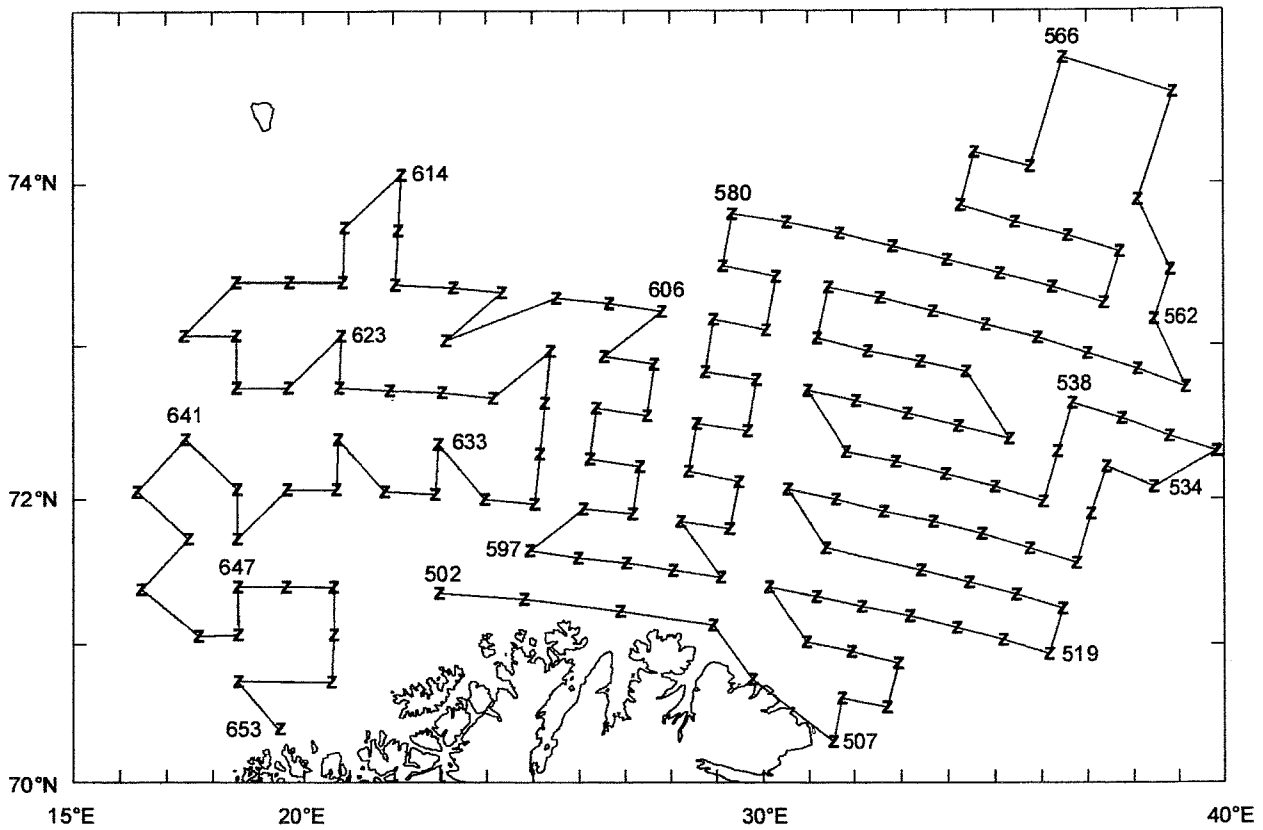


22 - 30 June 2000
Cruise no 2000208

CTD st.no 479-501,
Pelagic trawl st.no 202-208

"Johan Hjort"

PLANKTON stations: 19 WpII-net and 3 Moccuss stations

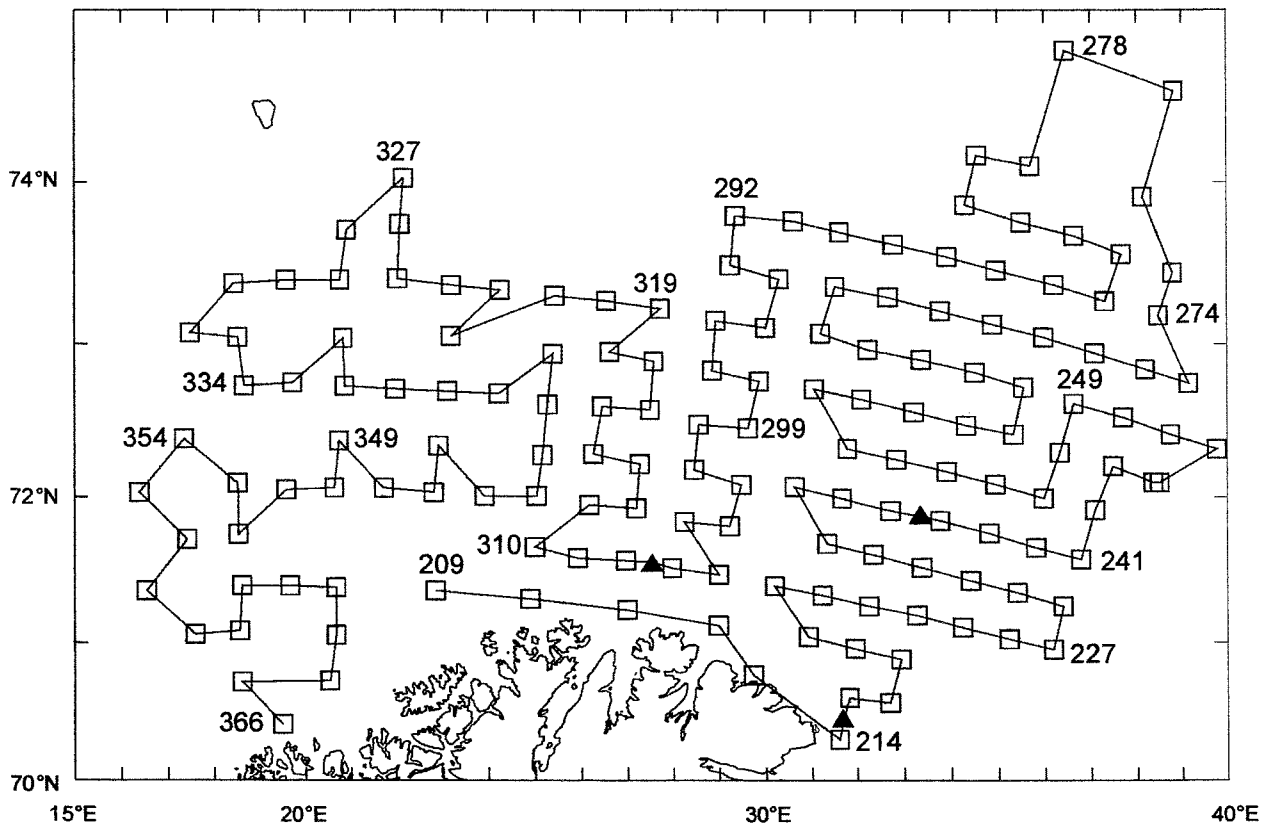


21 July - 15 Aug 2000

z CTD st.no 502-653

"Johan Hjort"

Cruise no 2000210



21 July - 15 Aug 2000

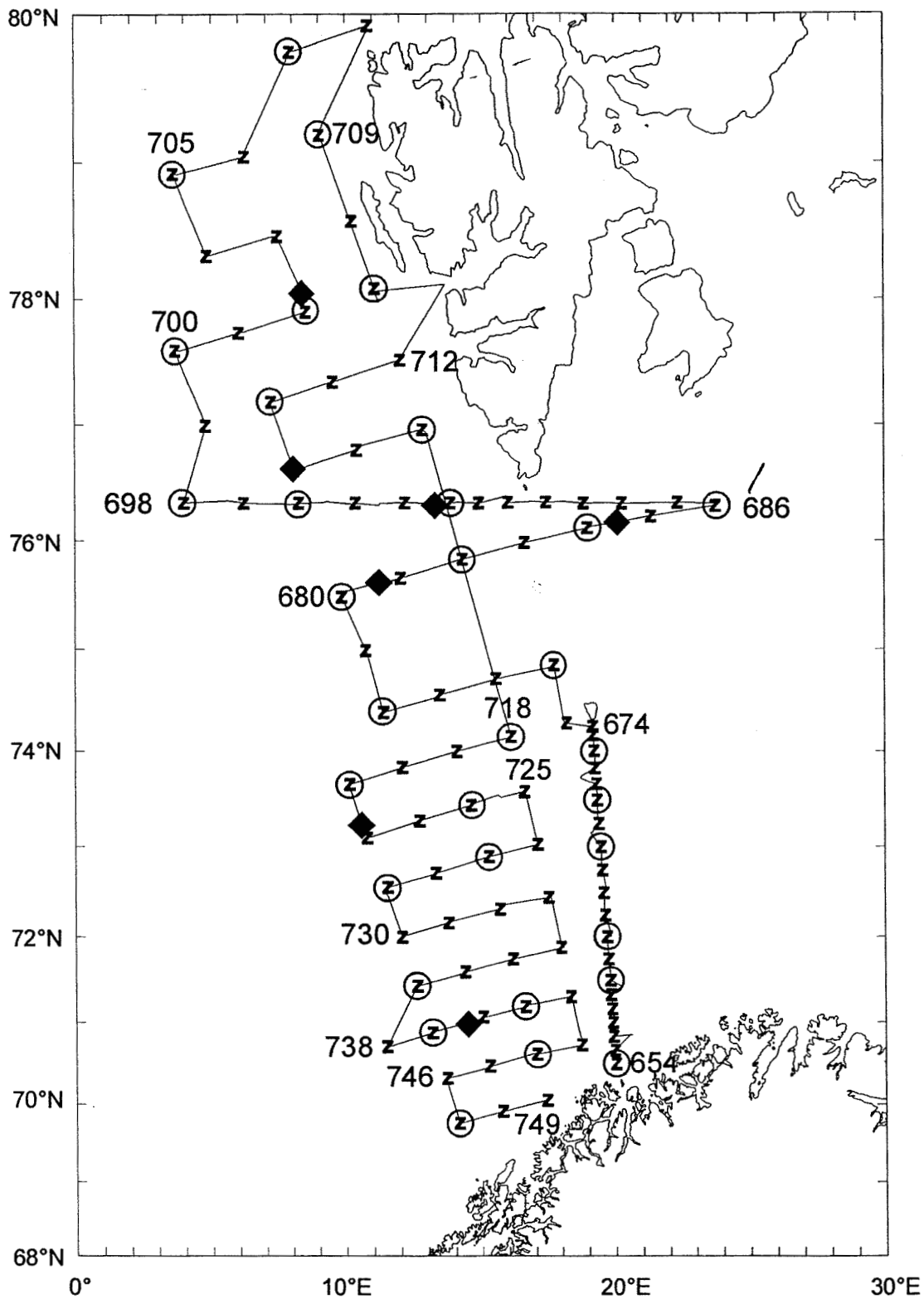
TRAWL st.no 209-366

"Johan Hjort"

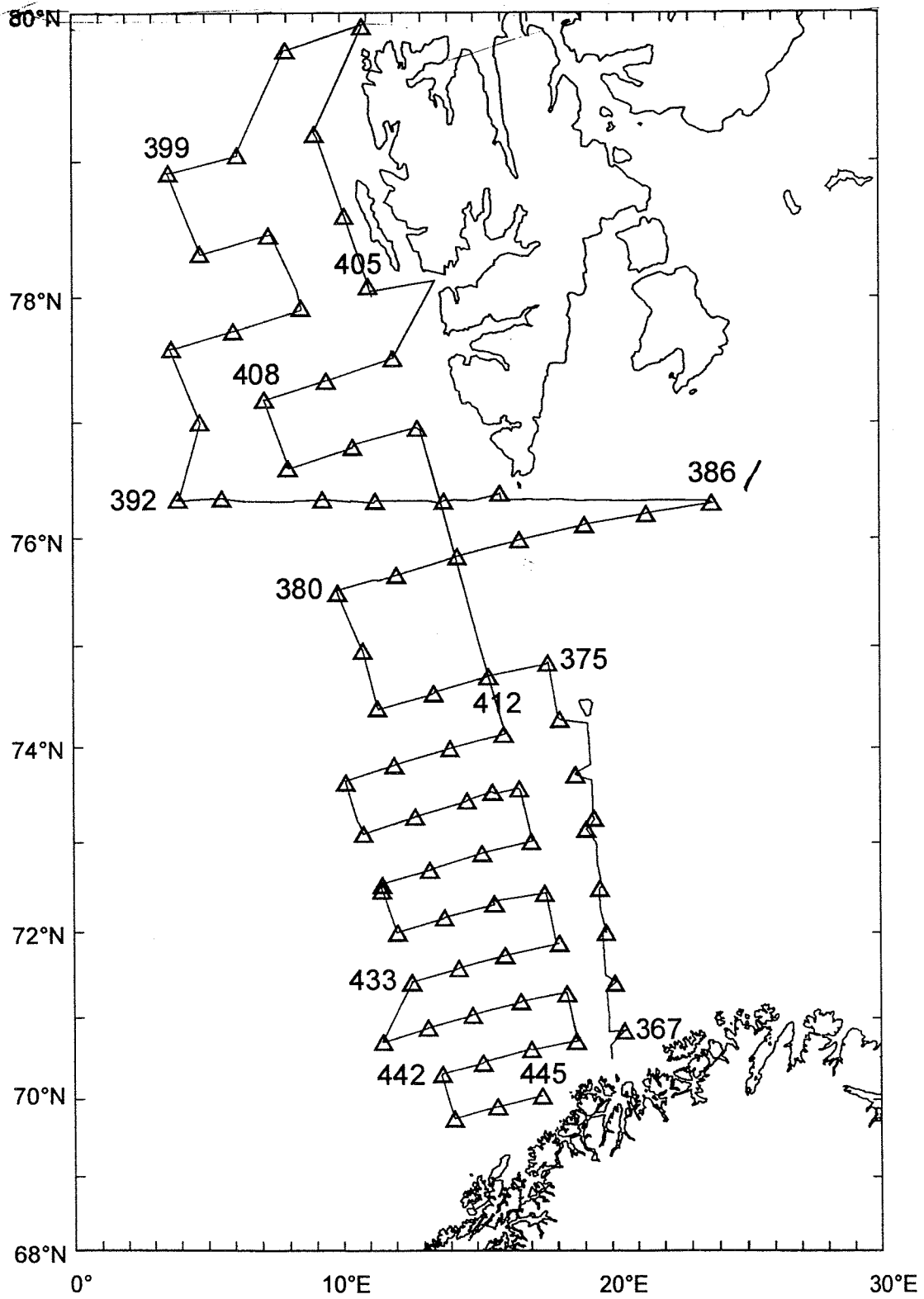
Cruise no 2000210

□ Bottom tr.

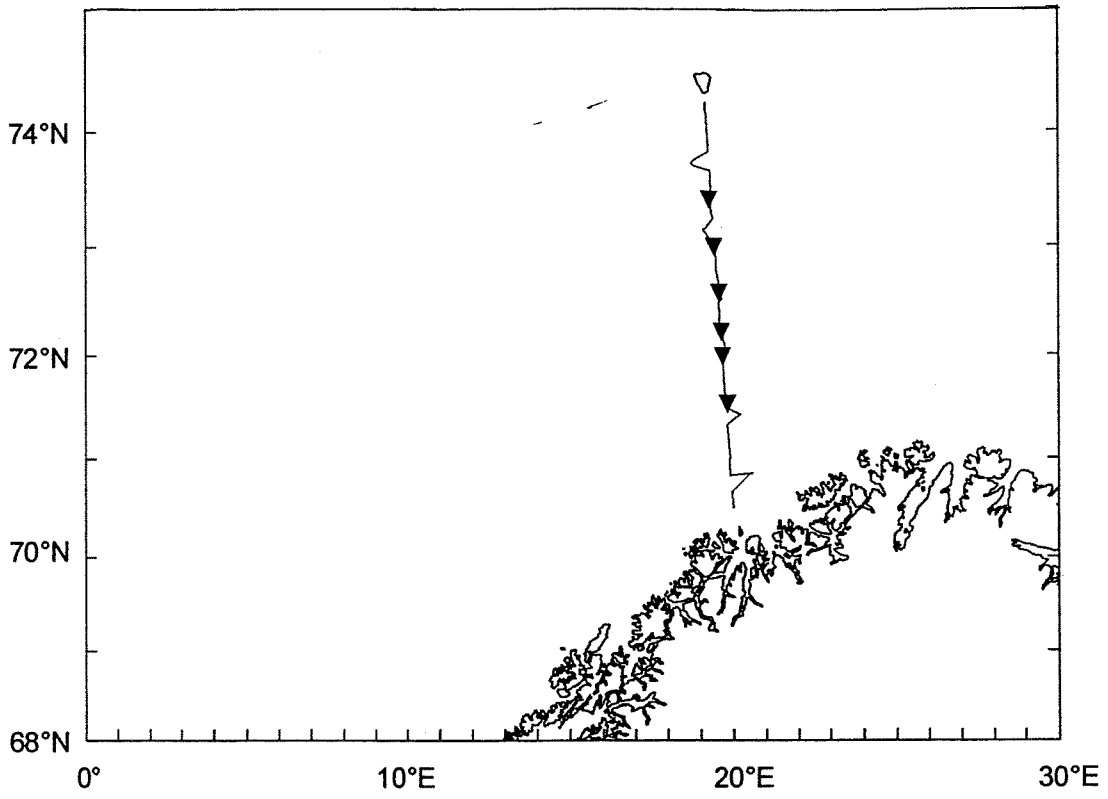
▲ Pel.tr.



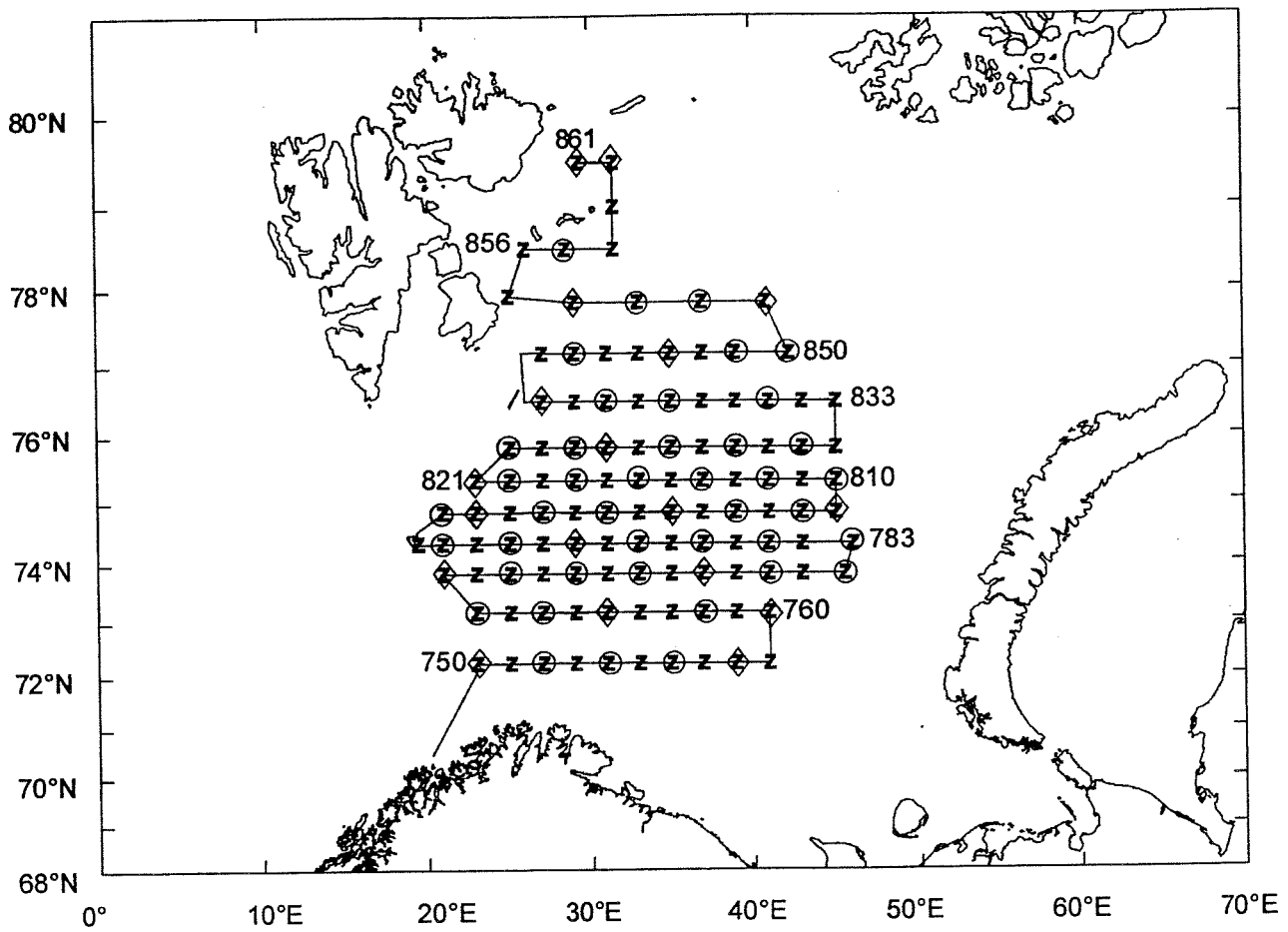
18 Aug - 6 Sep 2000 z CTD st.no 654-749 "Johan Hjort"
 Cruise no 2000211 (z) CTD and PLANKTON st. (WP II)
 ◆ Mocness st.
 Standard Sections Fugløya - Bjørnøya: st.no 654-674
 Sørkapp: st.no 686-698



18 Aug - 6 Sep 2000 Pel. TRAWL St.no 367-445 "Johan Hjort"
 Cruise no 2000211



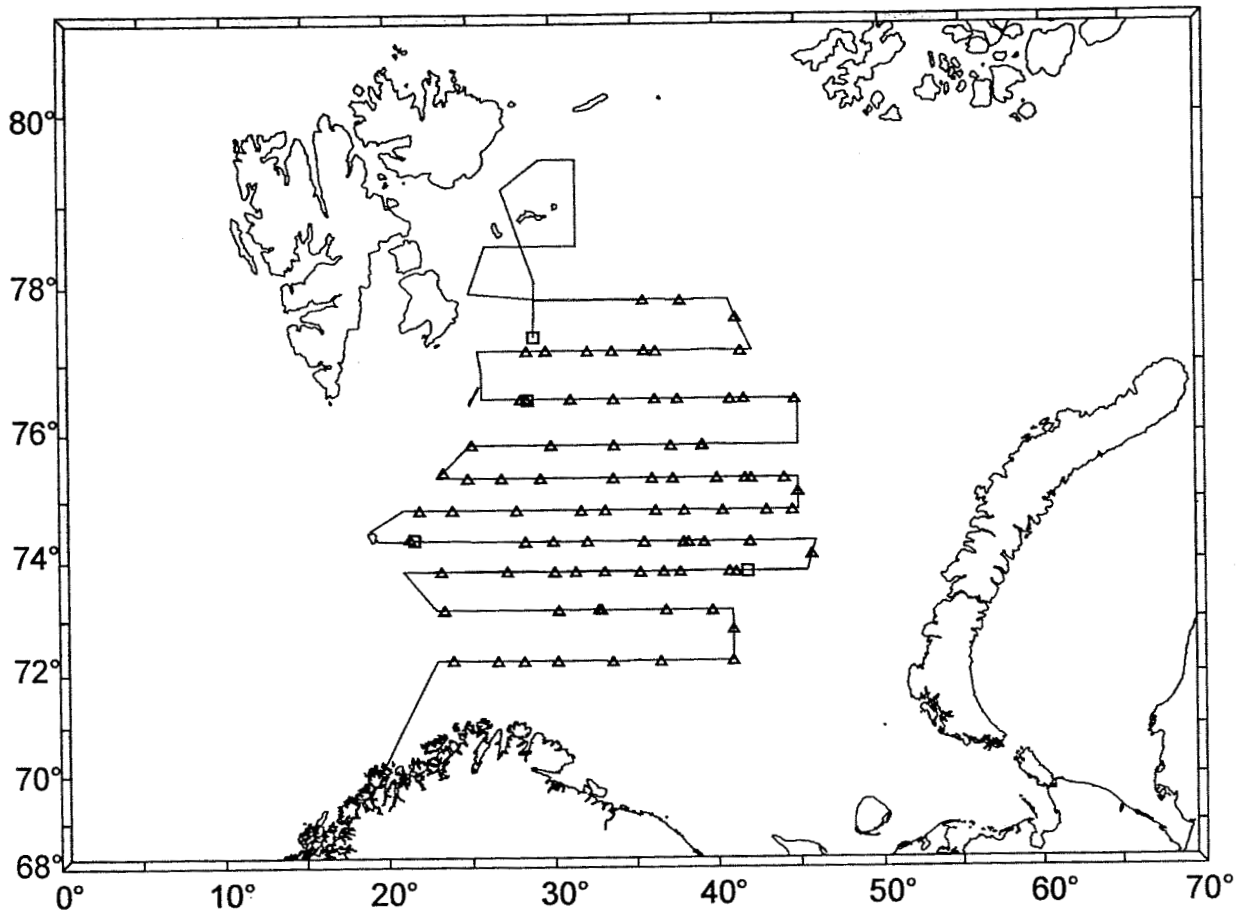
Deployed half-year mooring MAIA with current meters
Cruise no 2000211



8 Sep - 3 Oct 2000
Cruise no 2000212

z CTD st.no 750 - 861
◇ MOCNESS st.
⊗ WP-II net

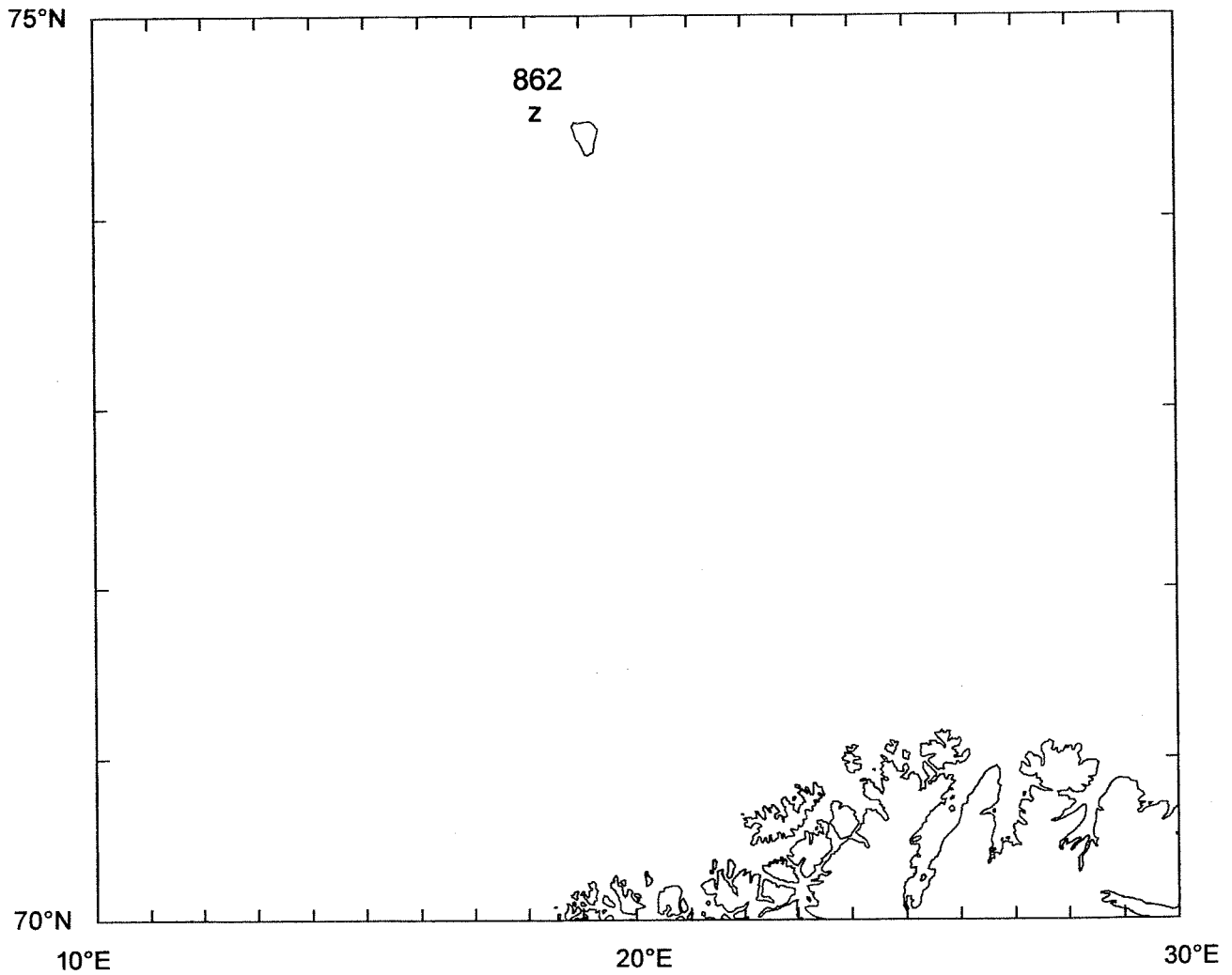
"Johan Hjort"



8 Sep - 3 Oct 2000
 Cruise no 2000212

TRAWL st.
 △ Pelagic tr
 □ Bottom tr.

"Johan Hjort"



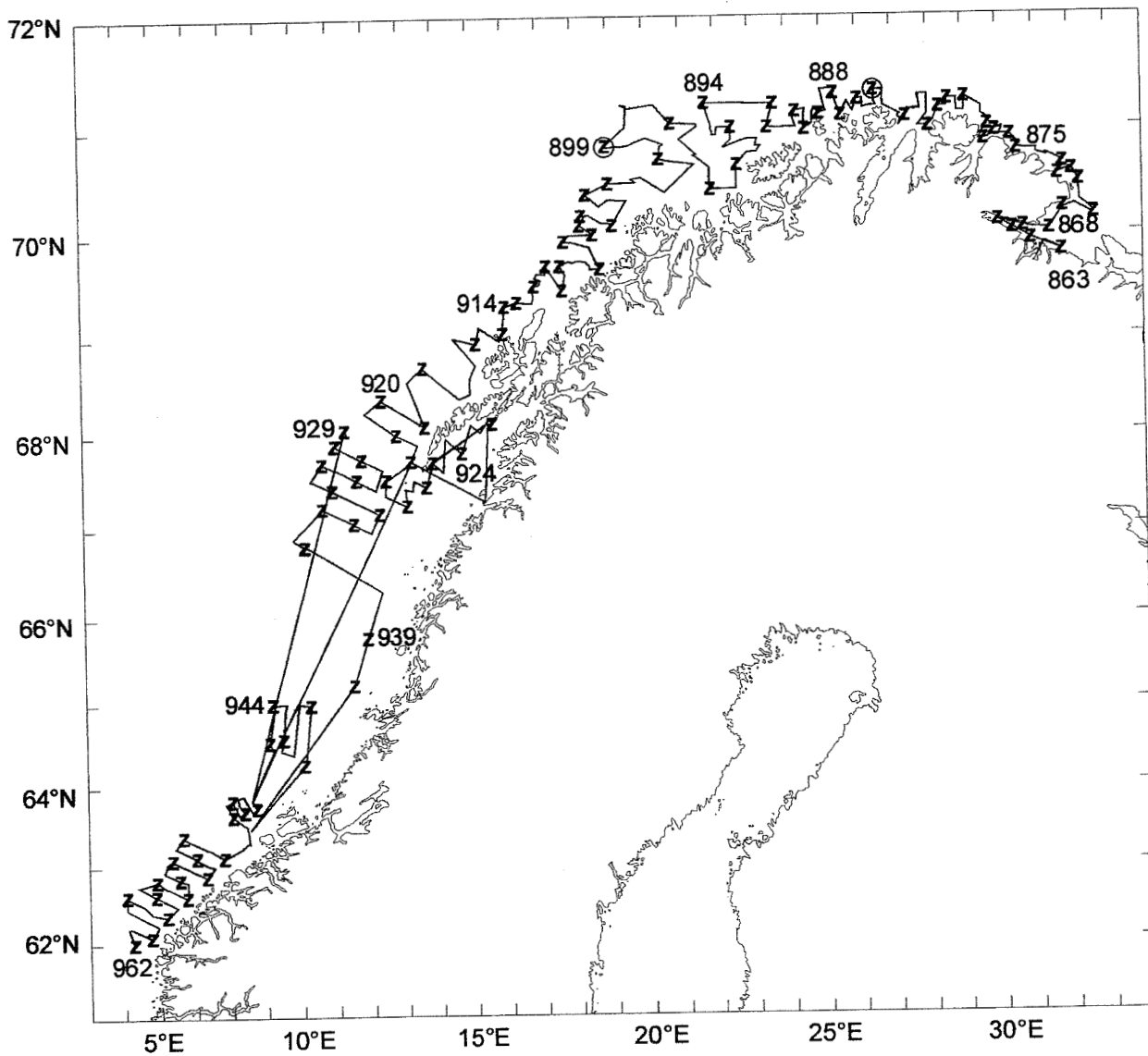
6 - 13 October 2000

Criose no 2000213

z CTD st.no 862

Investigate impacts on sea bed and benthic organisms of trawling
in the Bjørnøya area

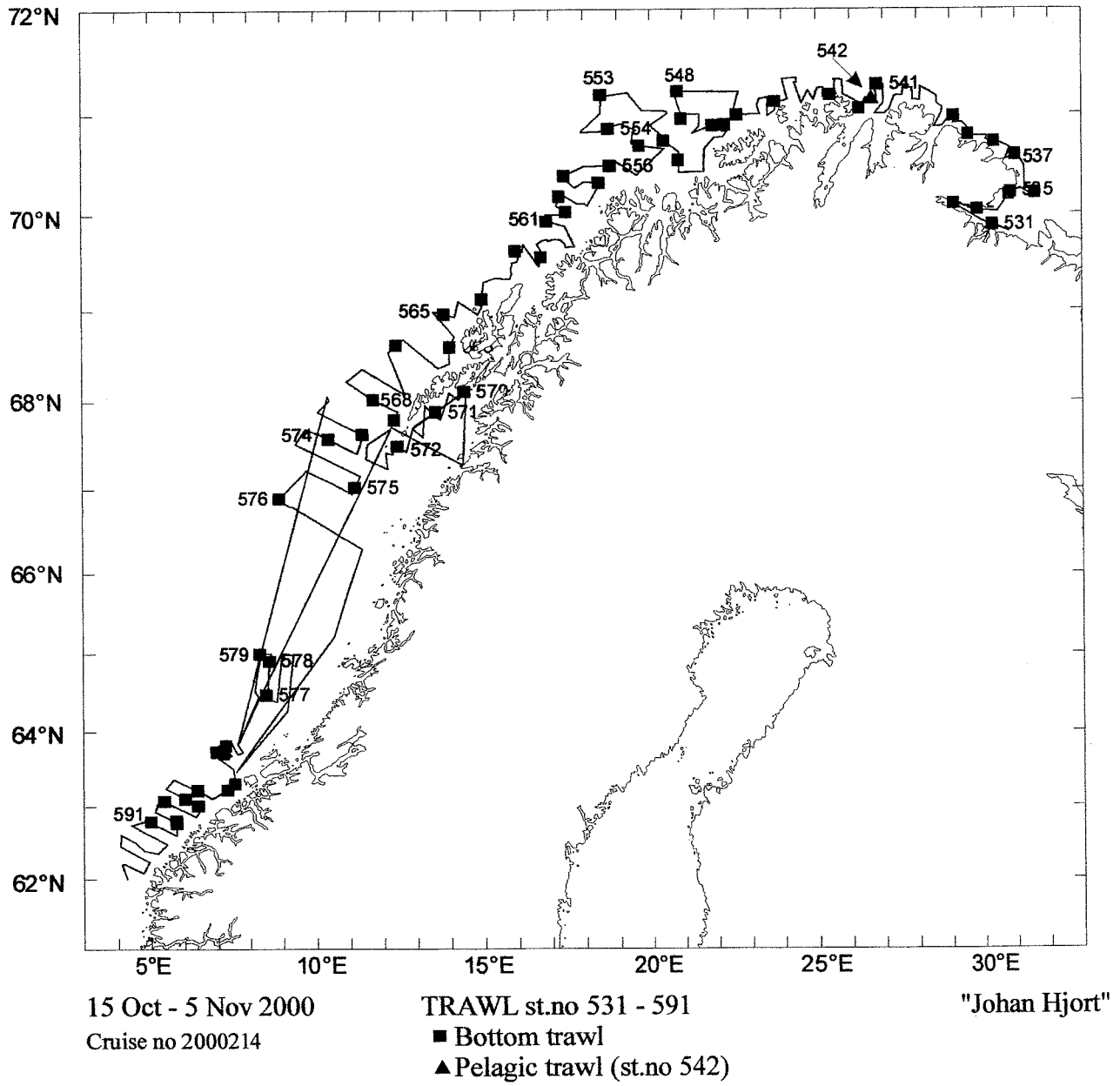
"Johan Hjort"

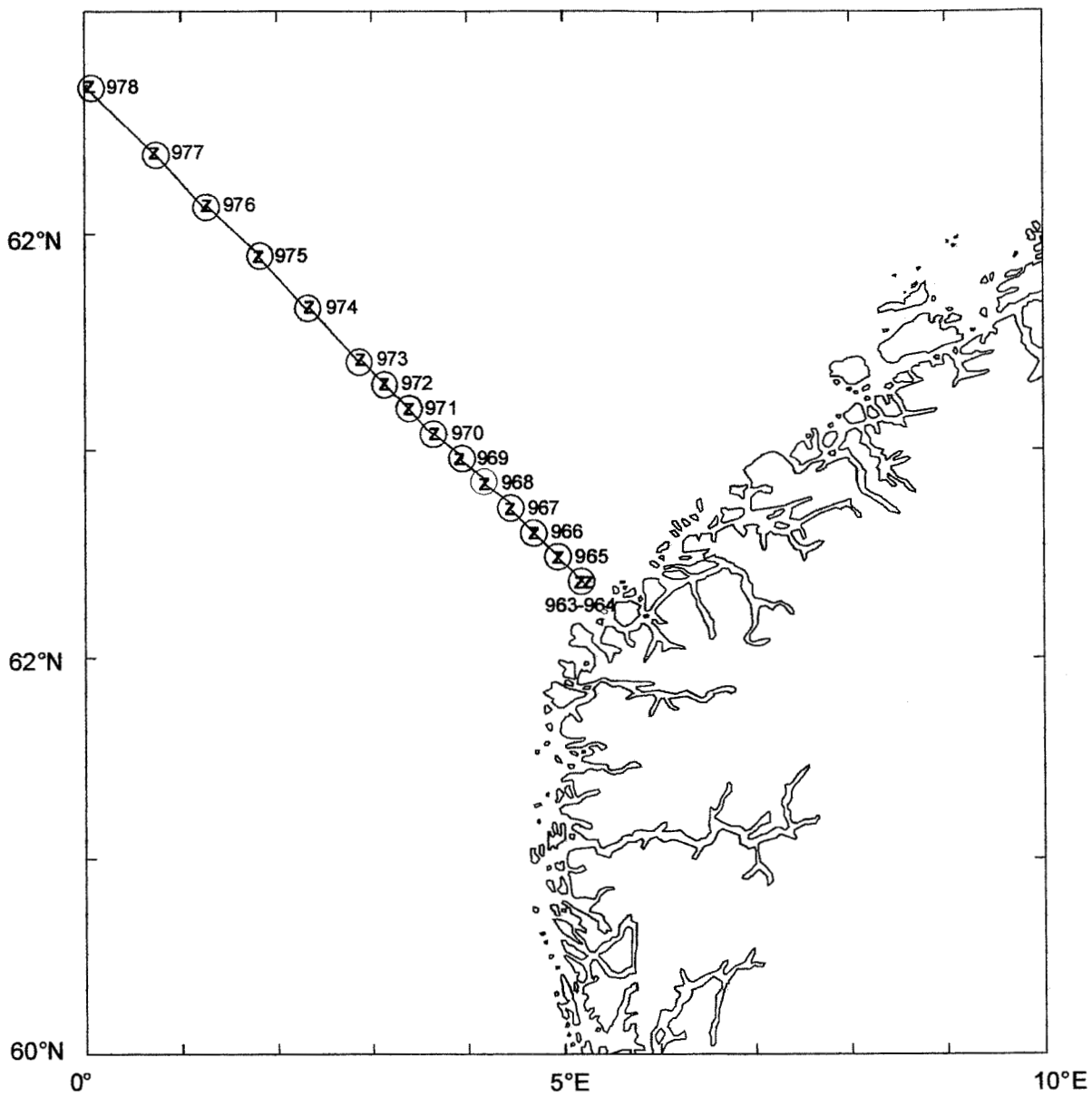


15 Oct - 5 Nov 2000
Cruise no 2000214

z CTD st.no 863-962
⓪ GRAB st.

"Johan Hjort"



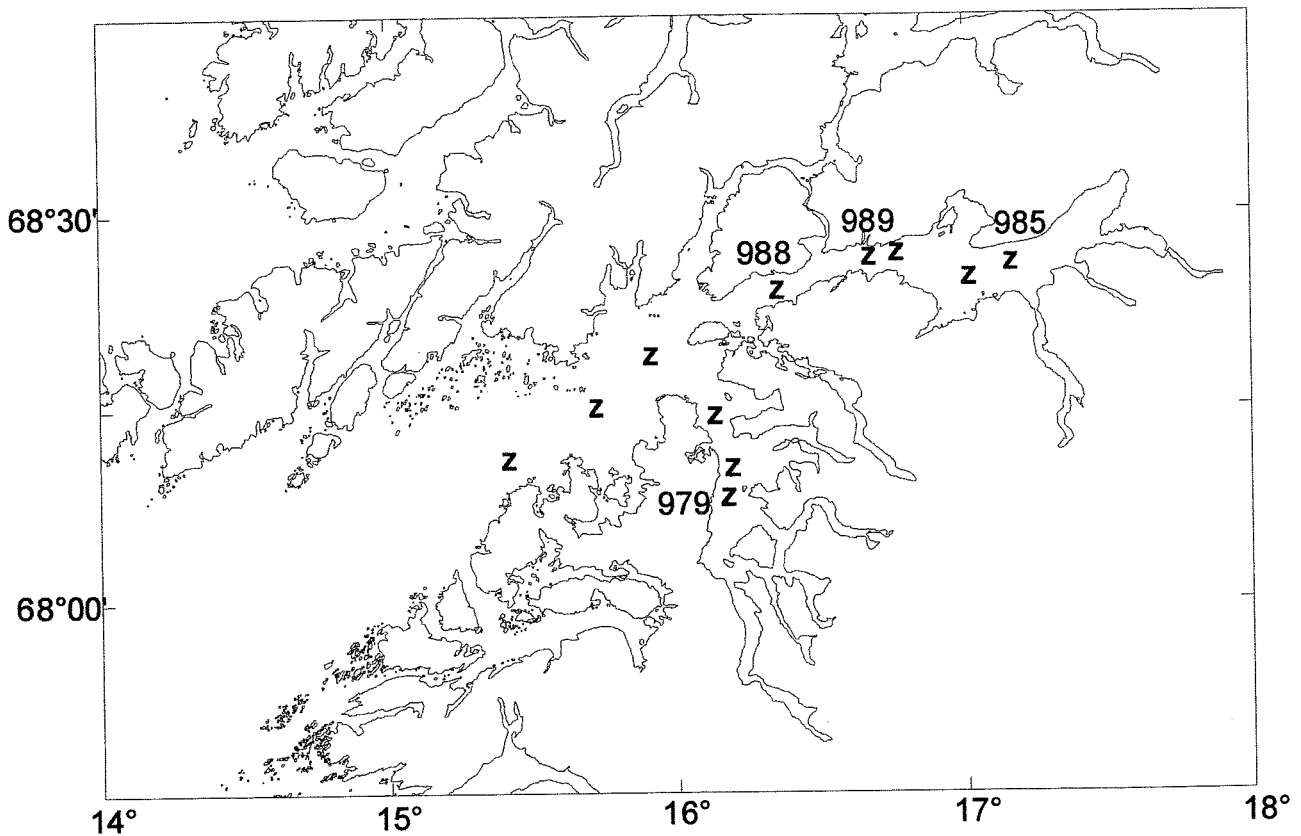


29 Nov - 3 Dec 2000
Cruise no 2000215

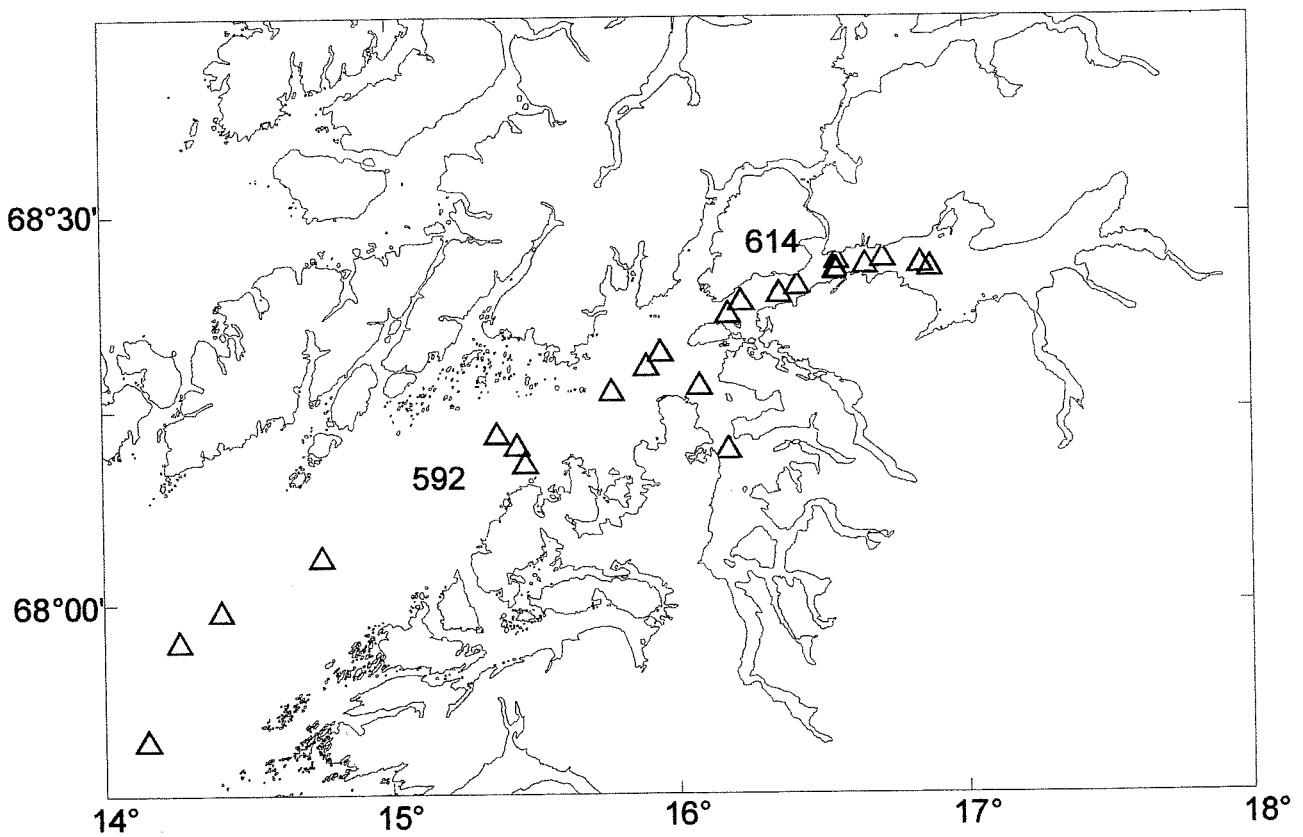
Standard section Svinøy NW

"Johan Hjort"

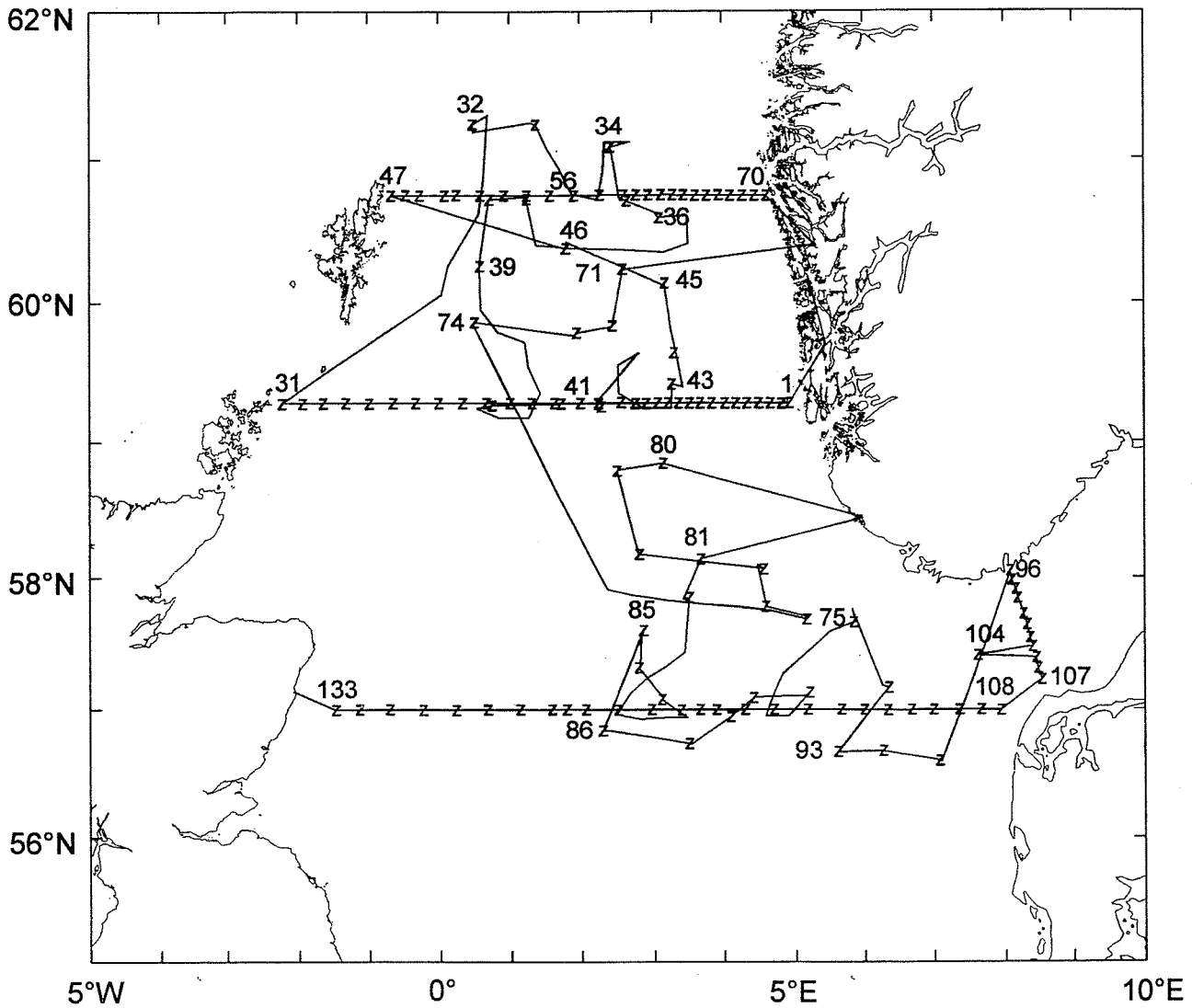
Ⓩ CTD and PLANKTON st. (WP-II-net)st.no 963 - 978



3 - 19 December 2000 z CTD st.no 979 - 989 "Johan Hjort"



3 - 19 December 2000 Δ Pelagic trawl "Johan Hjort"

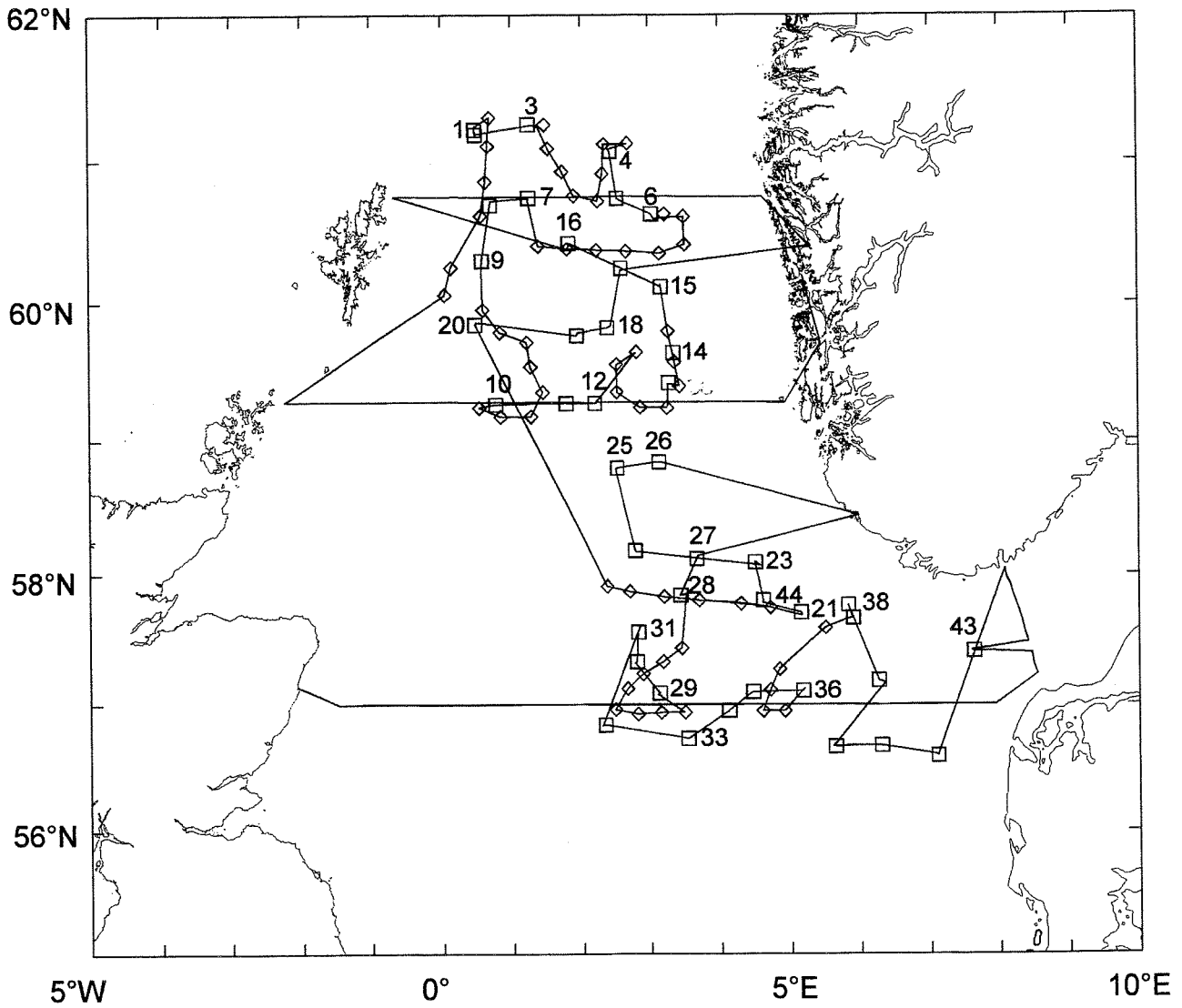


8 Jan - 12 Feb 2000
 Cruiseno 2000101

z CTD st.no 1-133

“Michael Sars”

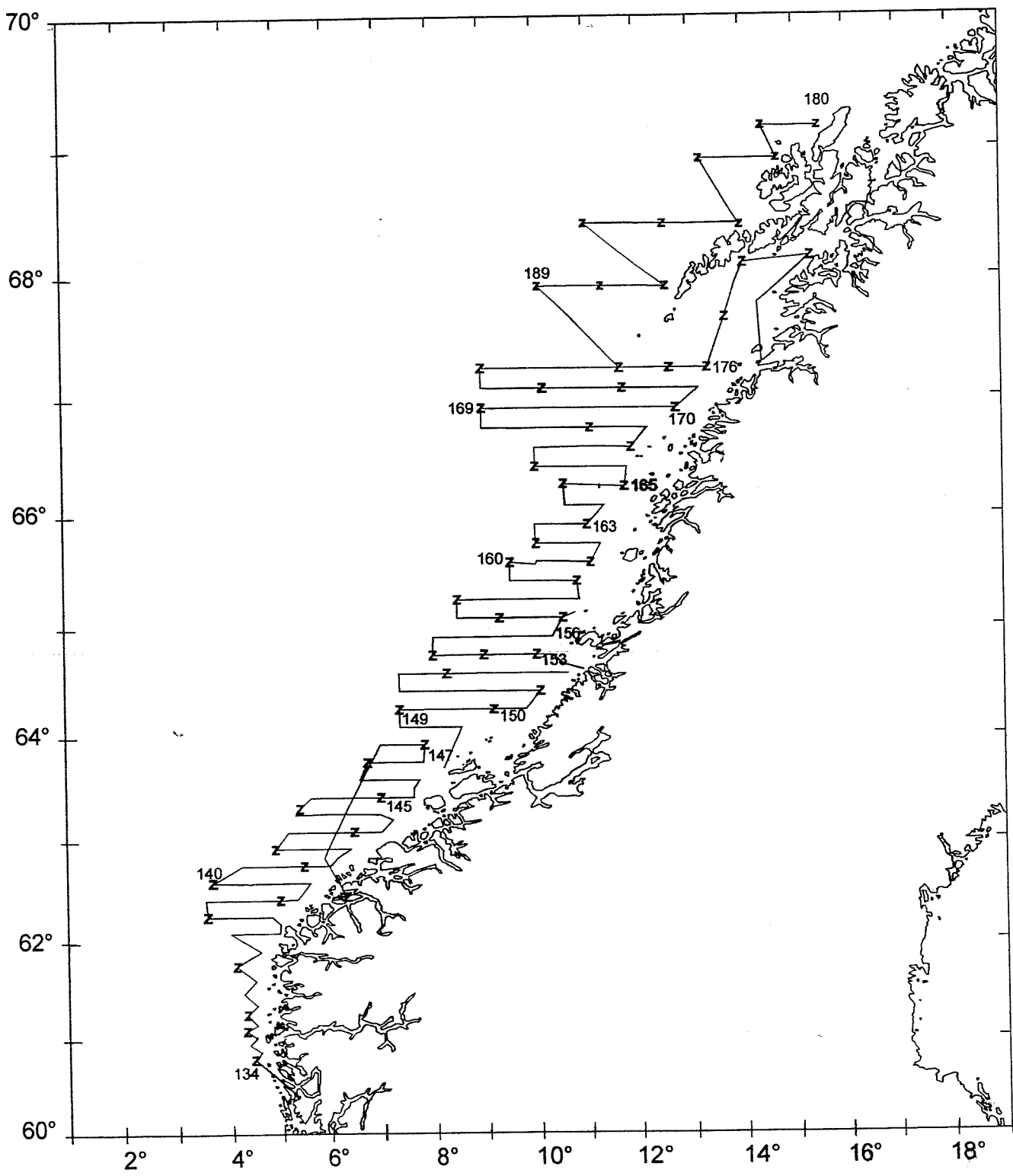
Standard sections : Feie-Shetland st.no 47-70
 Utsira W st.no 1-31
 Oksø-Hanstholm st.no 96-107
 Hanstholm-Aberdeen st.no 108-133



8 Jan - 12 Feb 2000

- ◇ MIK
- Bottom TRAWL st.no 1-43:

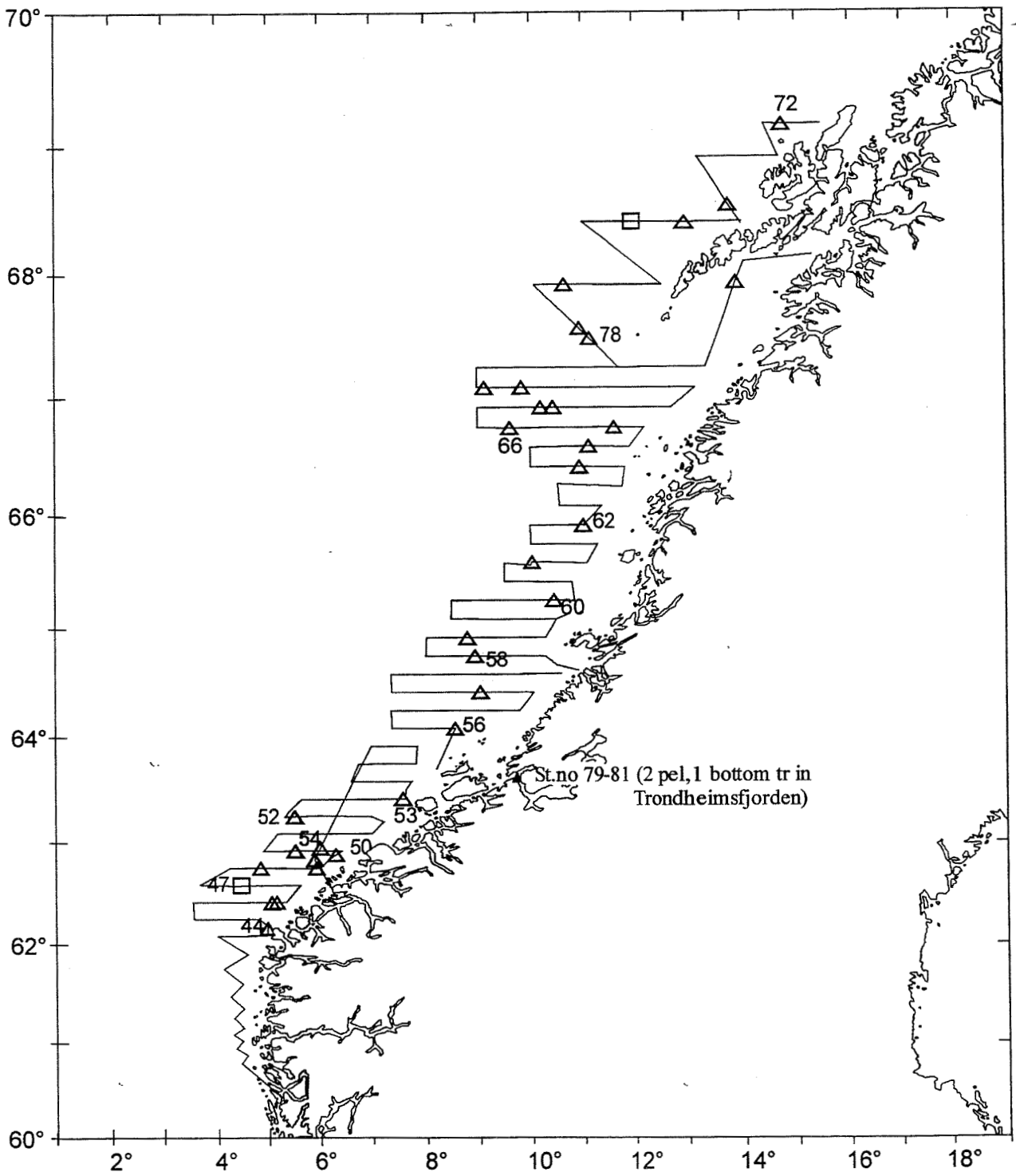
“Michael Sars”



1.part: 15 Feb - 11 Mar 2000
 Cruise no 2000102

z CTD st.no 134-189

"Michael Sars"



1. part: 15 Feb - 11 Mar 2000

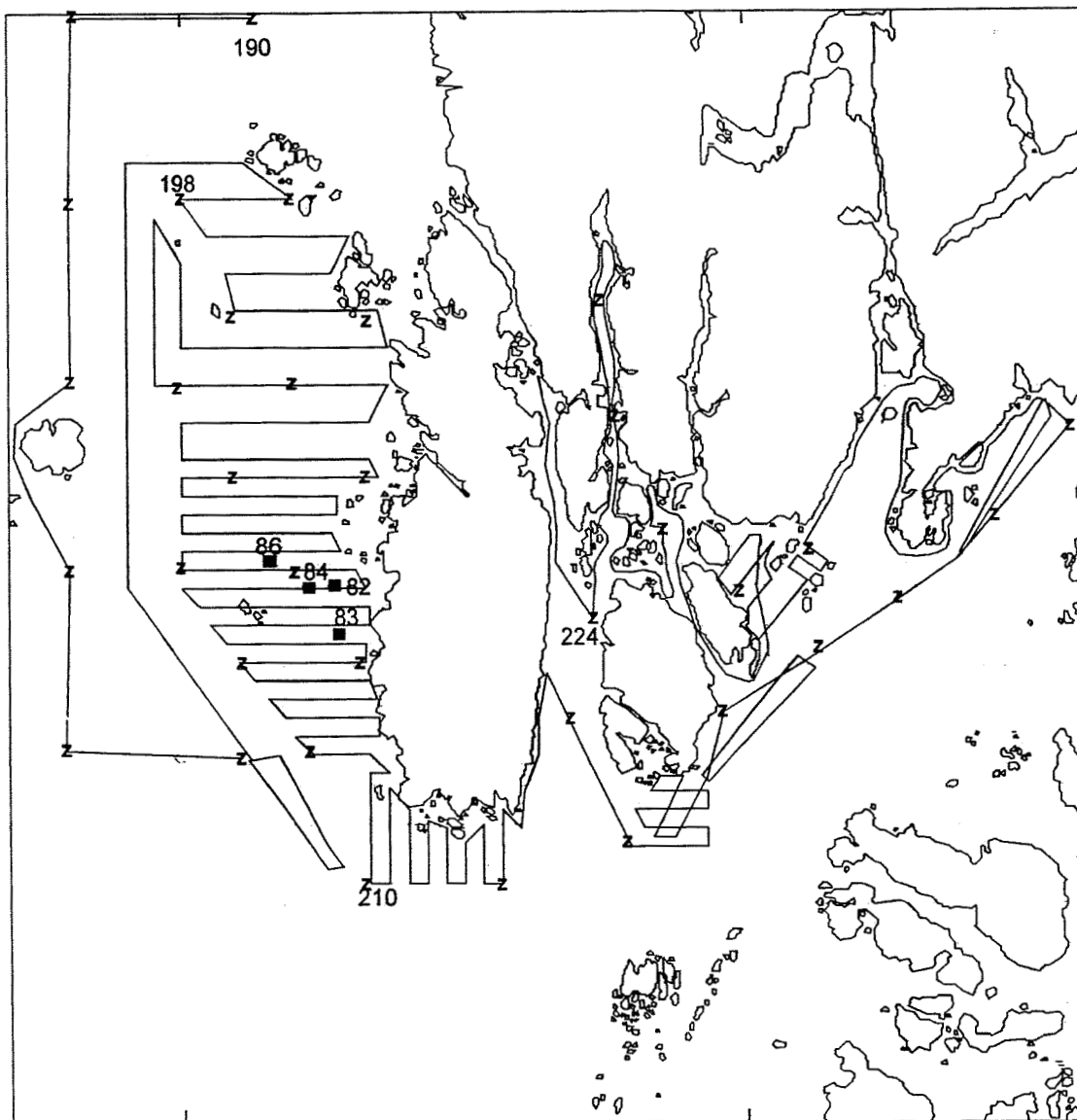
'Cruise no 2000102

TRAWL st. no 44-81

□ Bottom tr.

△ Pel.tr.

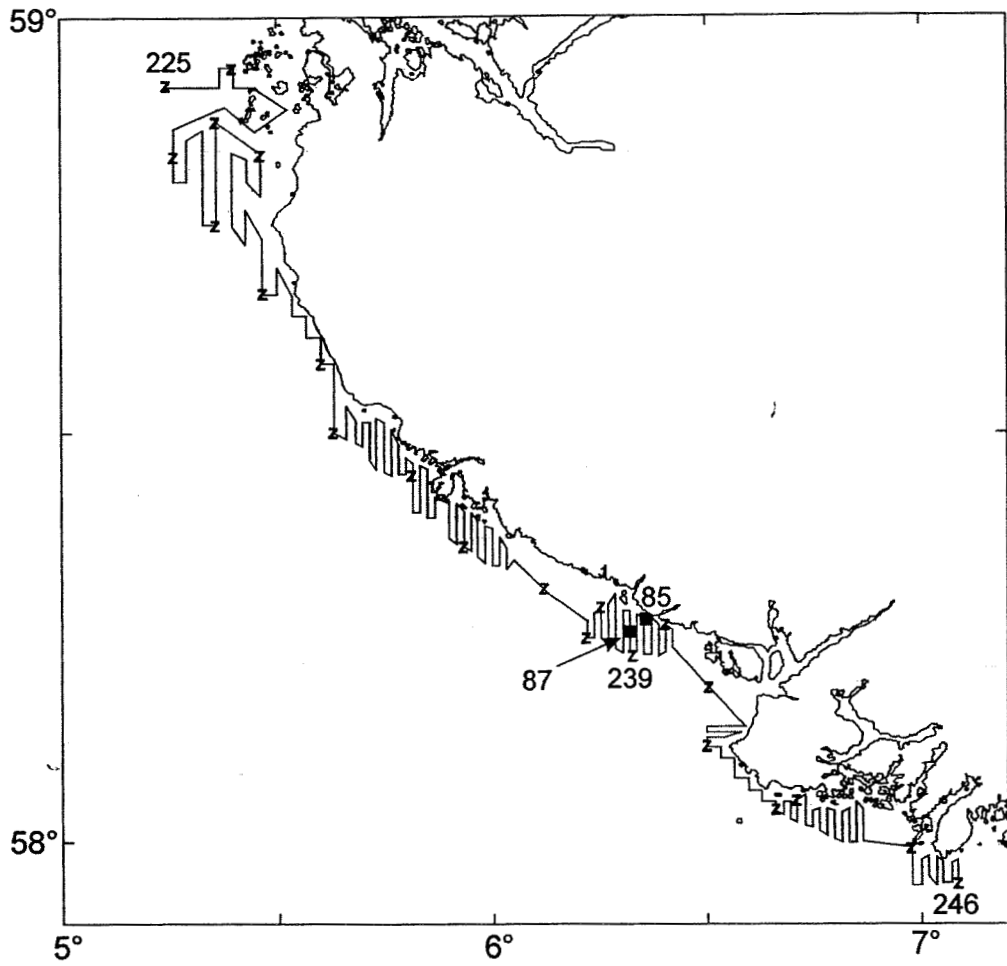
"Michael Sars"



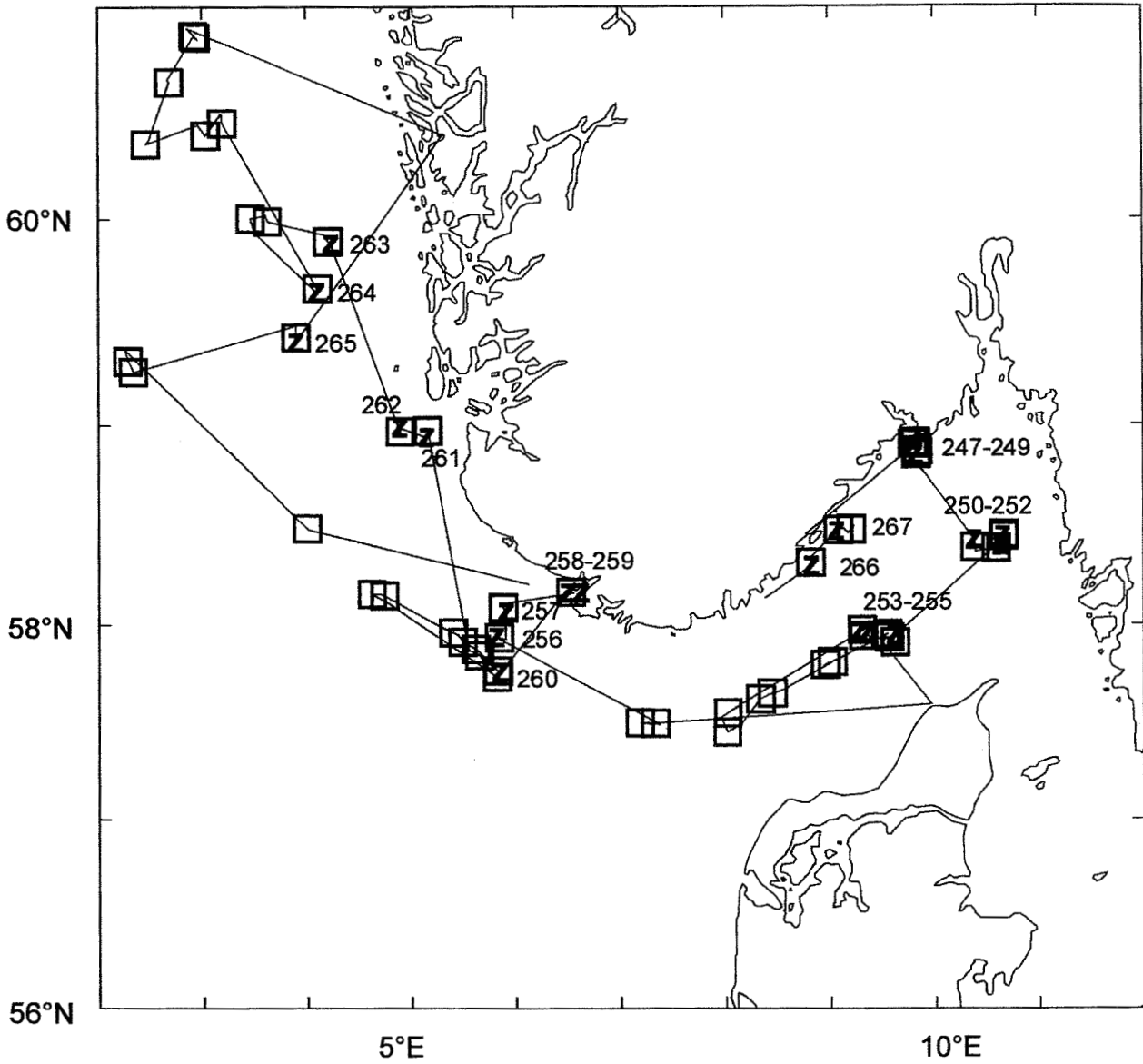
2. part: 15 - 17 Mar 2000
 Cruise no 2000102

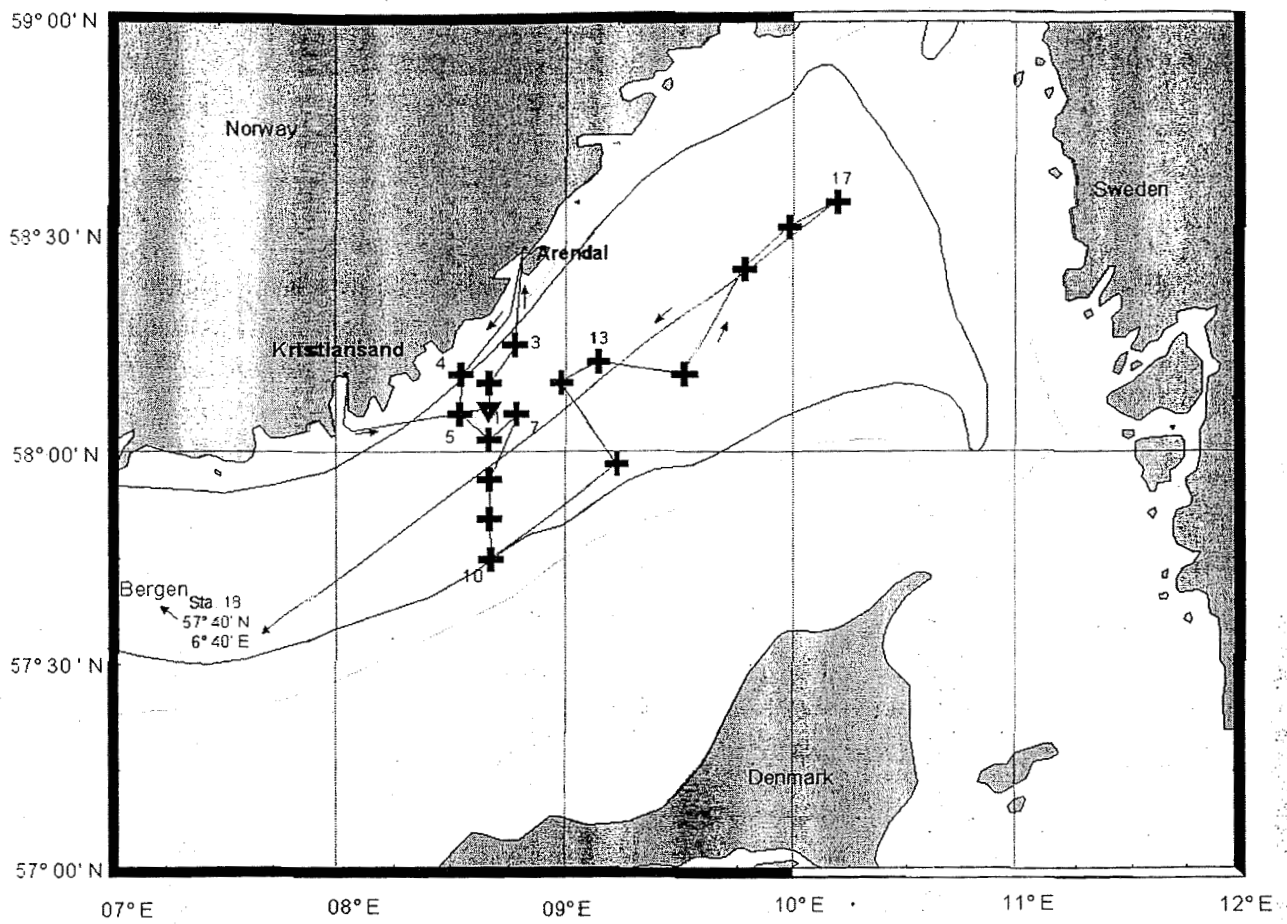
z CTD st.no 190-224
 ■ Bottom tr. st.no 82-86

“Michael Sars”



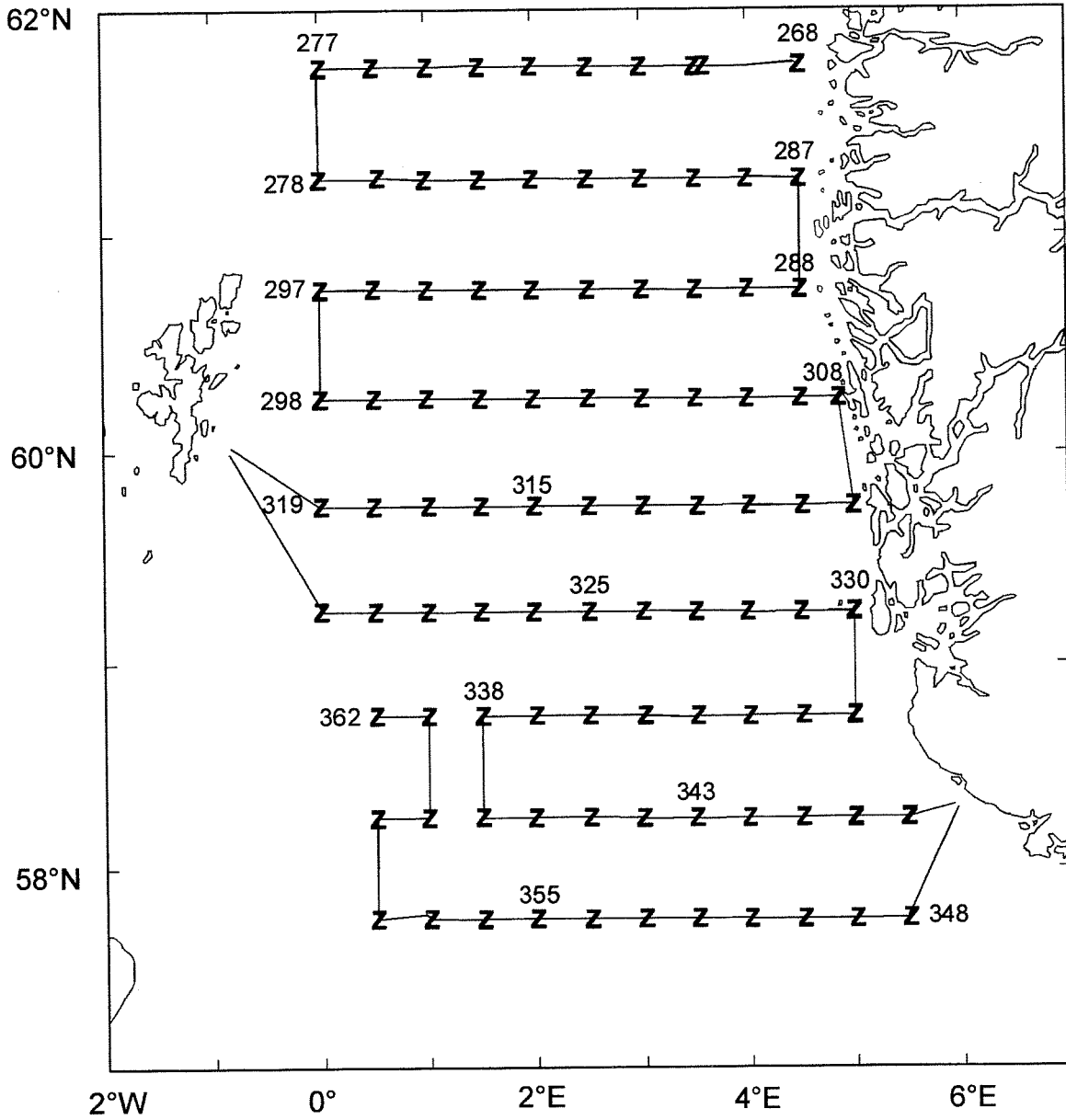
3. part: 18 - 19 Mar 2000 z CTD st.no 225-246 "Michael Sars"
 Cruise no 2000102 ■ Bottom tr. st.no 85 and 87





10 - 14 Apr 2000
Cruise no 2000104

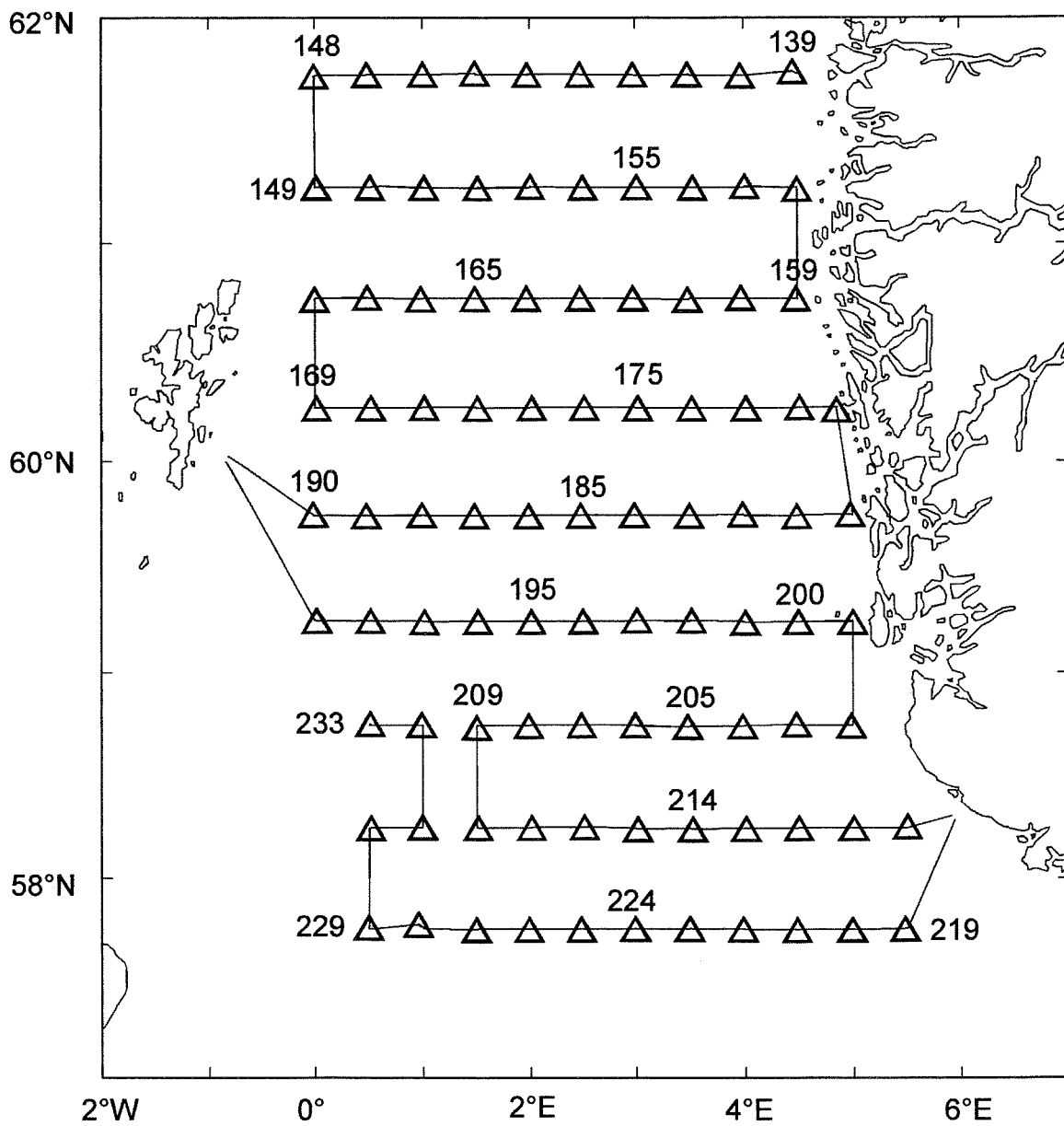
Cruise track and location of stations. "Michael Sars"
At all stations 6 sediment grabs were taken.
▲ : Location of the sediment-trap/current-meter mooring.



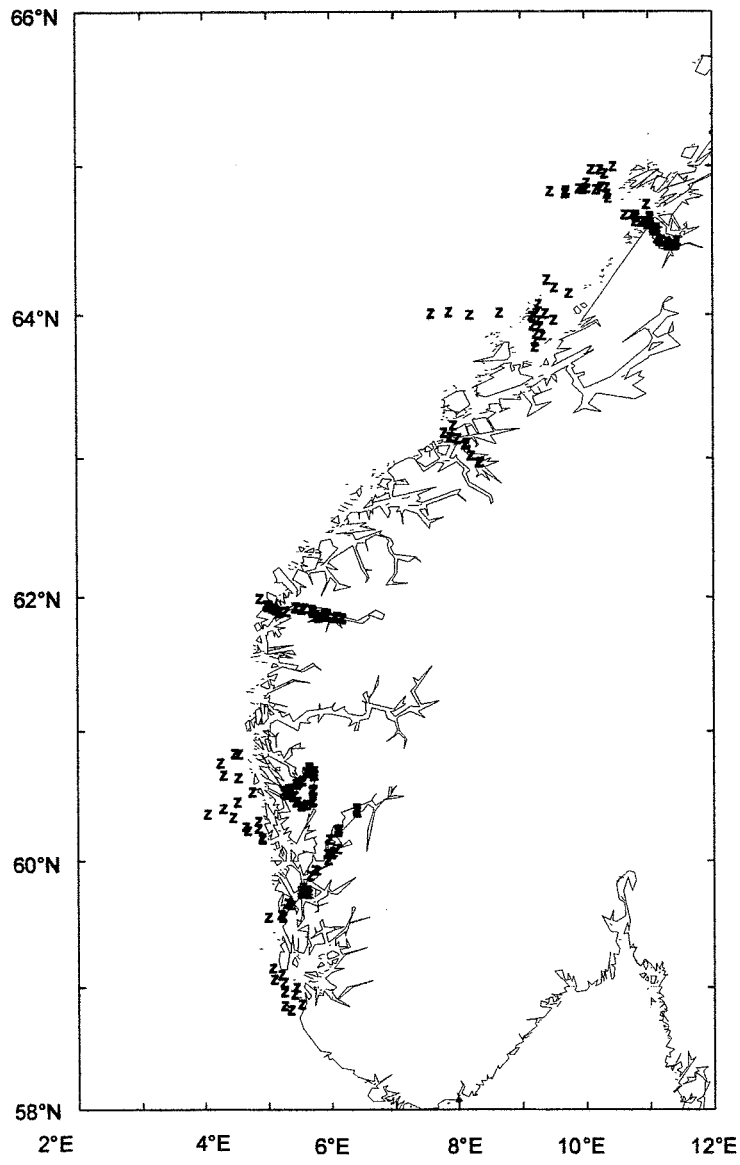
26 Apr - 9 May 2000
 Cruise no 2000105

z CTD st.no 268-362

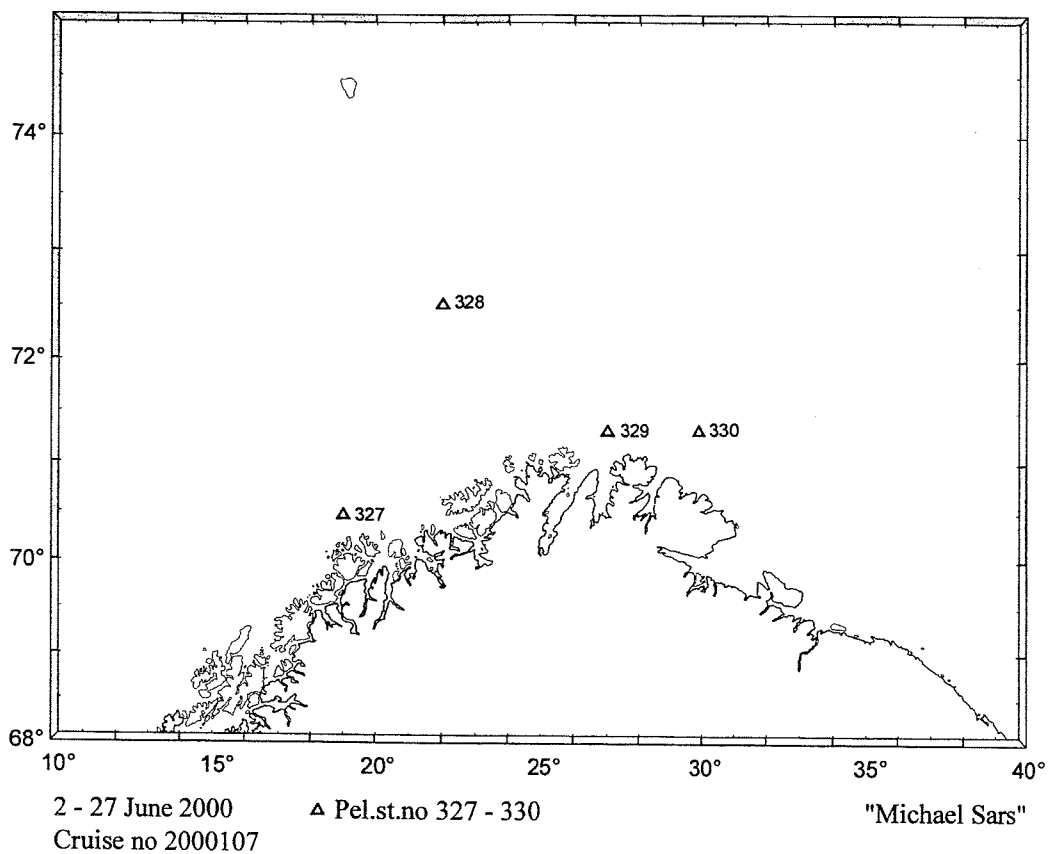
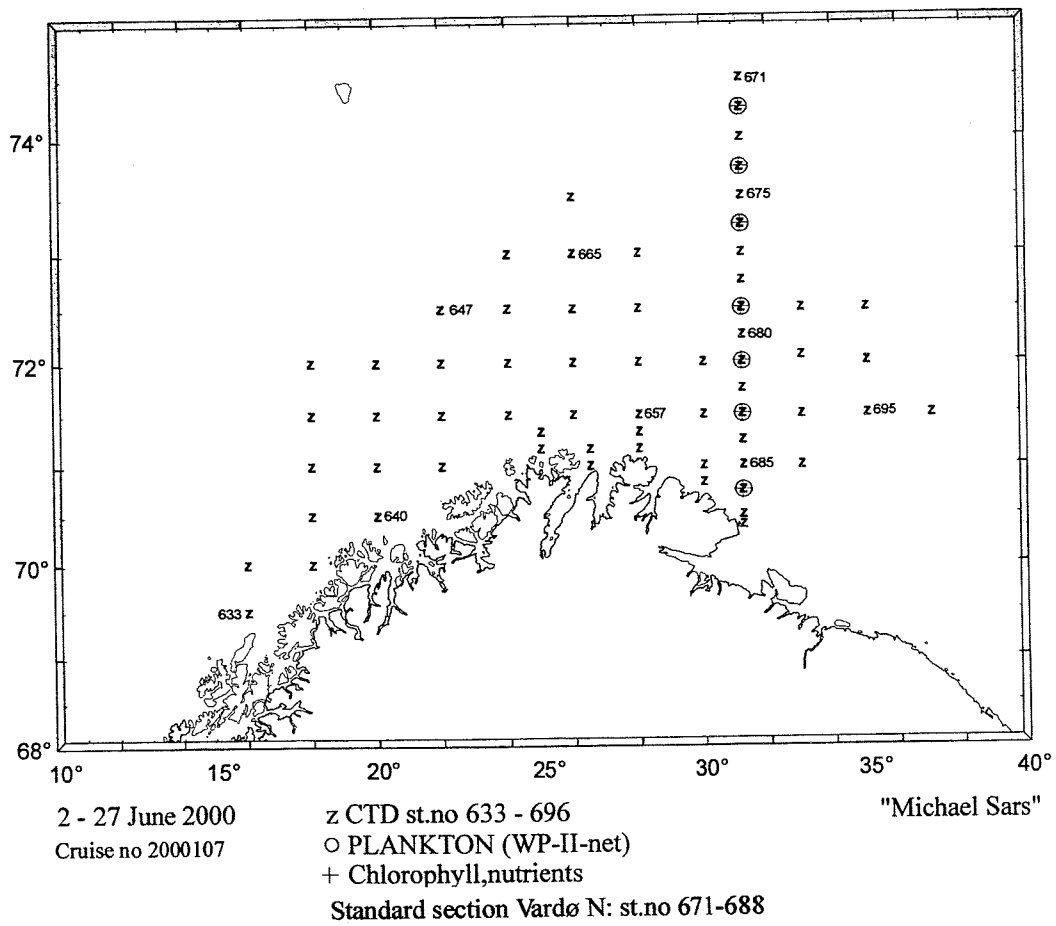
"Michael Sars"

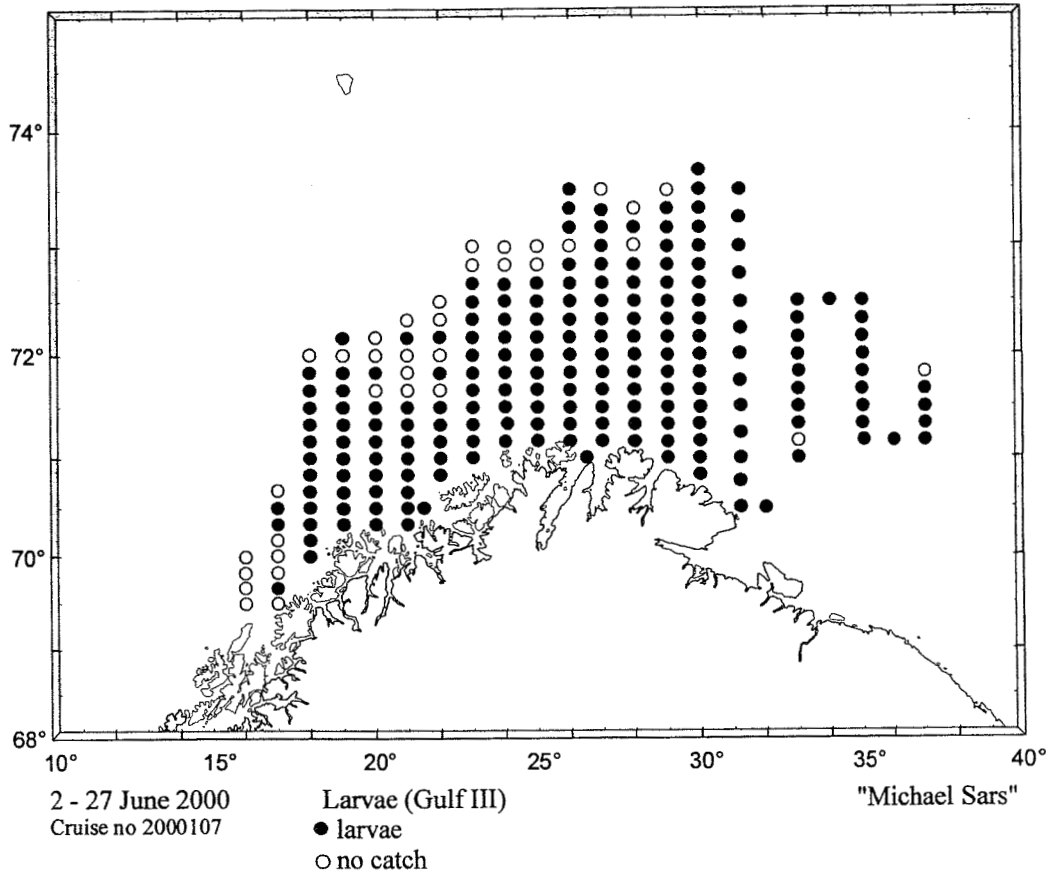


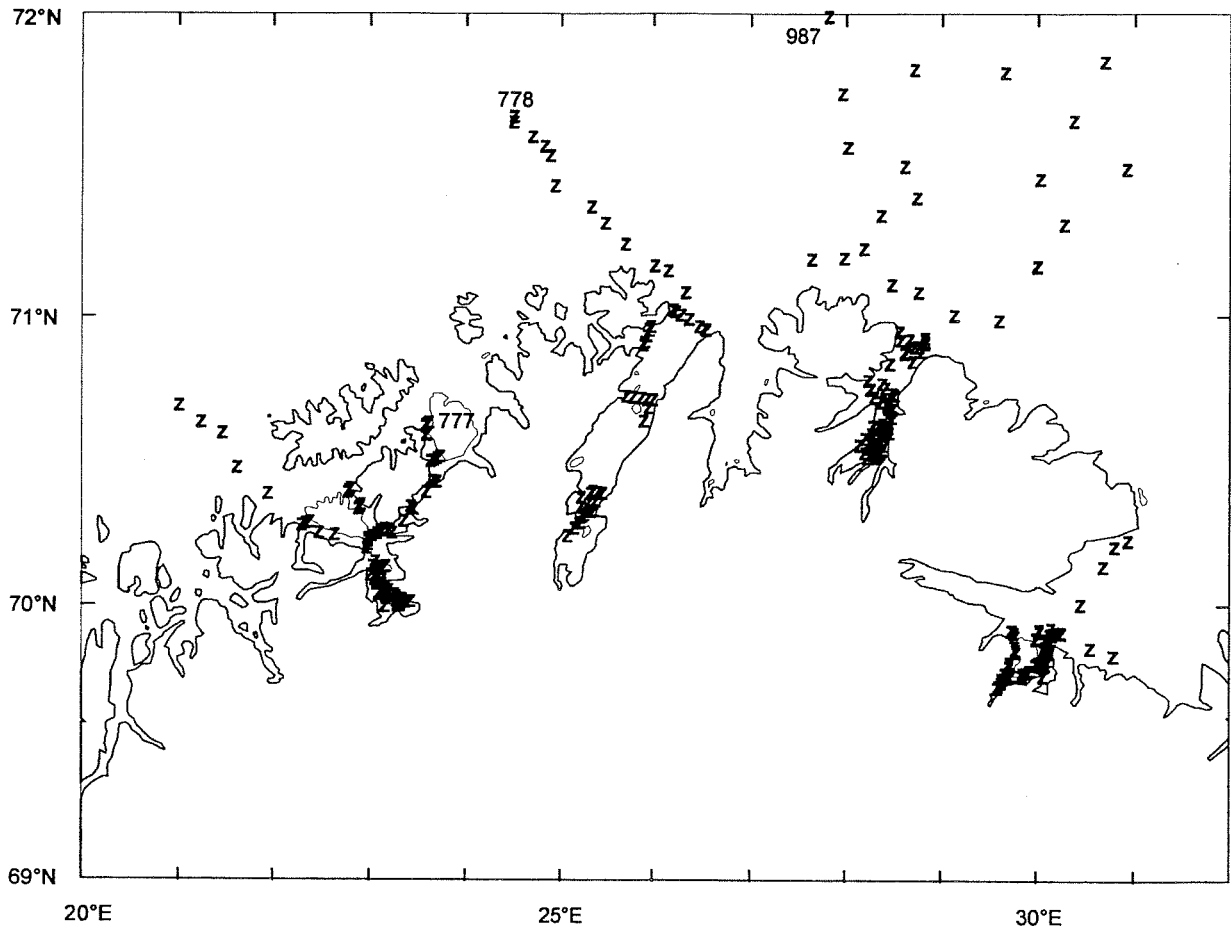
26 Apr - 9 May 2000 Pel. TRAWL st.no 139-233 "Michael Sars"
 Cruise no 2000105



11 - 31 May 2000 z CTD st.no 363-632 "Michael Sars"
Cruise no 2000106



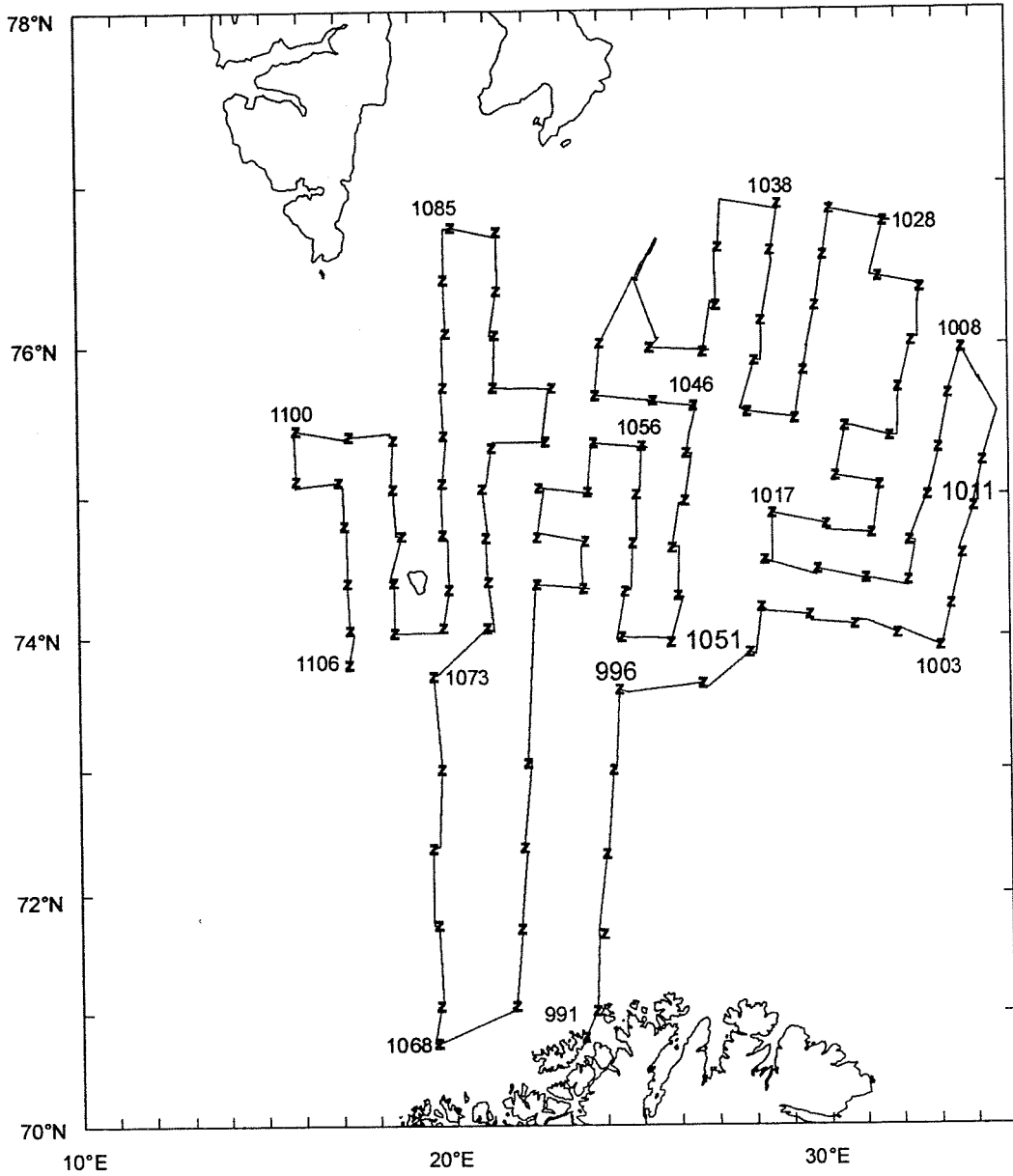




28 Jun - 24 Jul 2000
 Cruise no 2000108

z CTD st.no 697 - 990

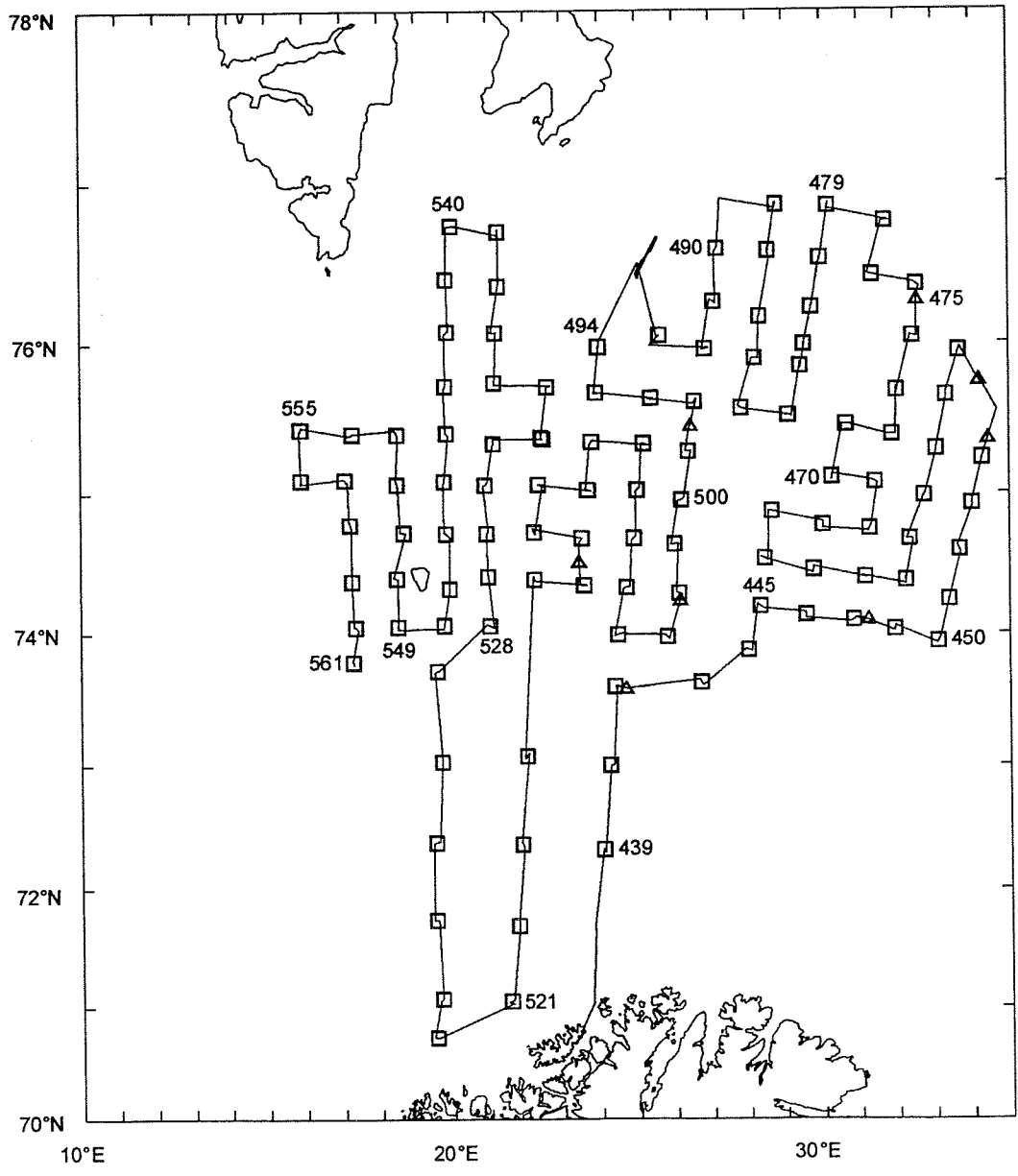
"Michael Sars"



25 Jul - 20 Aug 2000
Cruise no 2000110

z CTD st.no 991-1106

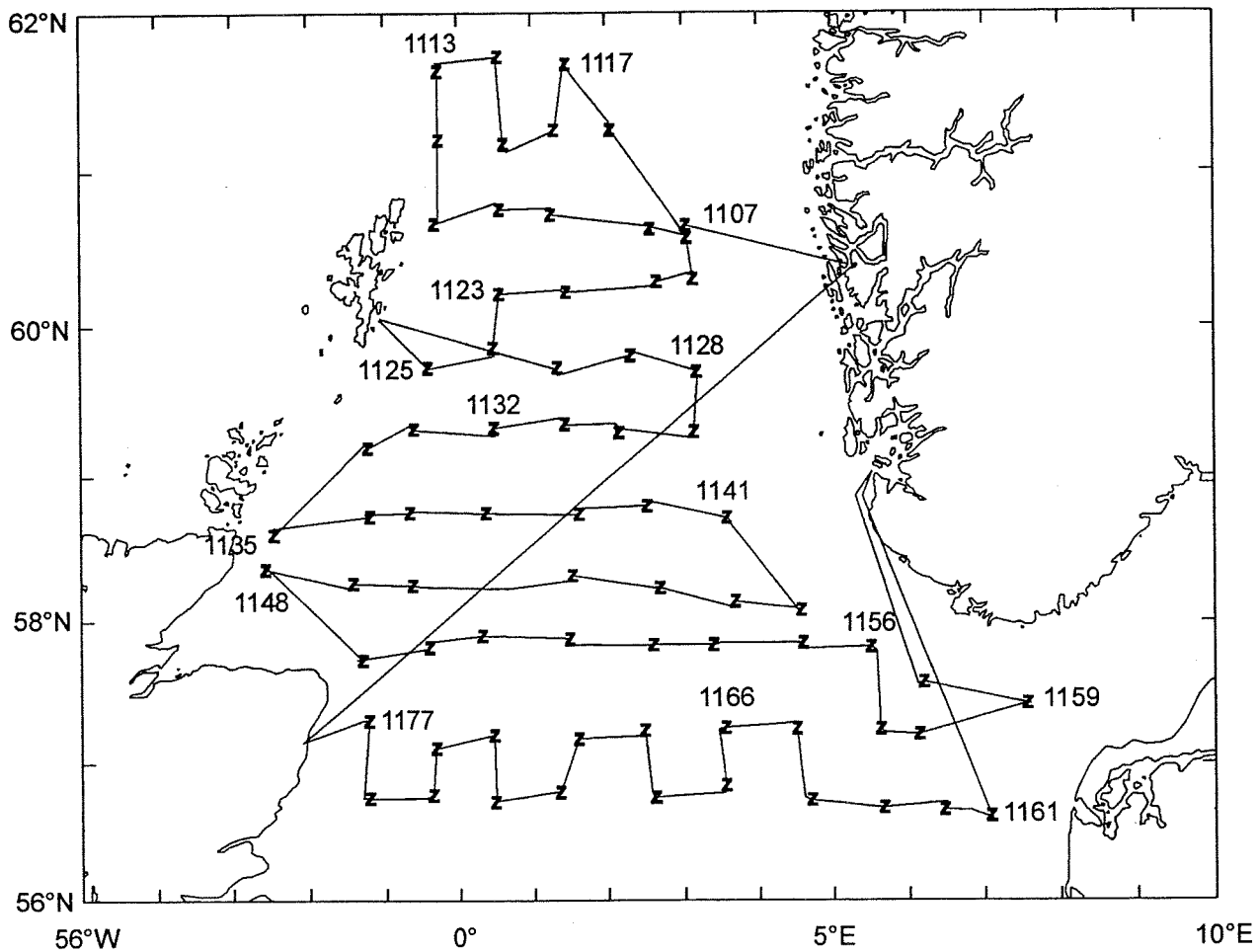
"Michael Sars"



25 Jul - 20 Aug 2000
 Cruise no 2000110

TRAWL st.no 439-561
 □ Bottom tr.
 △ Pel. tr.

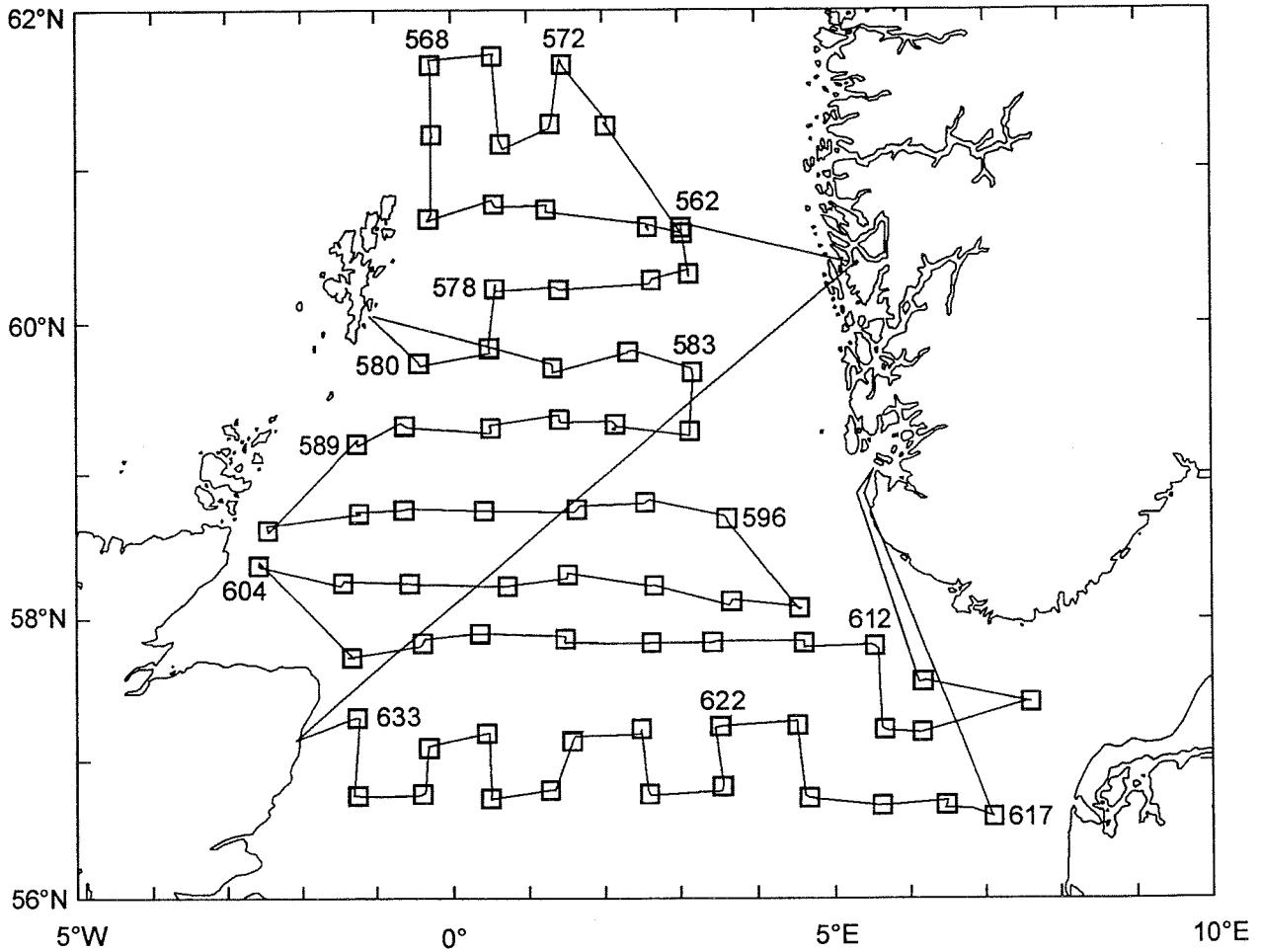
"Michael Sars"



23 Aug - 16 Sep 2000
 Cruise no 2000111

z CTD st.no 1107-1177

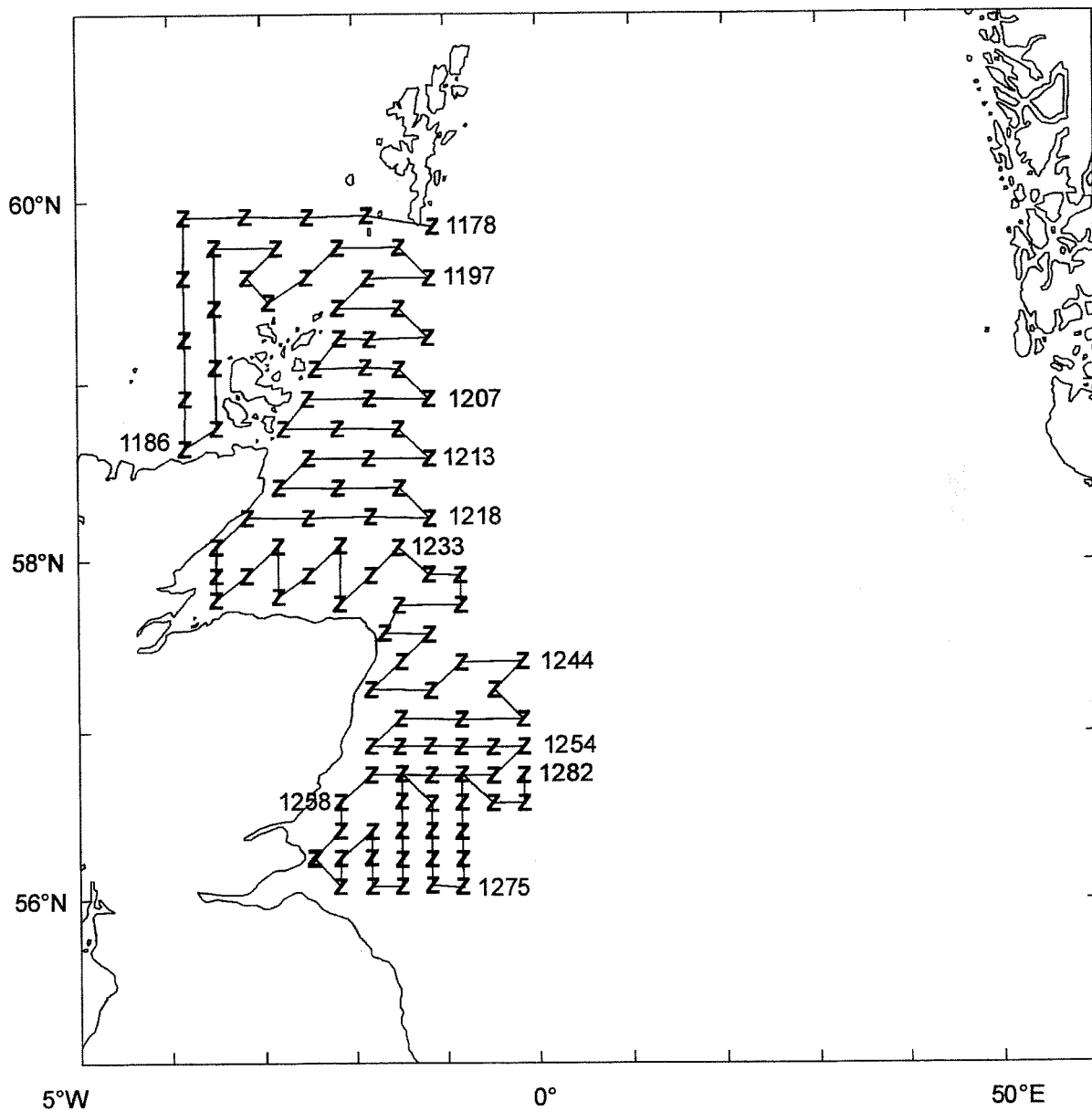
"Michael Sars"



23 Aug - 16 Sep 2000
Cruise no 2000111

Bottom TRAWL st.no 562-633

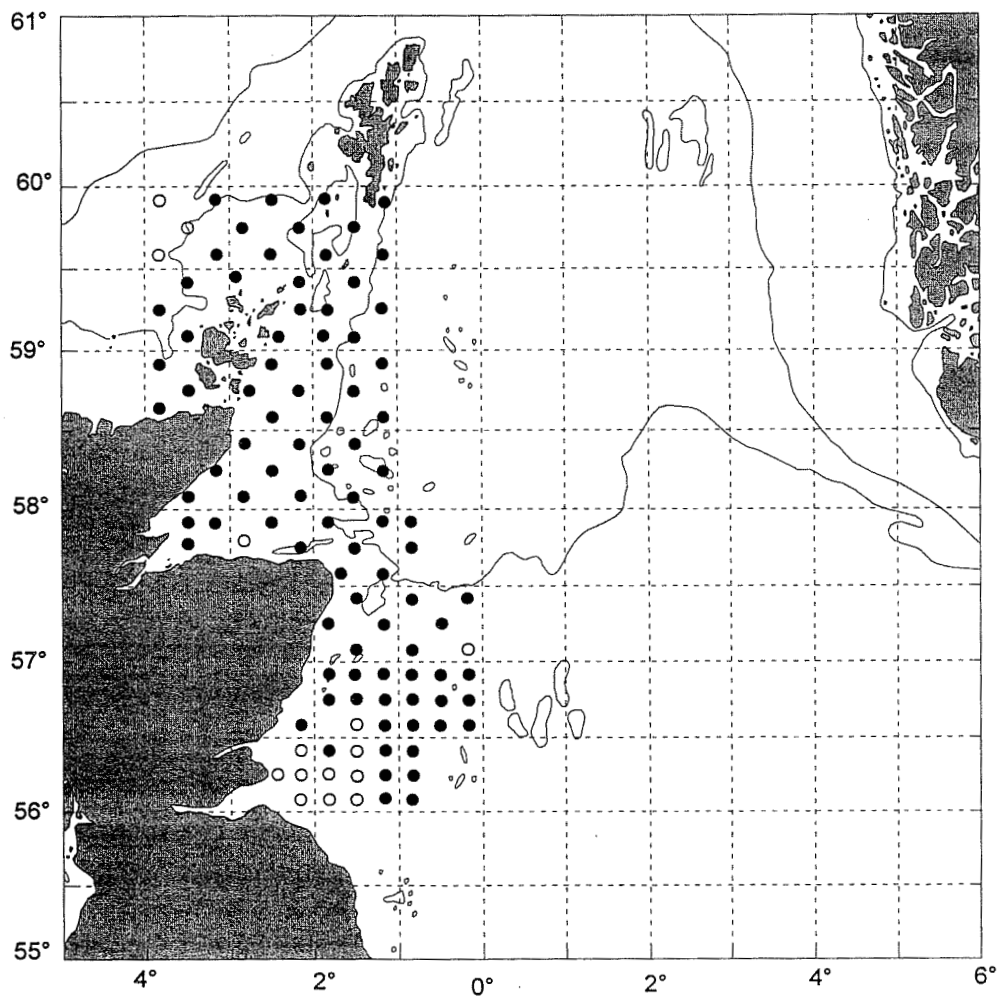
"Michael Sars"



19 Sep - 4 Oct 2000
Cruise no 2000112

z CTD st.no 1178 - 1282

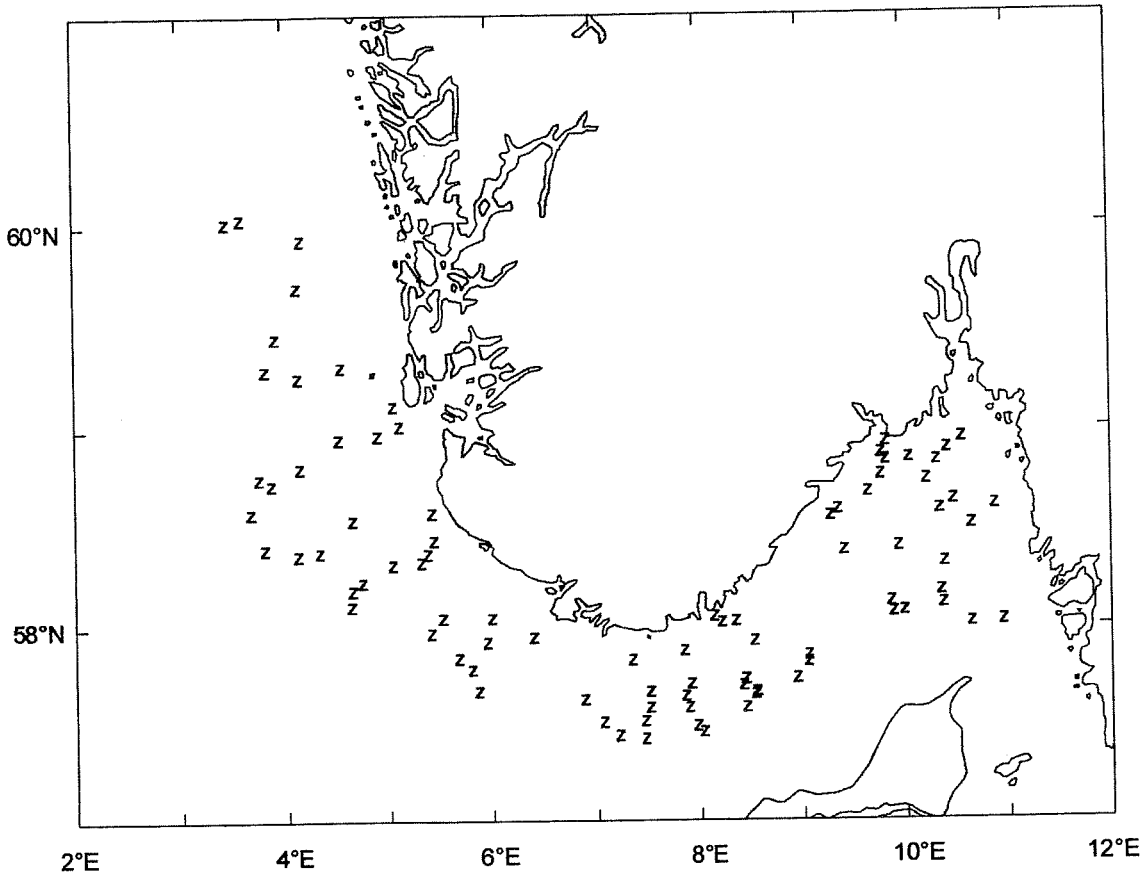
"Michael Sars"



19 Sep - 4 Oct 2000

● Gulf III

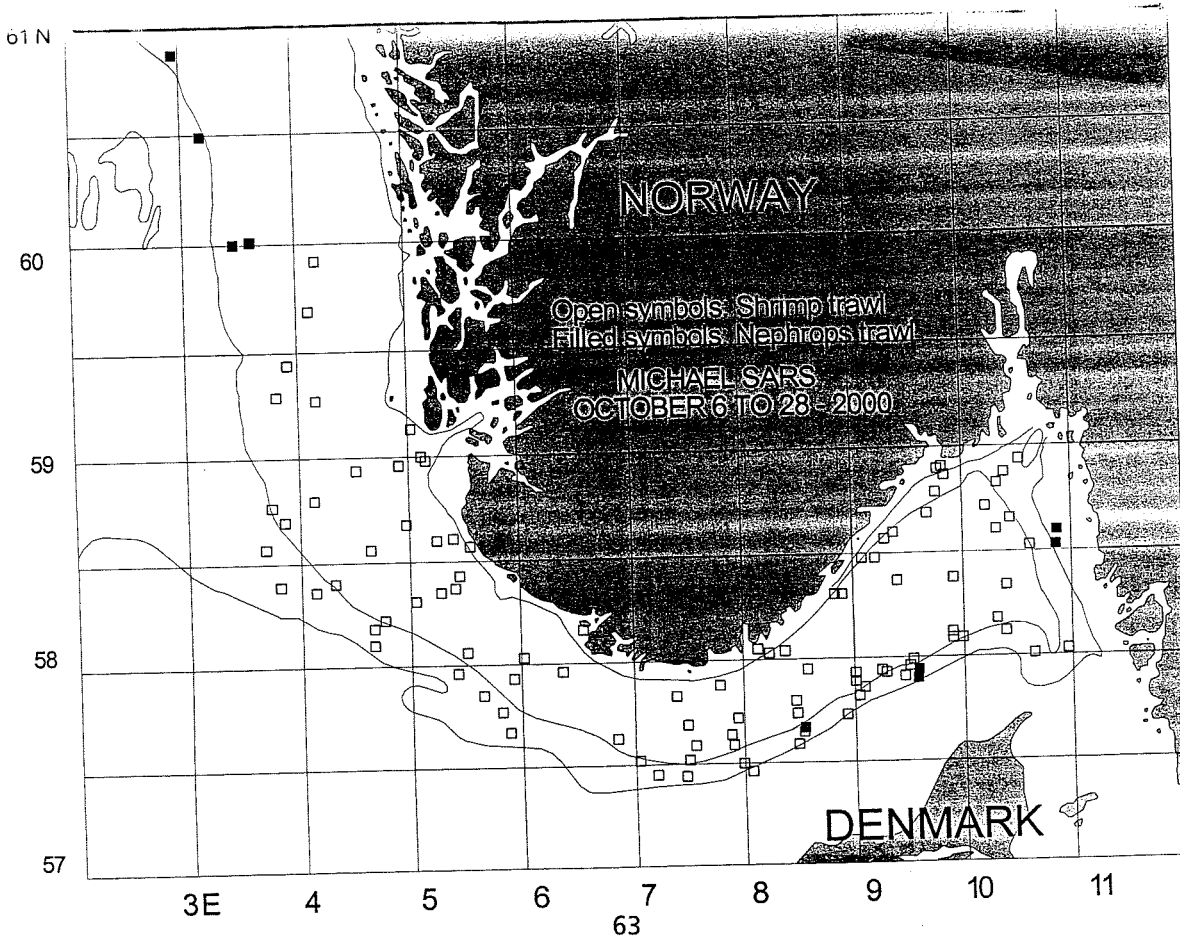
"Michael Sars"

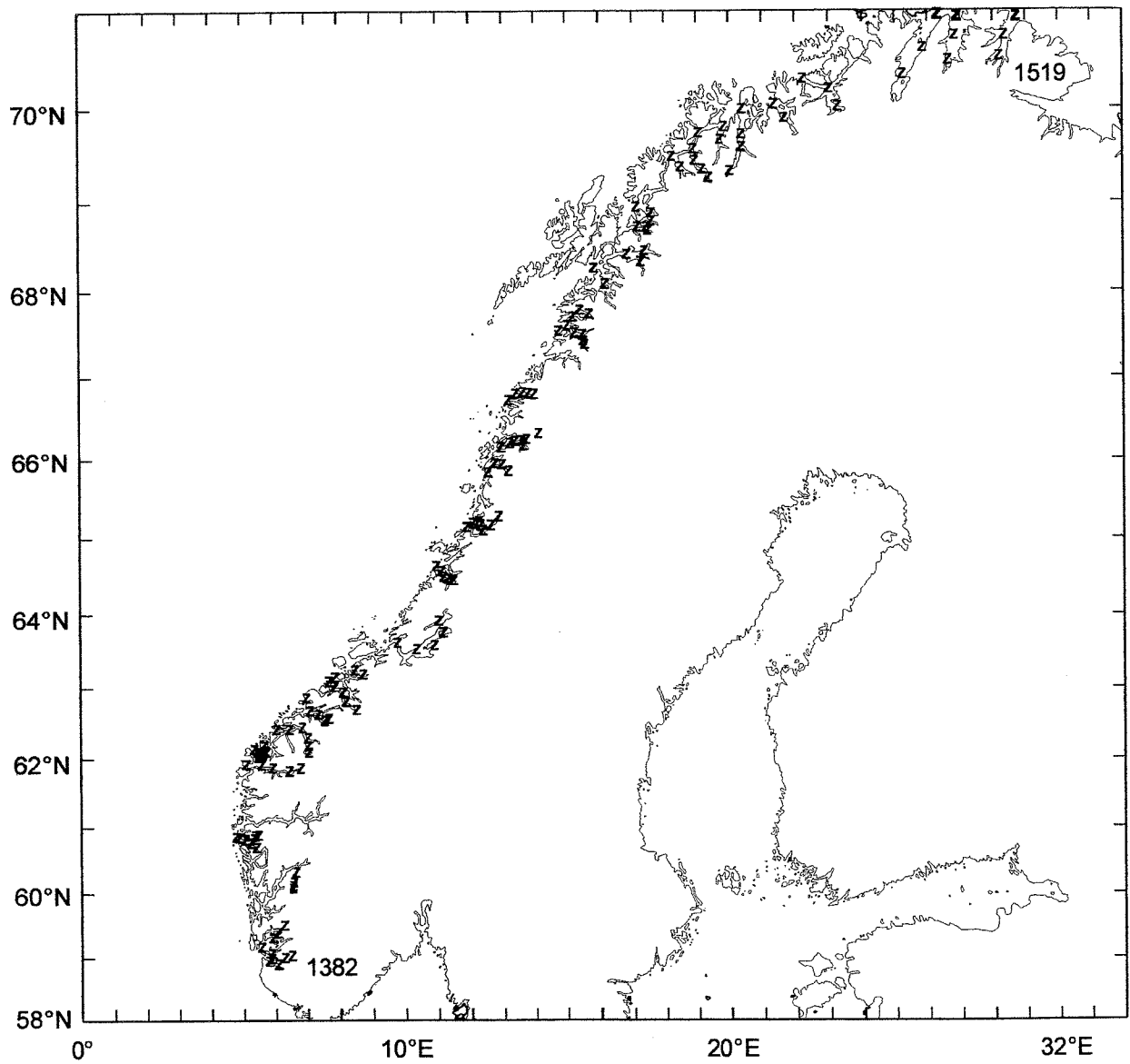


6 Oct - 31 Oct 2000
Cruise no 2000113

z CTD st.no 1283 - 1381

"Michael Sars"

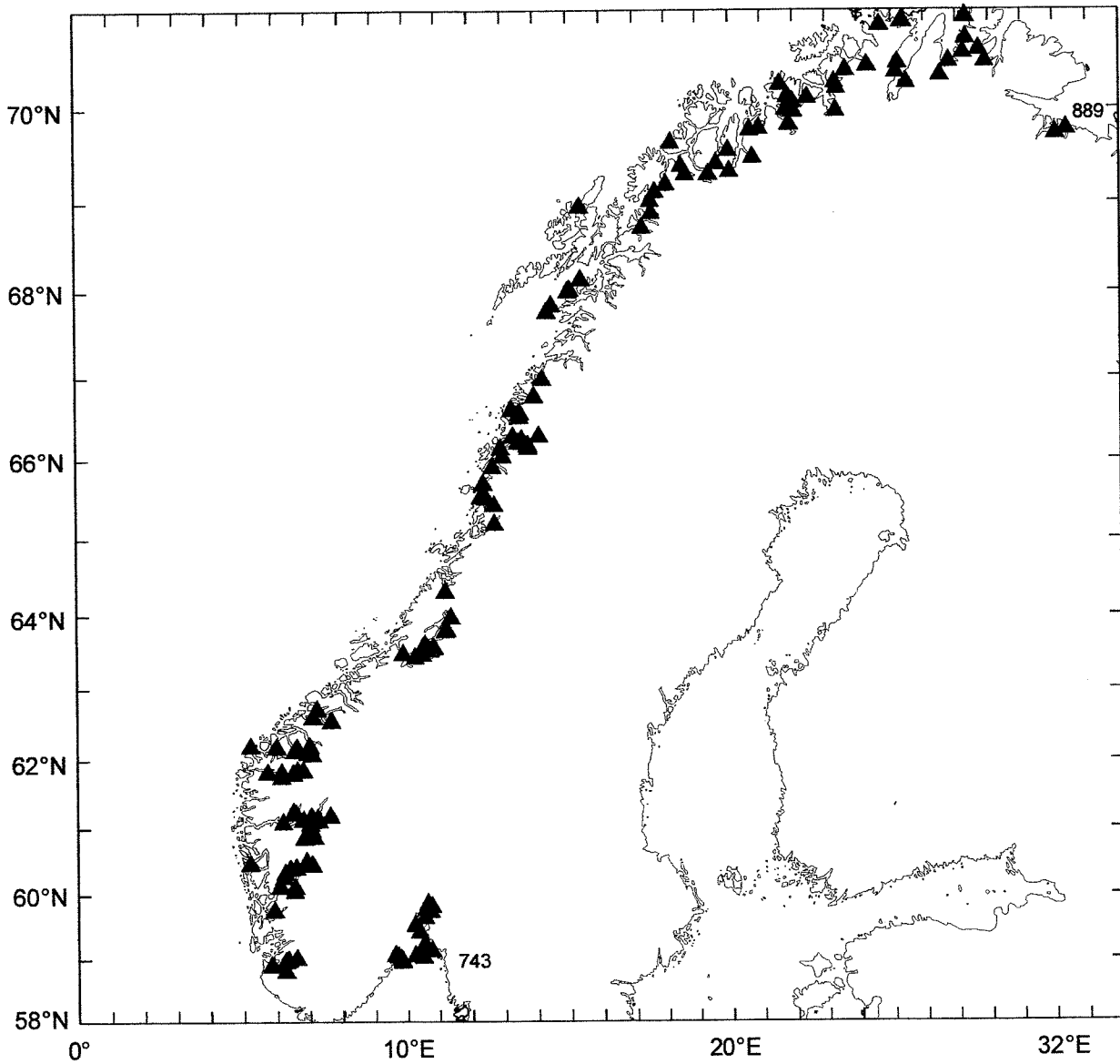




3 Nov - 17 Dec 2000
Cruise no 2000114

Z CTD st.no 1382-1519

"Michael Sars"

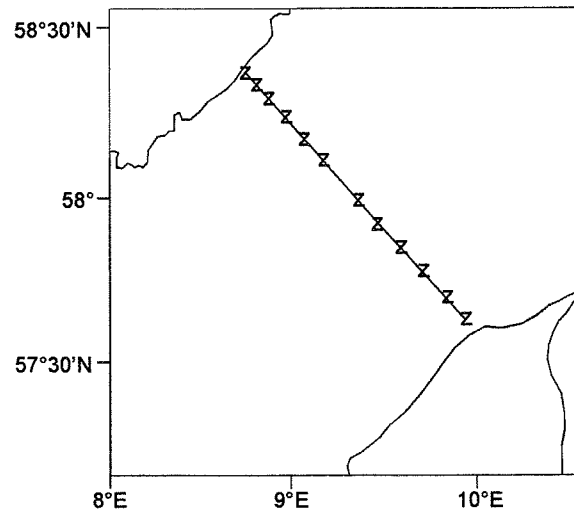


3 Nov - 17 Dec 2000
Cruise no 2000114

▲ Pelagic trawl st.no 743 - 889

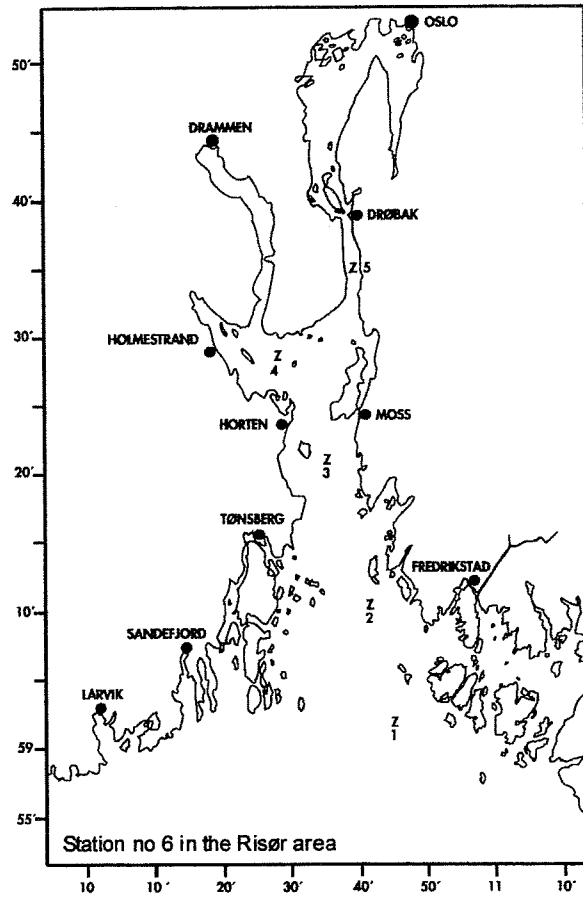
"Michael Sars"

TORUNGEN - HIRTSHALS - 2000

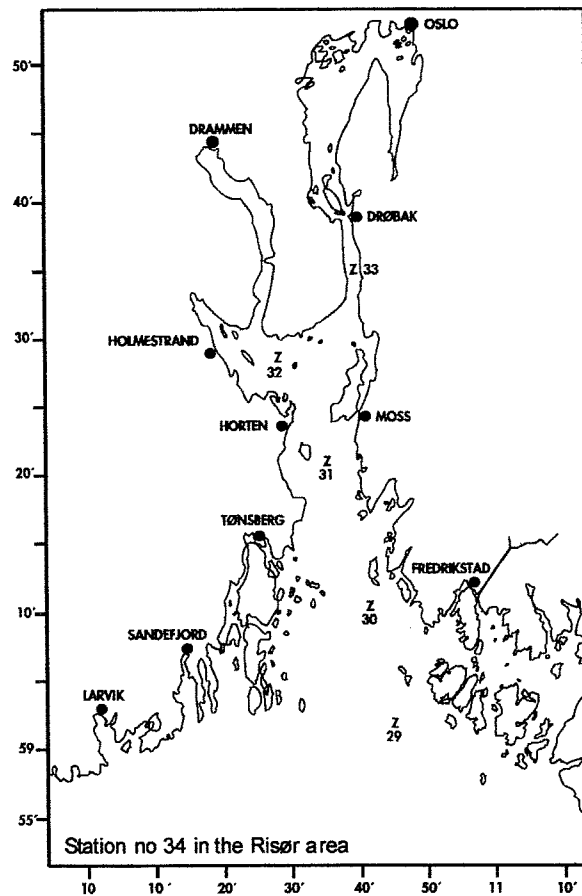


CTD st.no

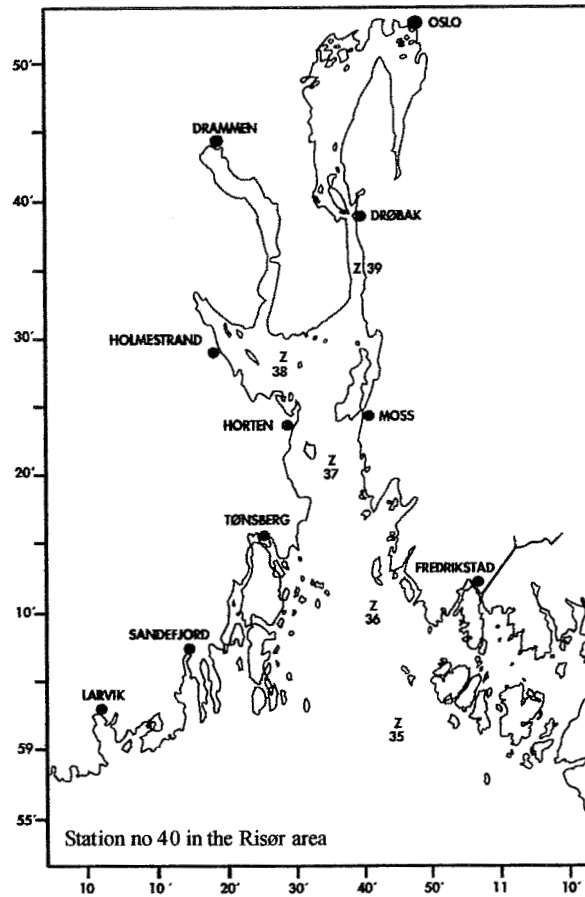
| | |
|-----------|-----------|
| Januar | 7 - 16 |
| Februar | 17 - 28 |
| Mars | 41 - 52 |
| April | 67 - 78 |
| May | 173 - 184 |
| June | 216 - 227 |
| July | 241 - 252 |
| August | 253 - 264 |
| September | 278 - 289 |
| October | 333 - 344 |
| November | 351 - 353 |
| December | 354 - 365 |



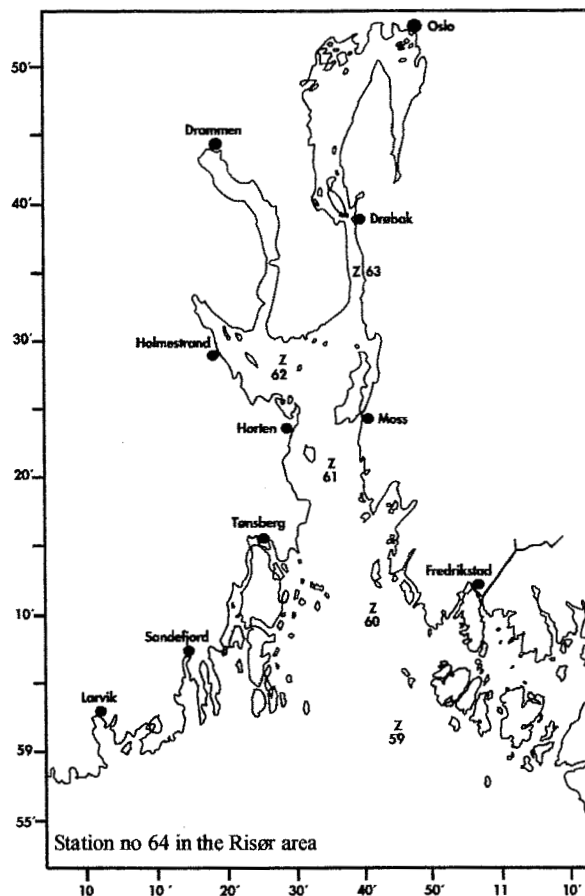
13 - 15 Jan 2000 z CTD st.no 1 - 6 "G.M. Dannevig"
 Cruise no 2000301



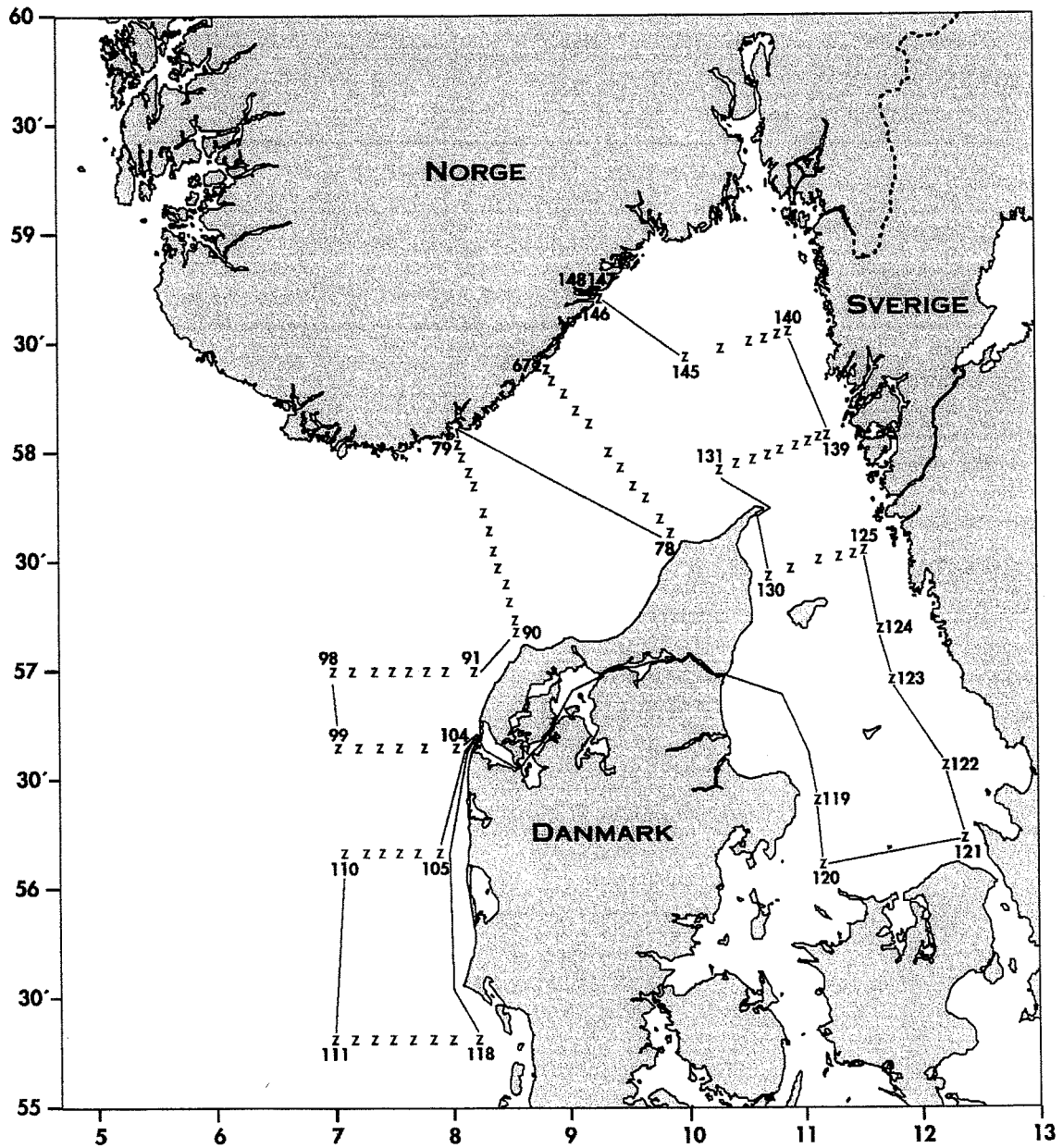
14 - 16 Feb 2000 z CTD st.no 29 - 34 "G.M. Dannevig"
 Cruise no 2000339



5 - 7 Mars 2000 z CTD st.no 35 - 40 "G. M. Dannevig"
 Cruise no 2000308



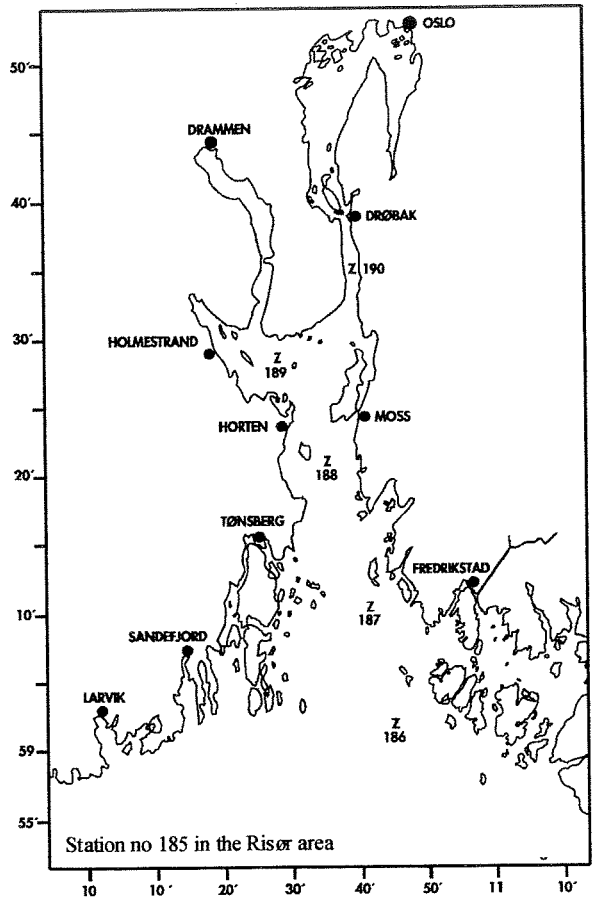
11 - 13 A pril 2000 z CTD st.no 59 - 66 "G. M. Dannevig"
 Cruise no 2000309



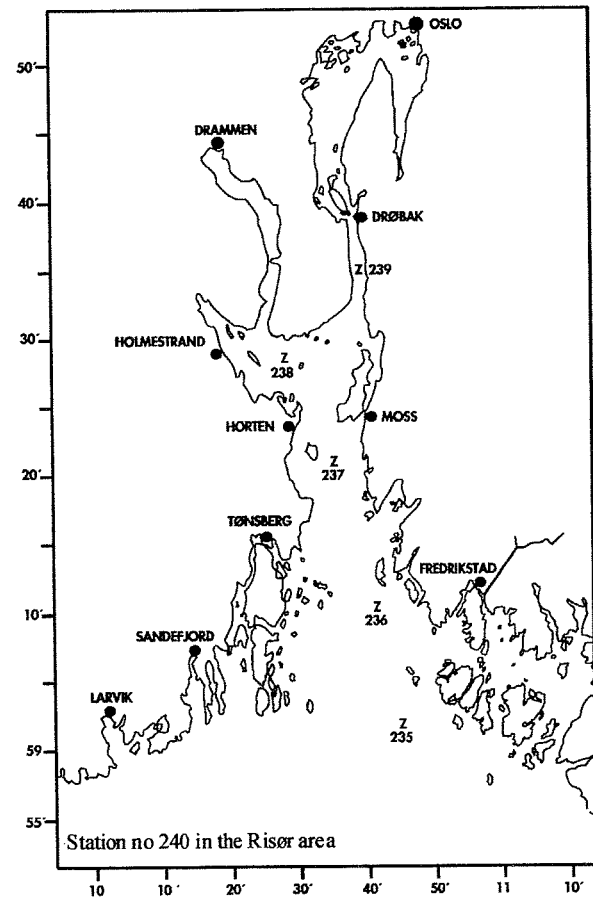
14 - 28 April 2001
Cruise no 200 311

CTD st.no 67 - 148

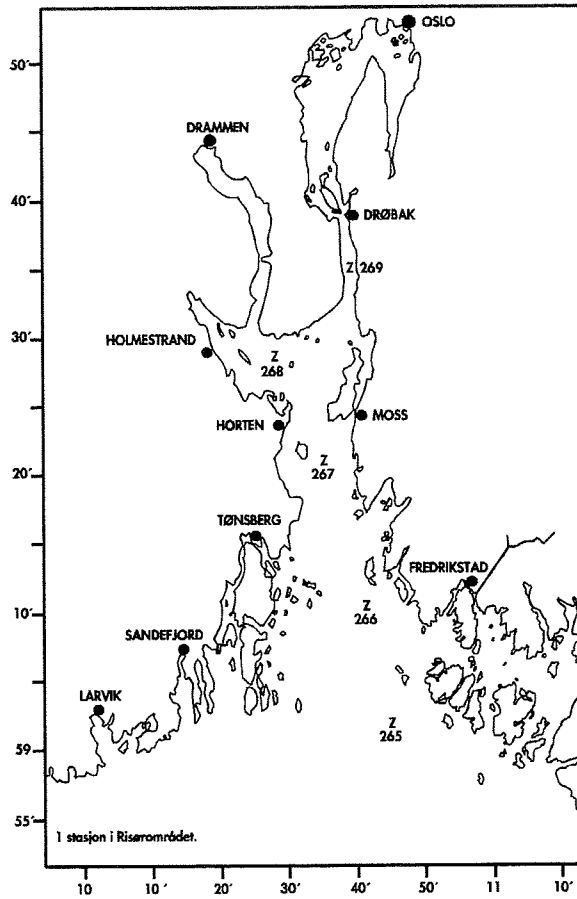
"G.M. Dannevig"



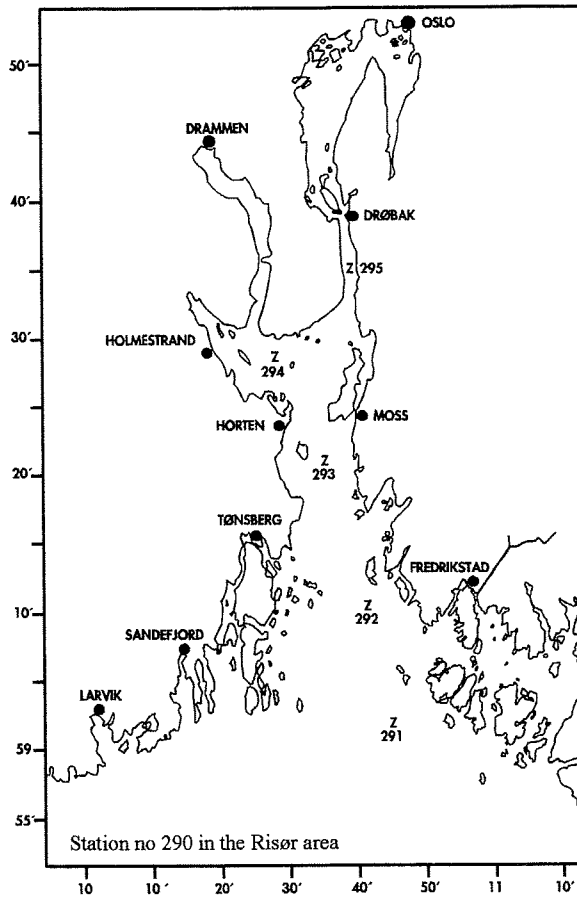
19 - 21 May 2000 z CTD st.no 185-190 "G. M. Dannevig"
Cruise no 2000317



1 - 3 July 2000 z CTD st.no 235-240 "G. M. Dannevig"
Cruise no 2000324



15 - 16 Aug 2000 z CTD st.no 265-269 "G. M. Dannevig"
Cruise no 2000327



13 - 15 Sep 2000 z CTD st.no 290-295 "G. M. Dannevig"
Cruise no 2000330