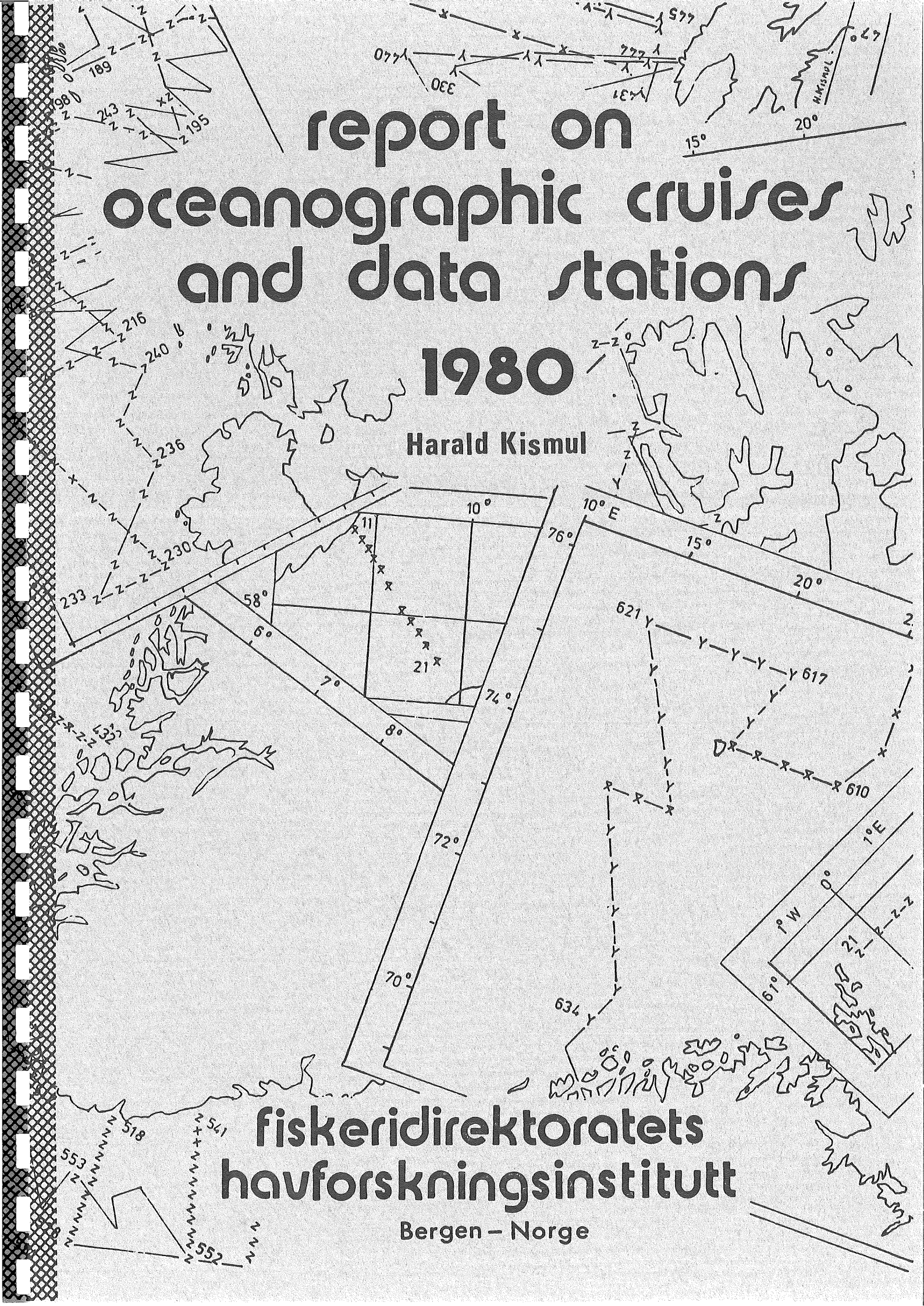


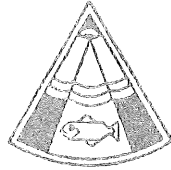
# report on oceanographic cruises and data stations 1980

Harald Kismul

fiskeridirektoratets  
havforskningsinstitutt

Bergen – Norge





# report on oceanographic cruises and data stations 1980

Harald Kismul

## Guidelines:

- X Classical oceanogr. stations
- Z Vertical profiles (STD/CTD)
- Y Bathythermograph (BT)
- Δ Moored buoy station
- △ Pelagic Trawl station
- Bottom Trawl station
- ◇ Plankton station
- Clarke
- Taggings
- Λ Surface observations t°C S‰

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ICES Annual Report on Oceanographic Cruises and Data Stations.

Country: NORWAY

Year: 1980

Ship: G.O. SARS

Cruise and ship number.	Period of cruises	Number of Stations															Continual observations					Page of track chart					
		Classical oceanogr. stations	Vertical profiles (STD/CTD)	Bathythermograph (BT)	Moored Buoy	Oxygen	Nutrients	Oil Hydrocarbons	Petroleum residues	Metals	Primary org. prod.	Petoplank. pigment con.	Sediment samples	Pelagic Trawl	Bottom Trawl	Pelagic eggs and larvae	Taggings	Zooplankton	Phytoplankton	Surface temperature	Transparency		Organic matter (extract.)	Part. matter (filtration)	NO <sub>2</sub> + NO <sub>3</sub> (auto-analyzer)	Echo sounding	Echo integration
1/15	6/1-1/2		171										41	2						x					x	x	7-8
2/15	4/2-21/3		173										18	38						x					x	x	9-10
3/15	22/3-31/3	27	27										1				106			x					x	x	11
4/15	9/4-14/5		166										39	1						x					x	x	12-13
5/15	18/6-16/7	61	121		1								29	6			176	176		x					x	x	14-15
6/15	21/7-2/8		97										18	7			19	19		x					x	x	16-17
7/15	4/8-23/8		84										80							x					x	x	18-19
8/15	25/8-8/9		92										93	1						x					x	x	20
9/15	10/9-5/10		110										72	10						x					x	x	21
10/15	8/10-29/10	3	53										28							x					x	x	22-23
11/15	4/11-28/11		244										15	20						x					x	x	24

ICES Annual Report on Oceanographic Cruises and Data Stations.

Country: NORWAY

Year: 1980

Ship: JOHAN HJORT

Cruise and ship number.	Period of cruises	Number of Stations																Continual observations				Page of track chart				
		Classical oceanogr. stations	Vertical profiles (STD/CTD)	Phosphates	Nitrates	Oxygen	Silicates	Oil Hydrocarbons	Petroleum residues	Current measured from ship	Primary org. prod.	Petrolplank. pigment con.	Drifters	Pelagic Trawl	Bottom Trawl	Pelagic eggs and larvae	Taggings	Zooplankton	Phytoplankton	Surface temperature	Transparency		Organic matter (extract.)	Part. matter (filtration)	NO <sub>2</sub> + NO <sub>3</sub> (auto-analyzer)	Echo sounding
1/12	7/1-28/1	1	171				51					40					72	72	x					x	x	25
2/12	31/1-8/2		88					17			3															26
3/12	10/2-28/2		23									2	5						x					x	x	27
4/12	3/3-30/3	227	200									35	4				30	30	x					x	x	28-29-30
5/12	10/4-29/4	28	28									1		274			274		x					x	x	31-32
6/12	30/4-12/5		266											268		65										33-34
7/12	18/6-27/7		173														322	322	x					x	x	35-36-37
8/12	6/8-23/8	61	34									74							x					x	x	38-39
9/12	26/8-7/9	62										66							x					x	x	40
10/12	10/9-1/10	34										31							x					x	x	41
11/12	3/10-28/10	26												152					x					x	x	42
<del>3/8</del>	7/11-11/12		152	1263	1263	1263	1263					62							x					x	x	43-44
12/12	5/11-26/11	30										61	6						x					x	x	A+B

ICES Annual Report on Oceanographic Cruises and Data Stations.

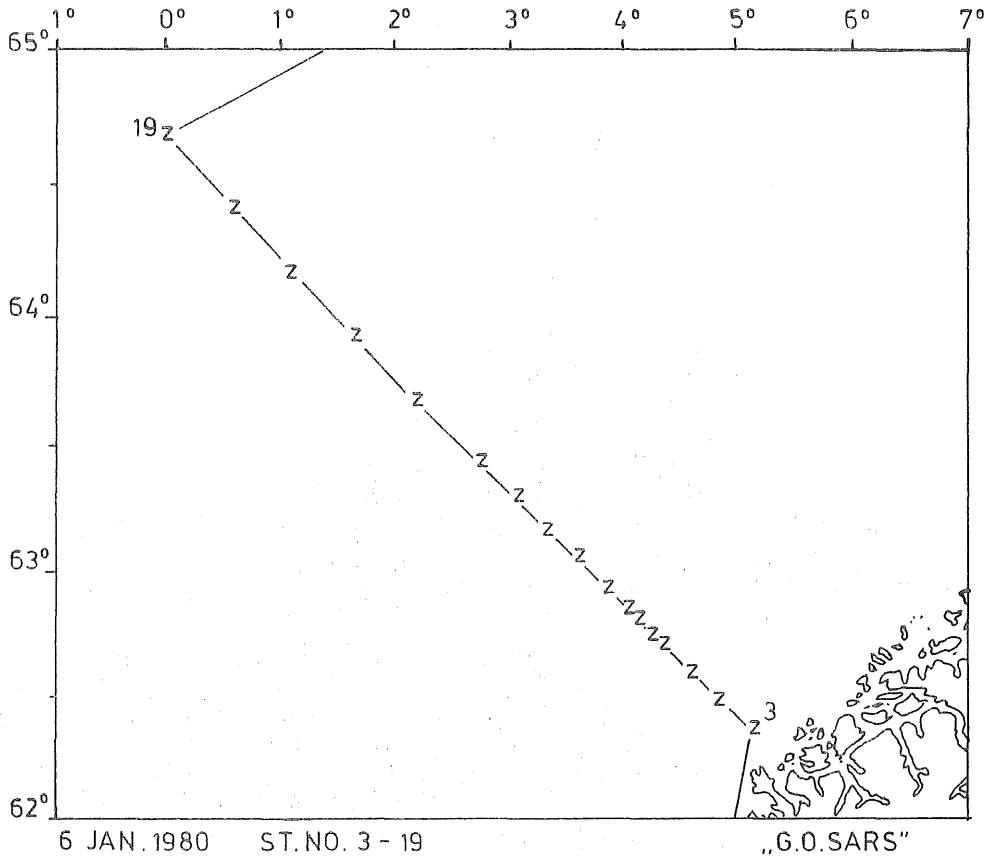
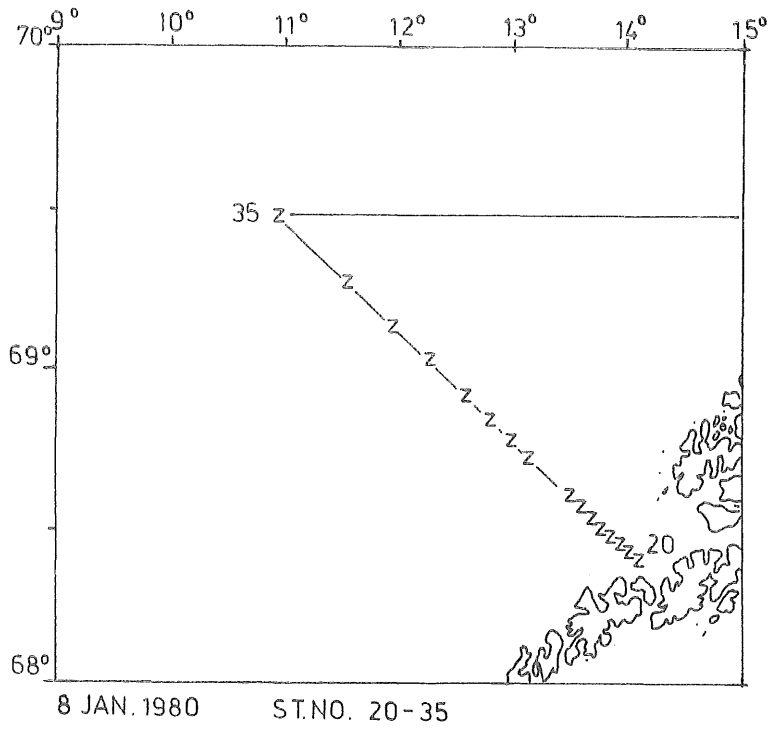
Country: NORWAY

Year: 1980

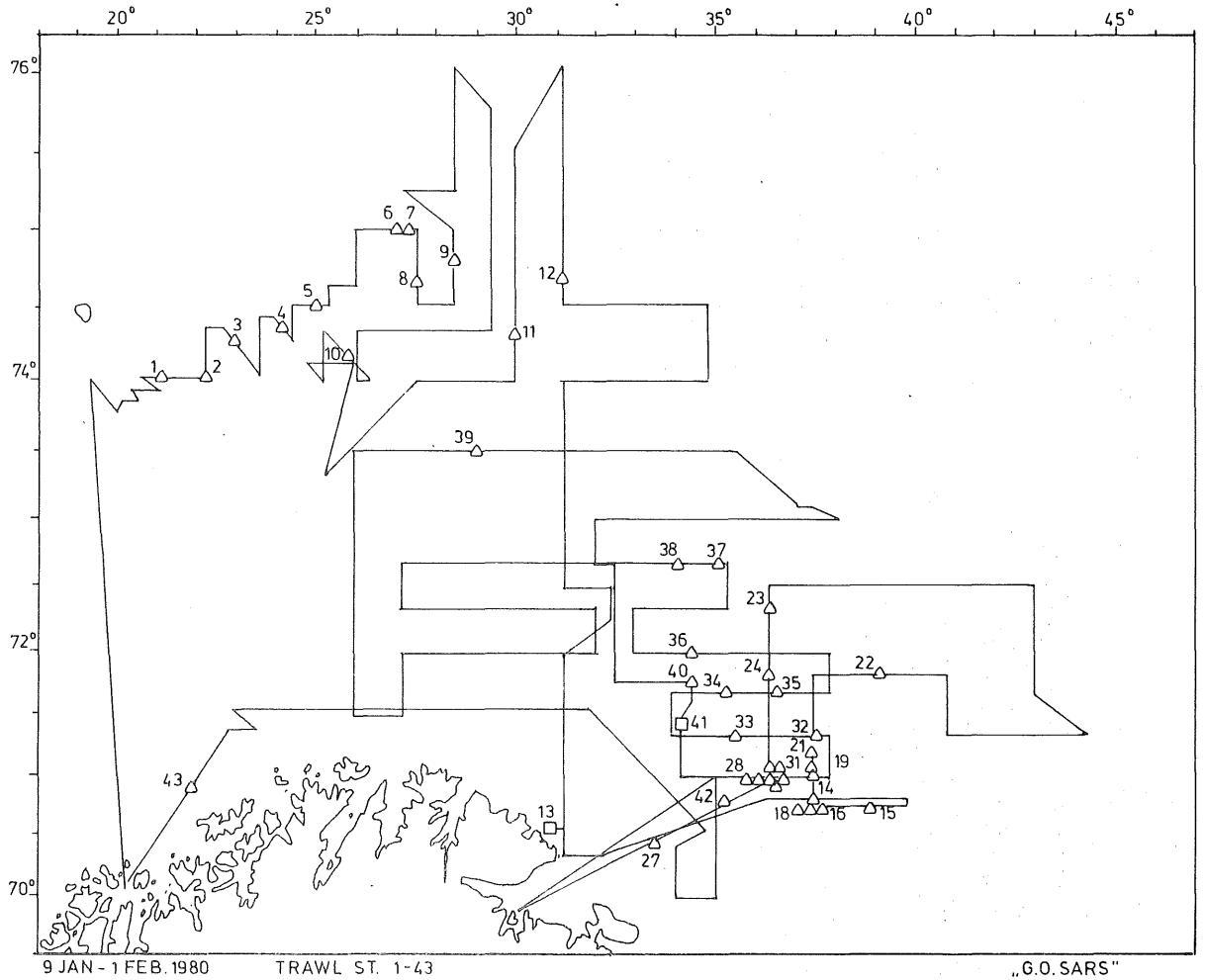
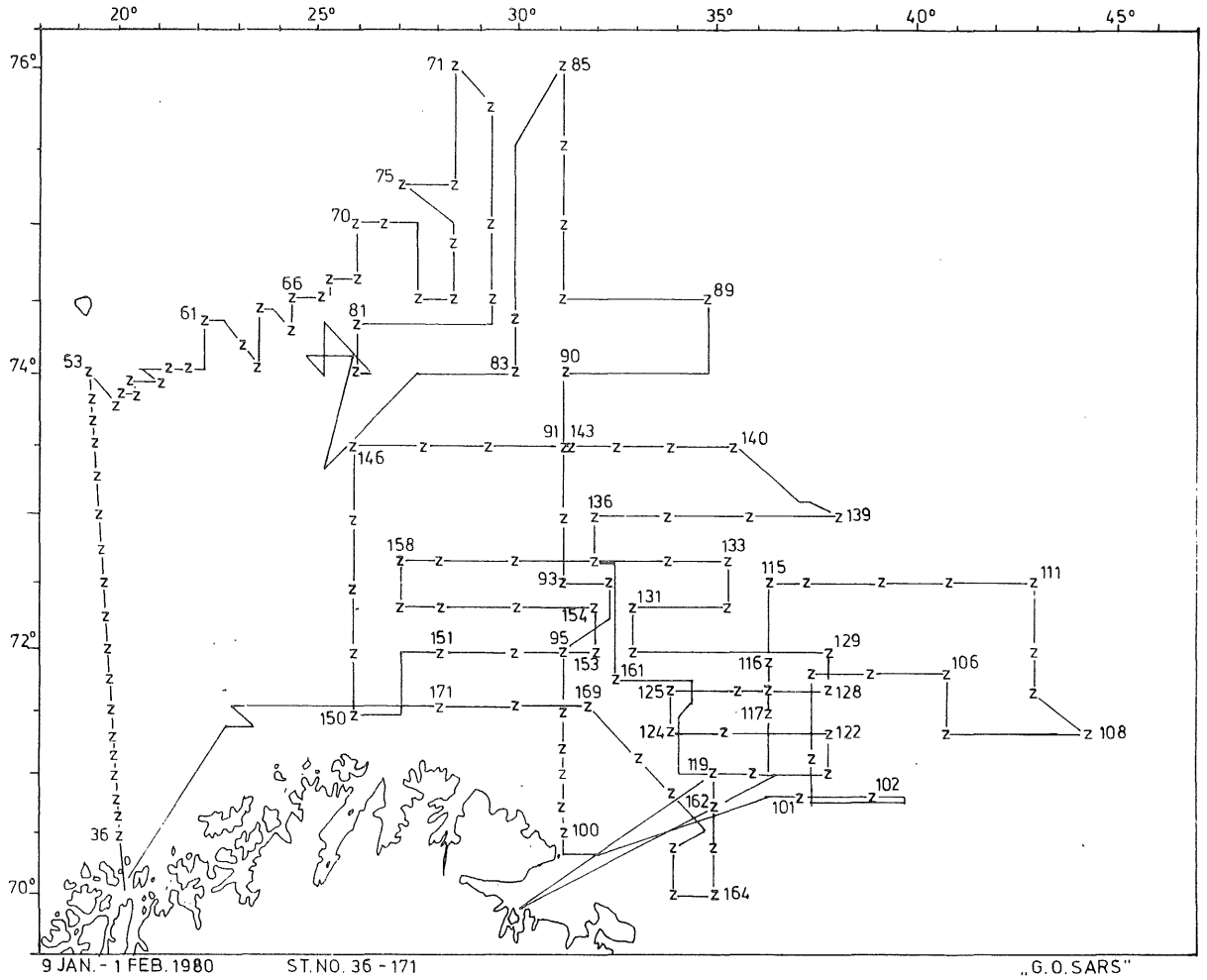
Ship: MICHAEL SARS

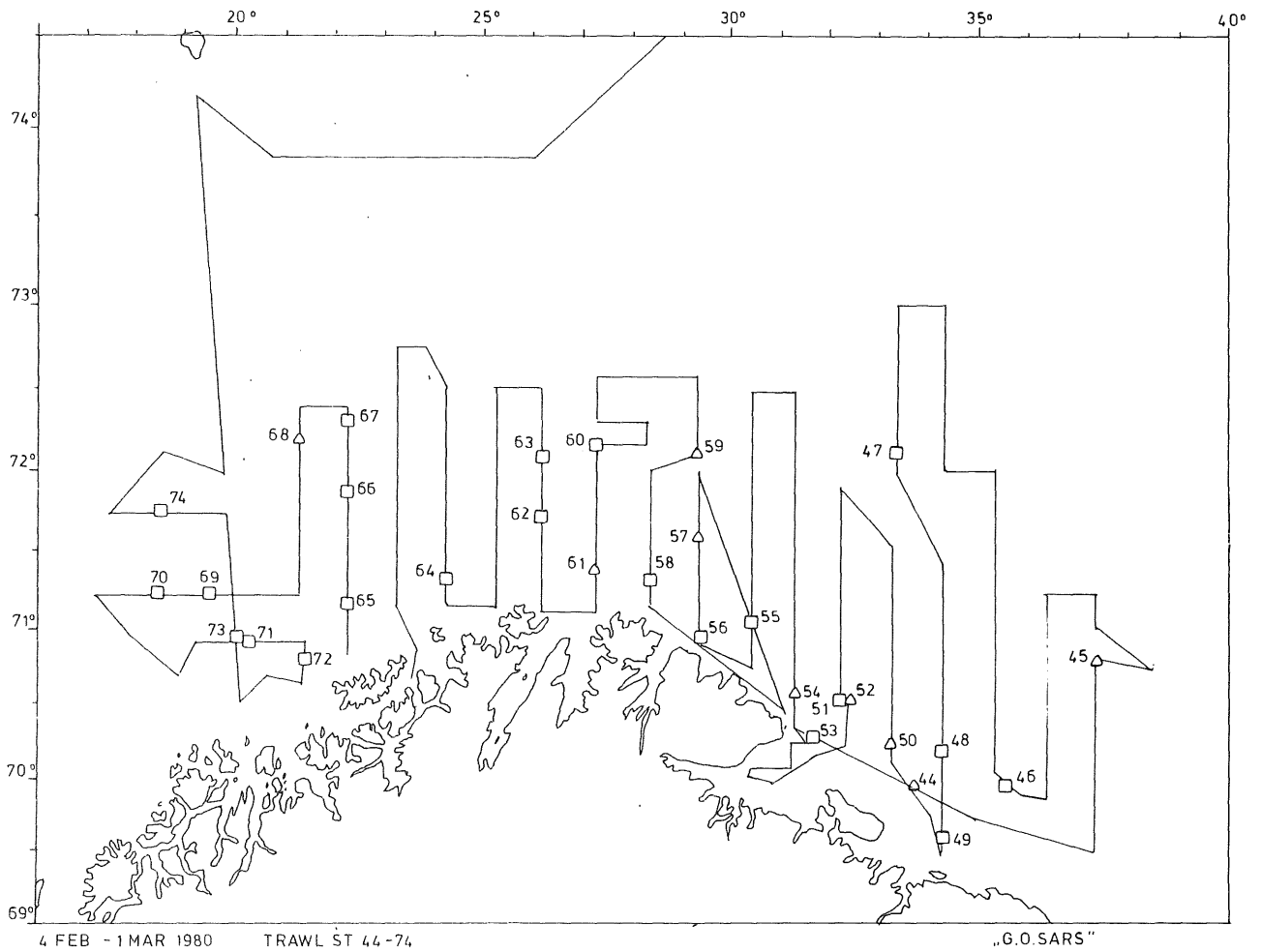
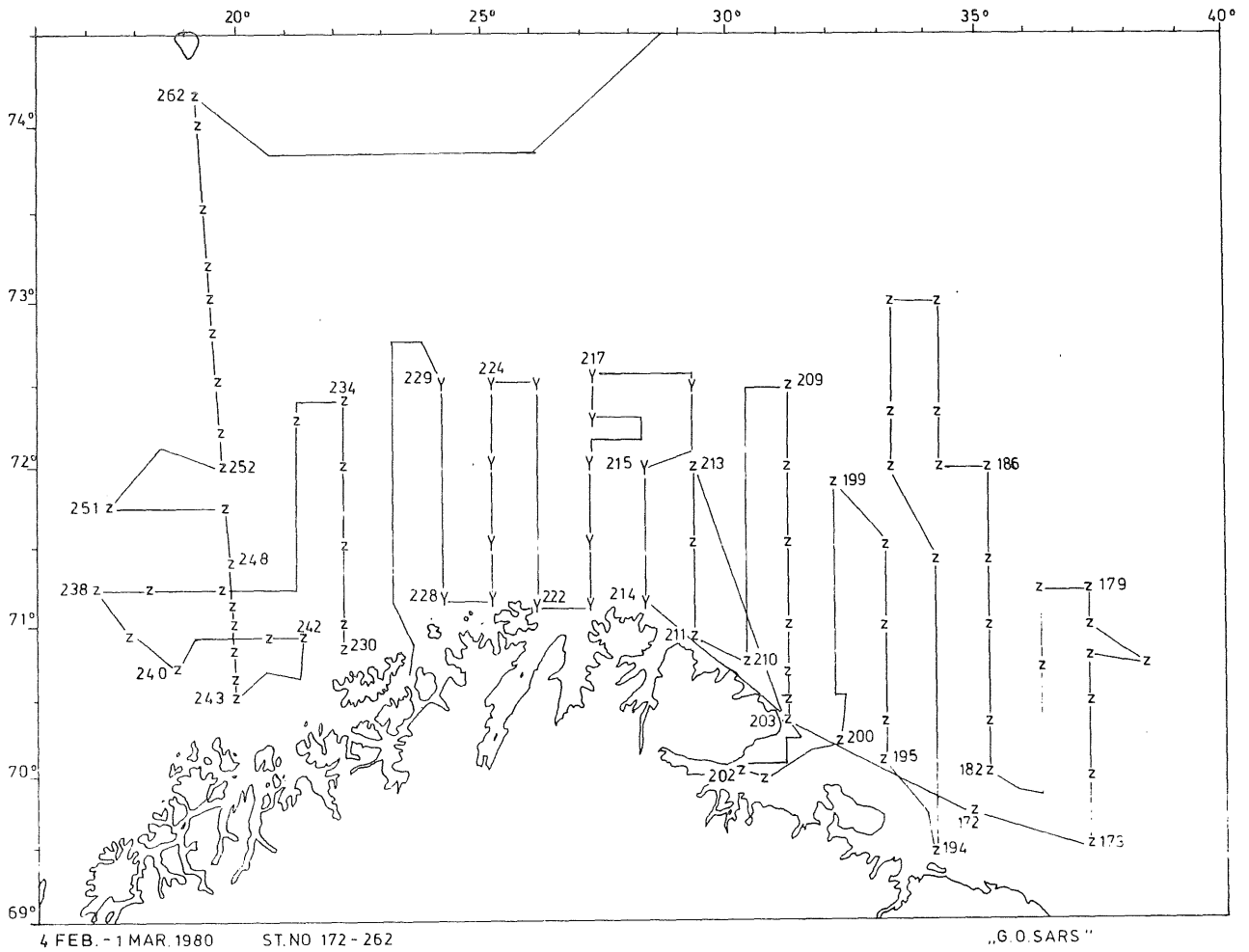
Cruise and ship number.	Period of cruises	Number of Stations																Continual observations				Page of track chart					
		Classical oceanogr. stations	Vertical profiles (STD/CTD)	Bathythermograph (BT)	Phosphates	Total-P	Nitrates	Silicates	Petroleum residues	Metals	Primary org. prod.	Phytoplank. pigments	Sediment samples	Pelagic Trawl	Bottom Trawl	Pelagic eggs and larvae	Taggings SQUID st.	Zooplankton	Phytoplankton	Surface temperature	Transparency		Organic matter (extract.)	Part. matter (filtration)	NO <sub>2</sub> + NO <sub>3</sub> (auto-analyzer)	Echo sounding	Echo integration
1/11	7/1-13/2		136										67	4	75		83	83	x						x	x	45-46-47
2/11	17/2-27/2		36																x						x	x	48
3/11	25/2-22/3		60										28	3					x						x	x	49-50
4/11	9/4-18/4		38										17	10			12	12	x						x	x	51-52
5/11	24/4-29/4	13	43		13	13	13	13			13				49		13	13	x	19					x	x	53
6/11	1/5-16/5		55										8	18					x						x	x	54
7/11	4/8-23/8		102										108						x						x	x	55-56
8/11	25/8-8/9		98										78						x						x	x	57
9/11	10/9-9/10	1	94										6	45			15	15	x						x	x	58-59
10/11	14/10-14/11		78													54									x	x	60-61

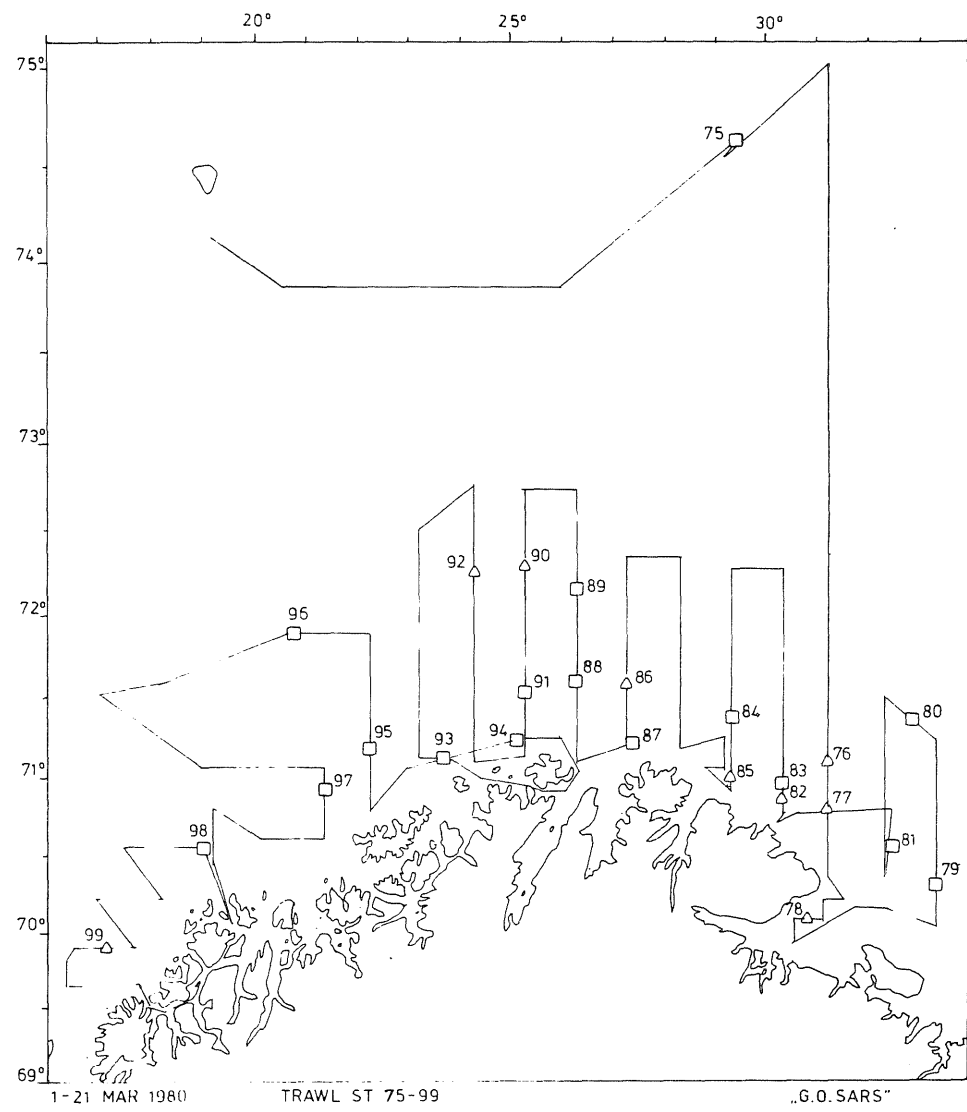
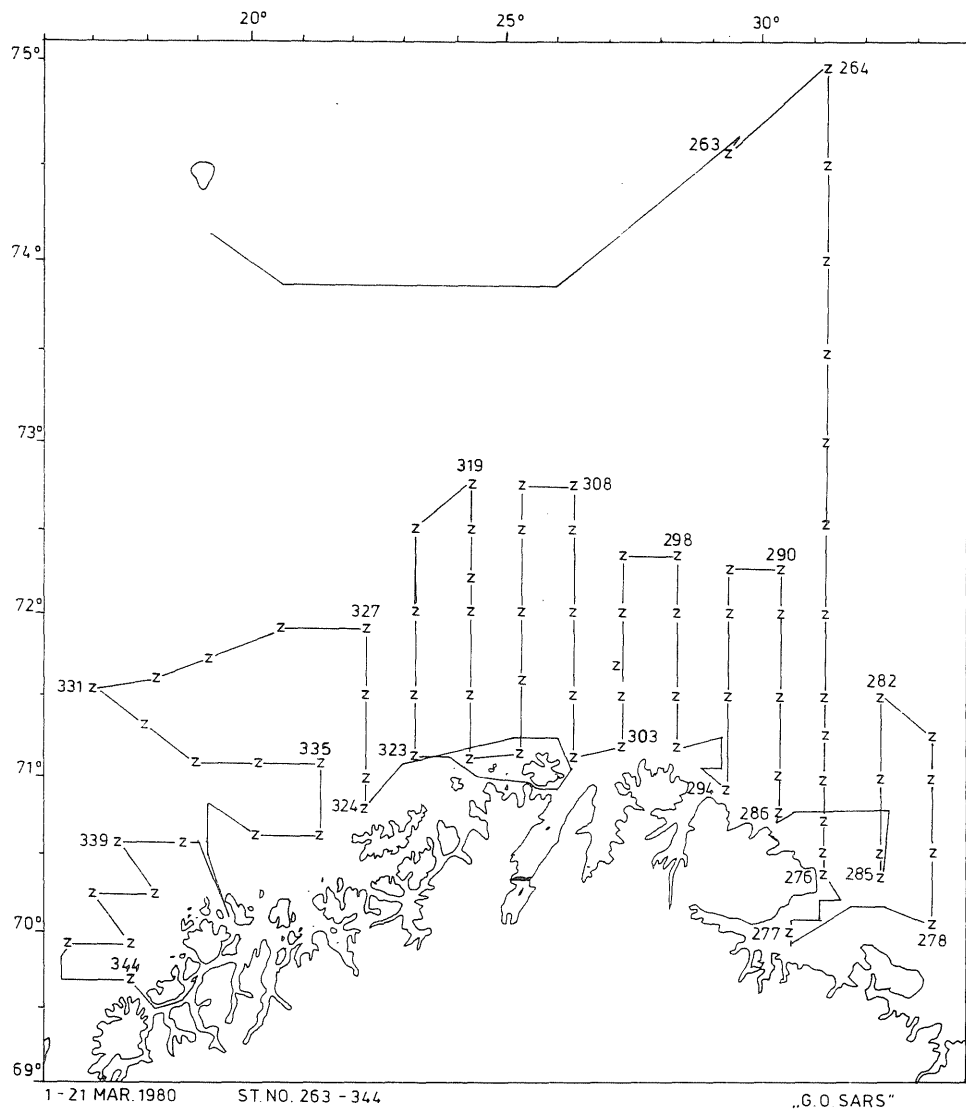


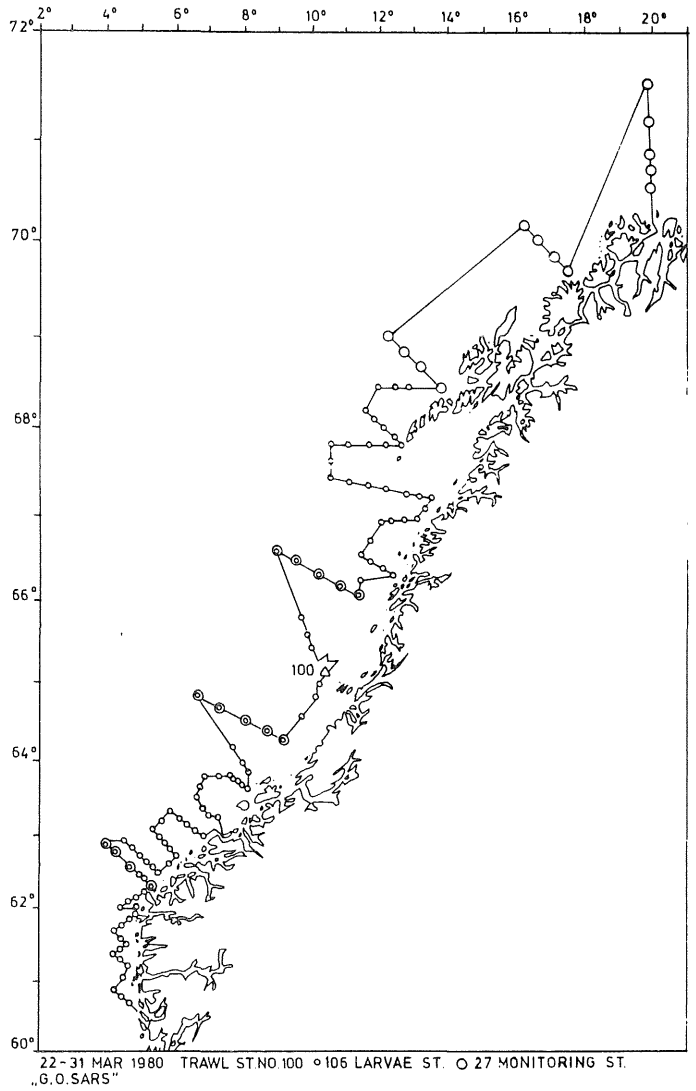
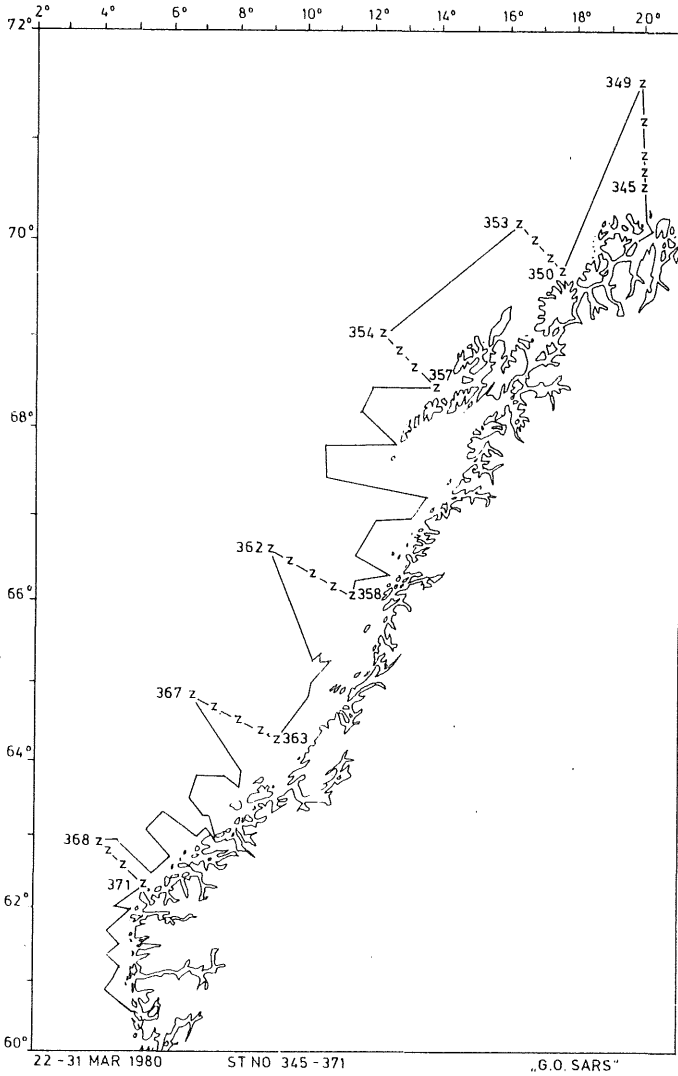


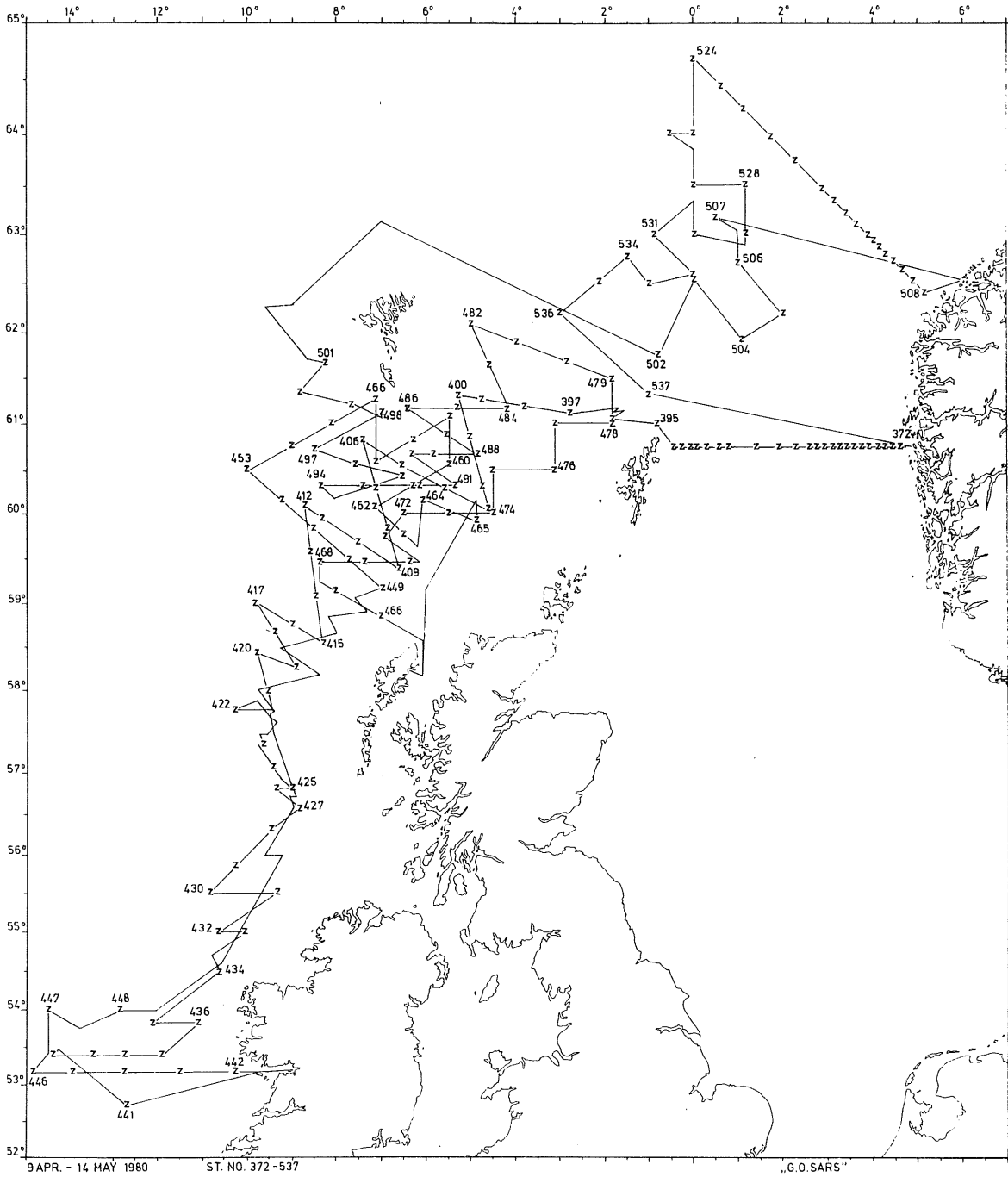


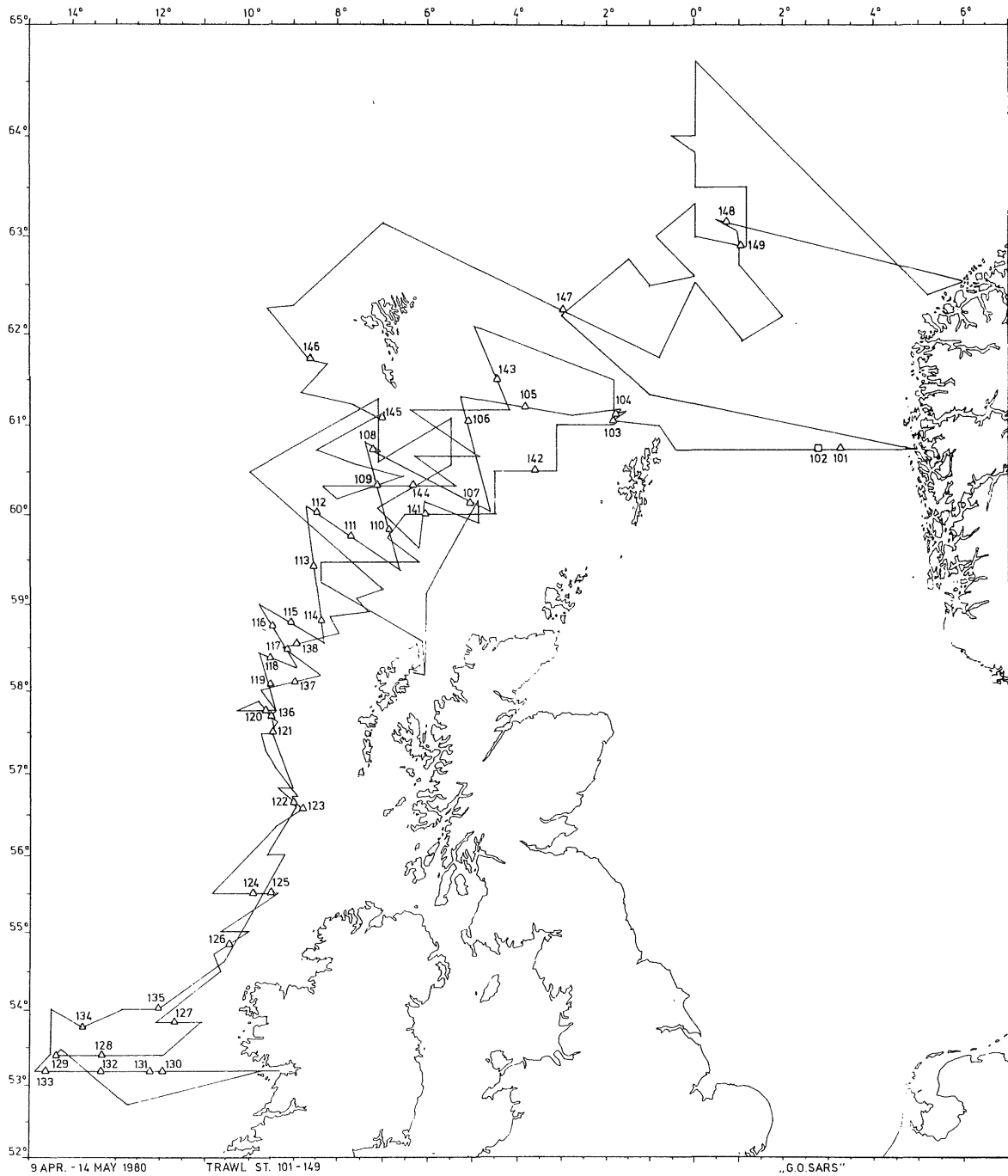


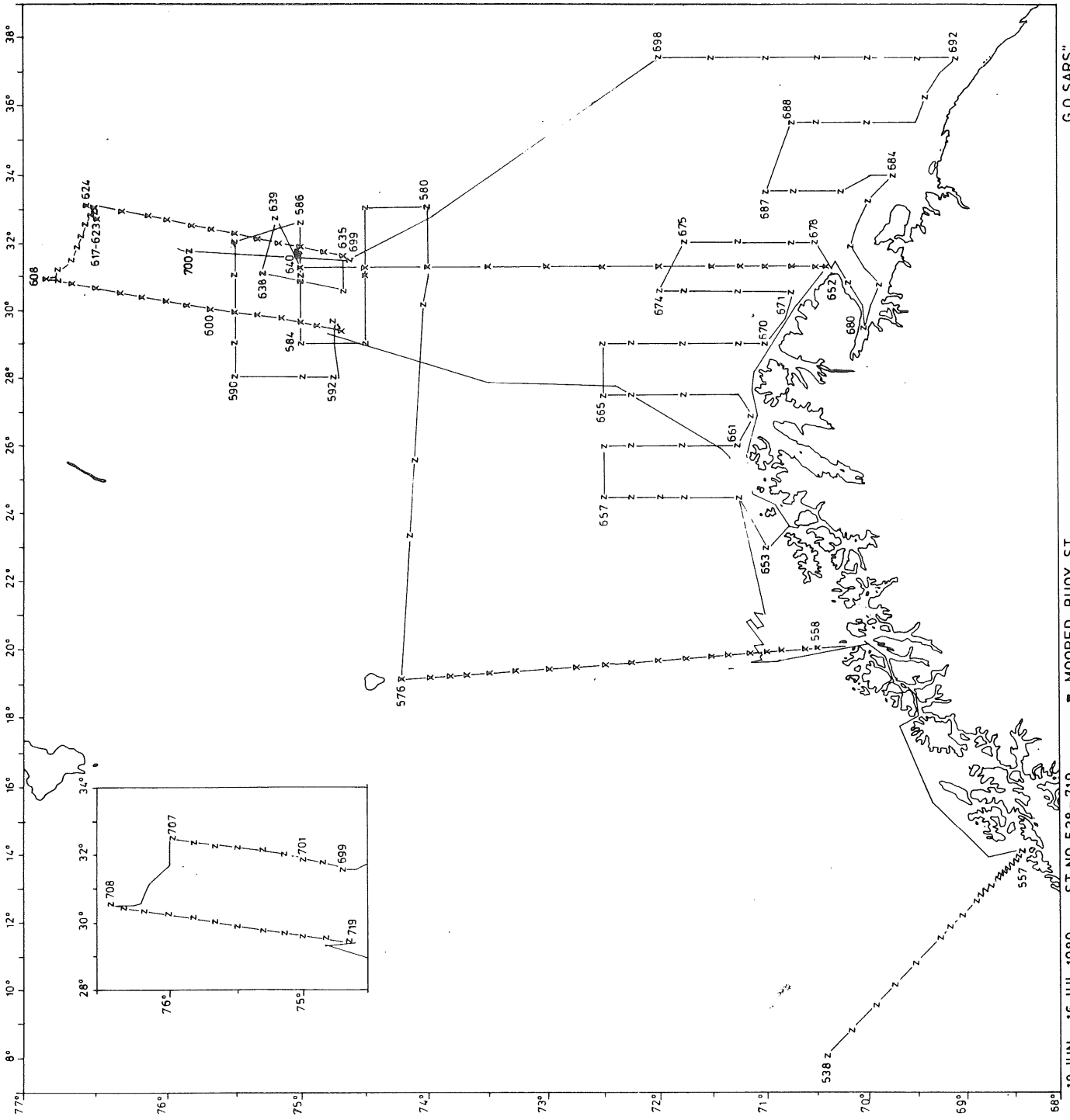










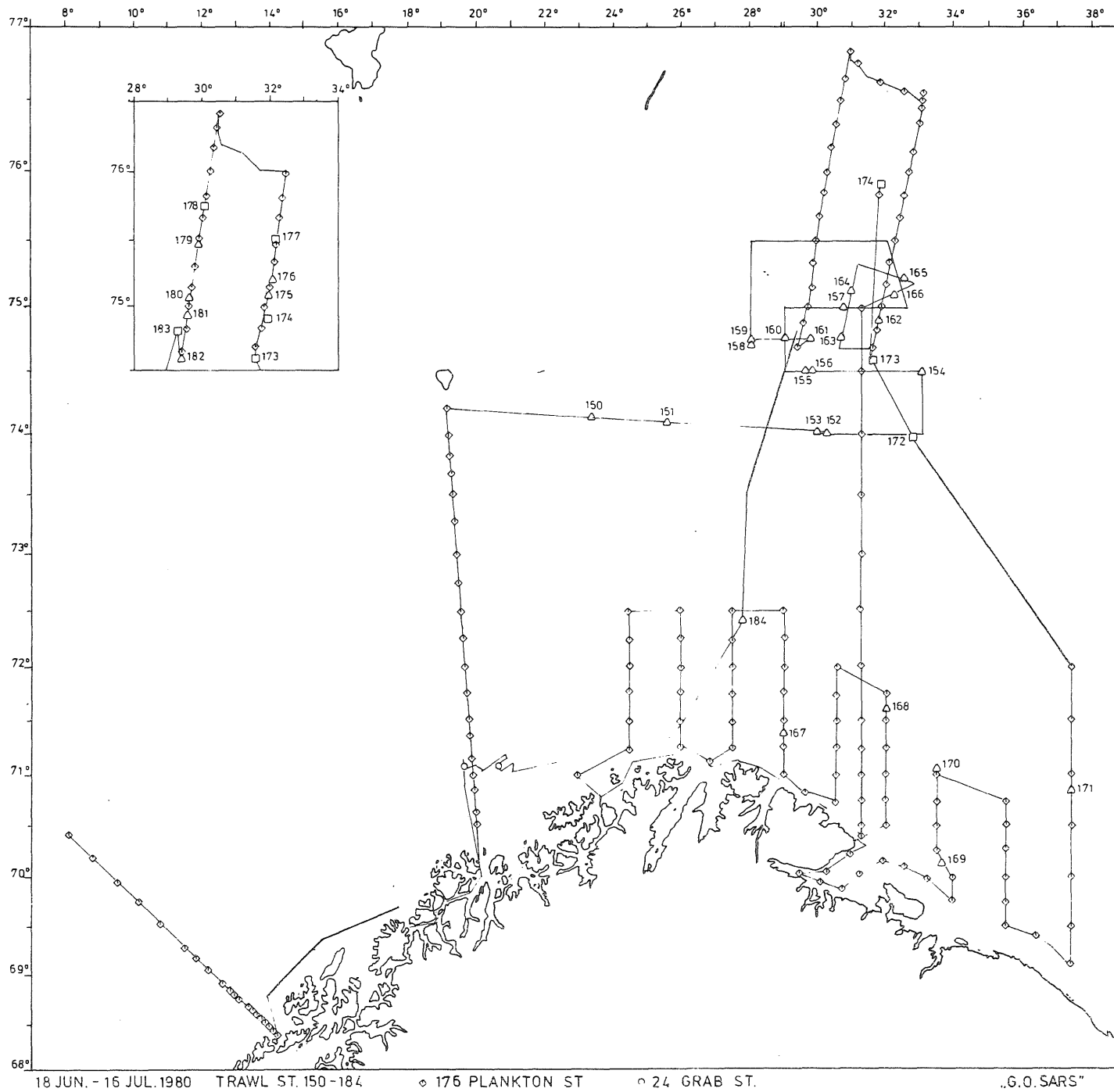


G.O. SARS

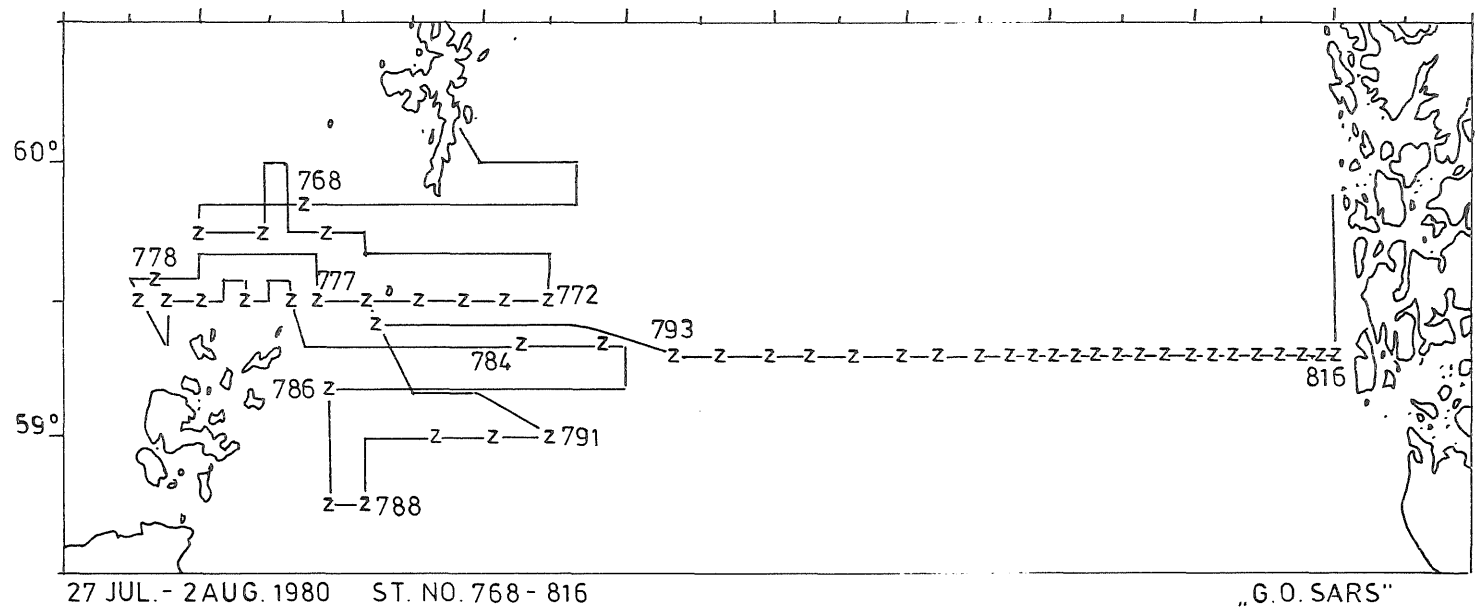
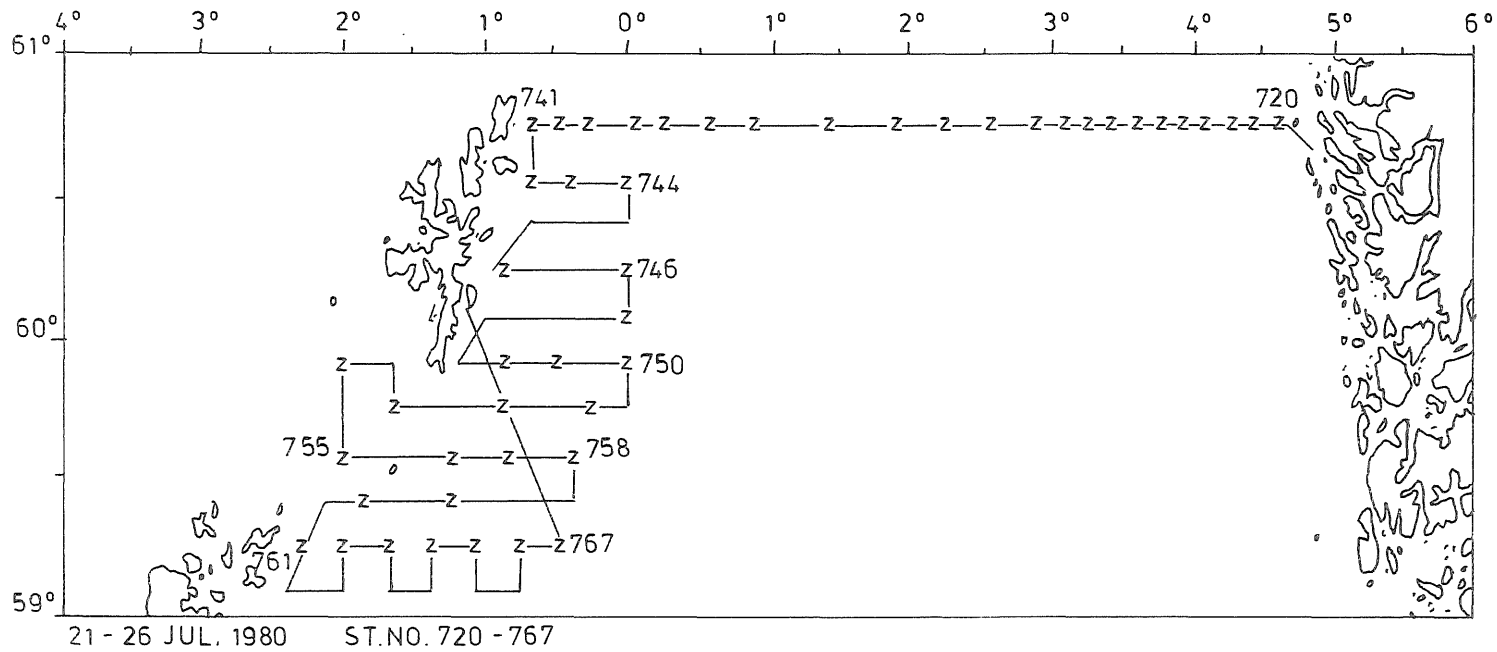
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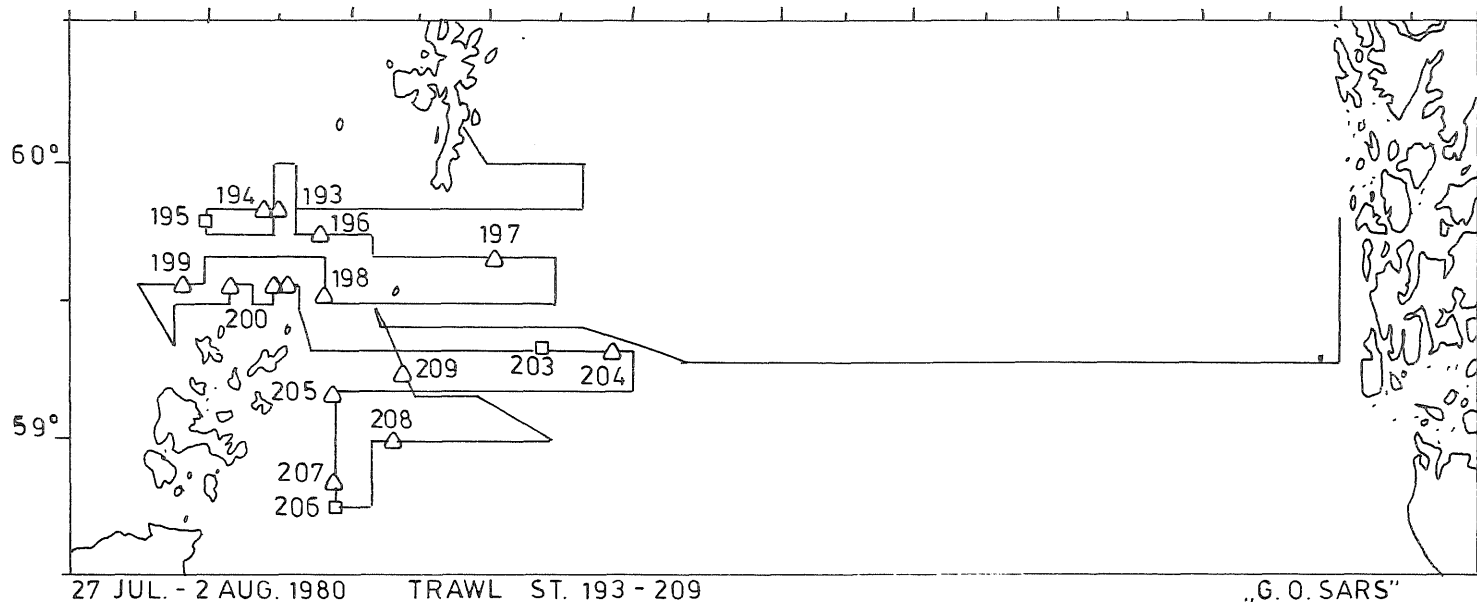
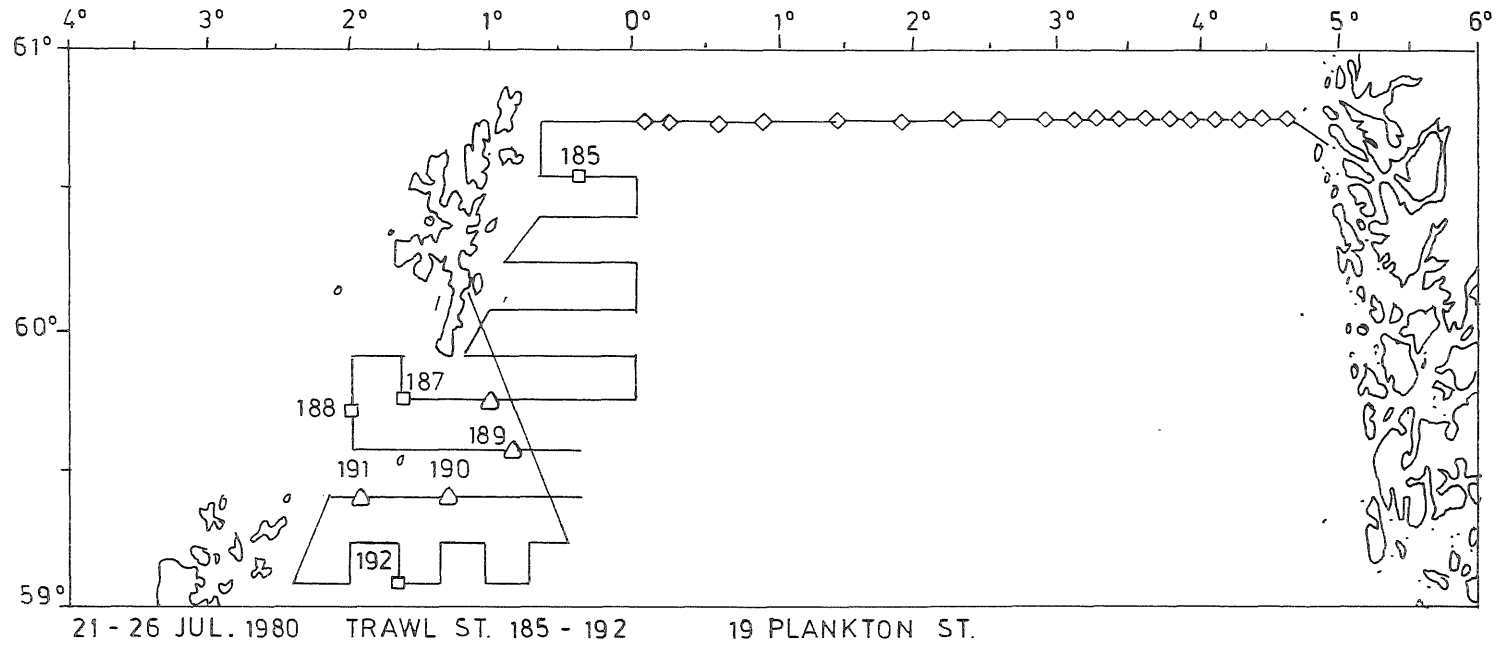
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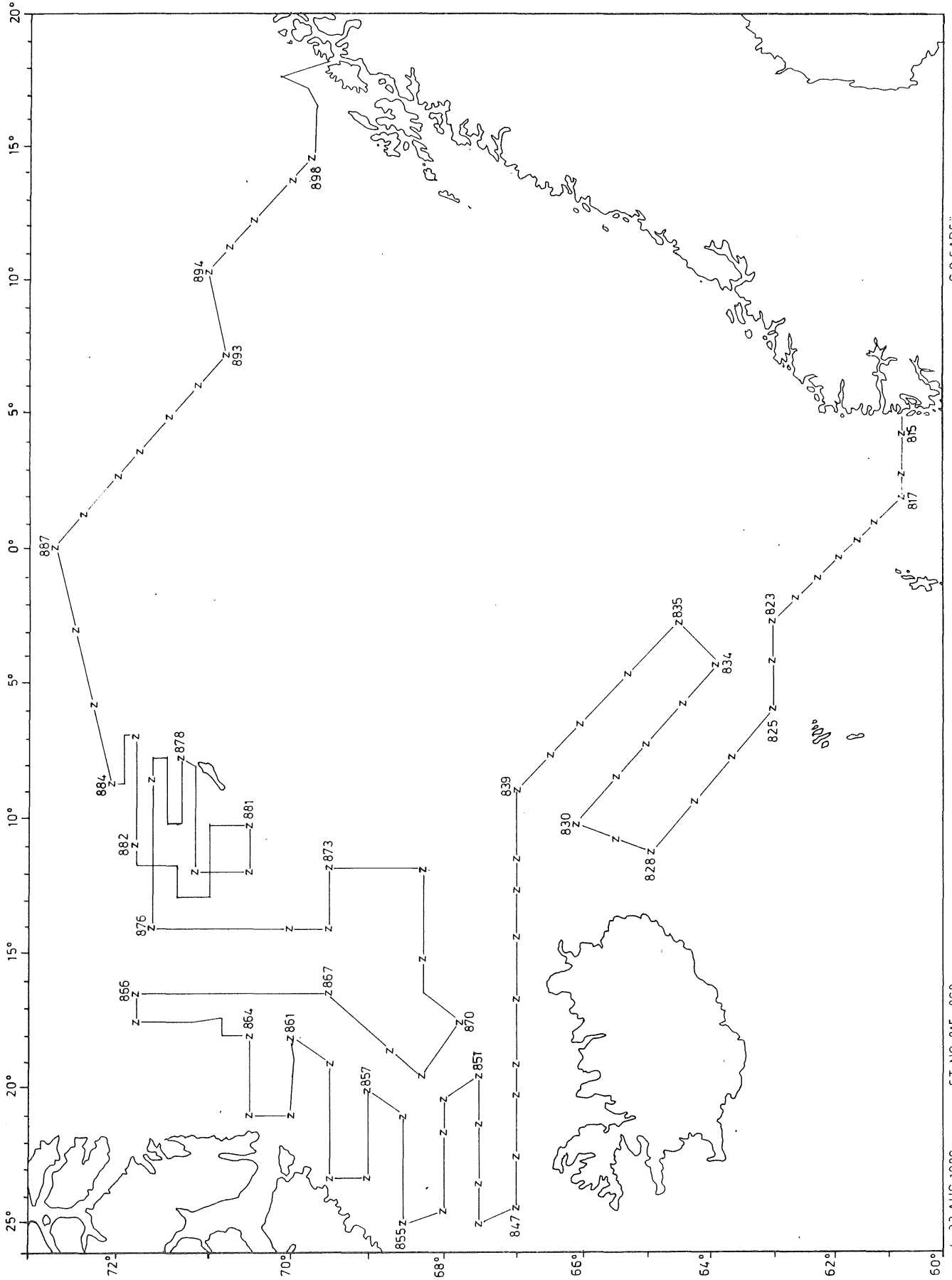
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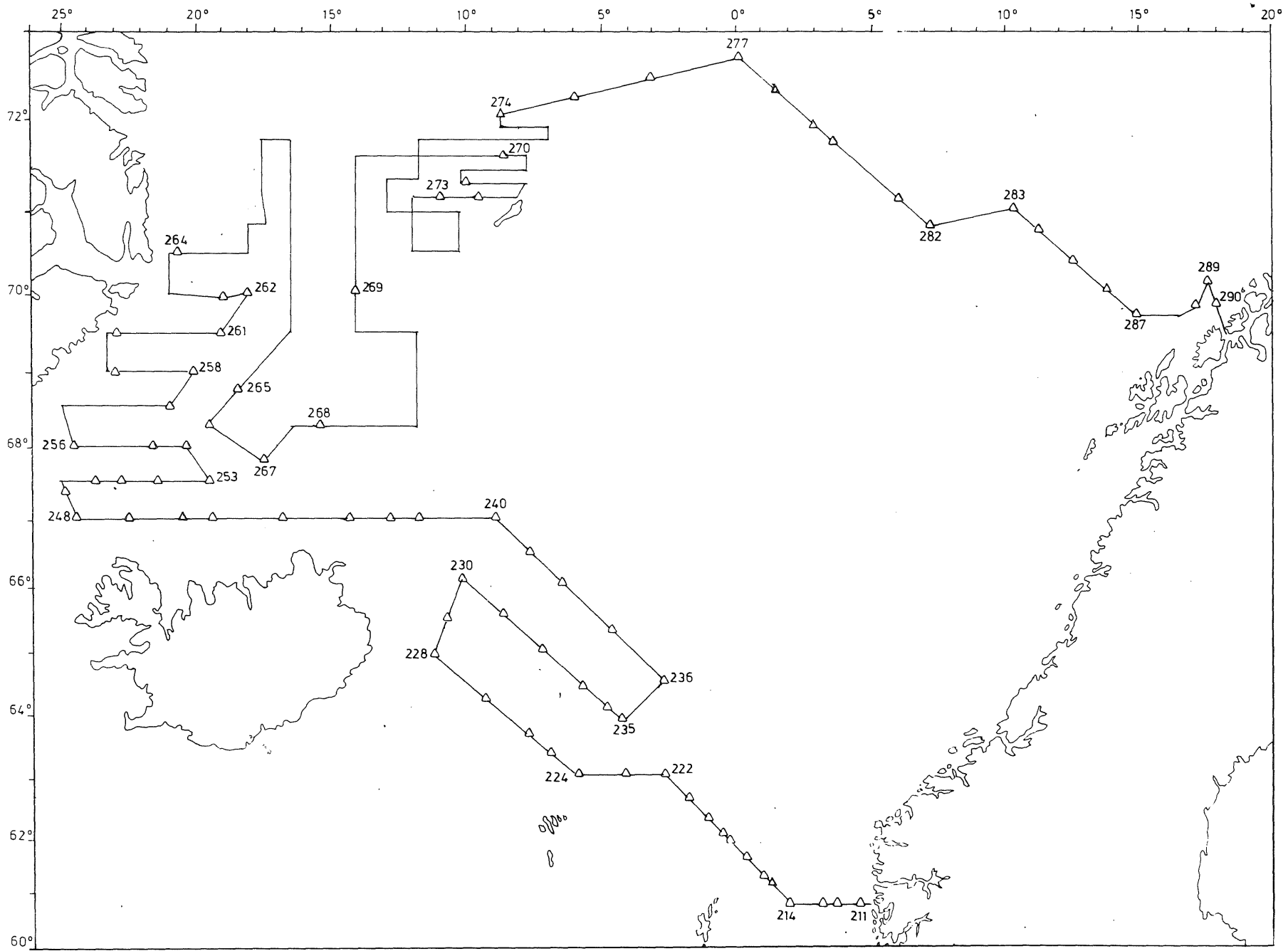




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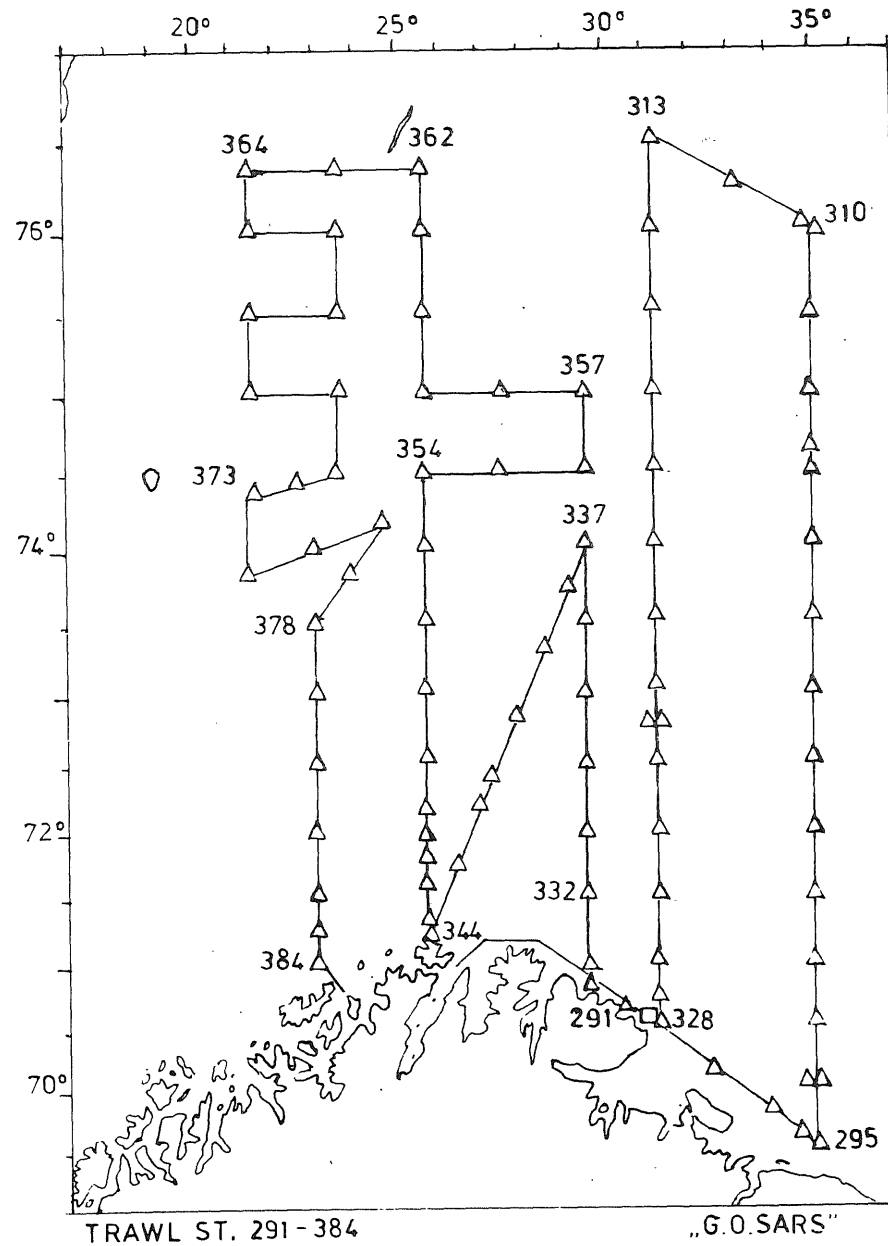
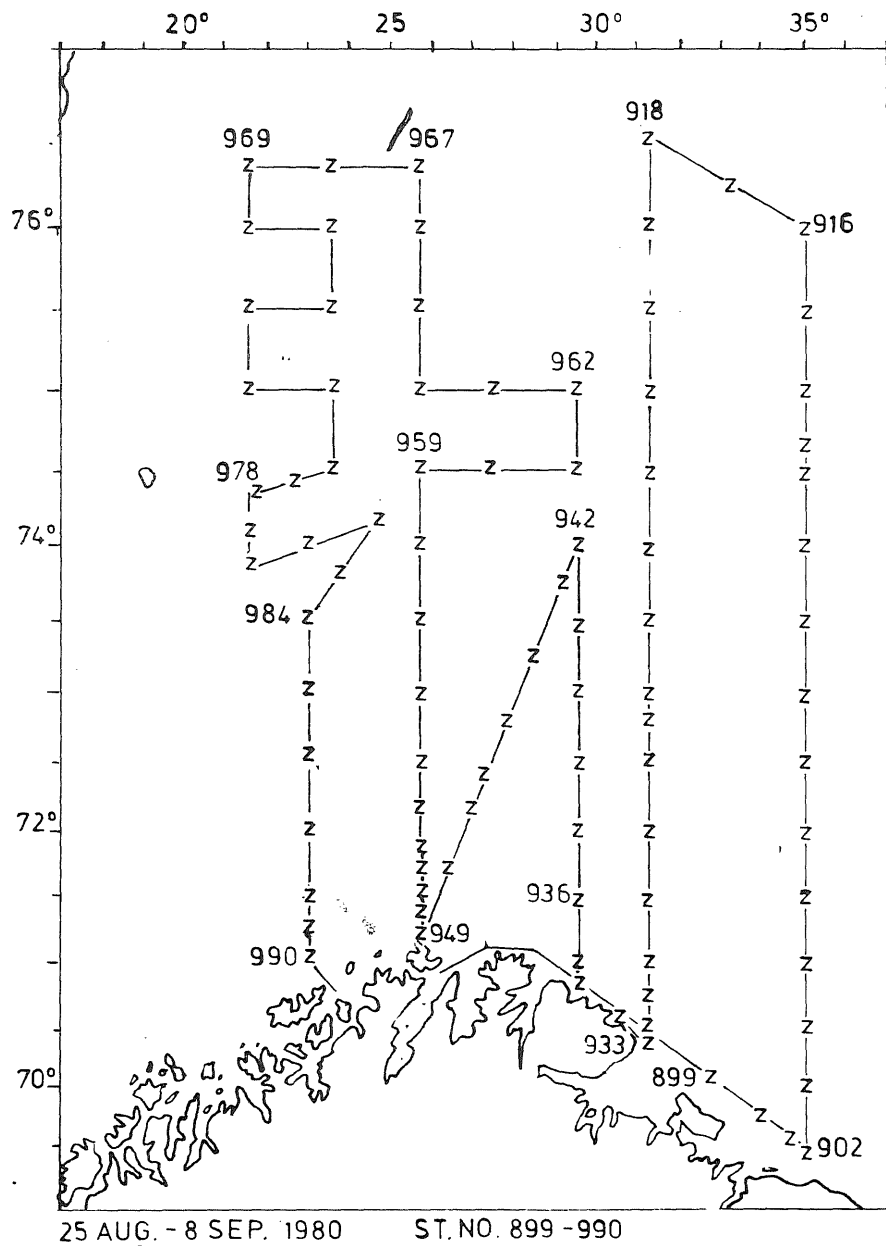
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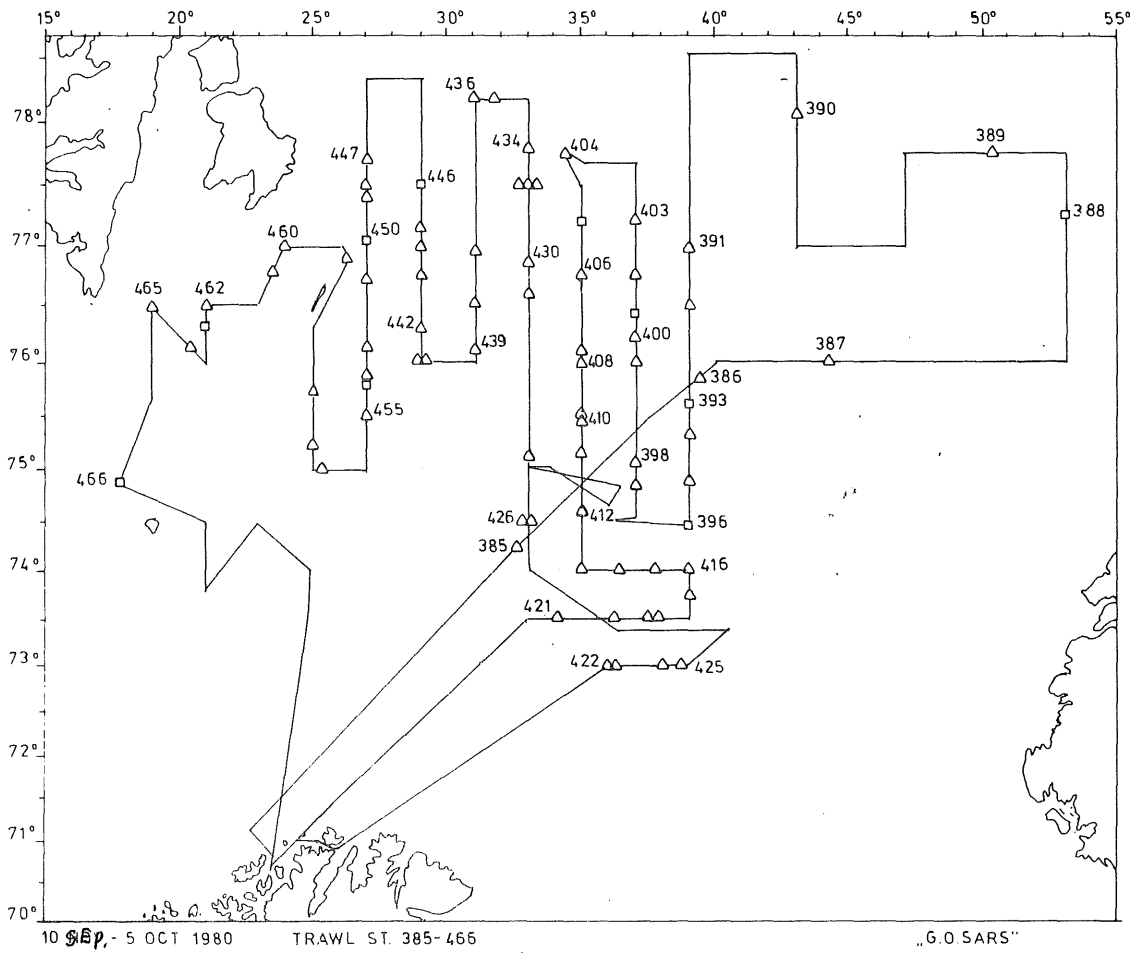
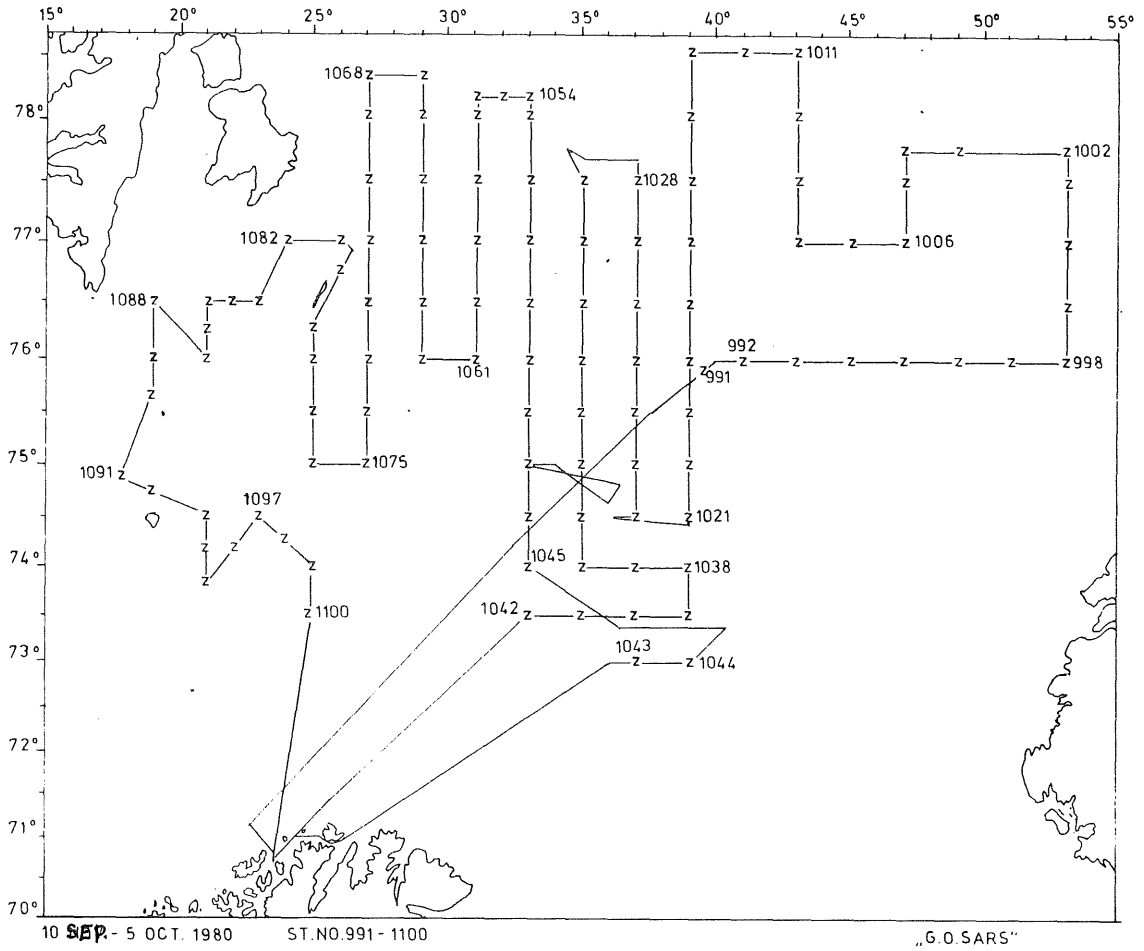


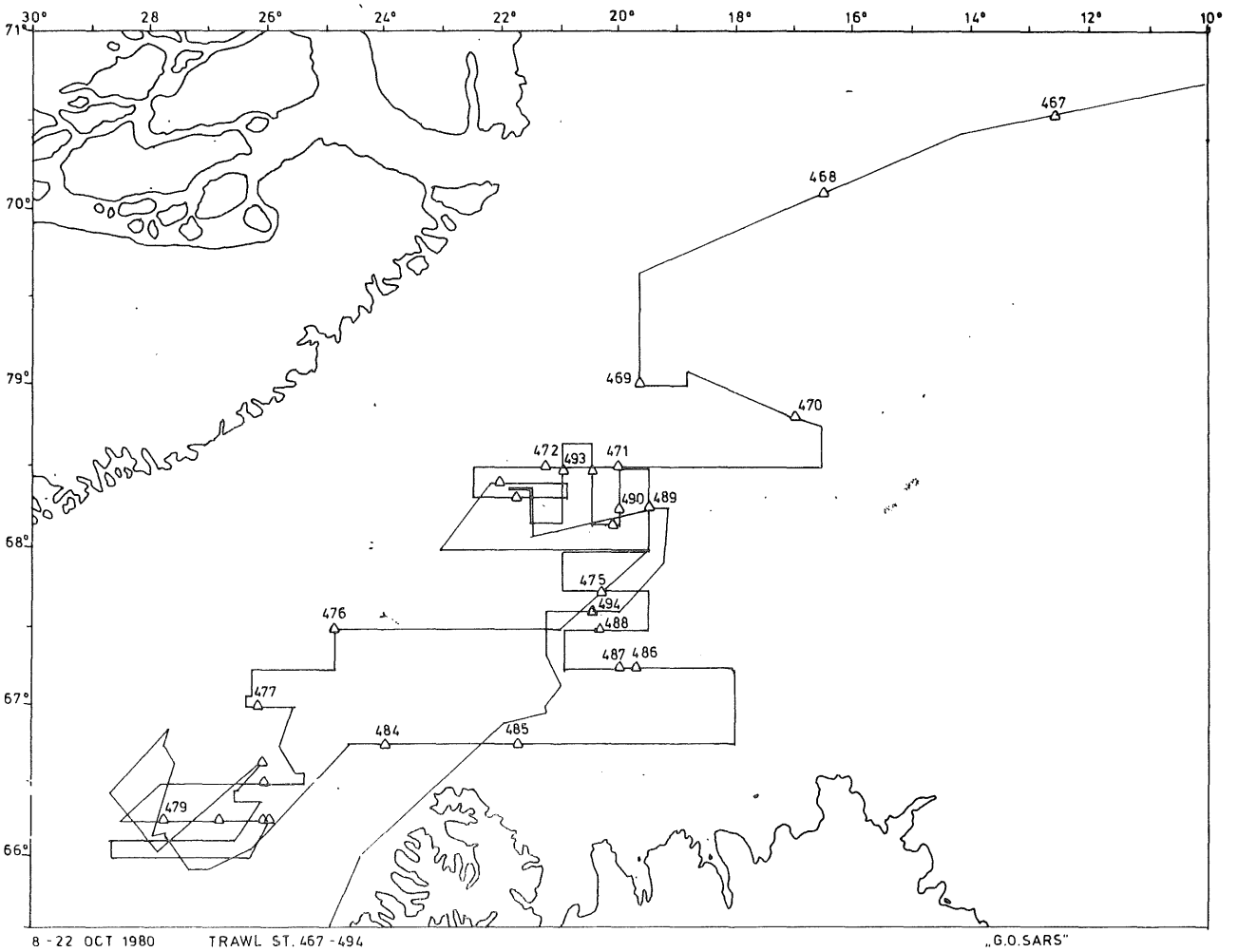
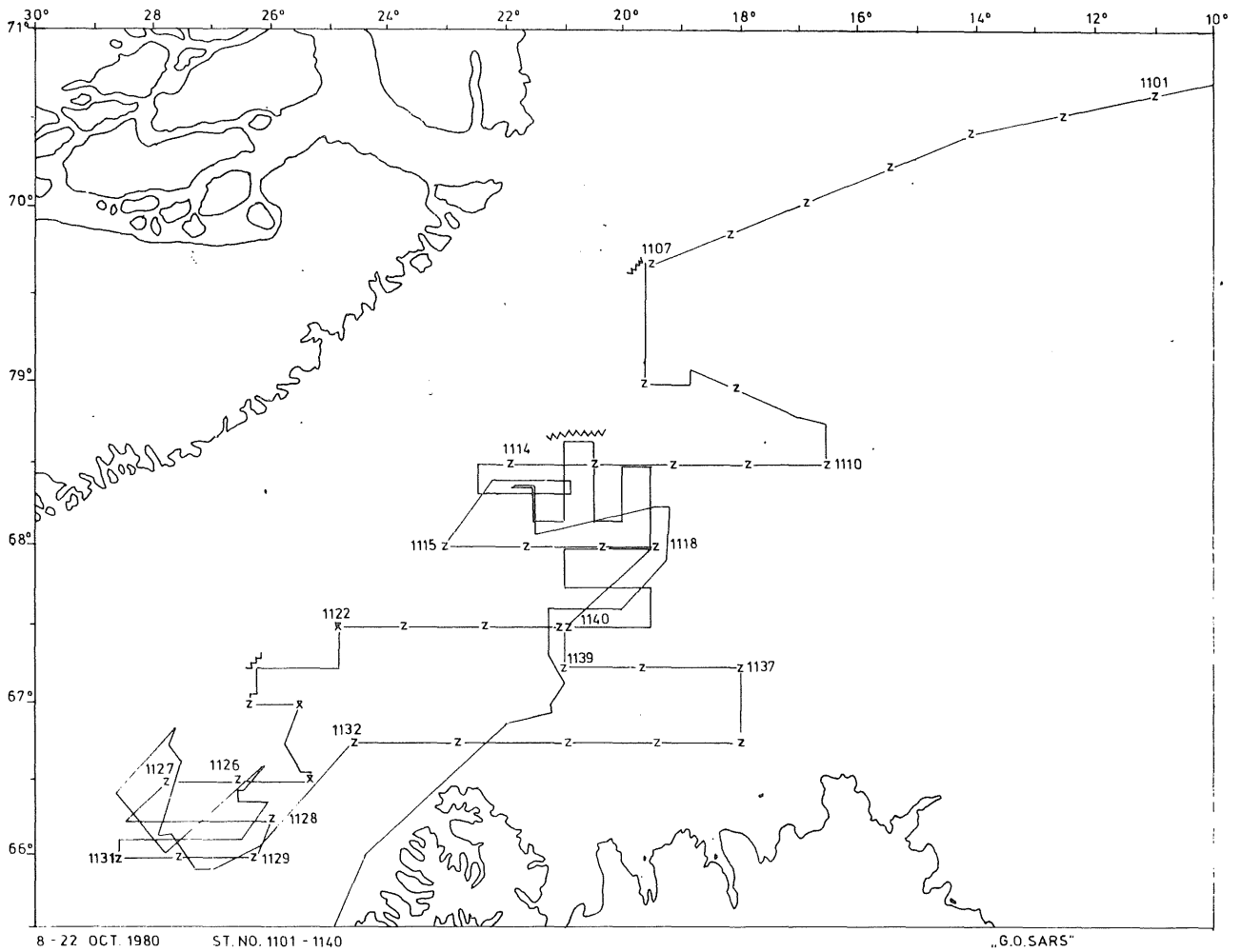
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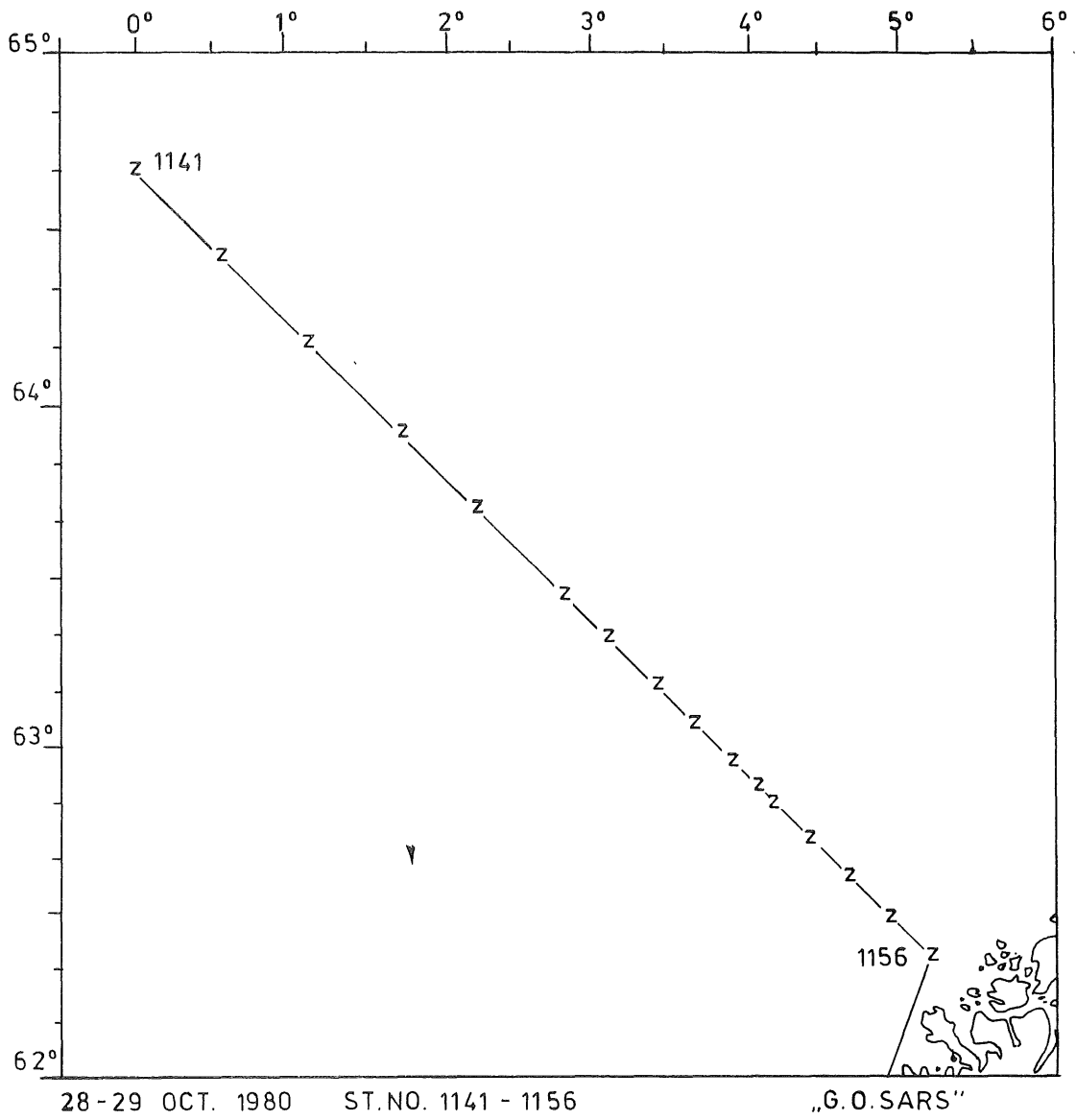
TRAWL ST. 211 - 290

..G.O.SARS"

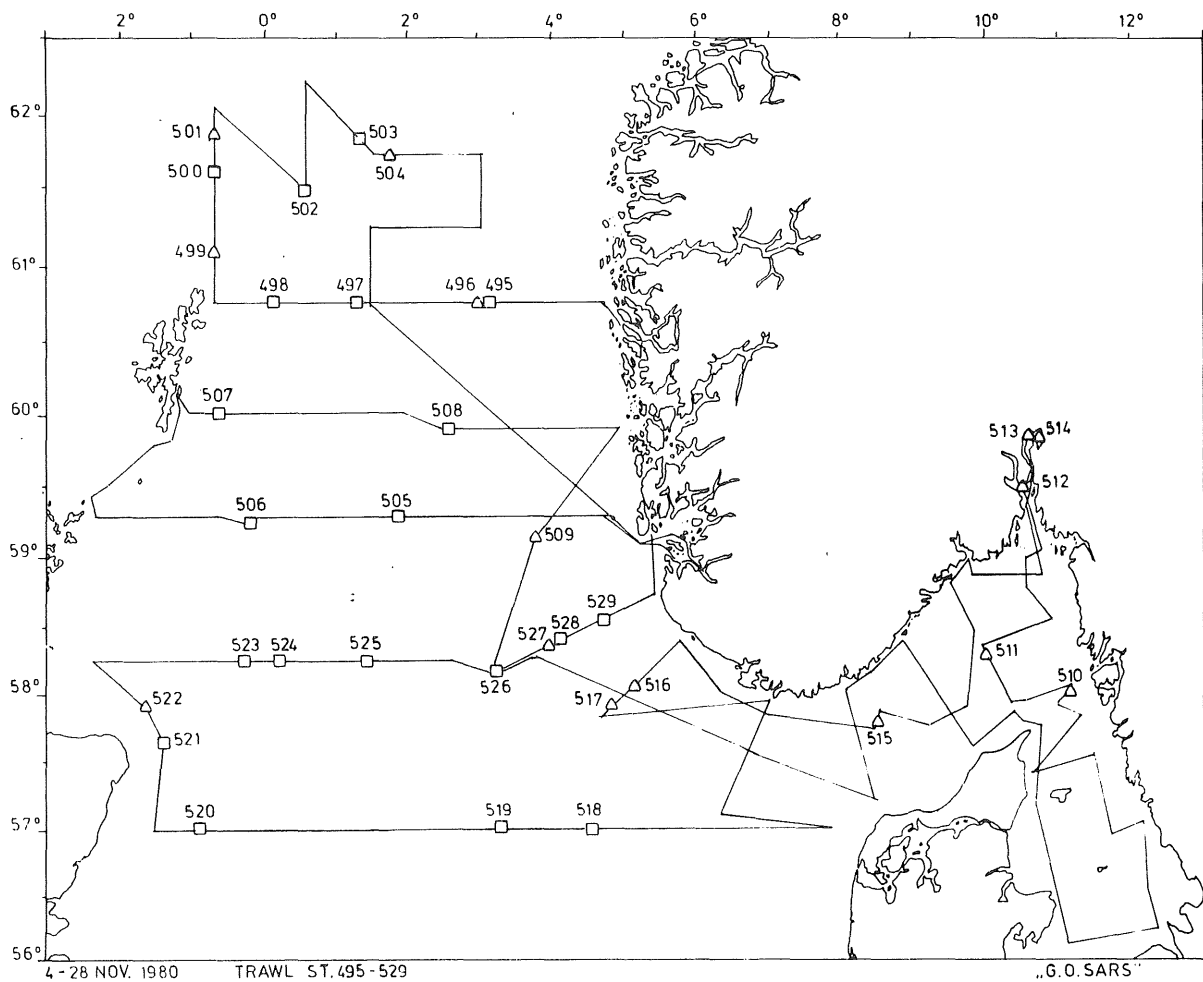
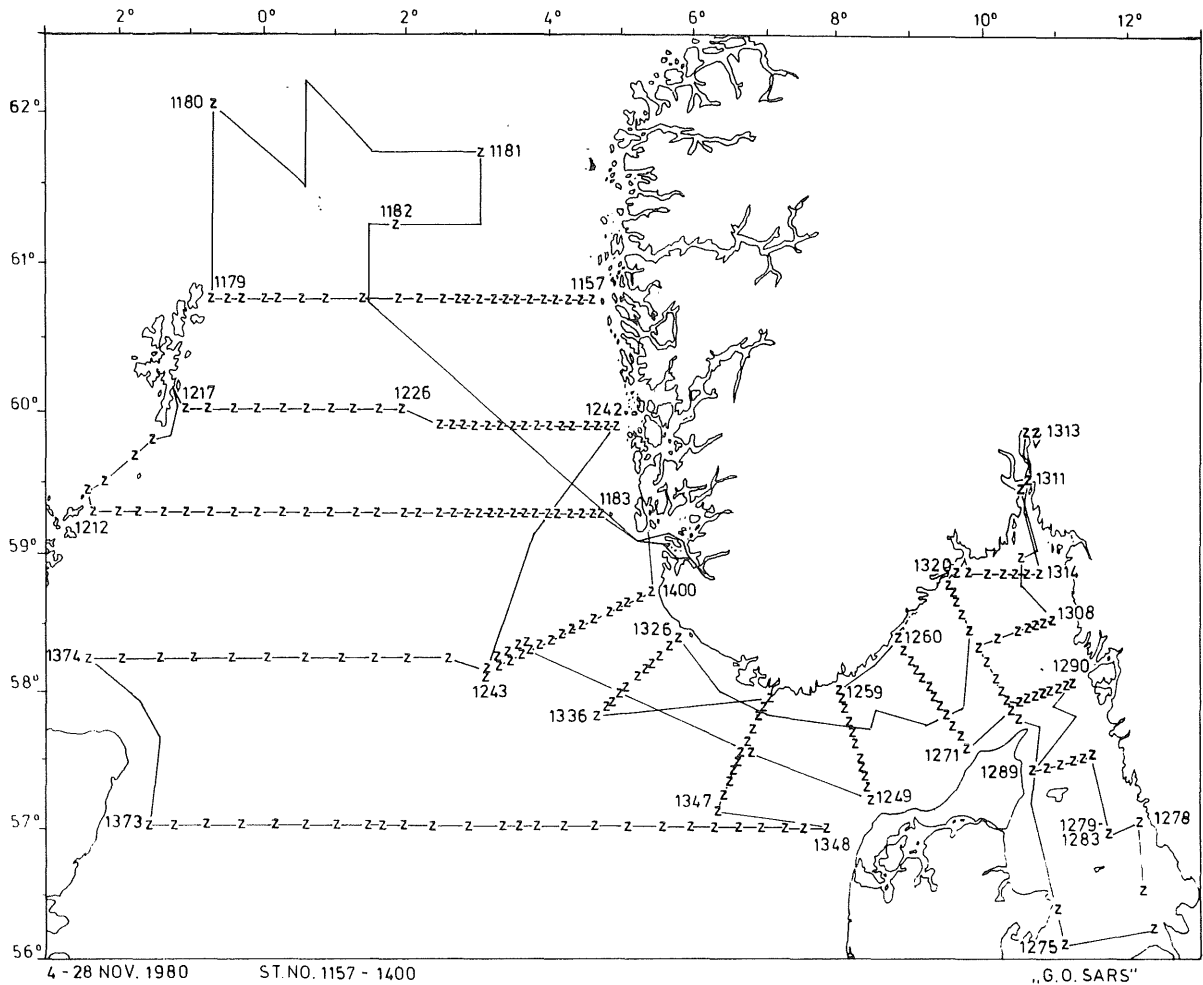


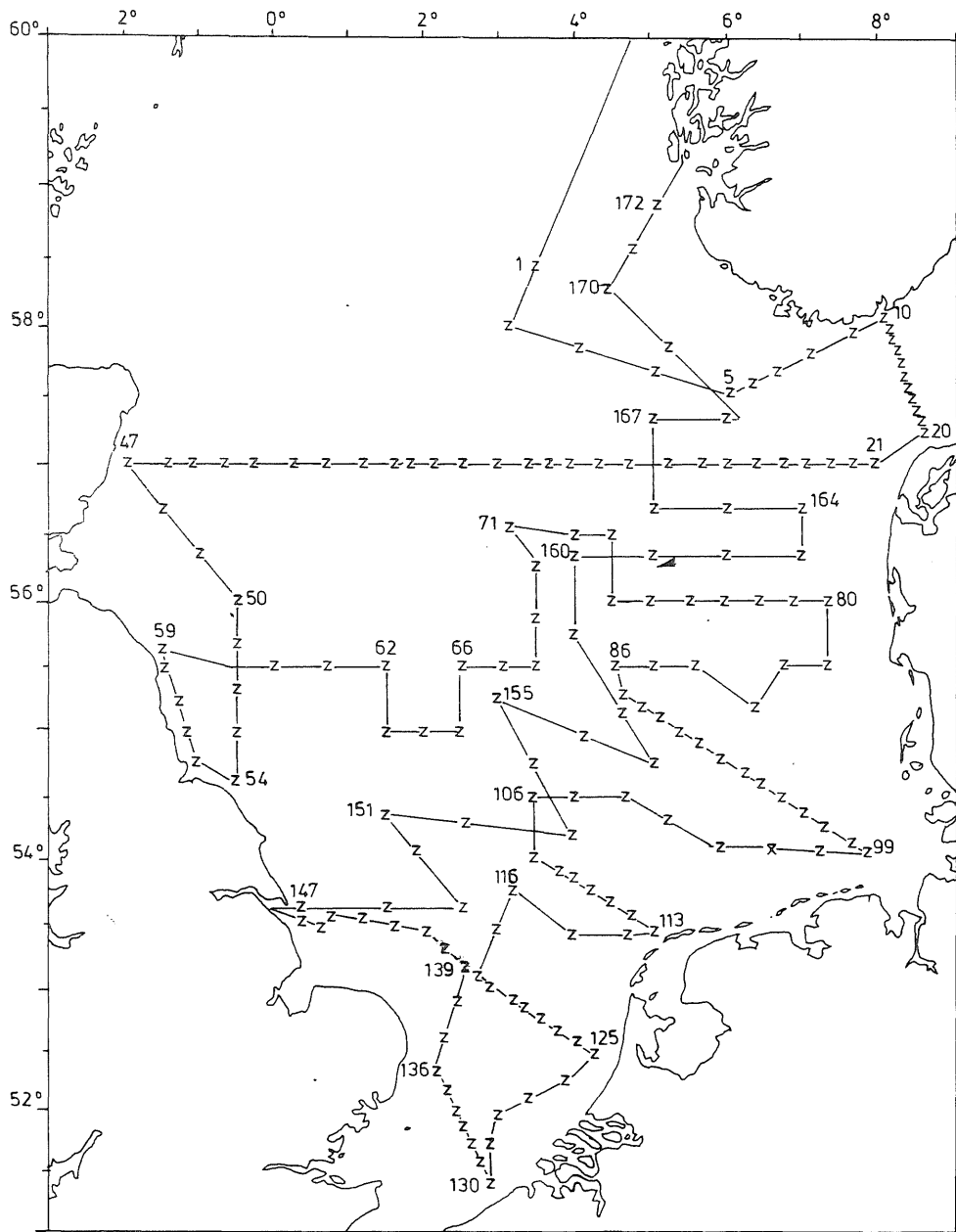






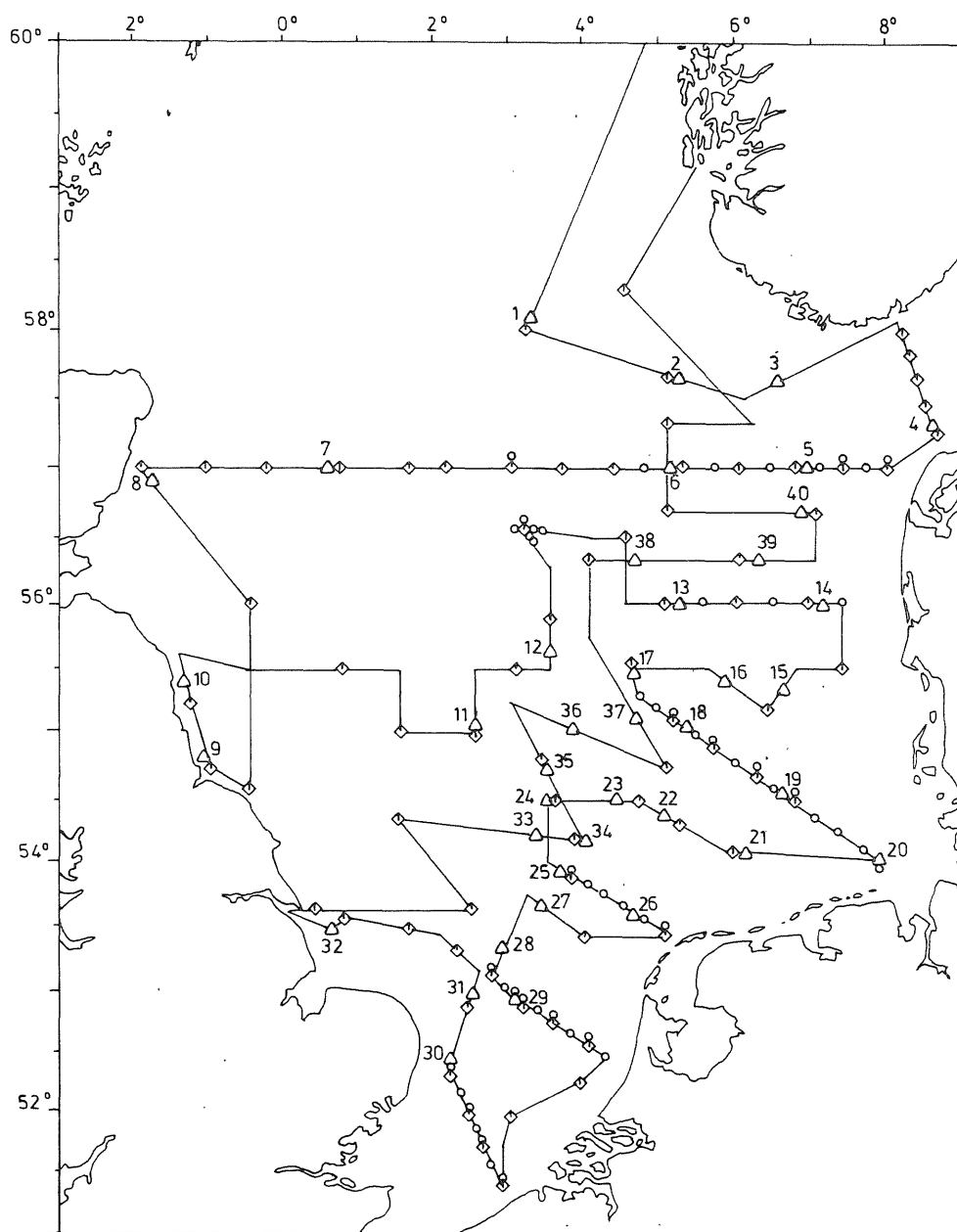




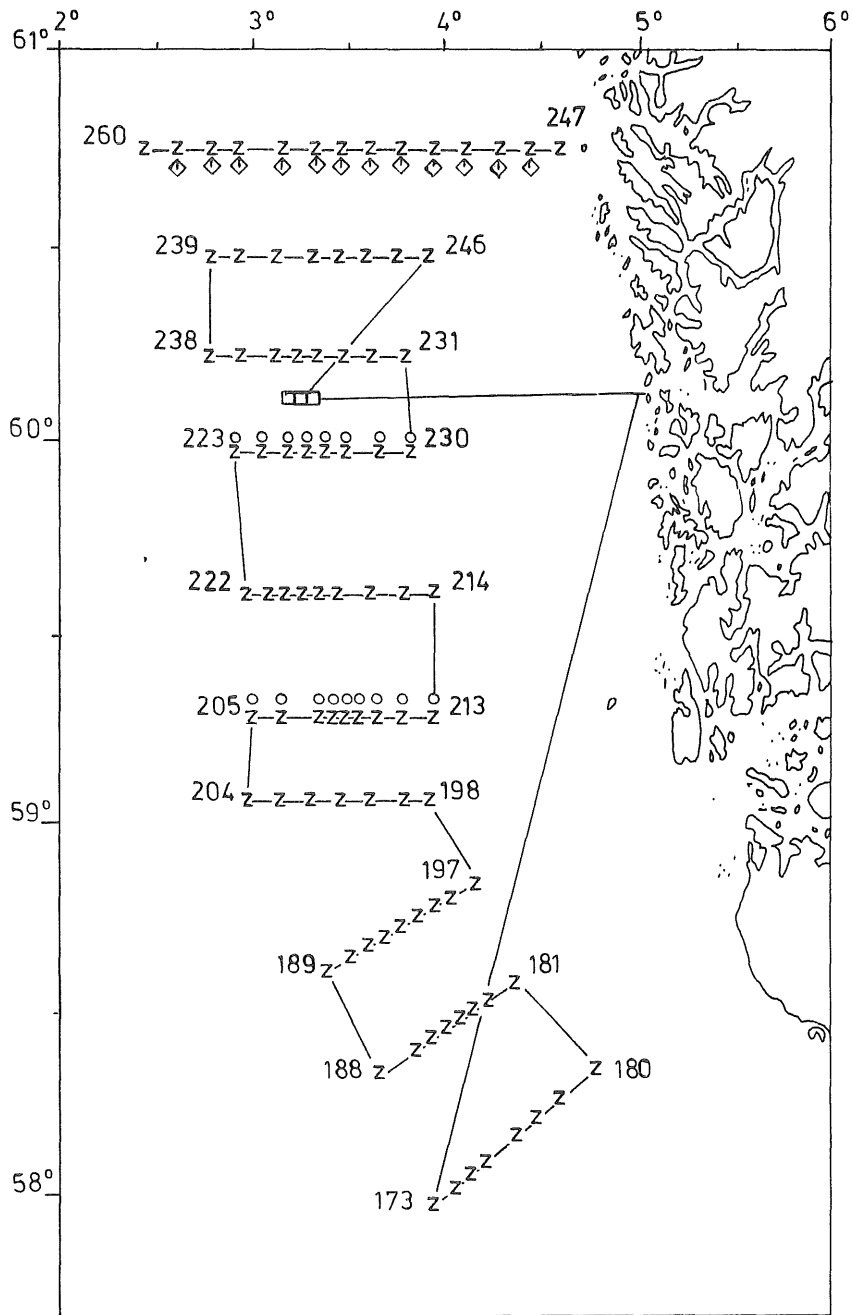


7-28 JAN. 1980 ST. NO. 1-172

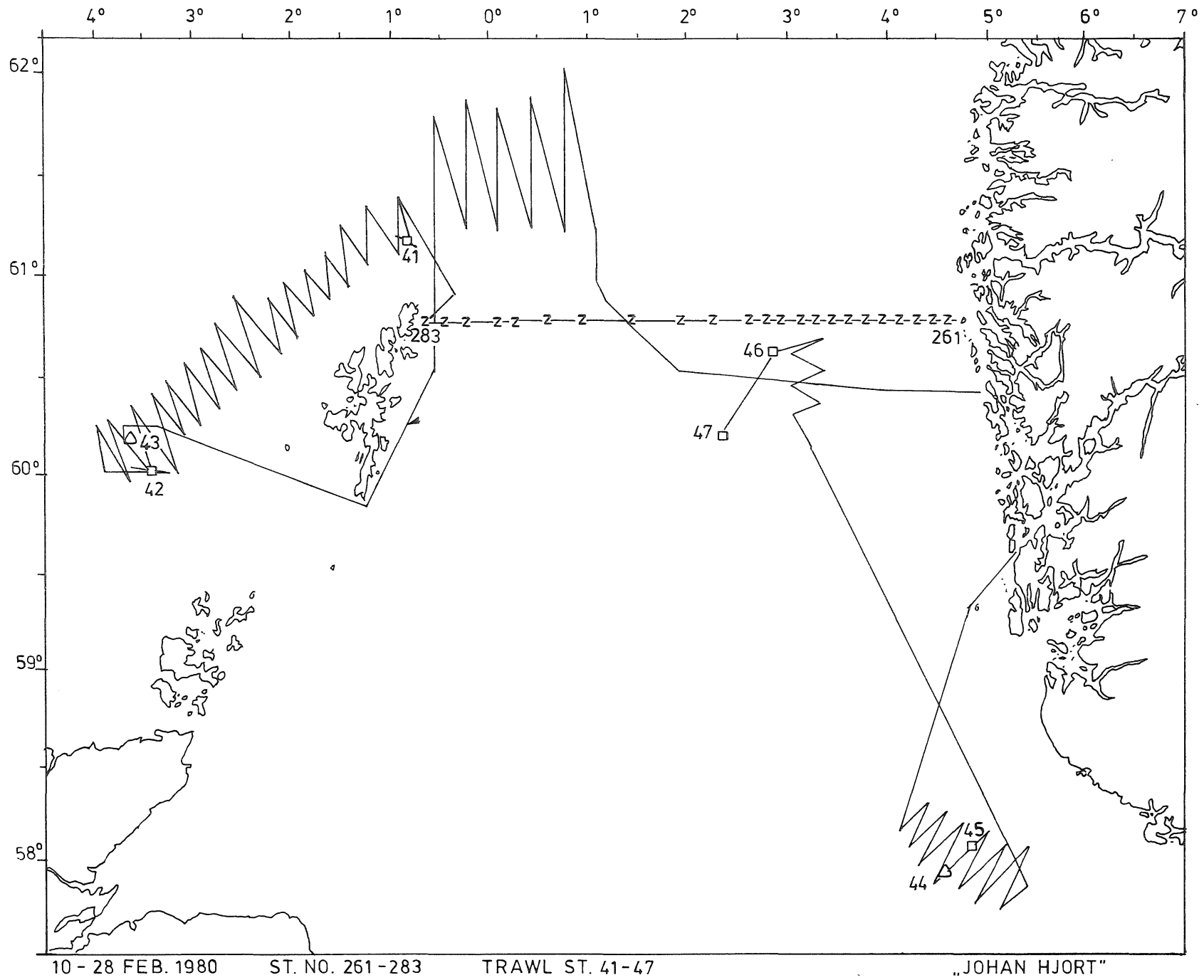
„JOHAN HJORT“



TRAWL ST. 1-40 ◊ 72 PLANKTON ST. ◊ 51 HYDROCARBON ANALYSIS SAMLE



31 JAN. - 8 FEB. 1980 ST. NO. 173 - 260 ◊ 12 PLANKTON ST.  
 ○ 17 CURRENTS MEASURED FROM SHIP. ◻ 3 DRIFTERS  
 „JOHAN HJORT“

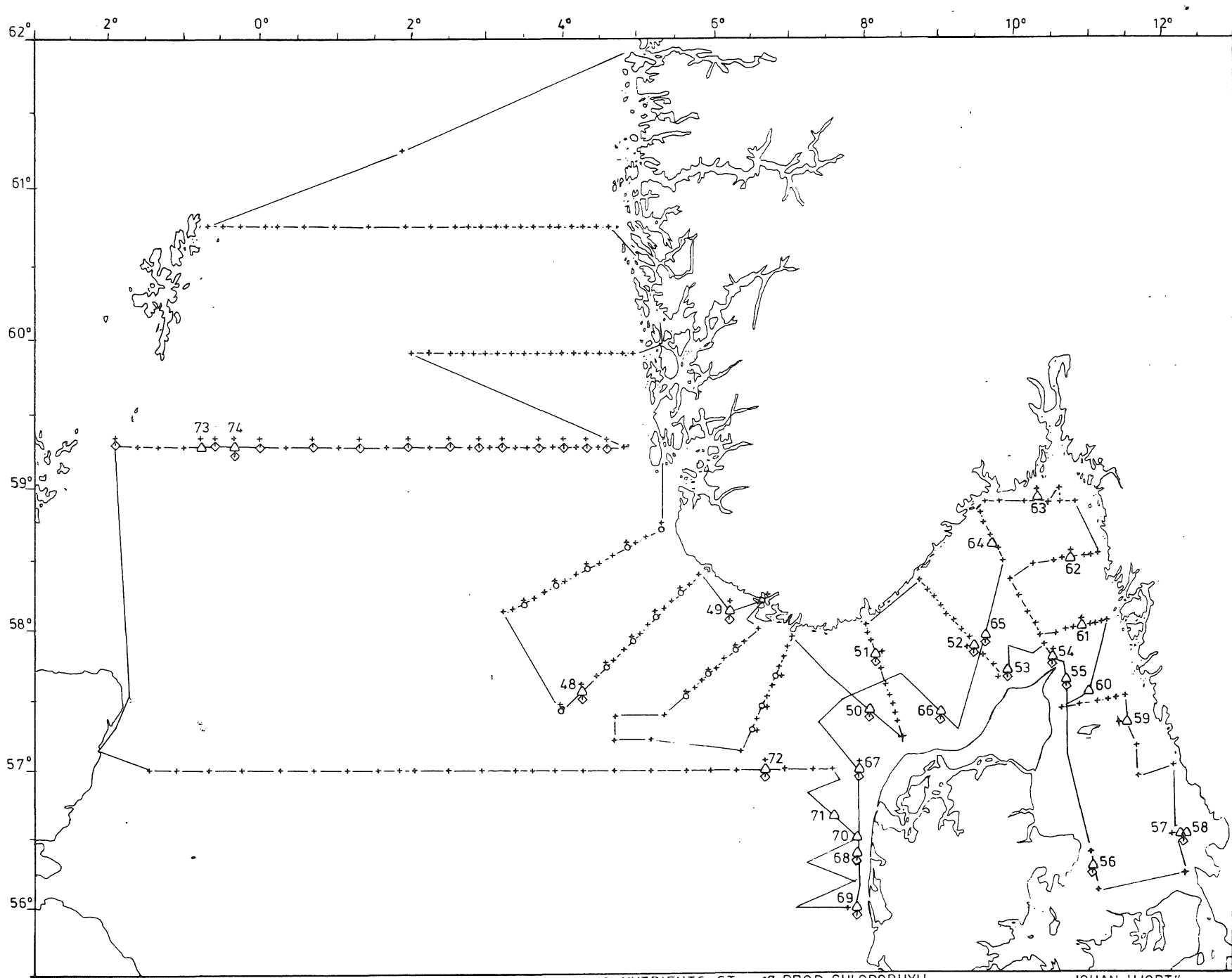


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„JOHAN HJORT”



3 - 25 MAR 1980

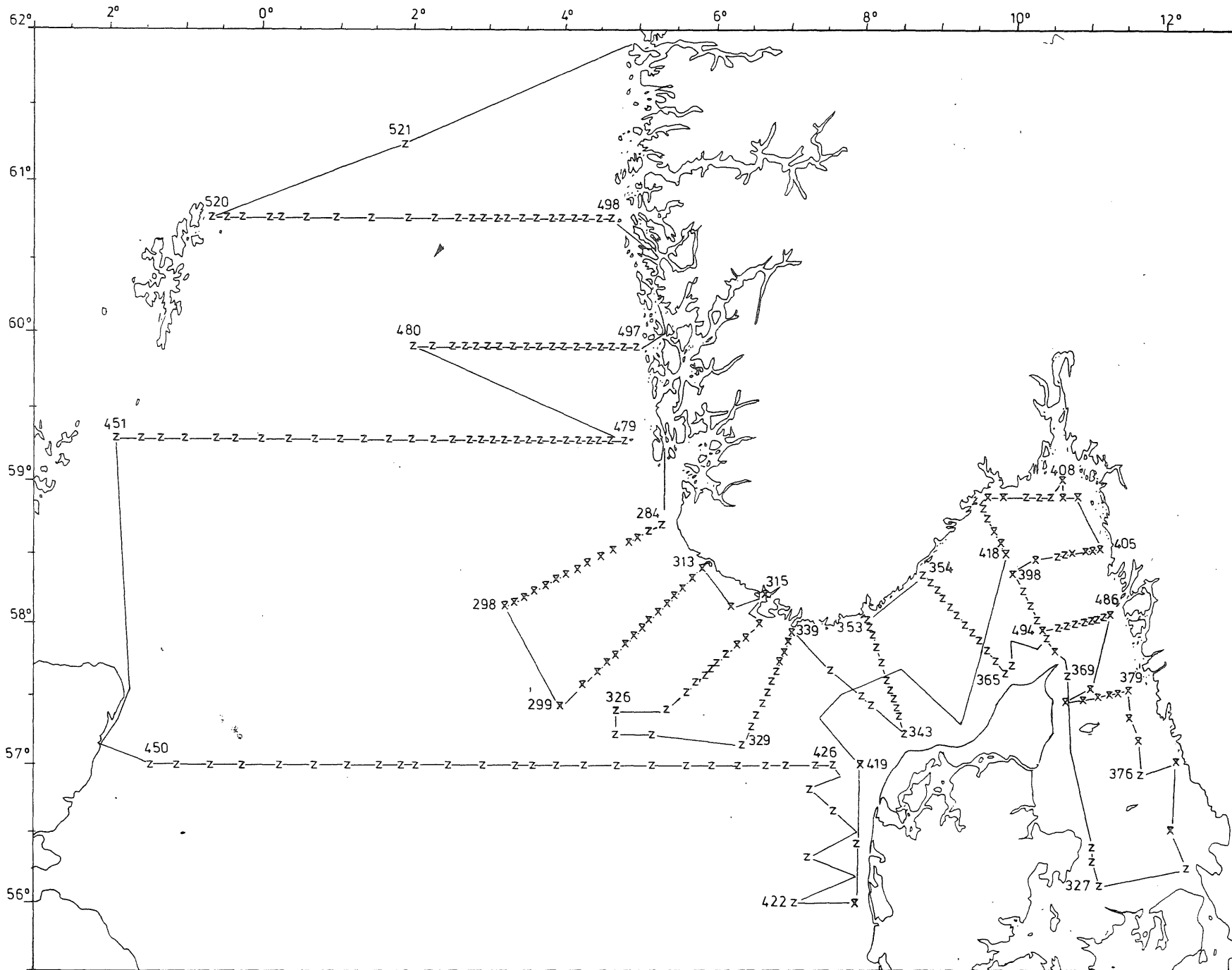
TRAWL ST 48-74

◇ 30 PLANKTON ST

+ 227 NUTRIENTS ST

○ 17 PROD. CHLOROPHYLL

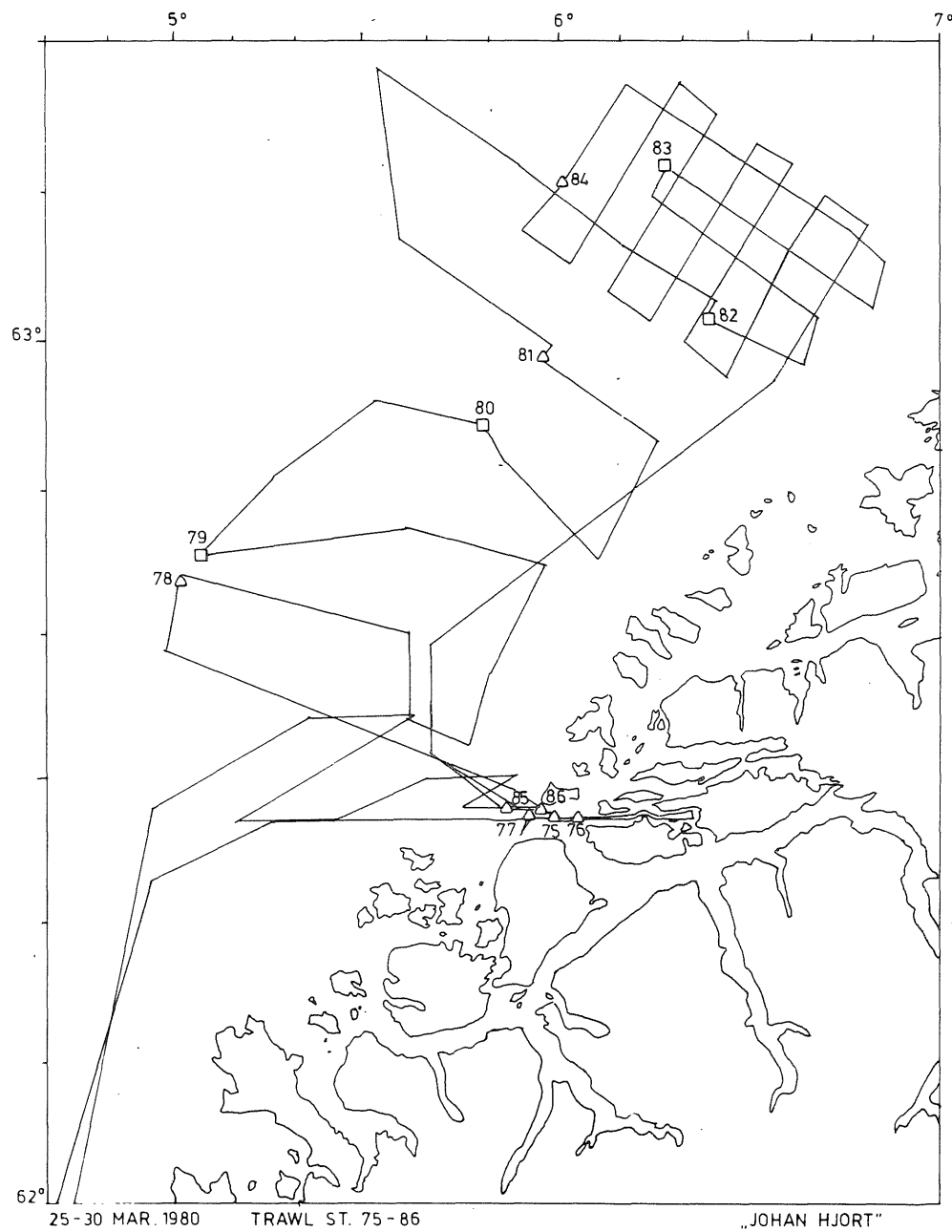
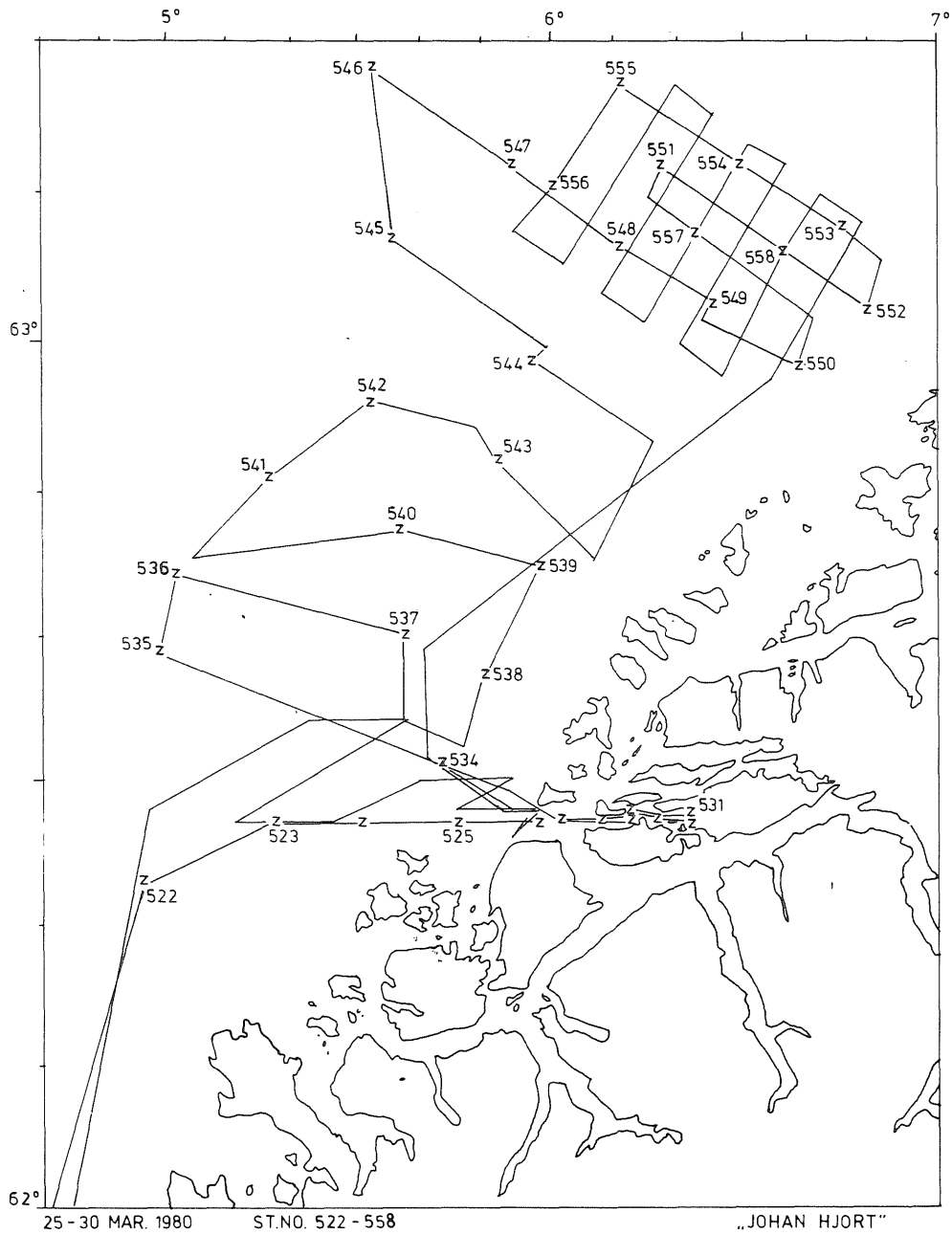
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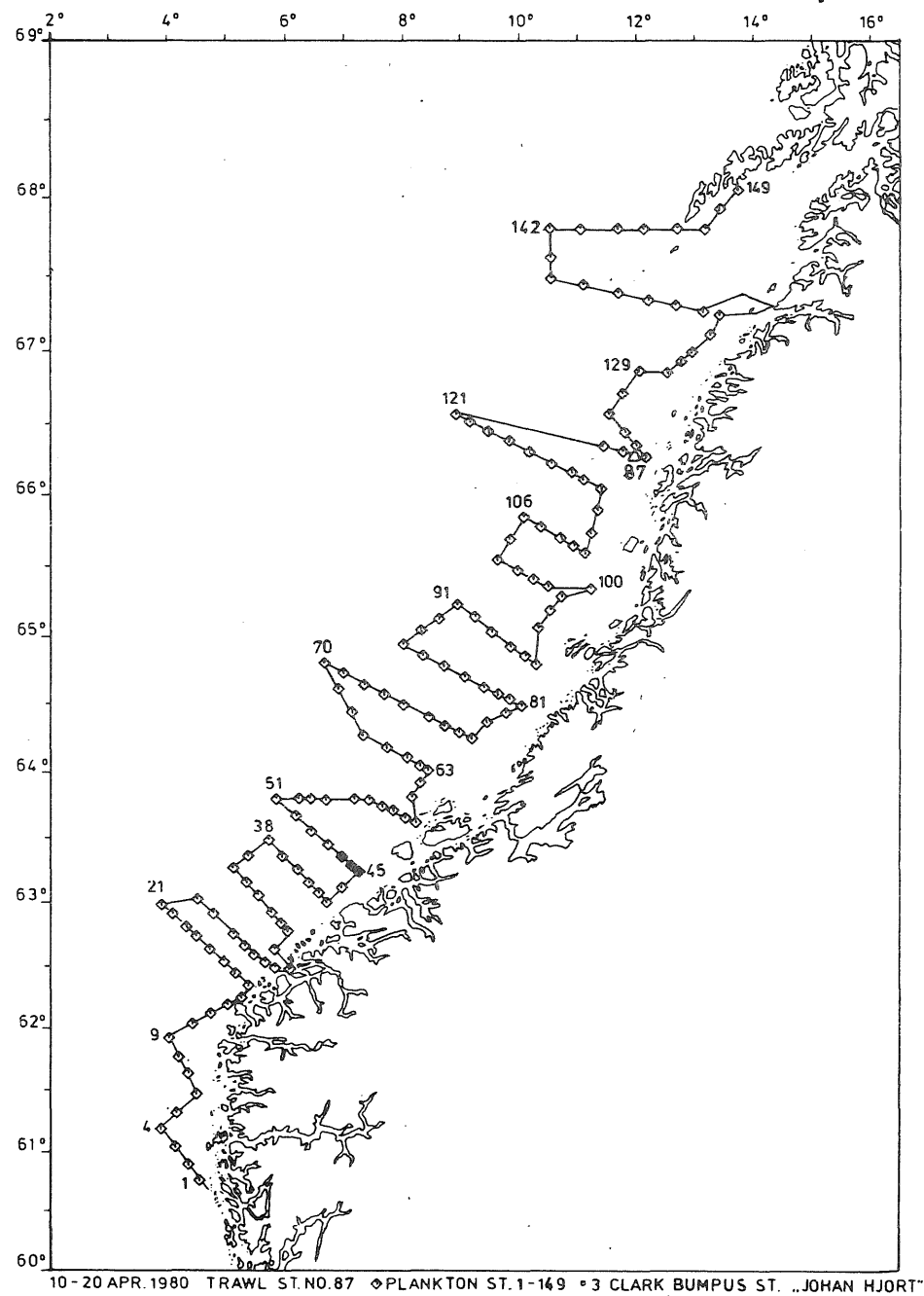
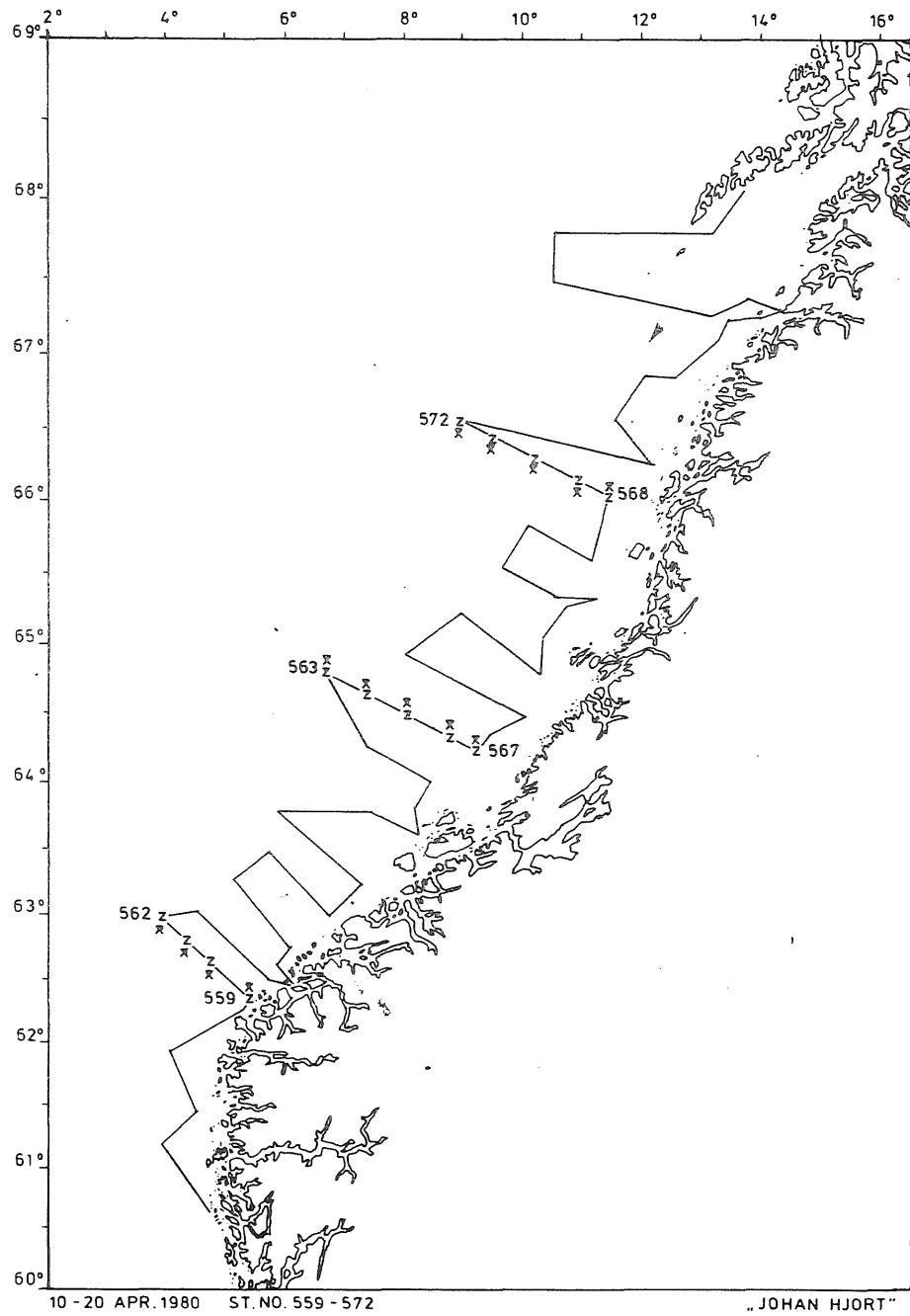


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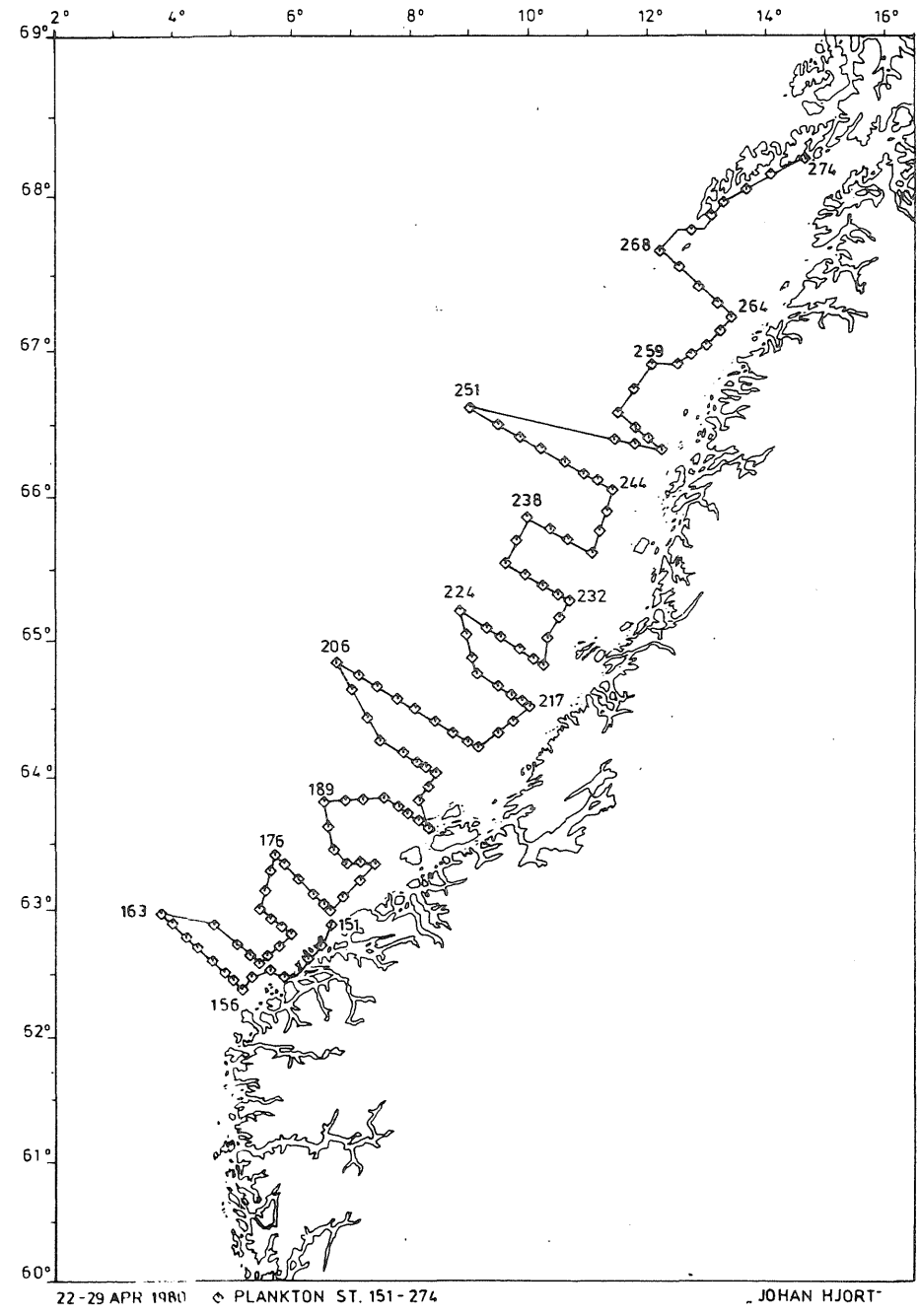
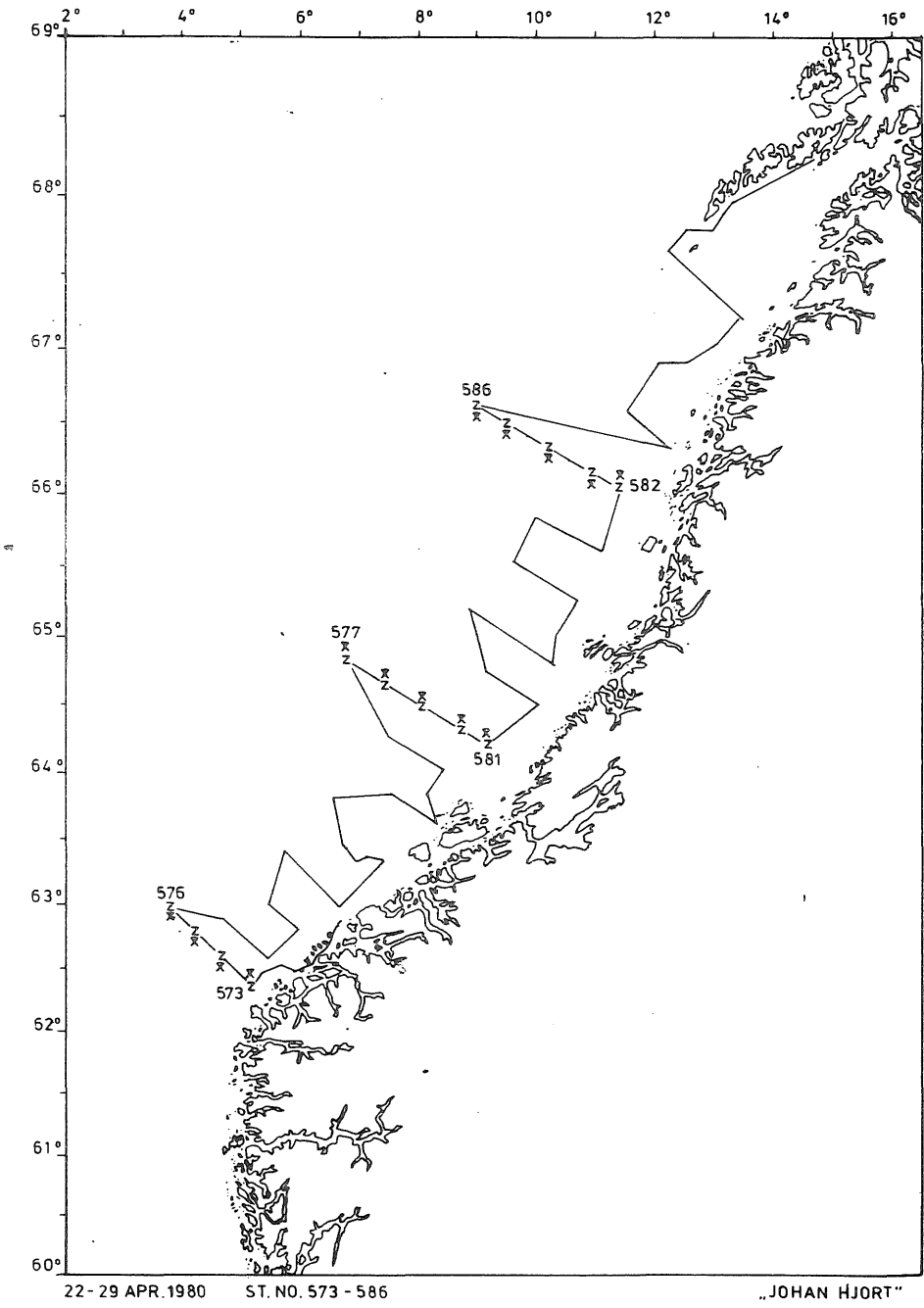
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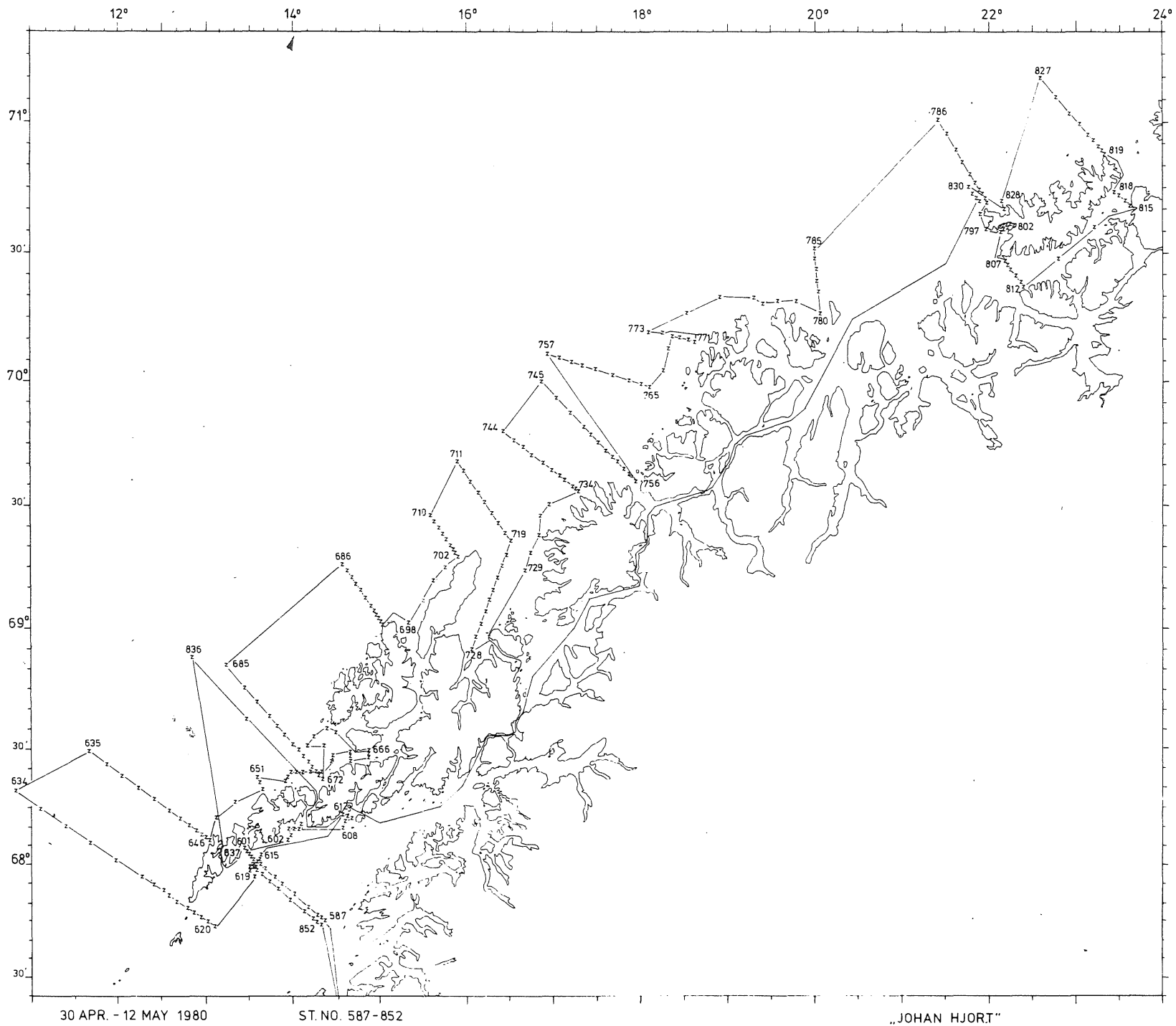
„JOHAN HJORT“







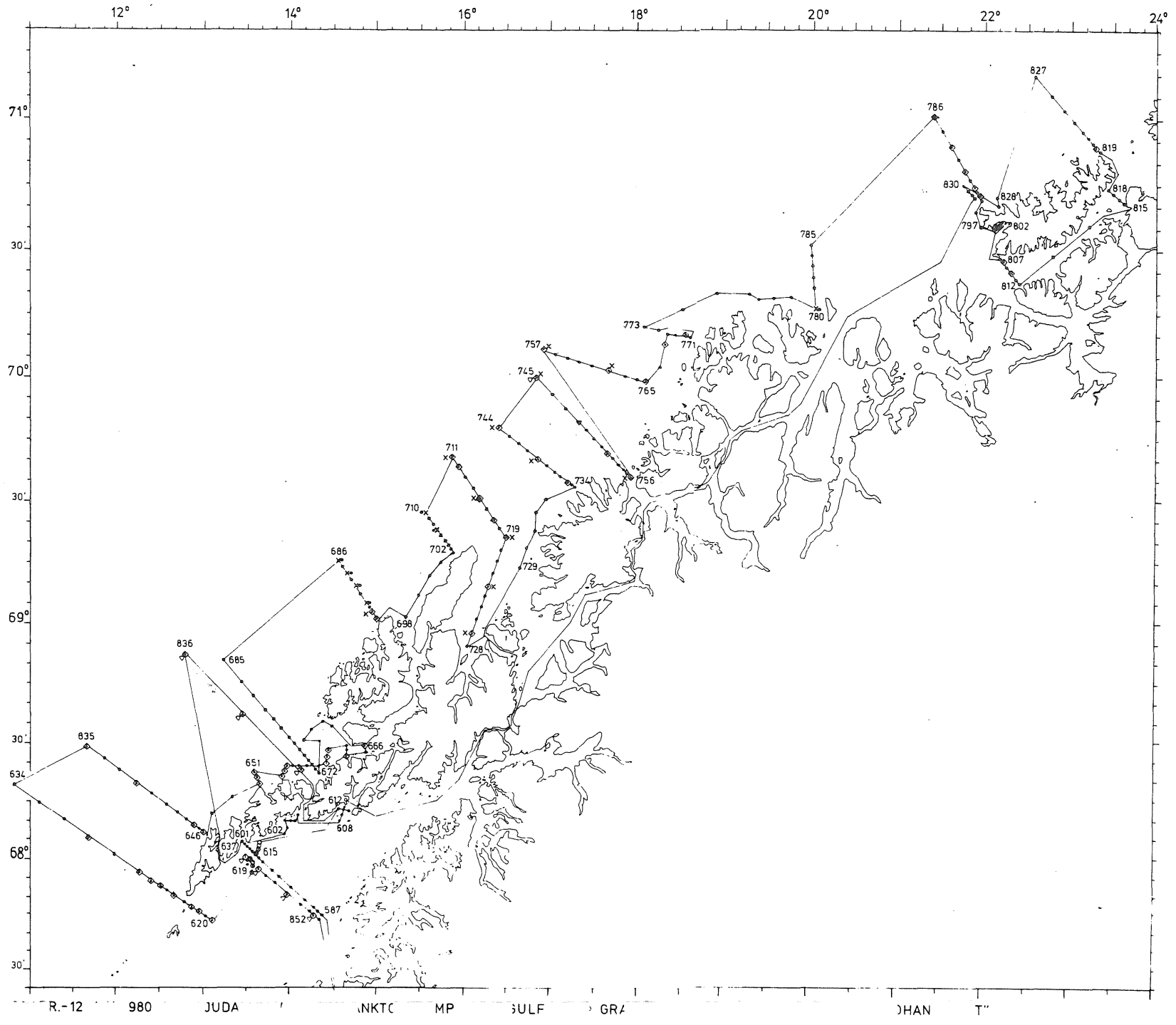


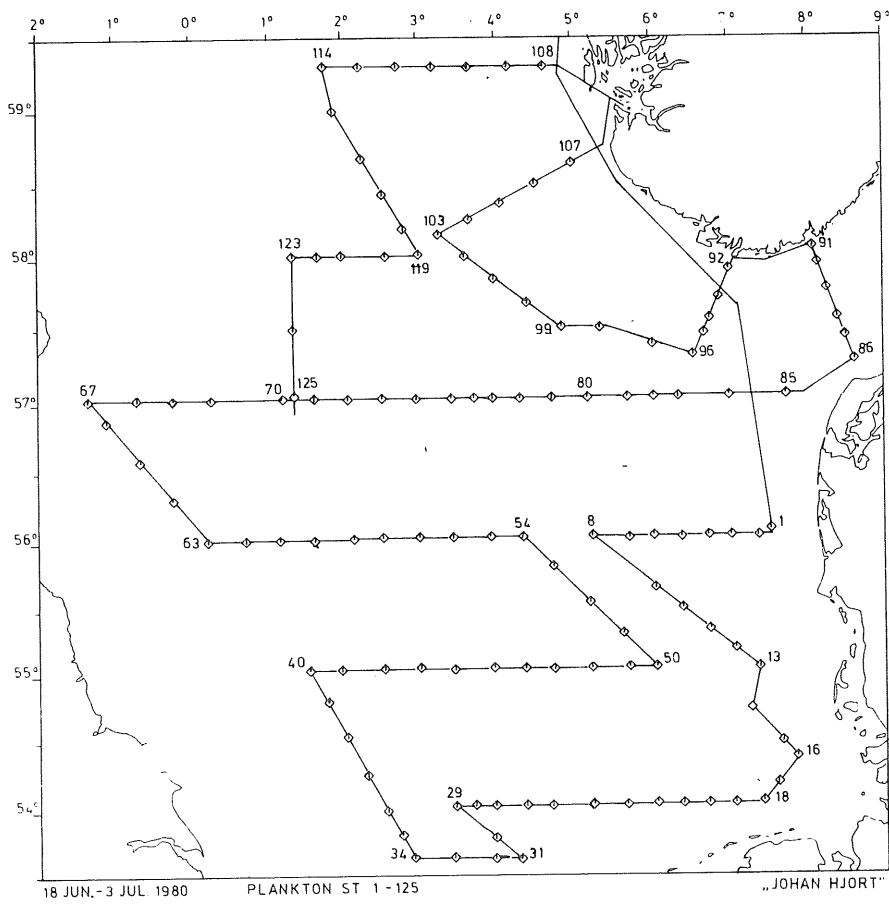
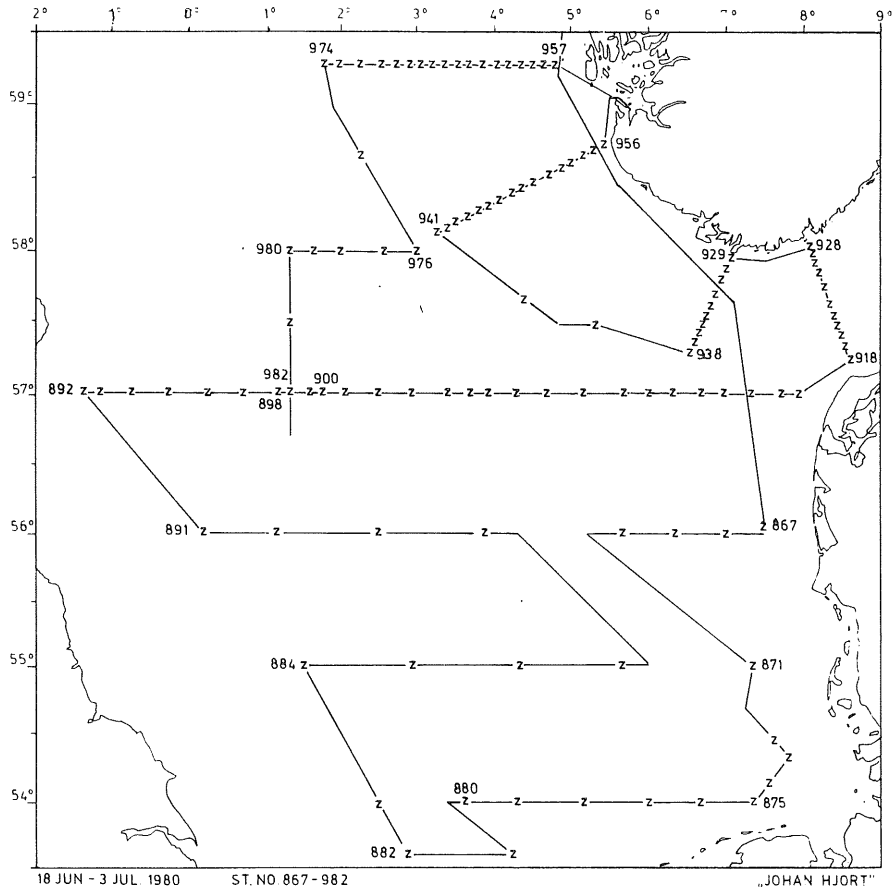


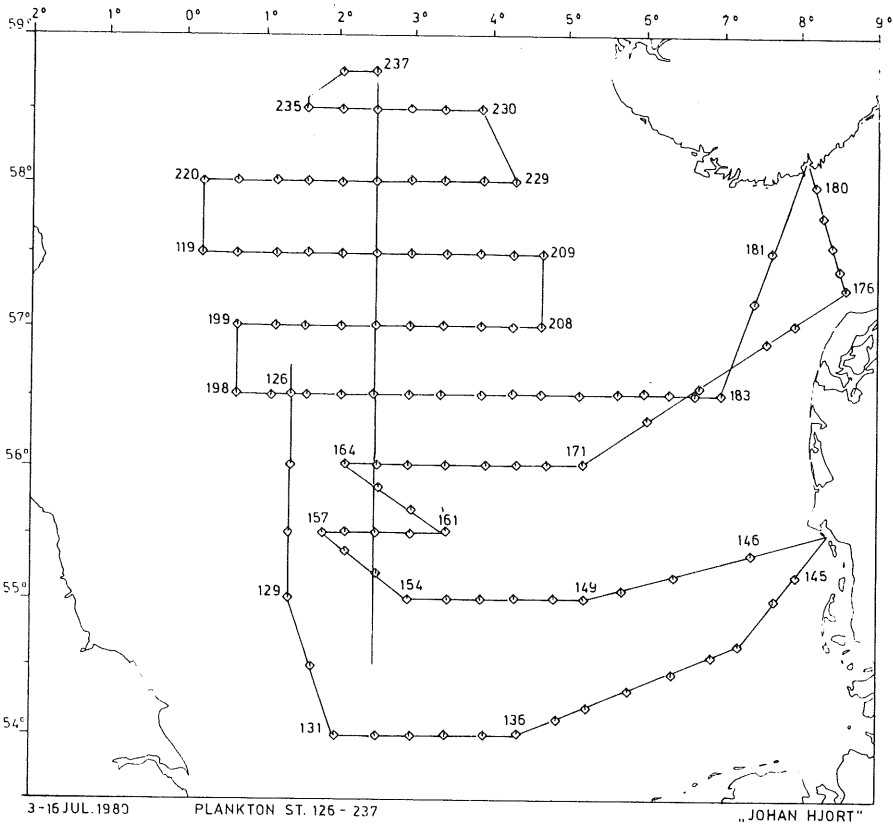
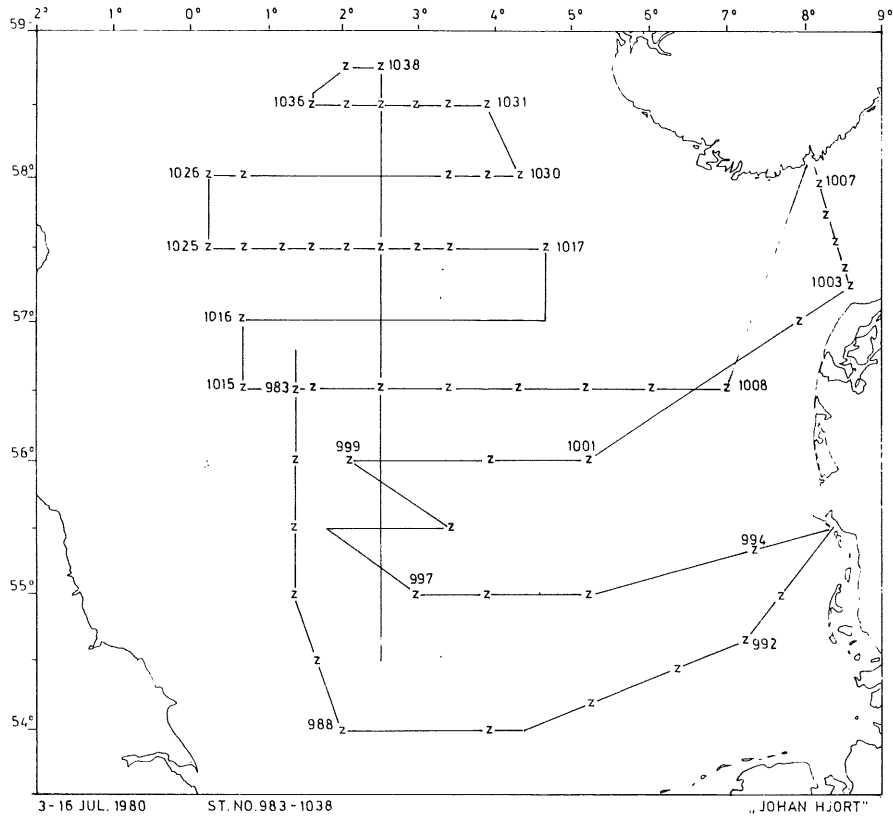
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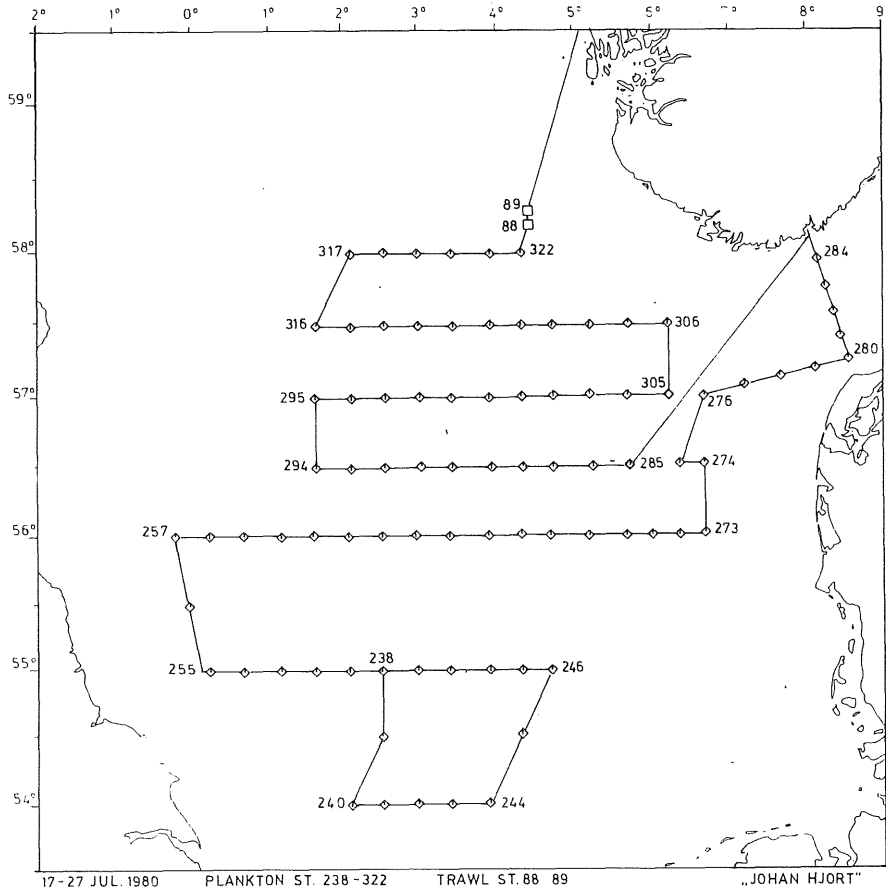
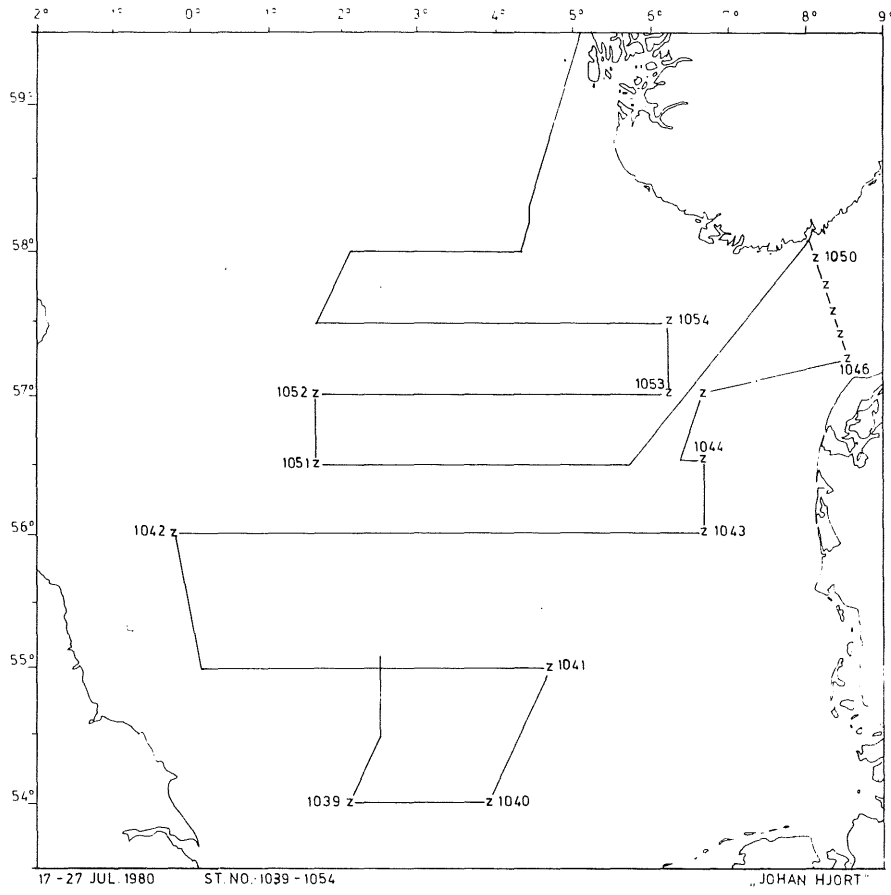
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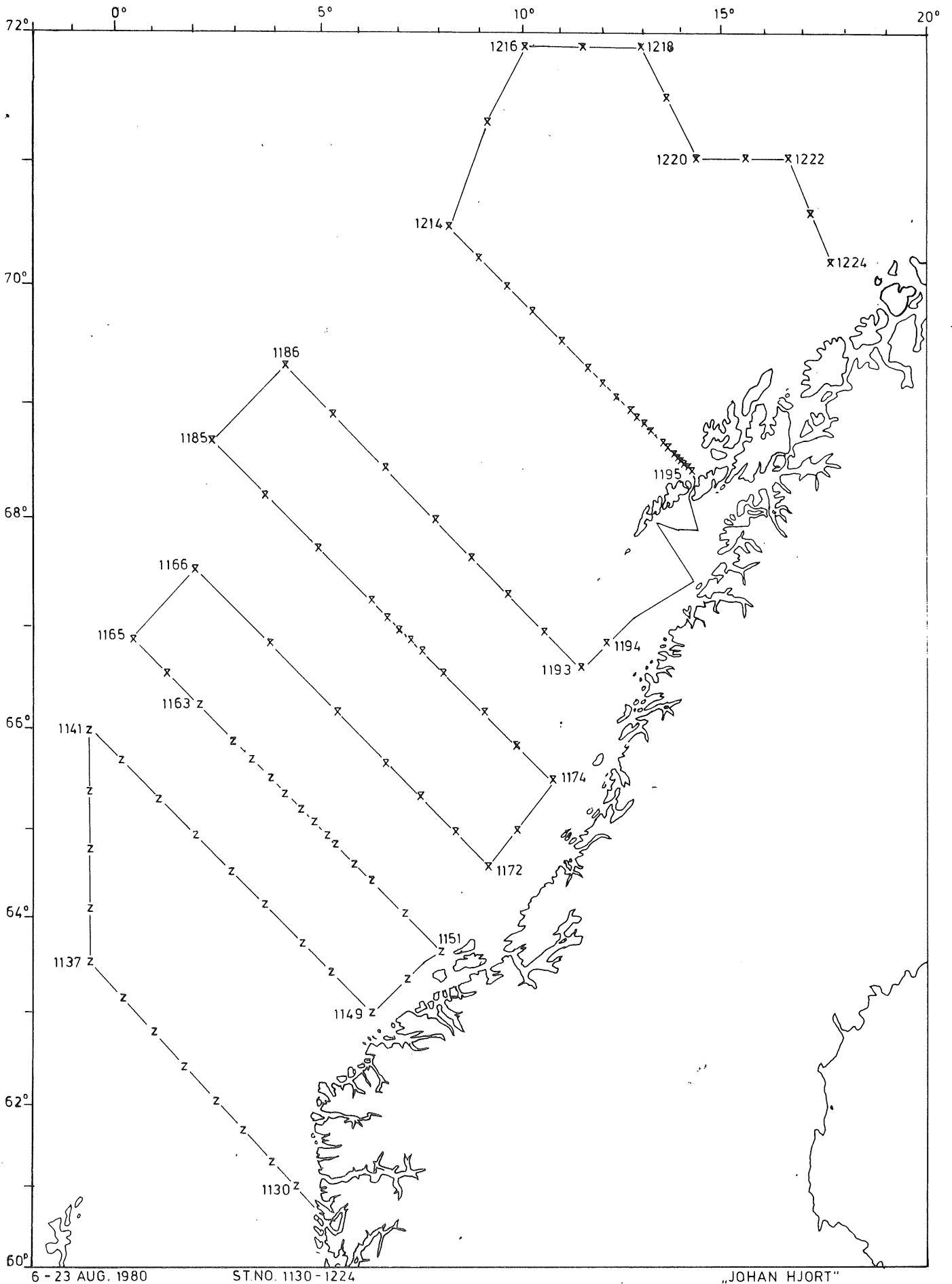
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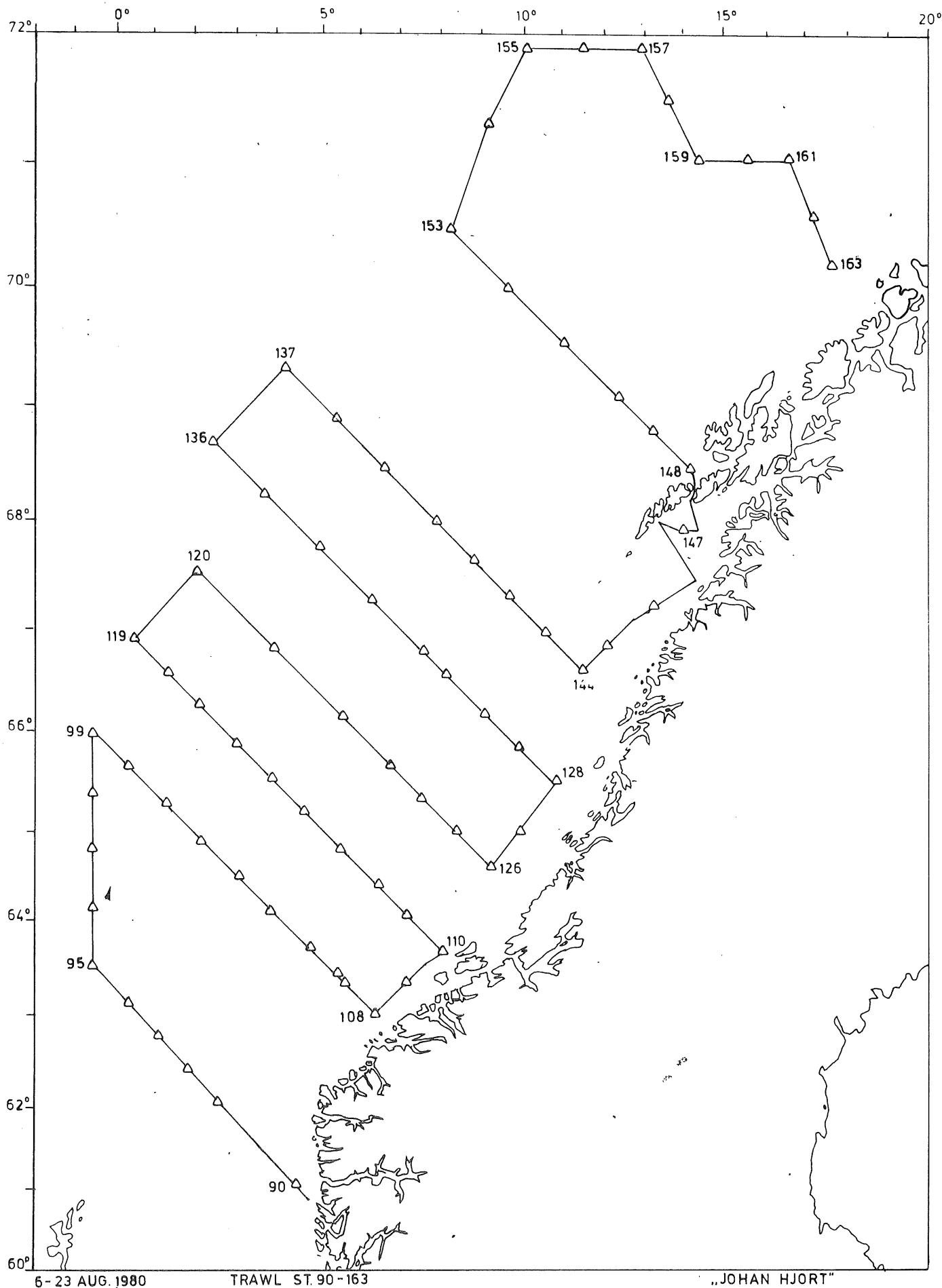




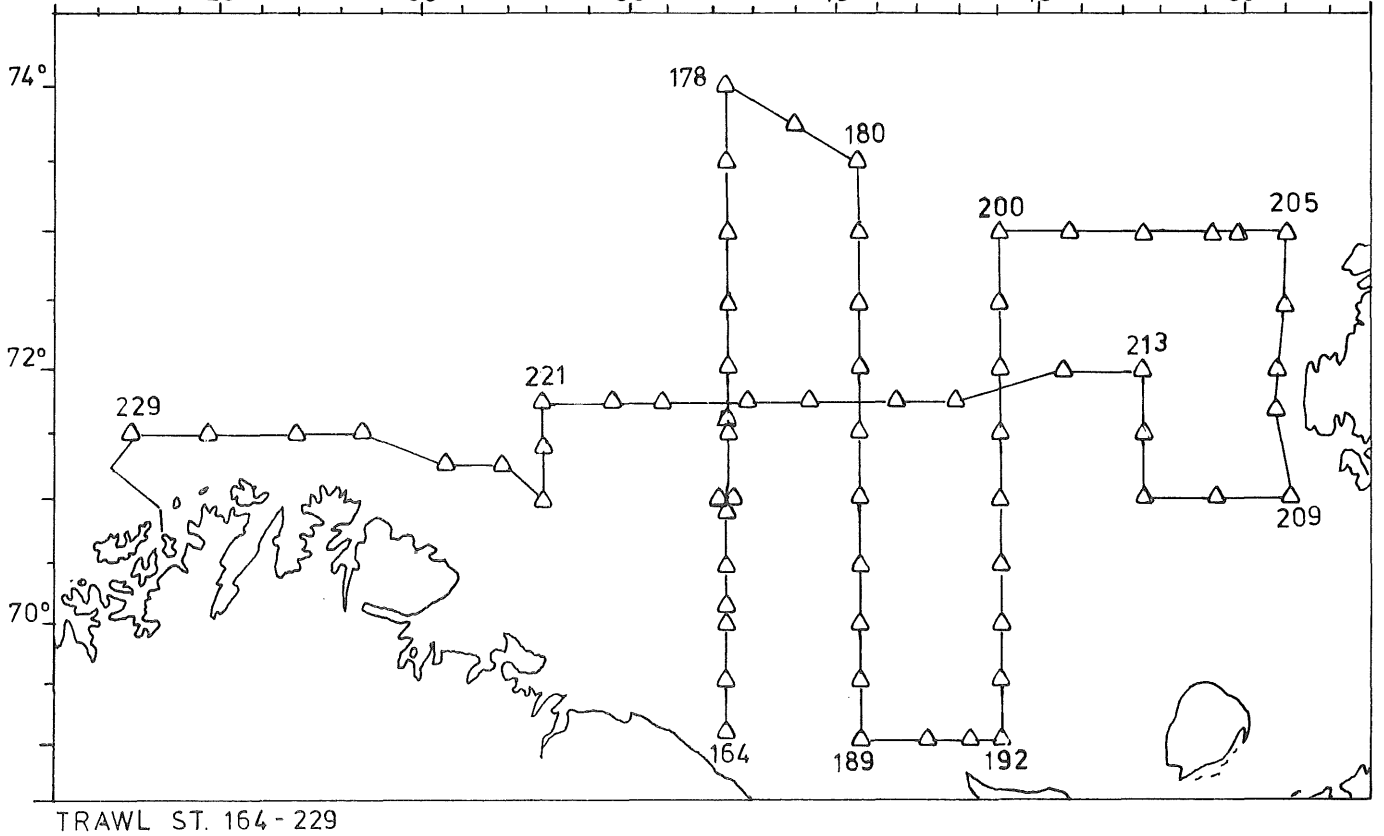
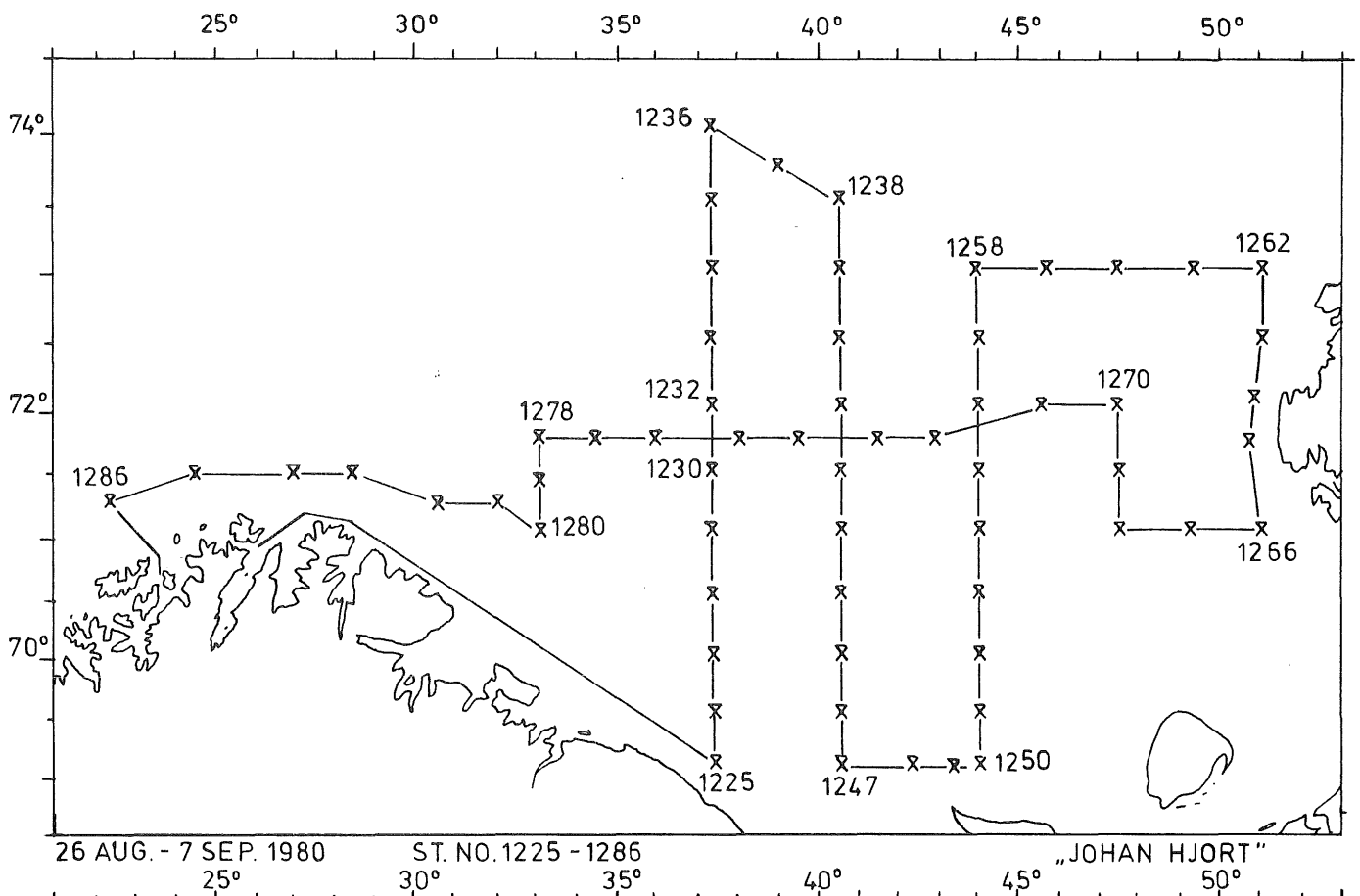


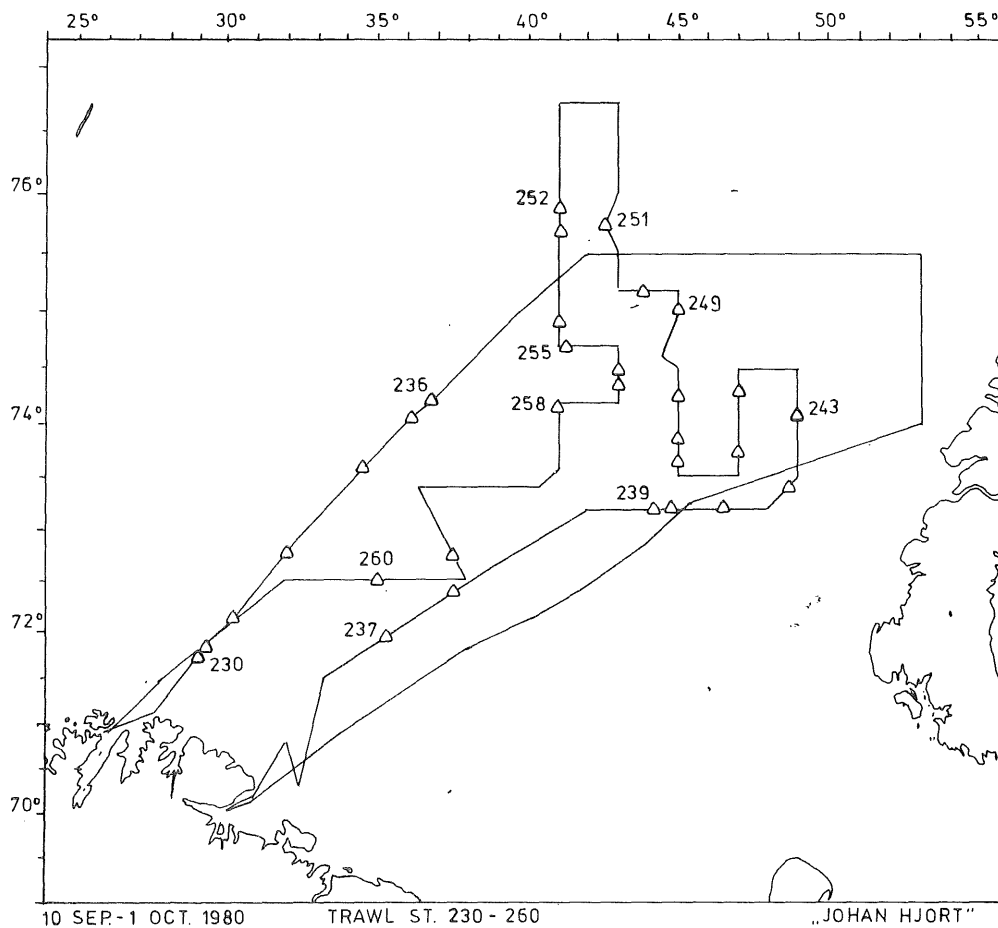
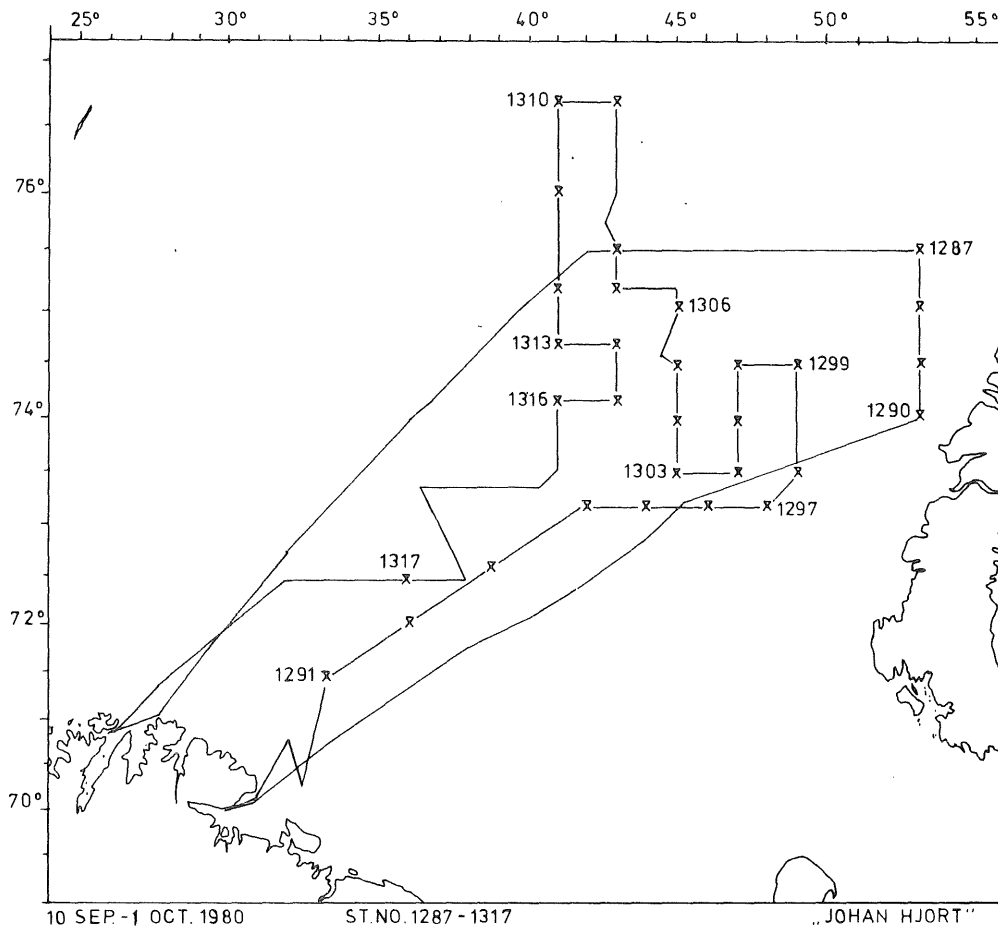


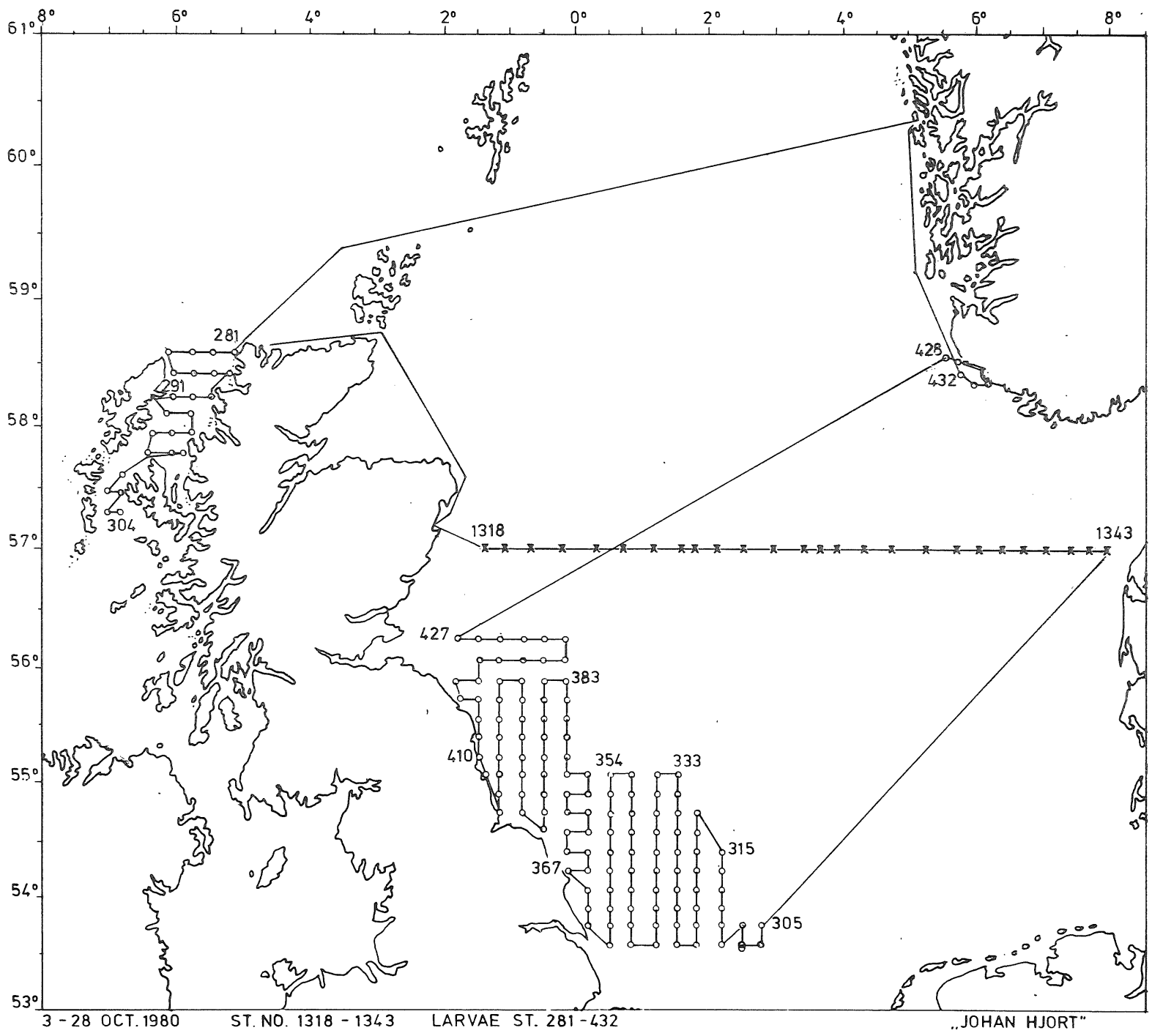




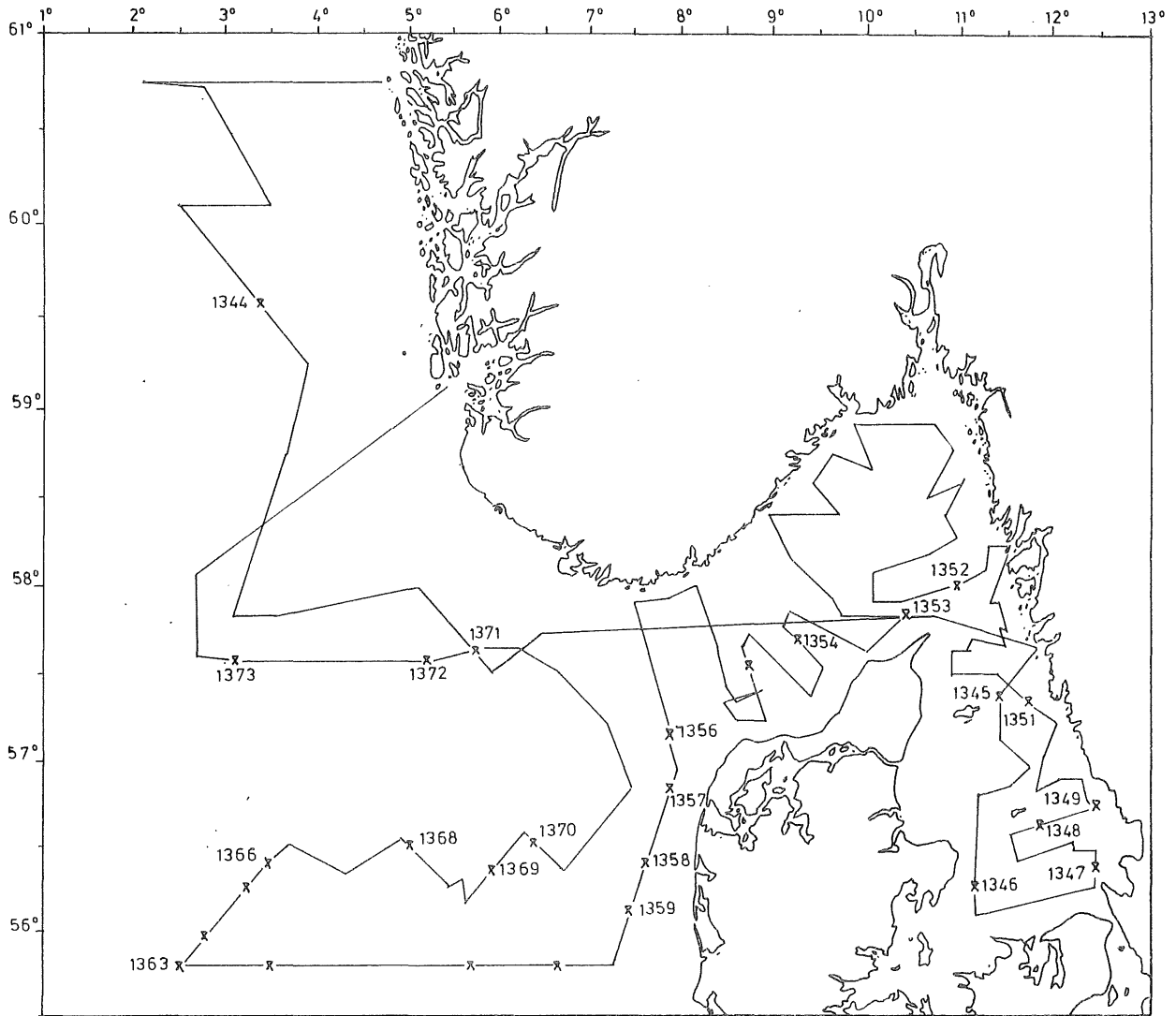






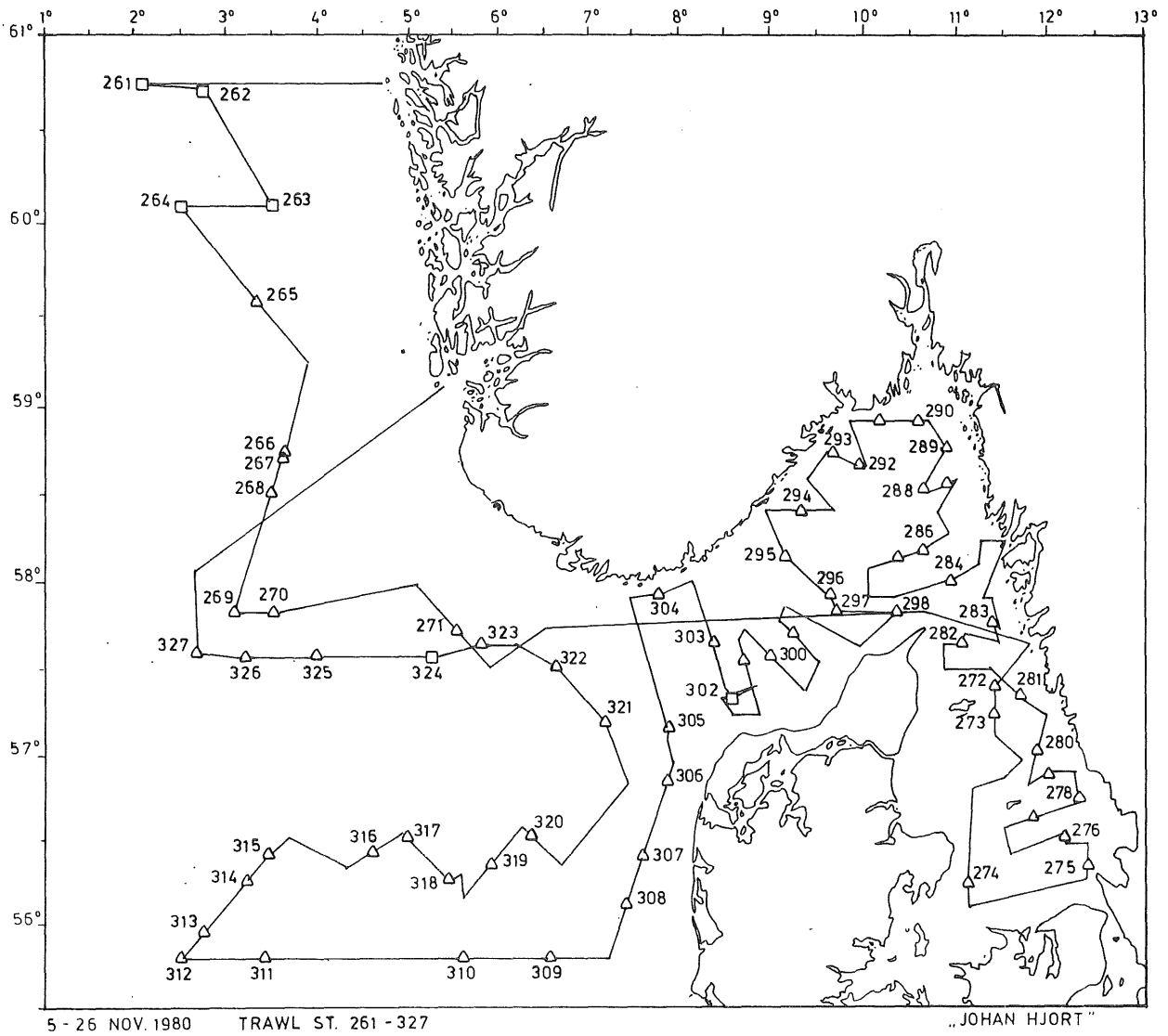


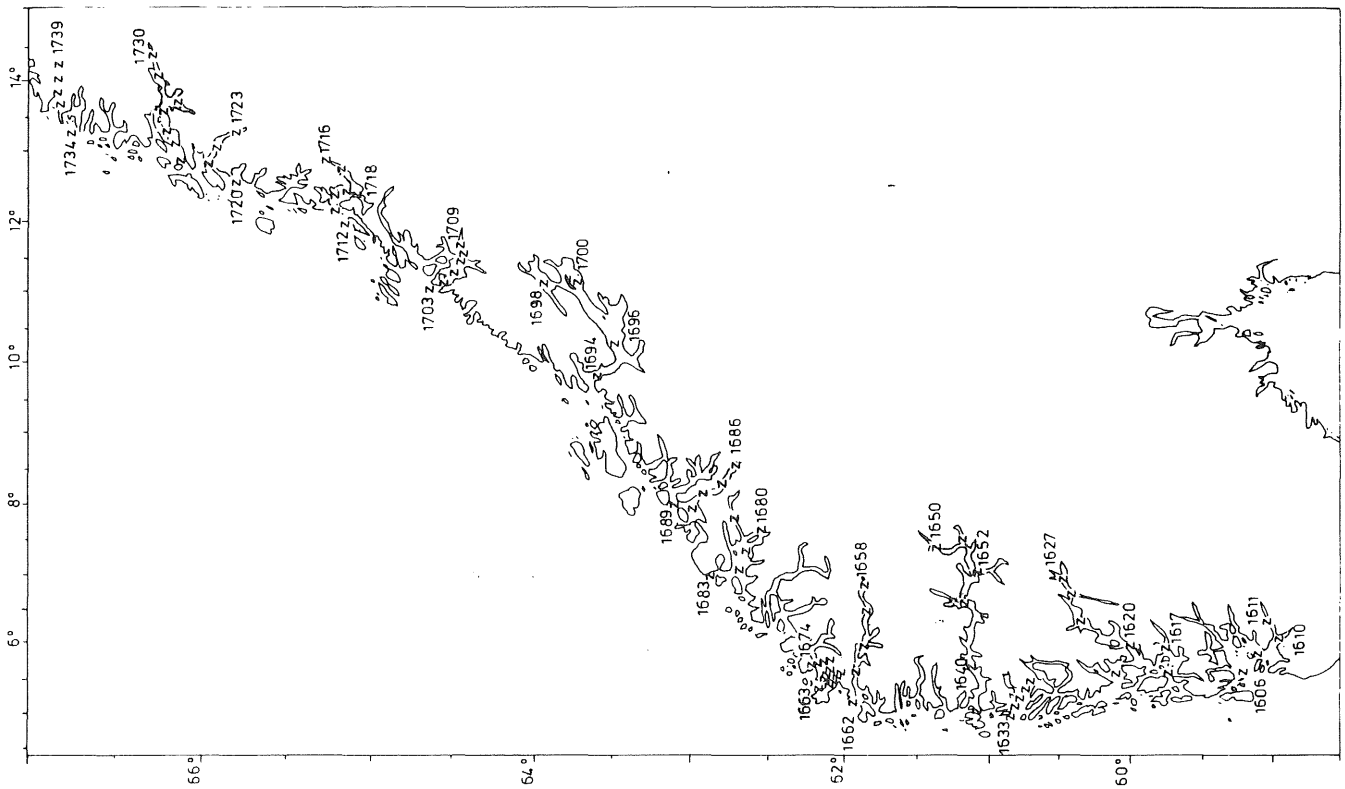
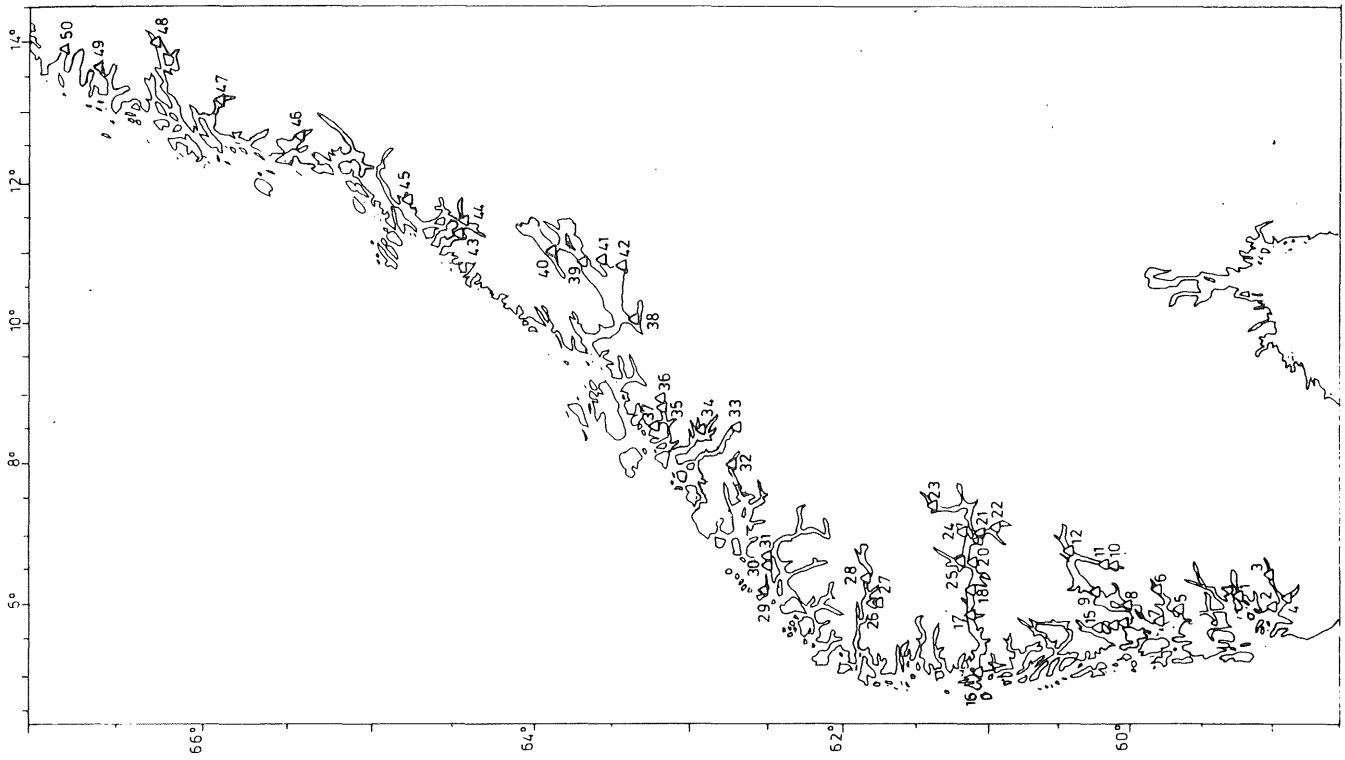
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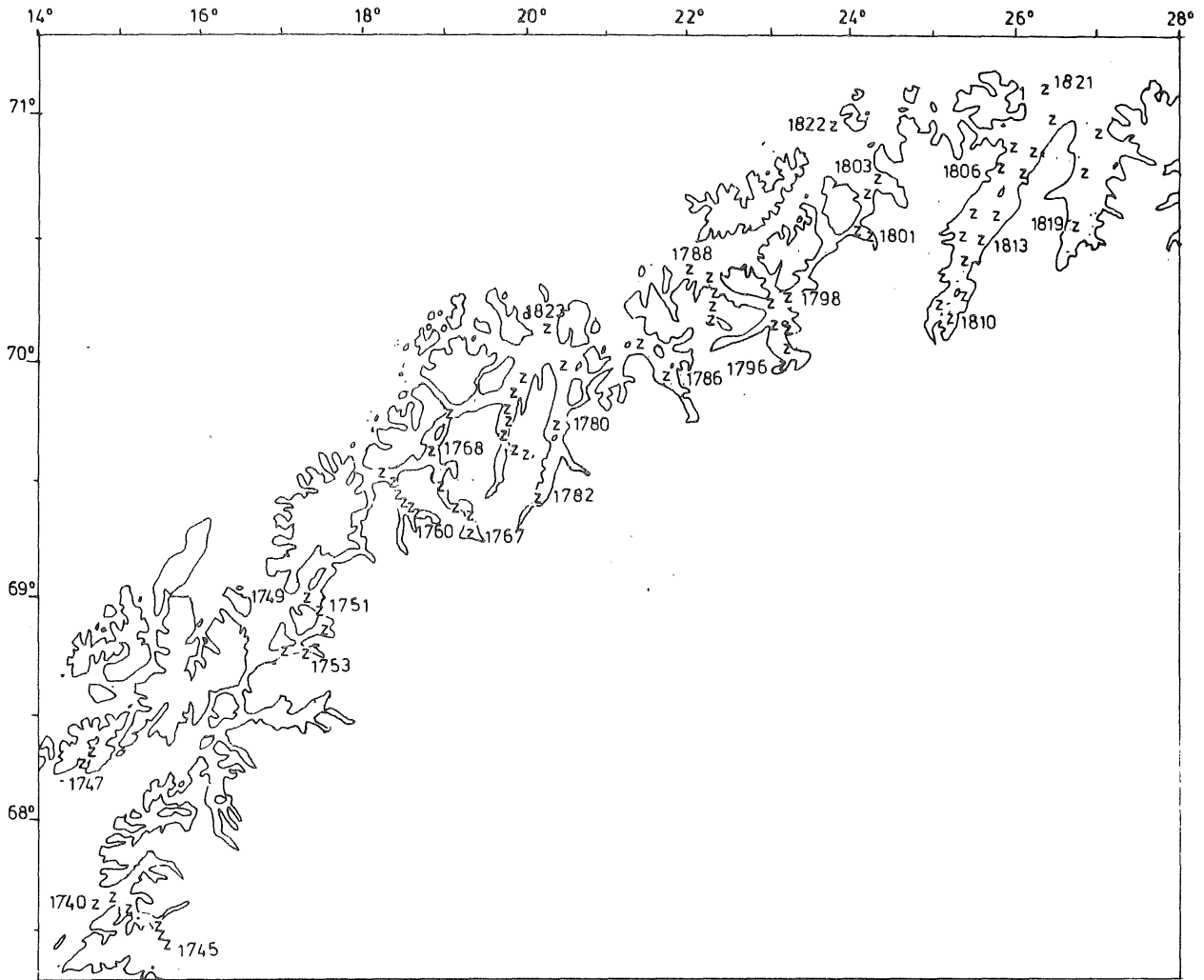


5 - 26 NOV. 1980 ST. NO. 1344 - 1373

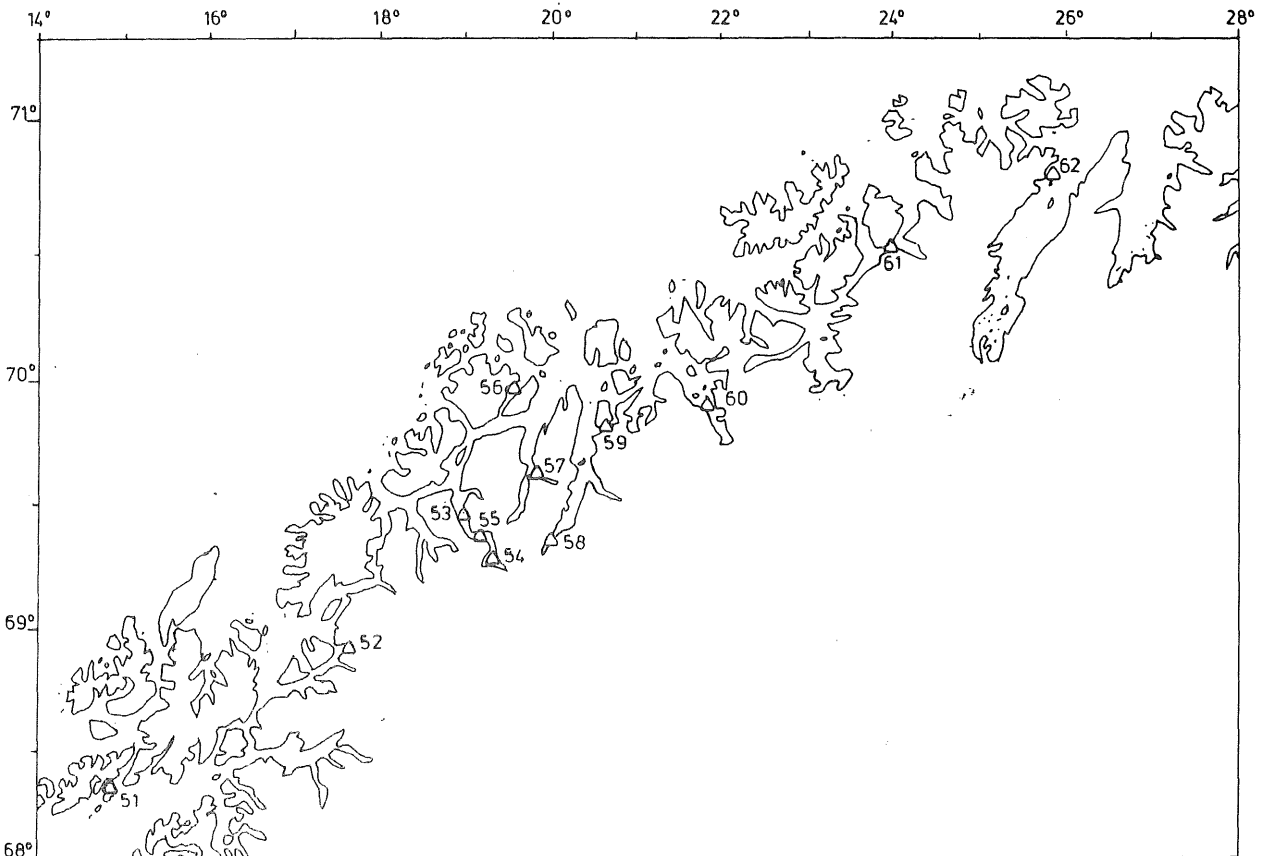
„JOHAN HJORT“





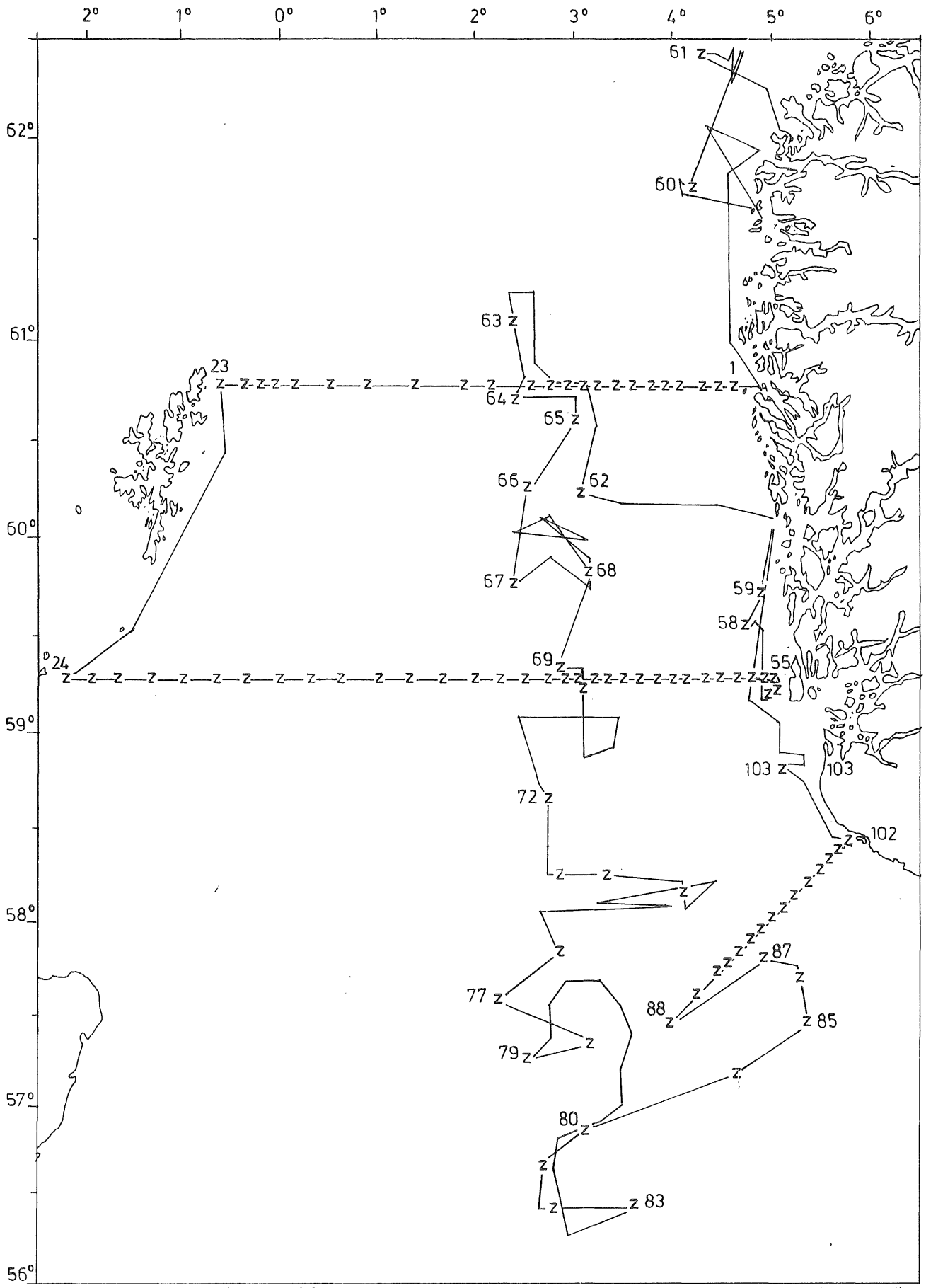


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TRAWL ST. 51-62

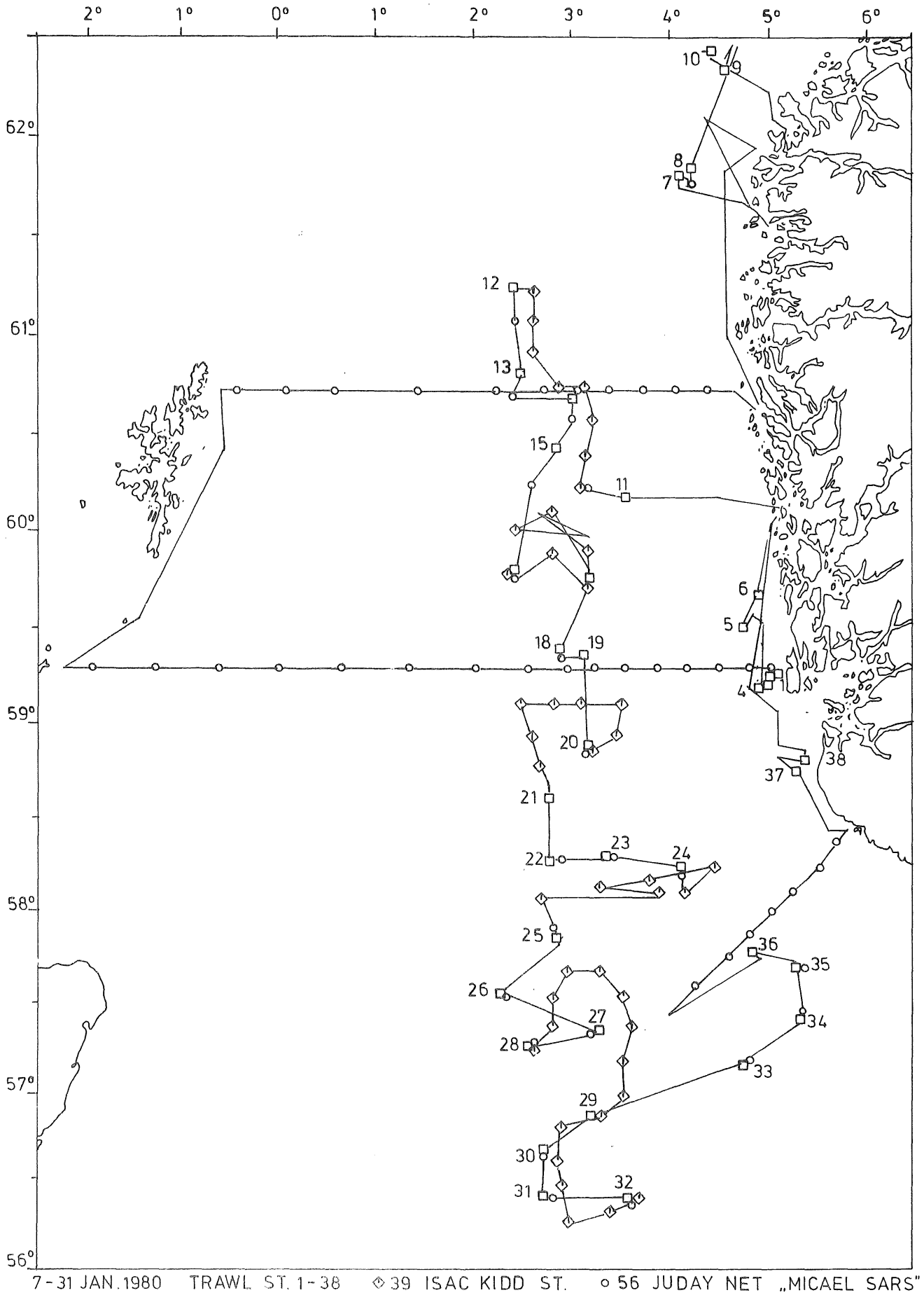
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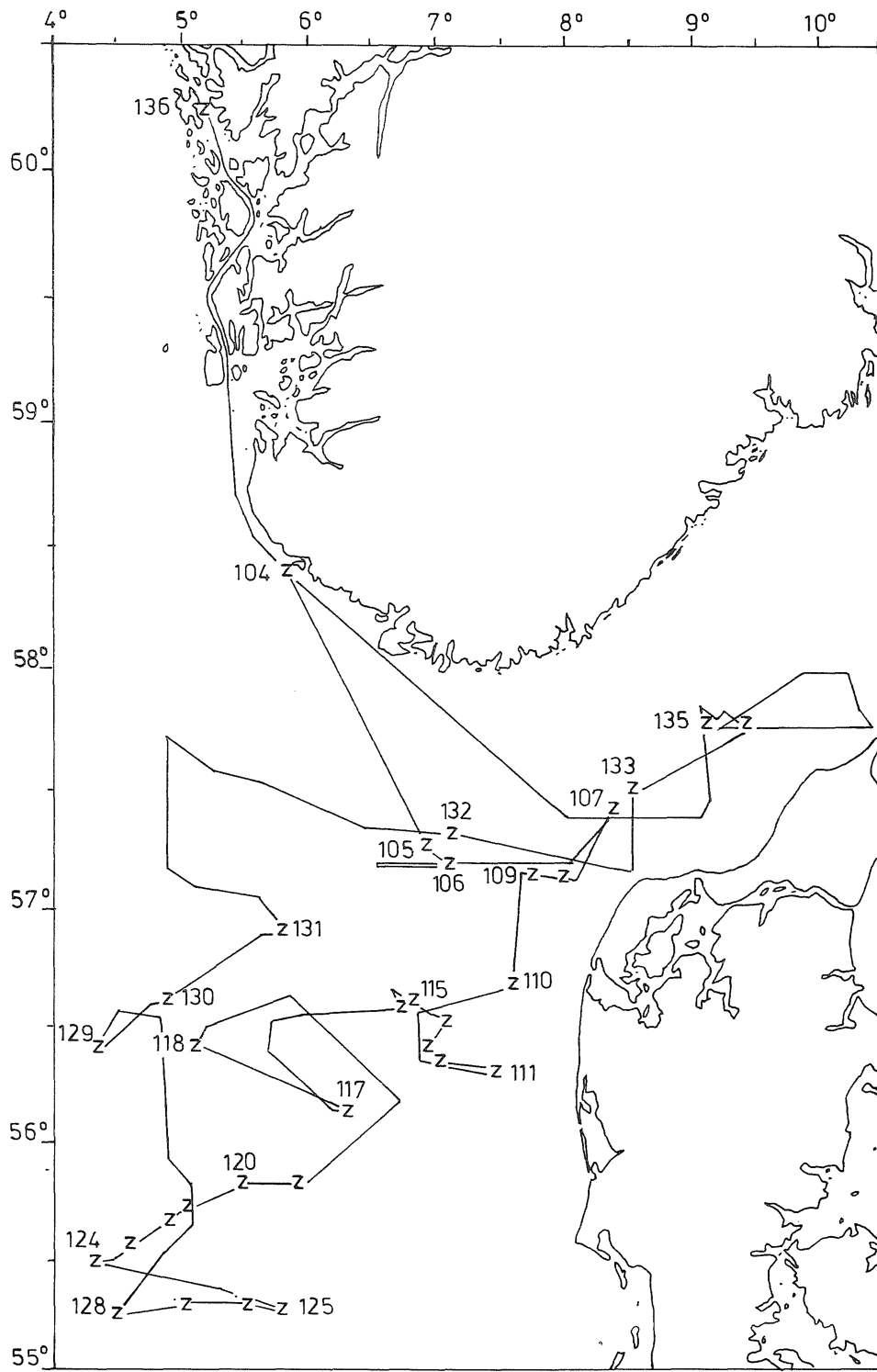


7-31 JAN.1980 ST. NO. 1-103

„MICHAEL SARS“



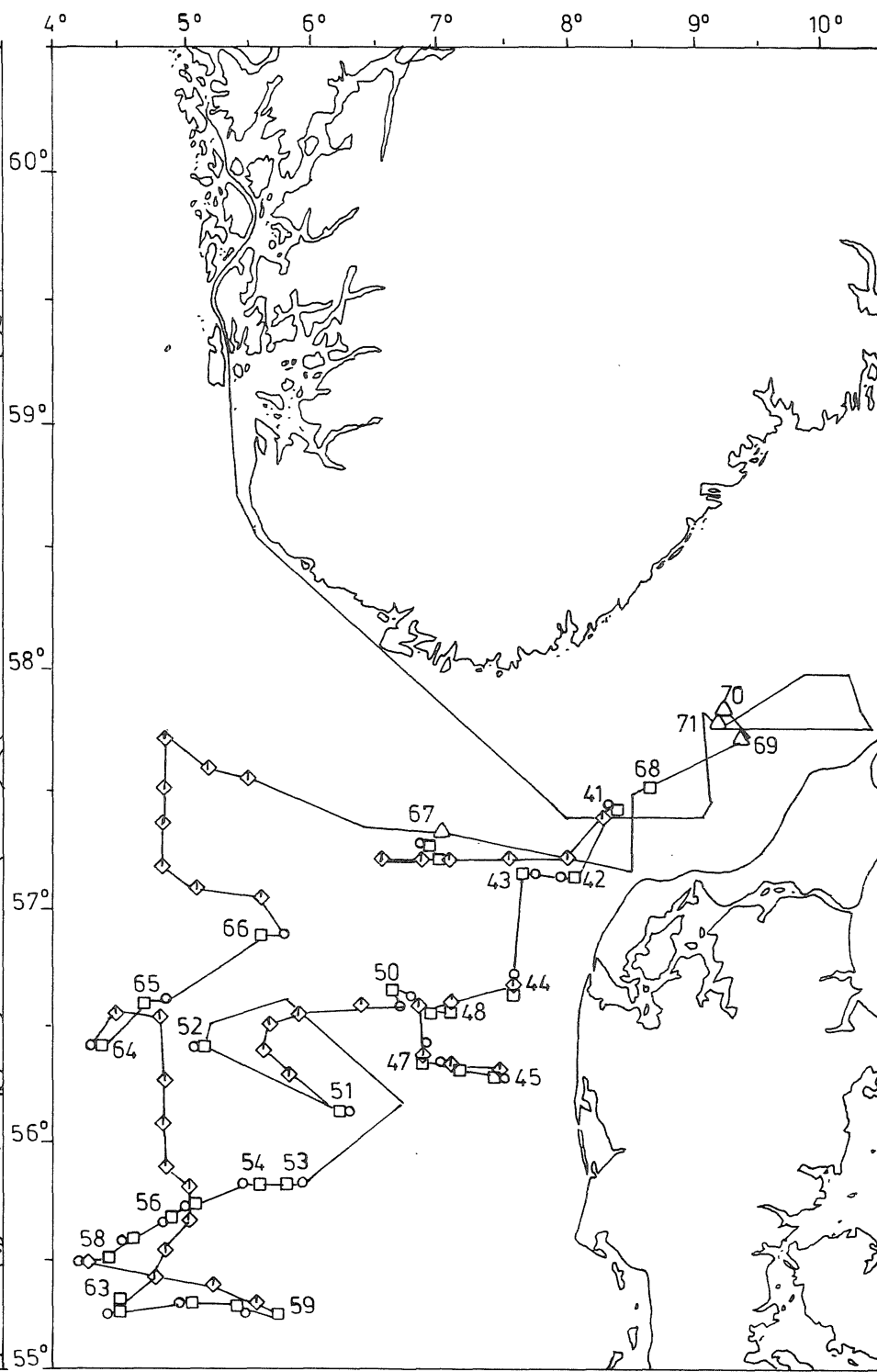




1-13 FEB. 1980

ST.NO. 104-136

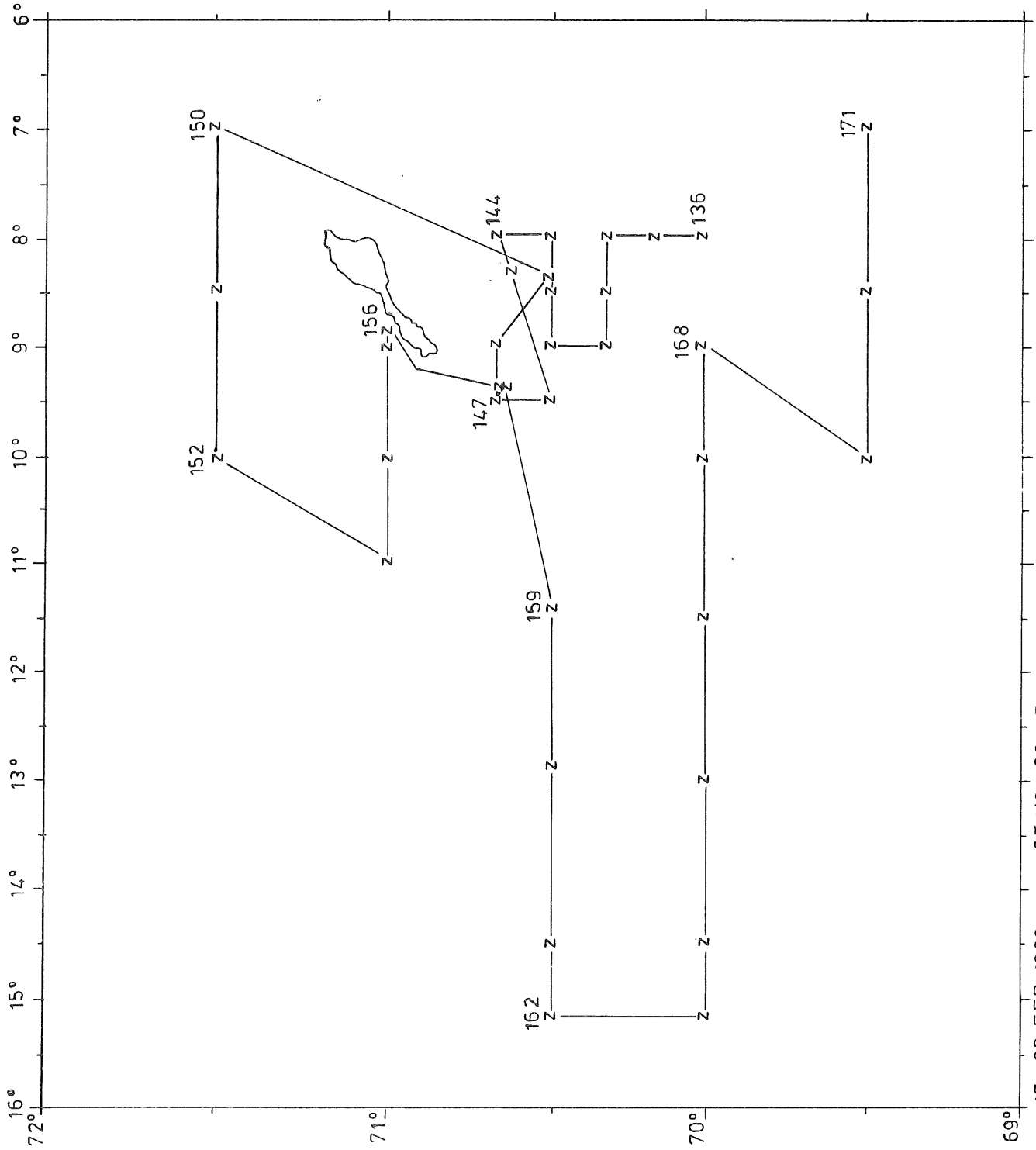
„MICAEL SARIS“



TRAWL ST. 39-71

◇ 36 ISAC KIDD ST.

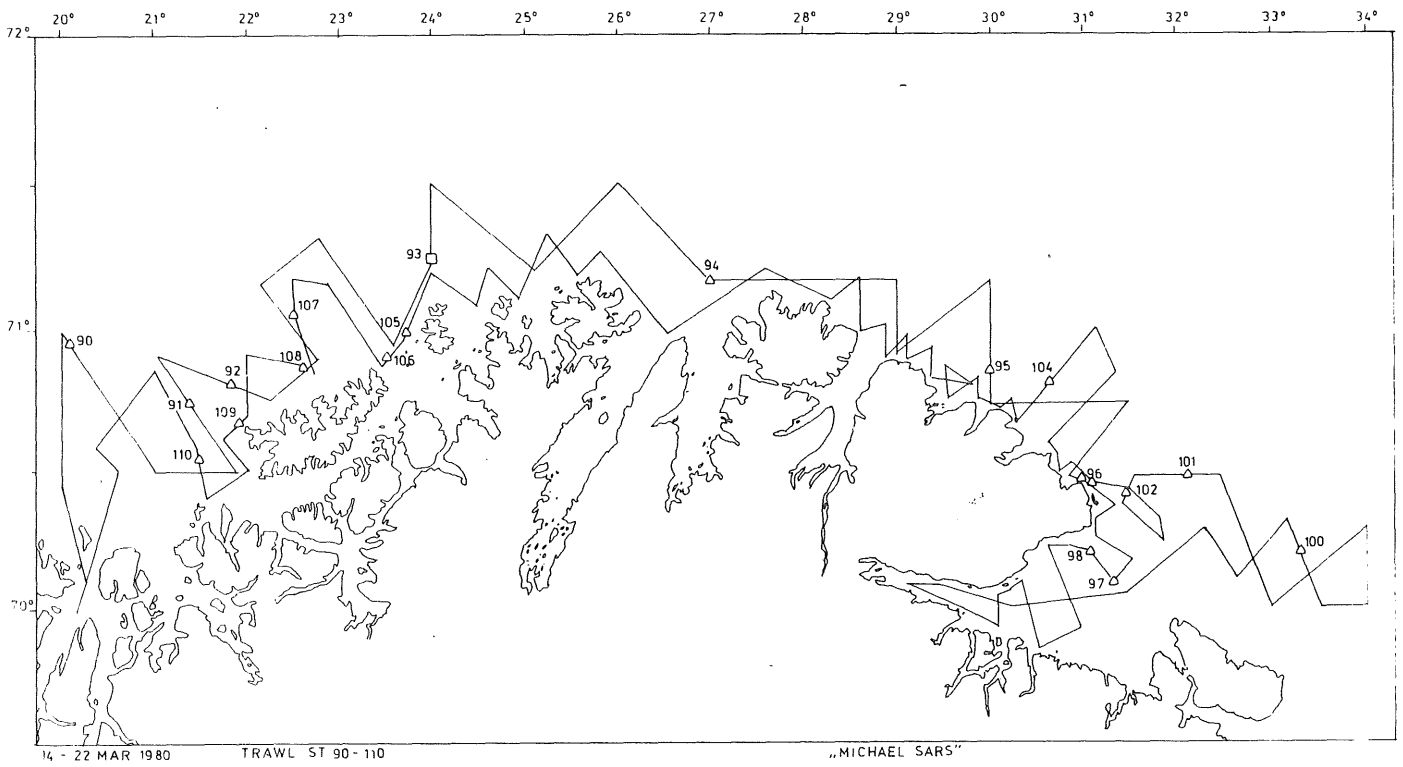
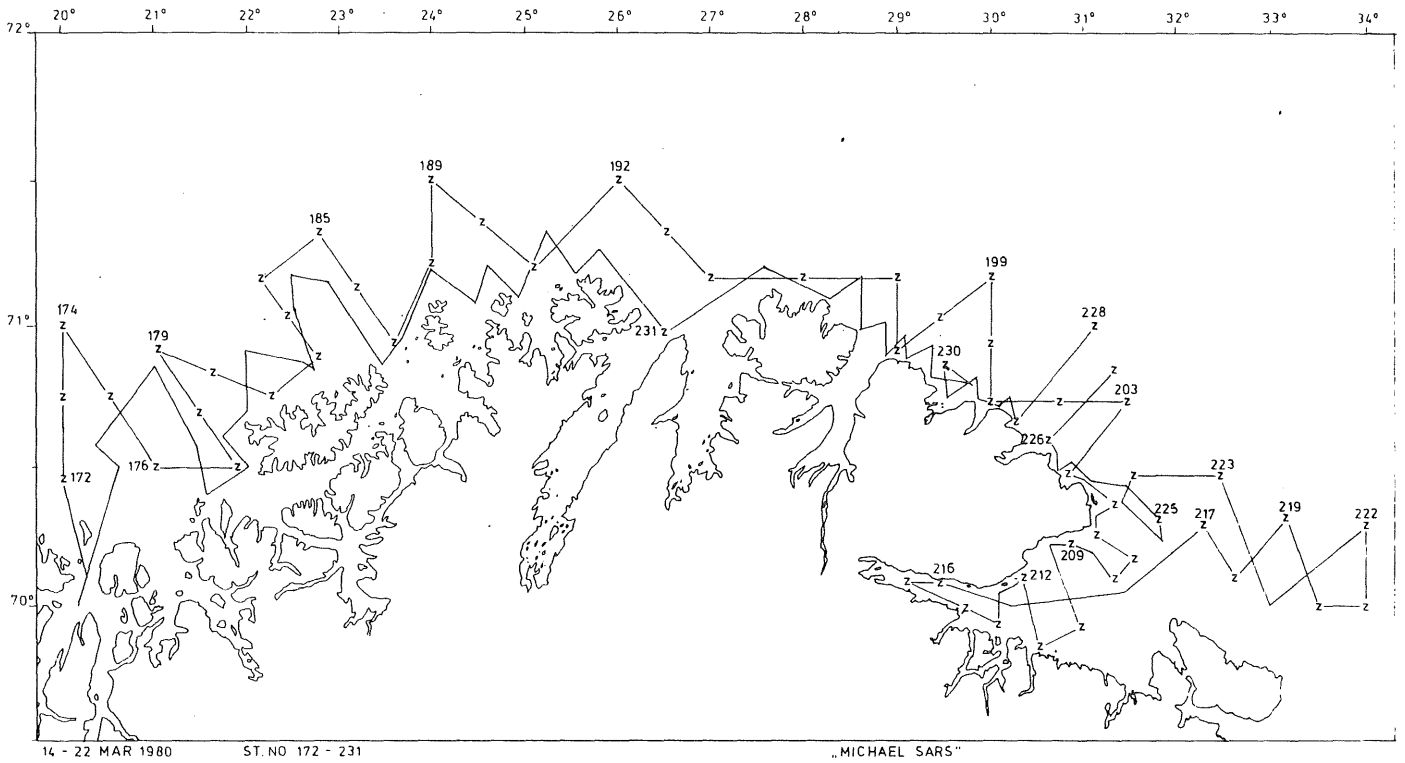
○ 26 JUDAY NET ST.

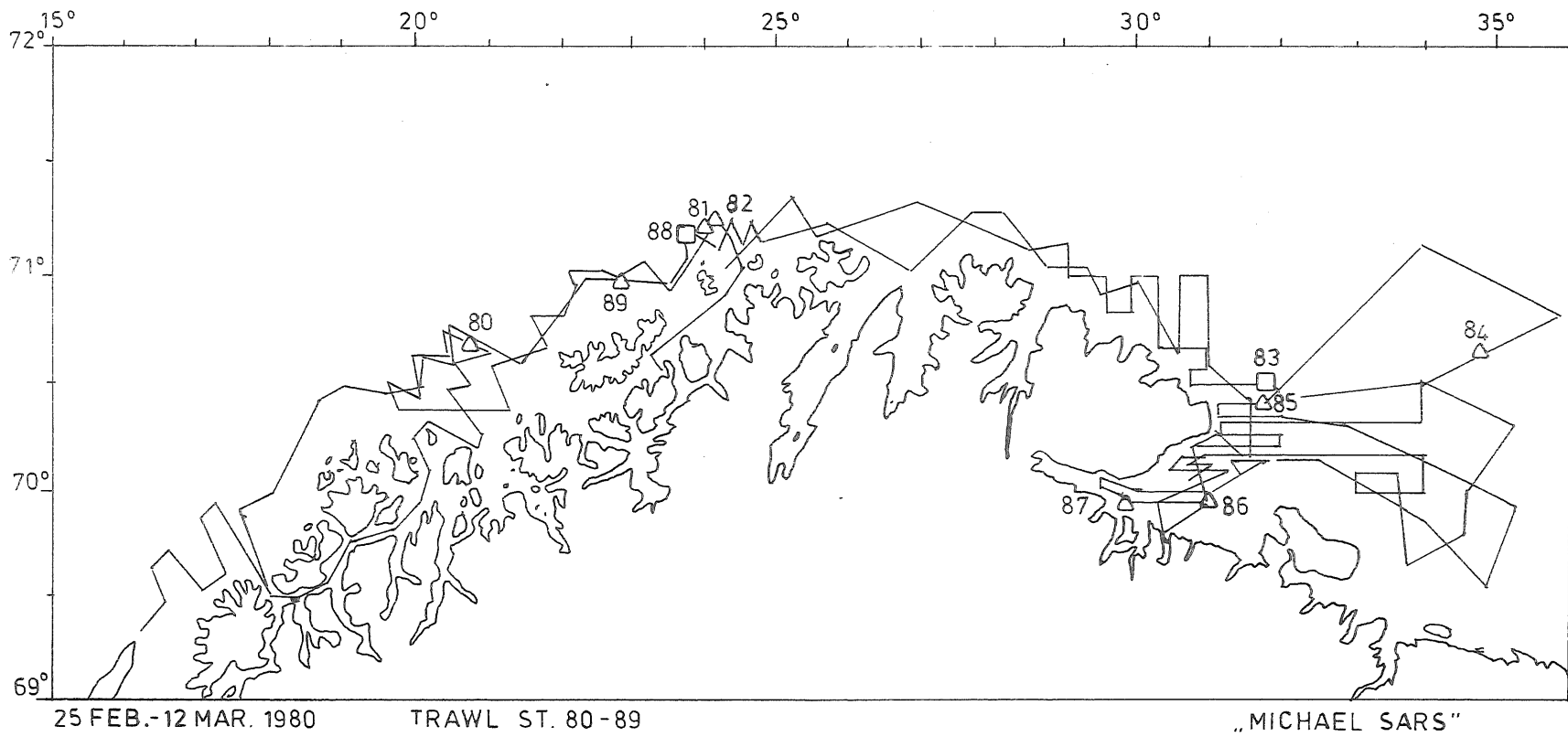


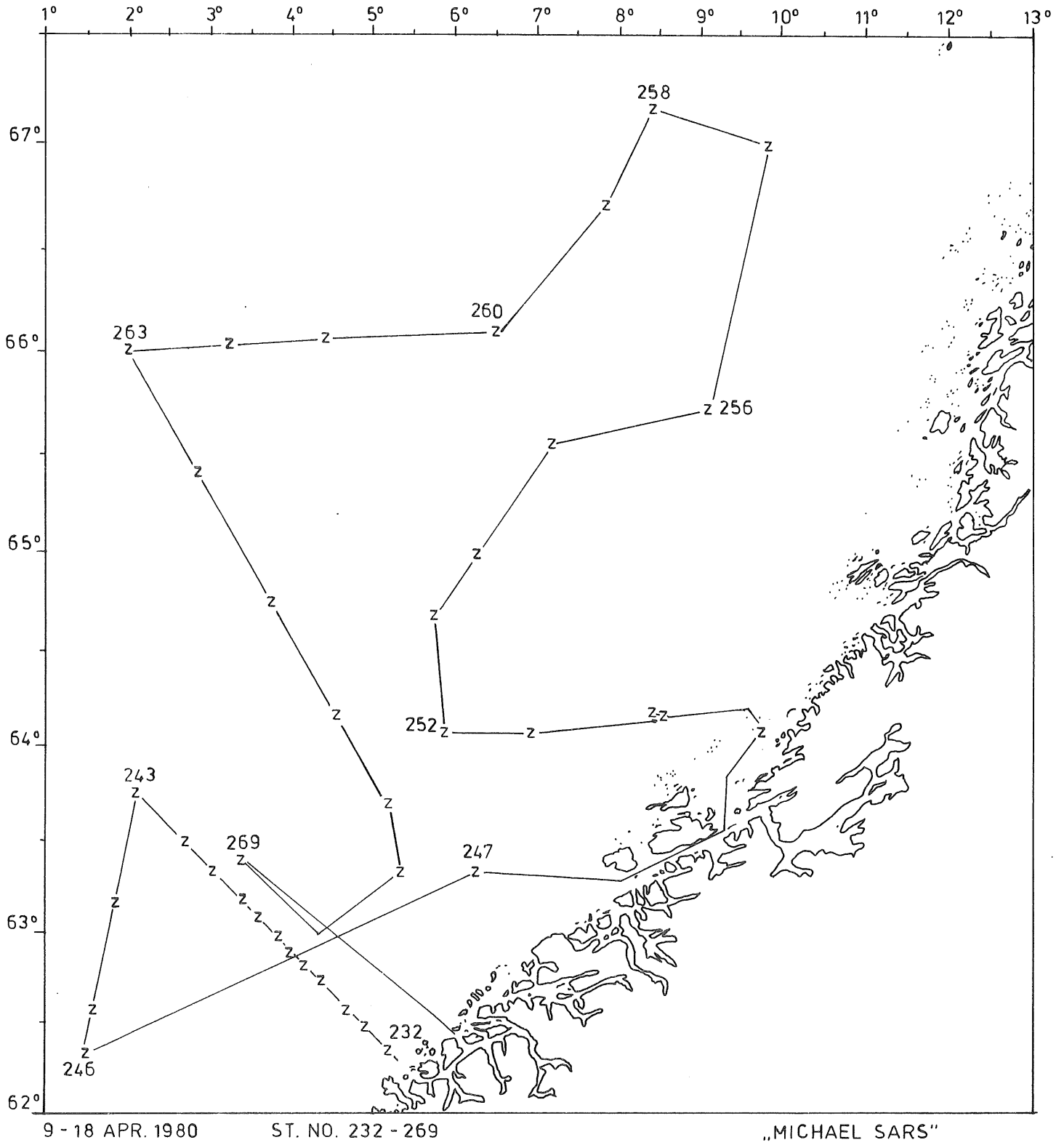
„MICHAEL SARS“

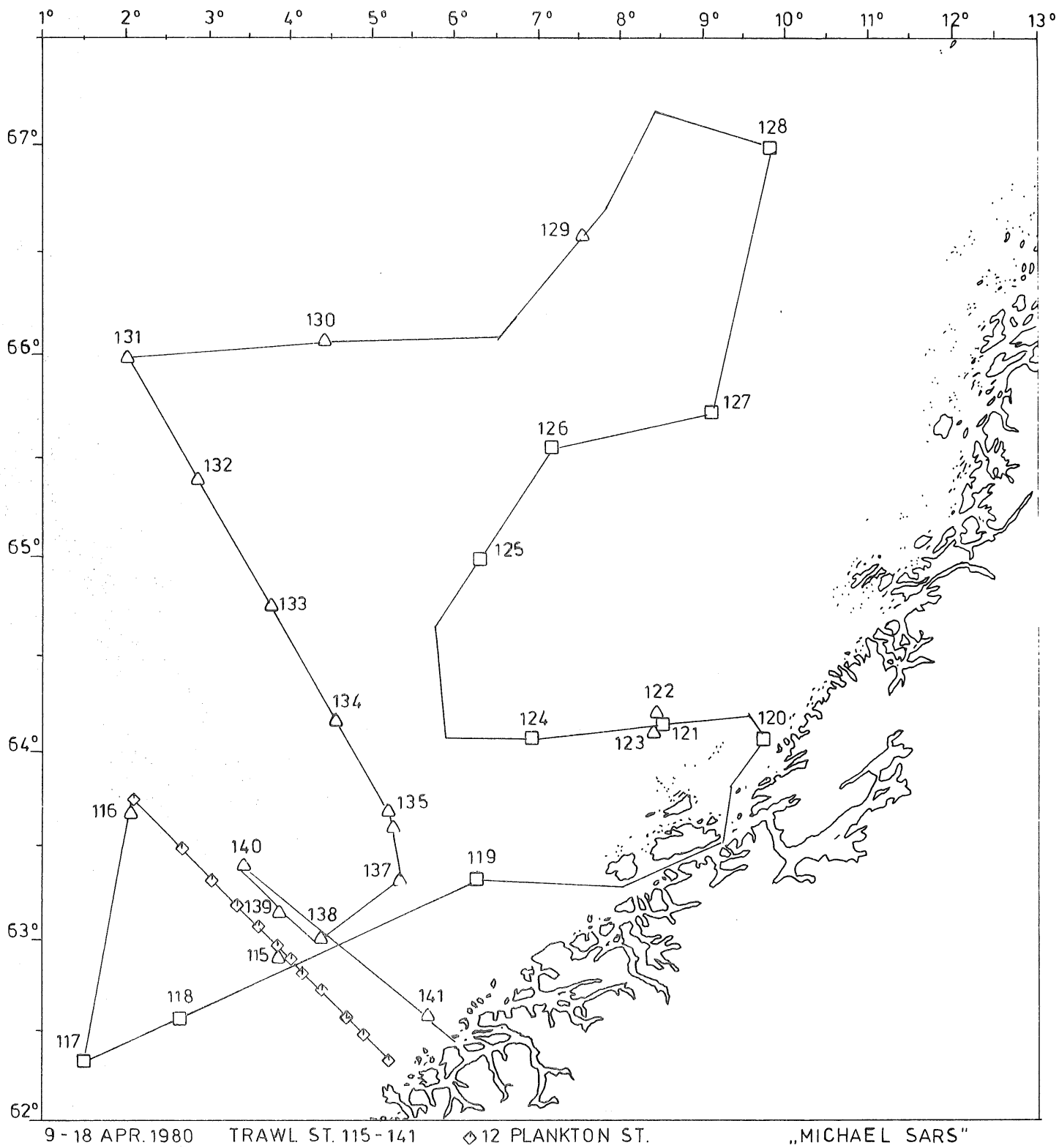
ST. NO. 136 - 171

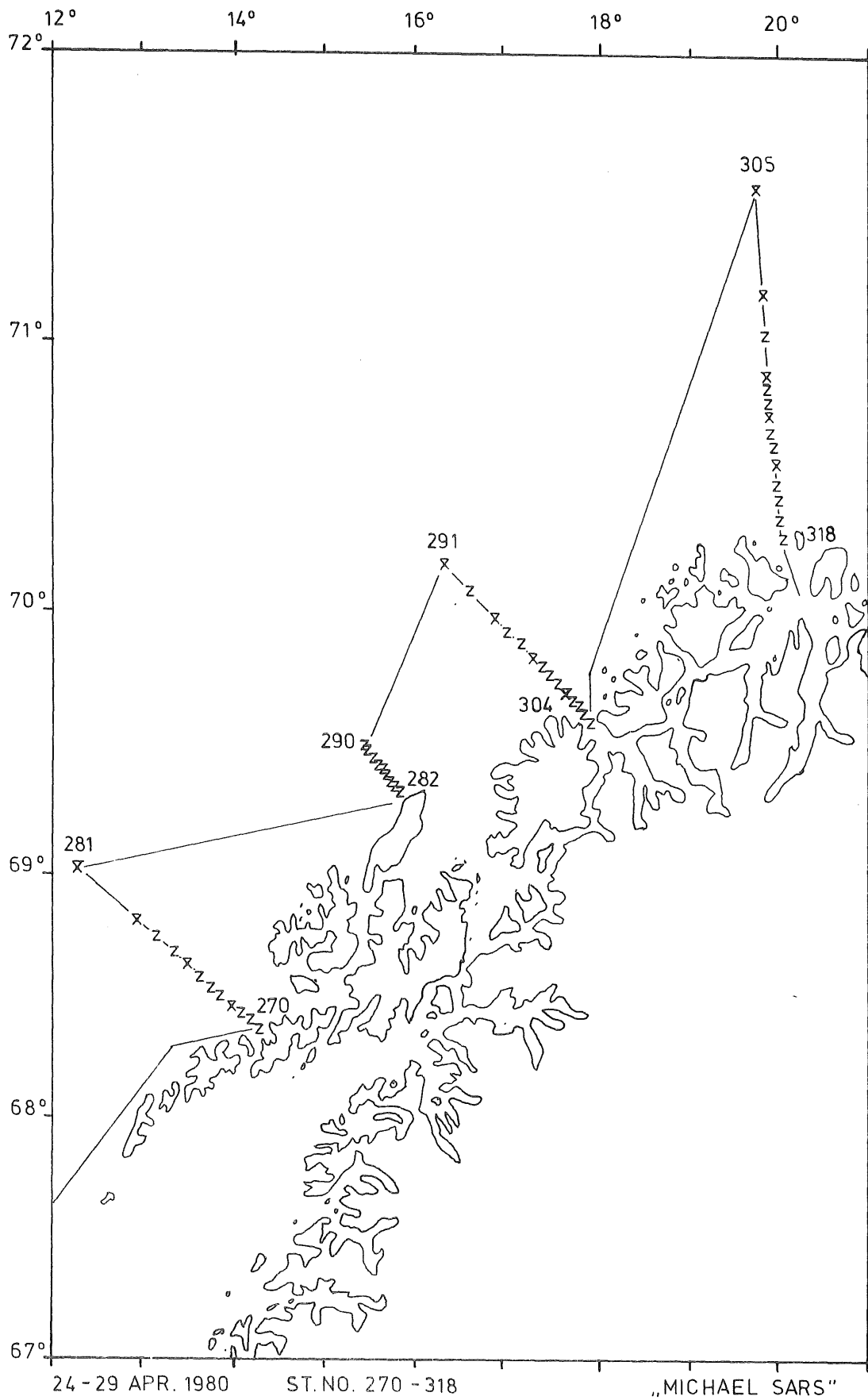
17 - 23 FEB. 1980



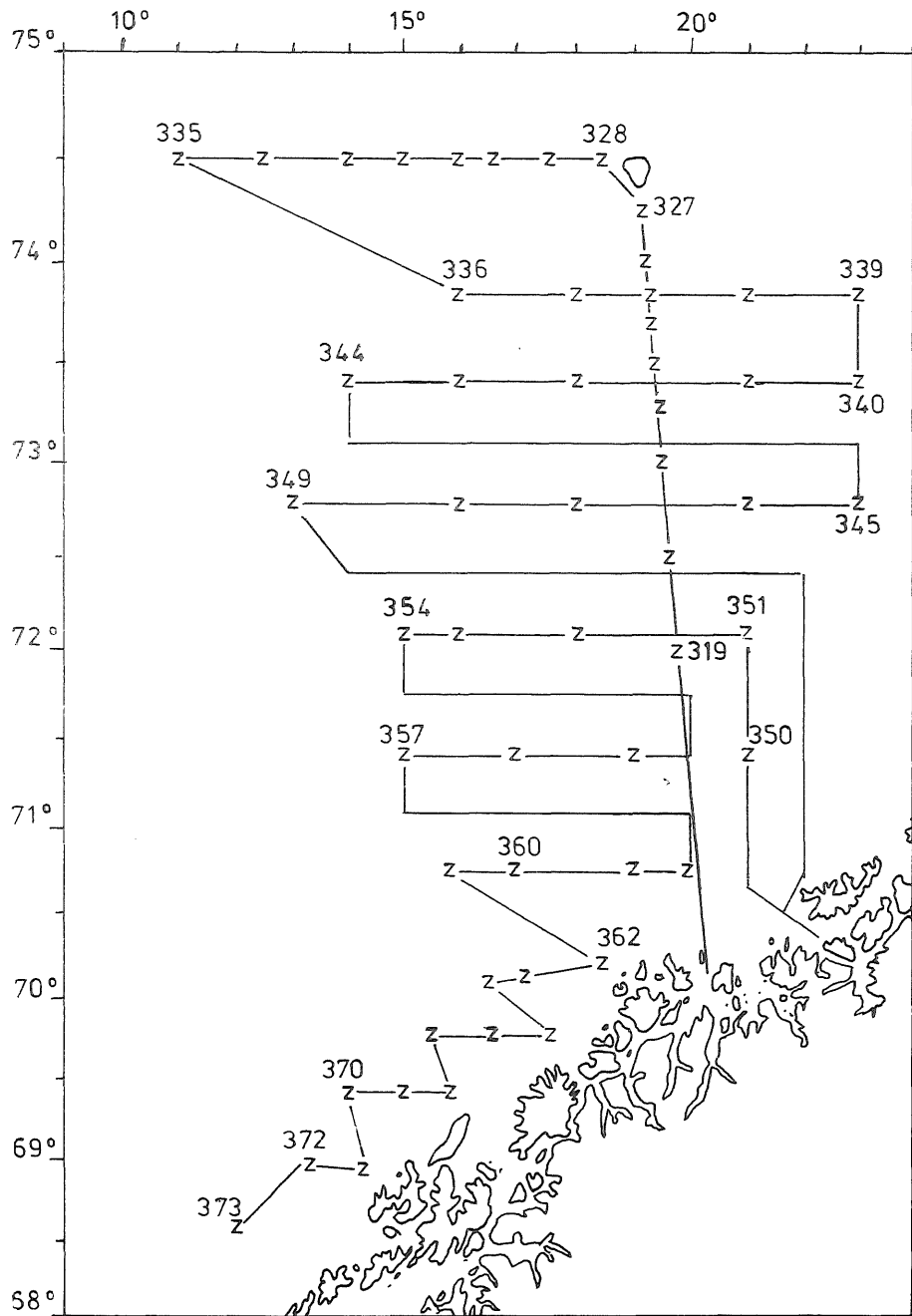




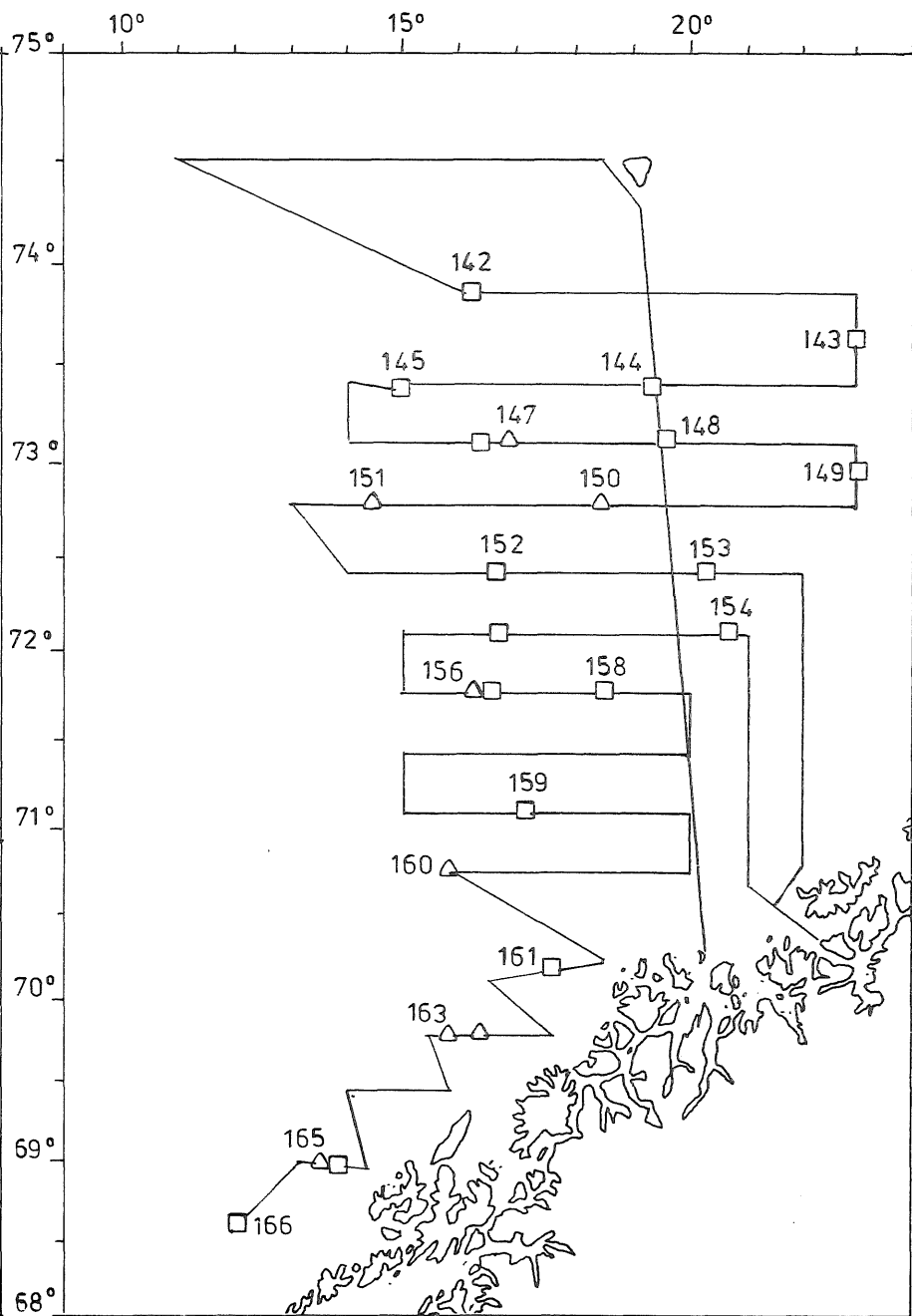






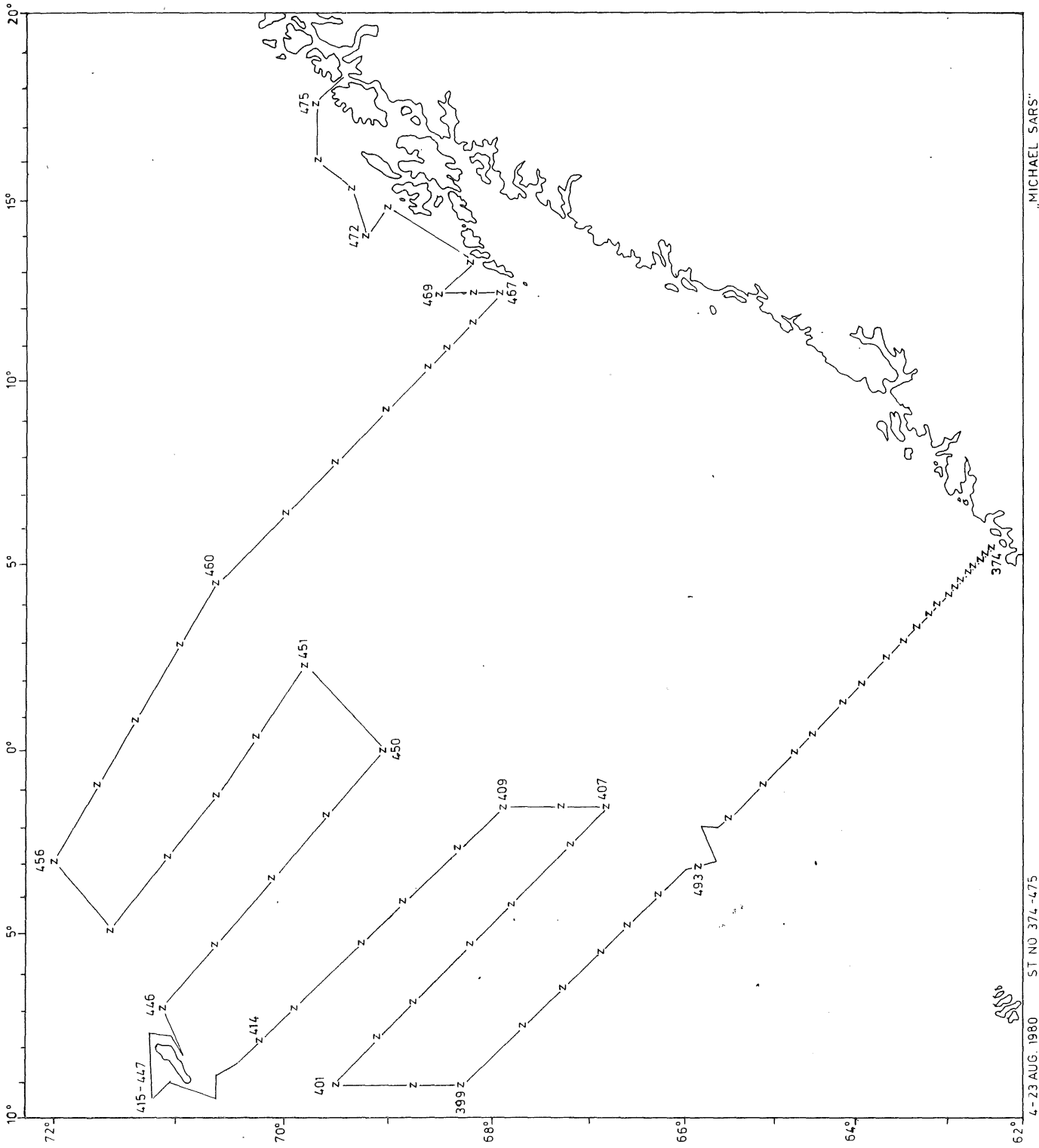


1-16 MAY 1980 ST.NO. 319-373



TRAWL ST. 142-166

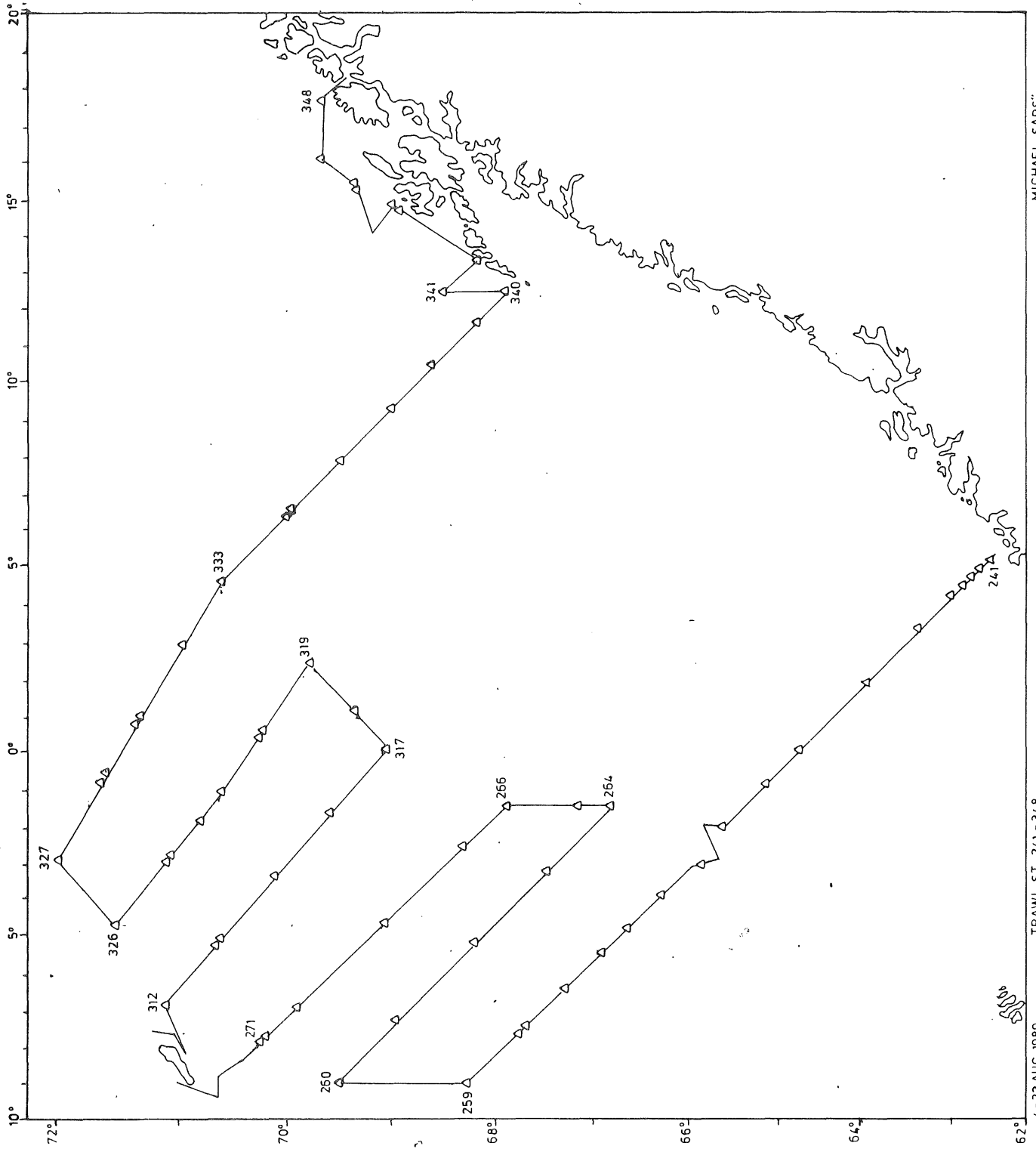
„MICHAEL SARS“



„MICHAEL SARS“

ST NO 374-475

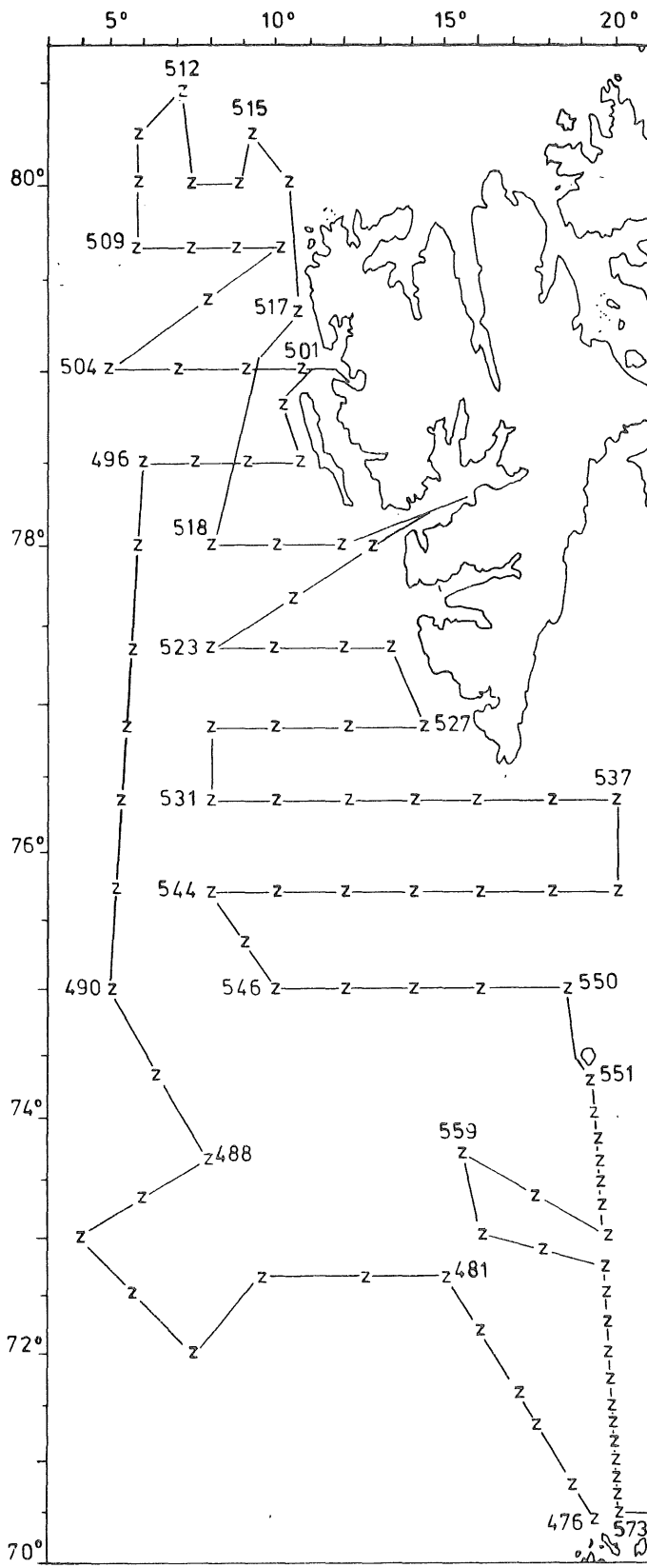
4-23 AUG. 1980



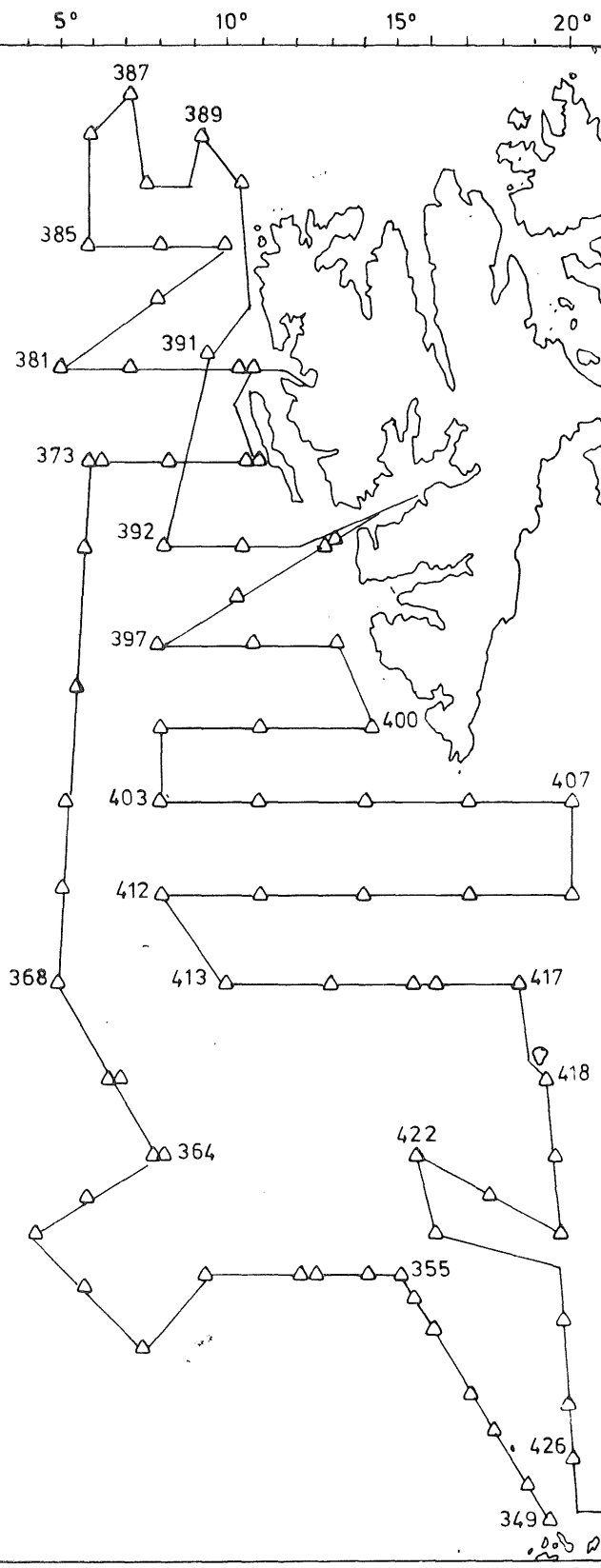
"MICHAEL SARRS"

TRAWL ST. 241 - 348

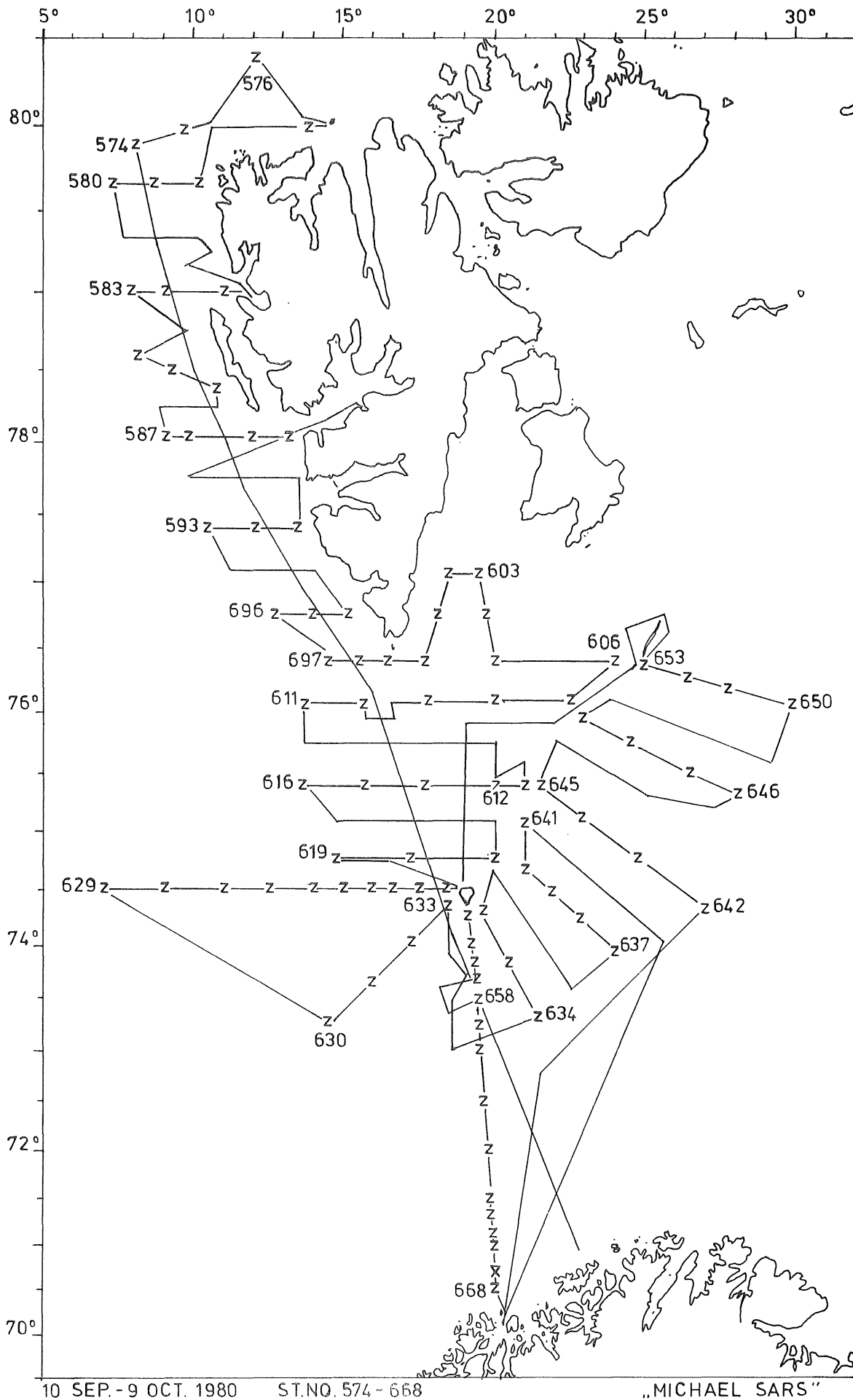
4-23 AUG 1980

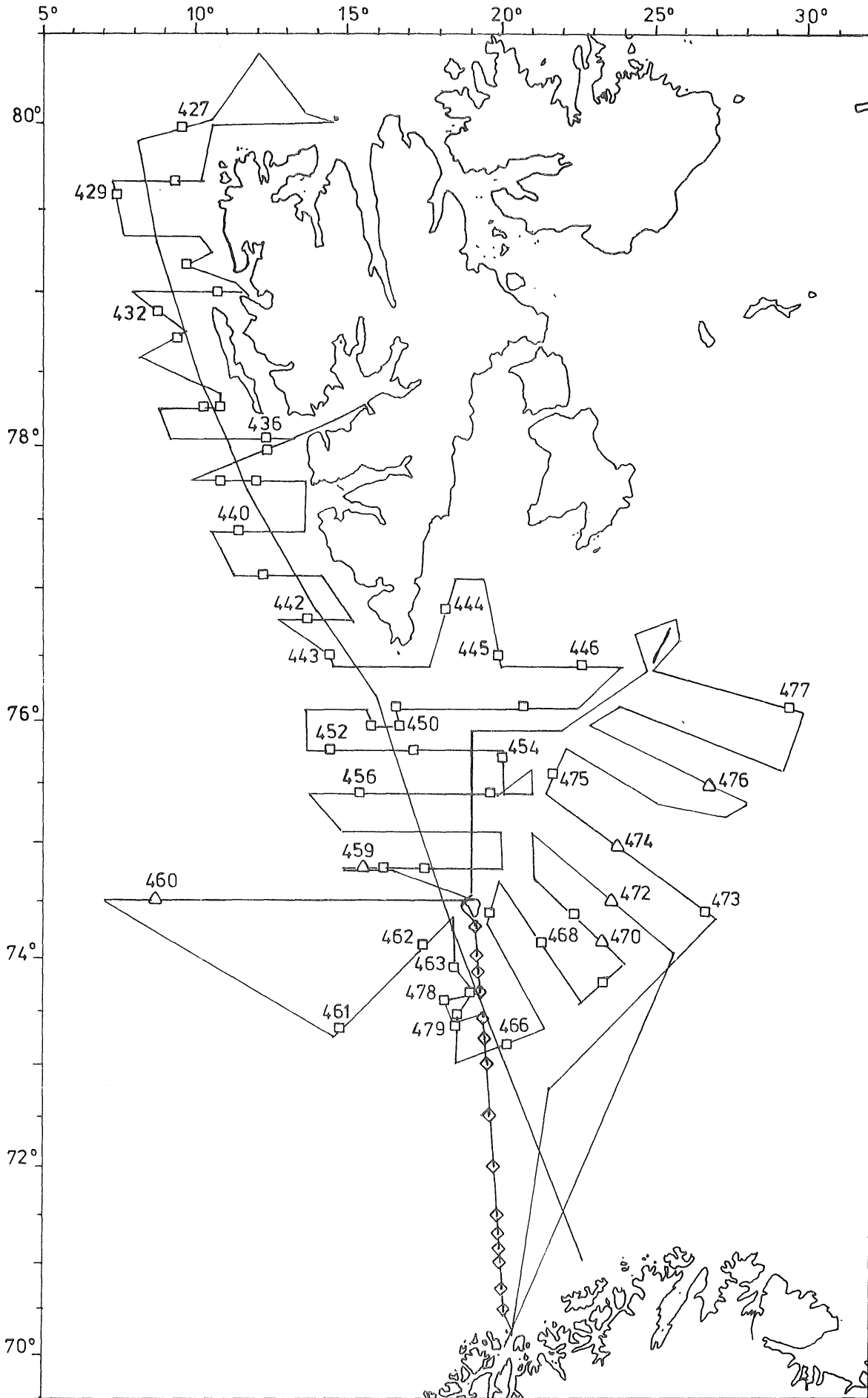


25 AUG. - 8 SEP. 1980 ST. NO. 476 - 573

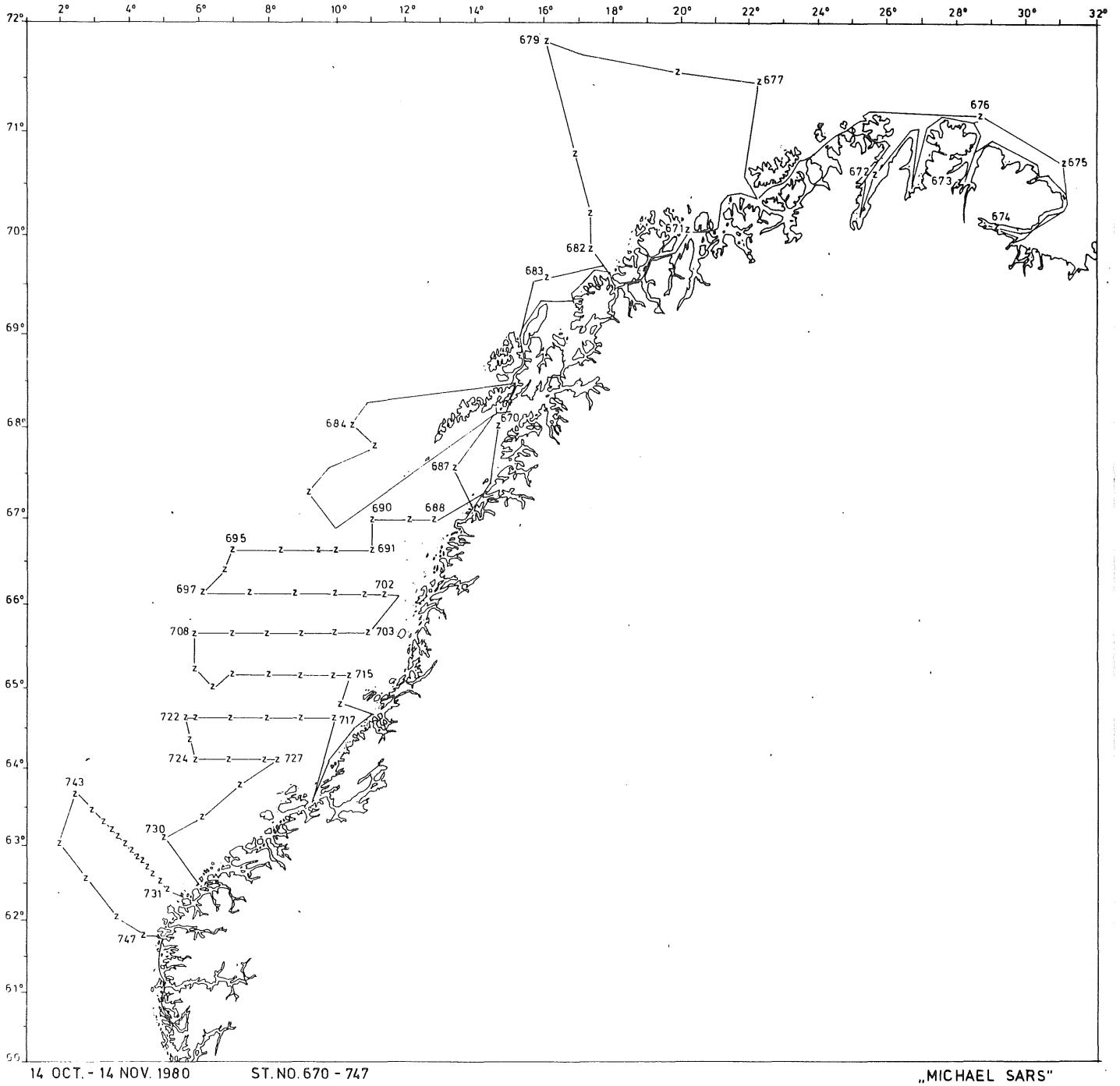


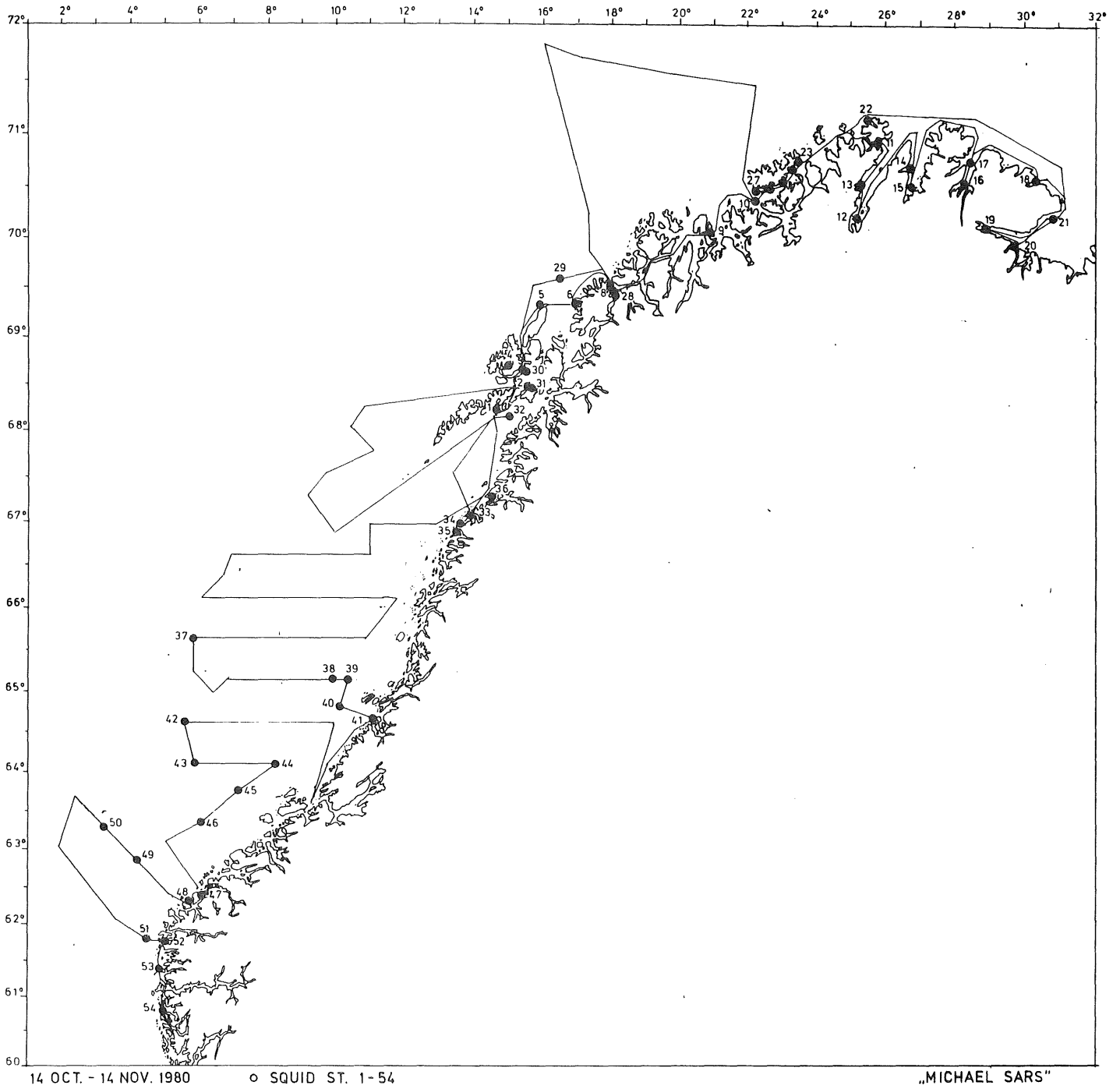
TRAWL ST. 349 - 426 „MICHAEL SARS“



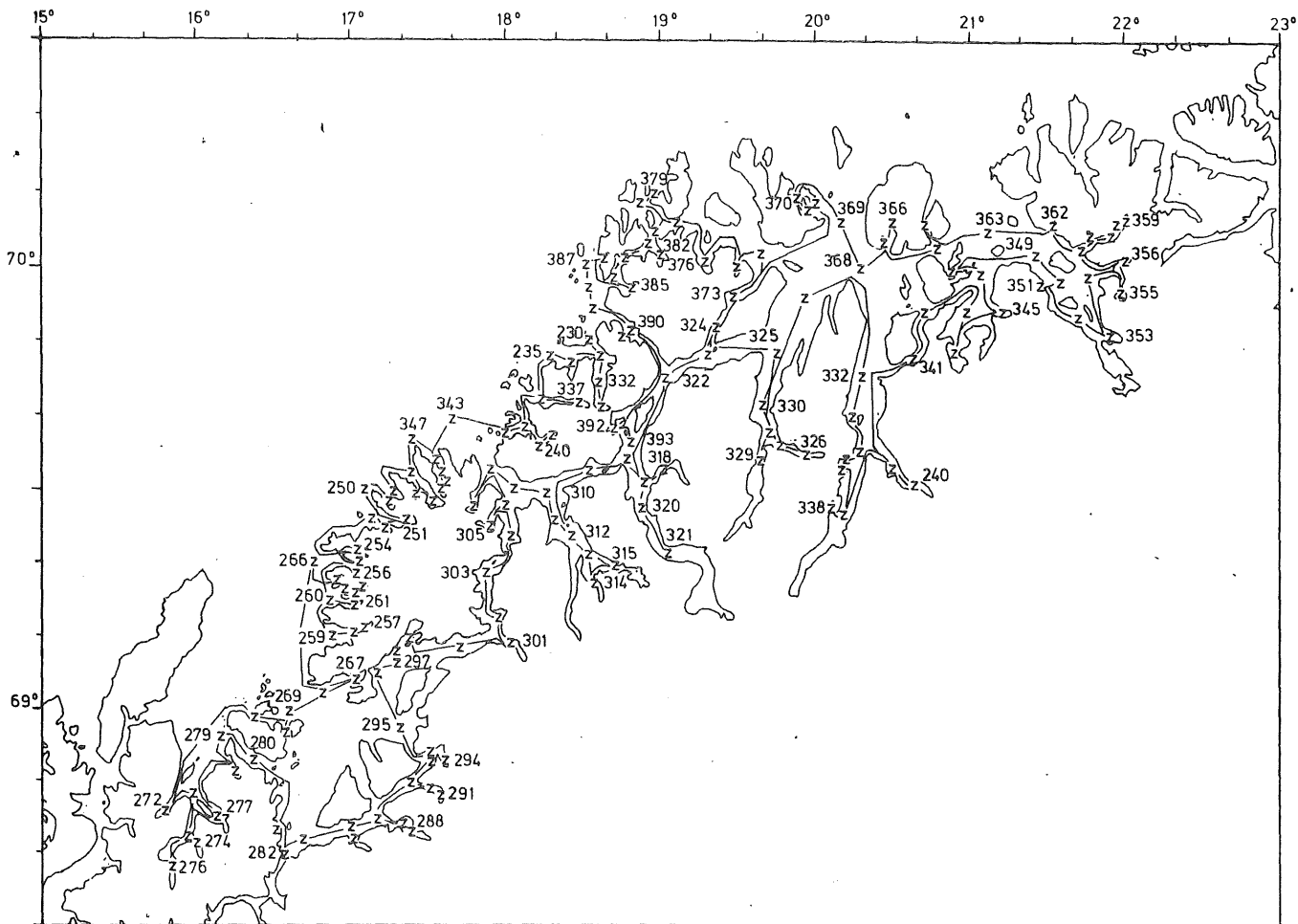


10 SEP. - 9 OCT. 1980      TRAWL ST. 427 - 479      ◇ 15 PLANKTON ST. „MICHAEL SARS“



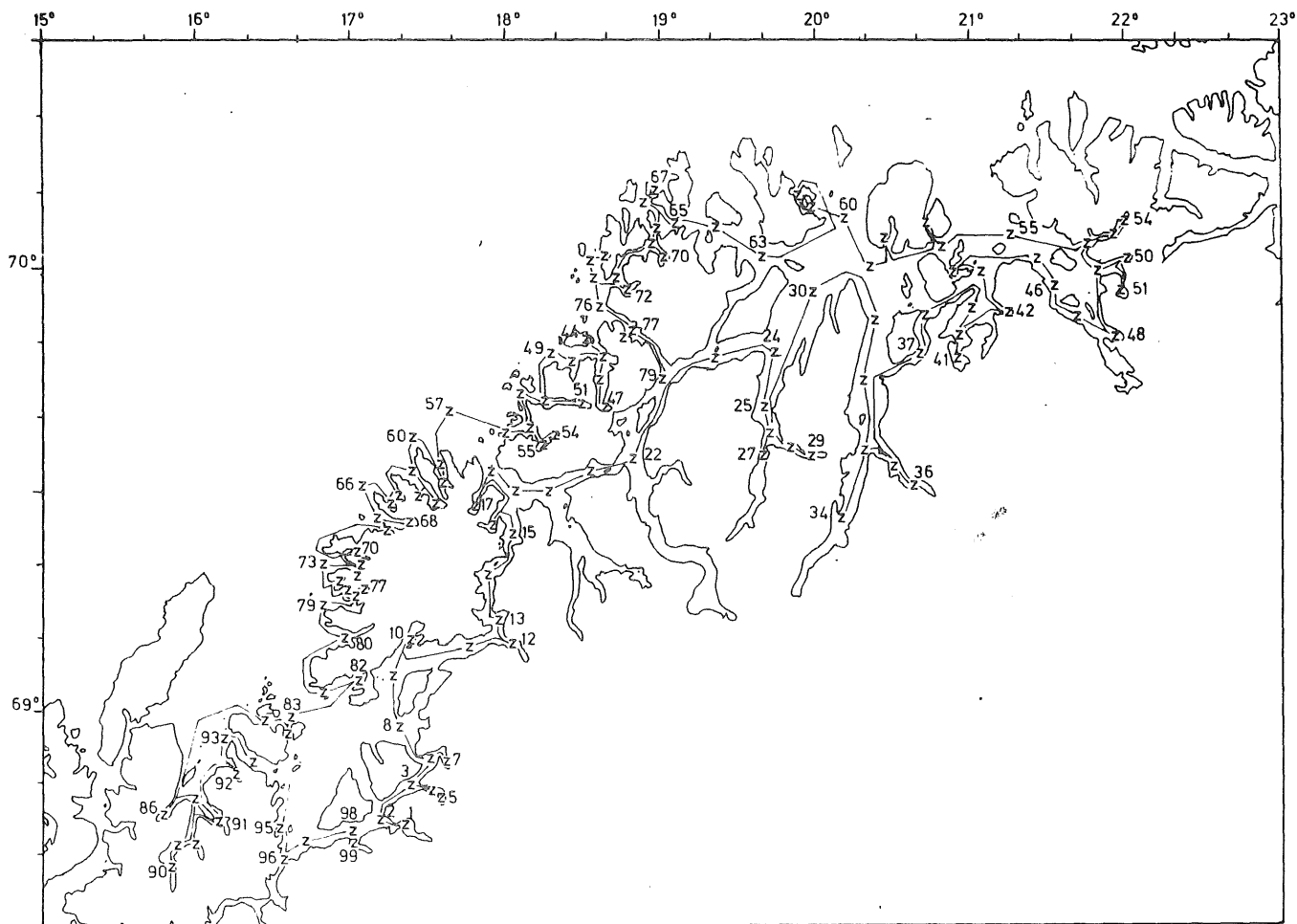






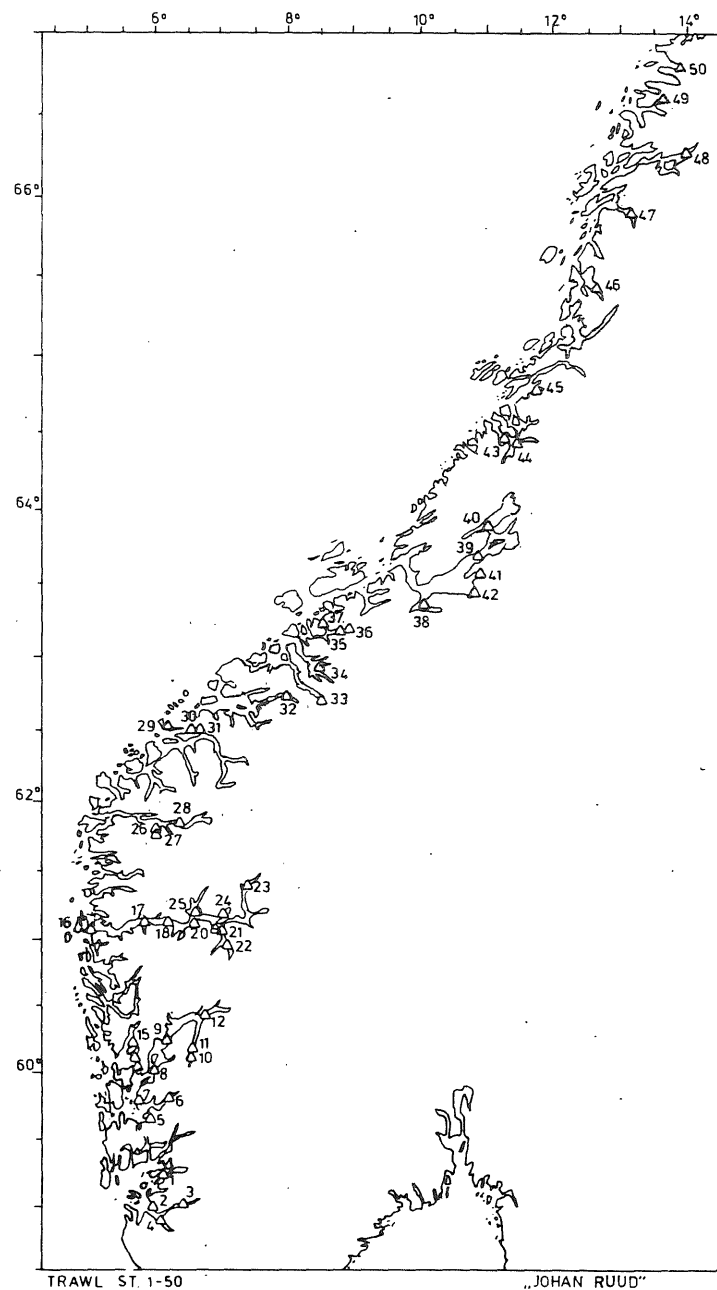
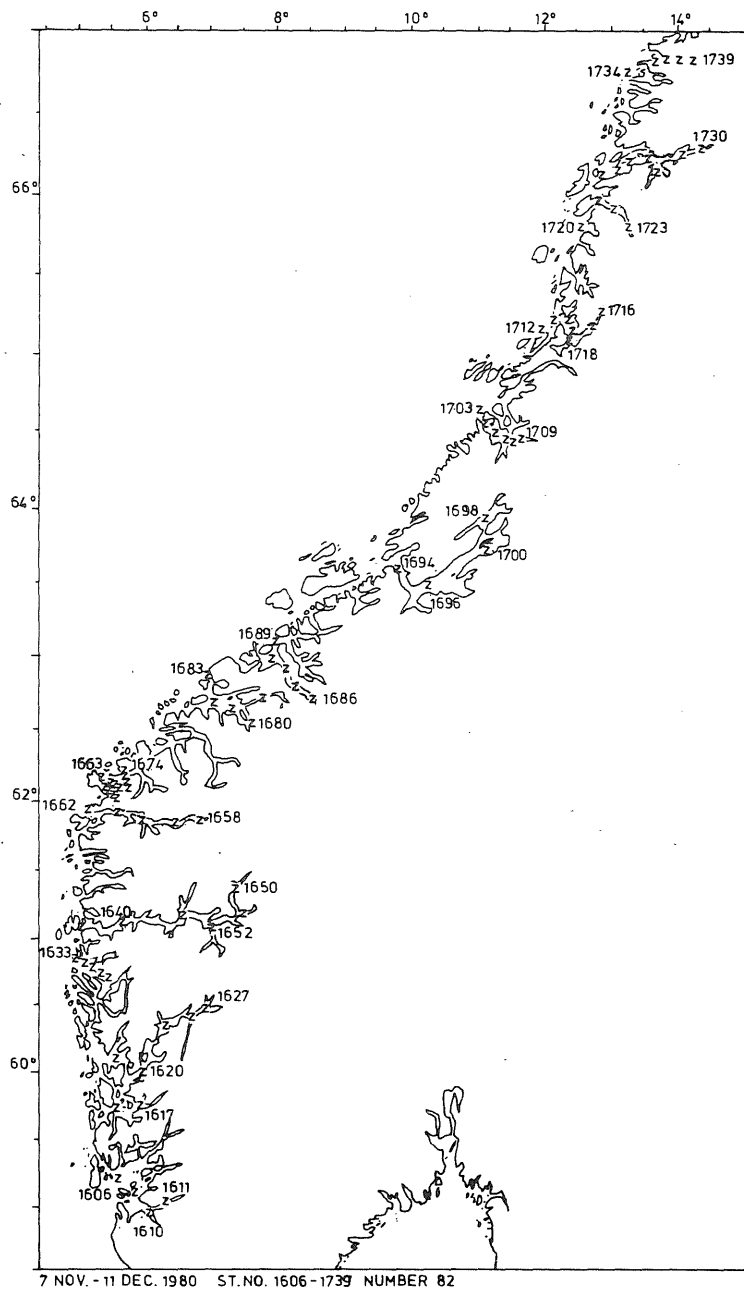
17-26 MAR 1980 ST. NO. 230-393

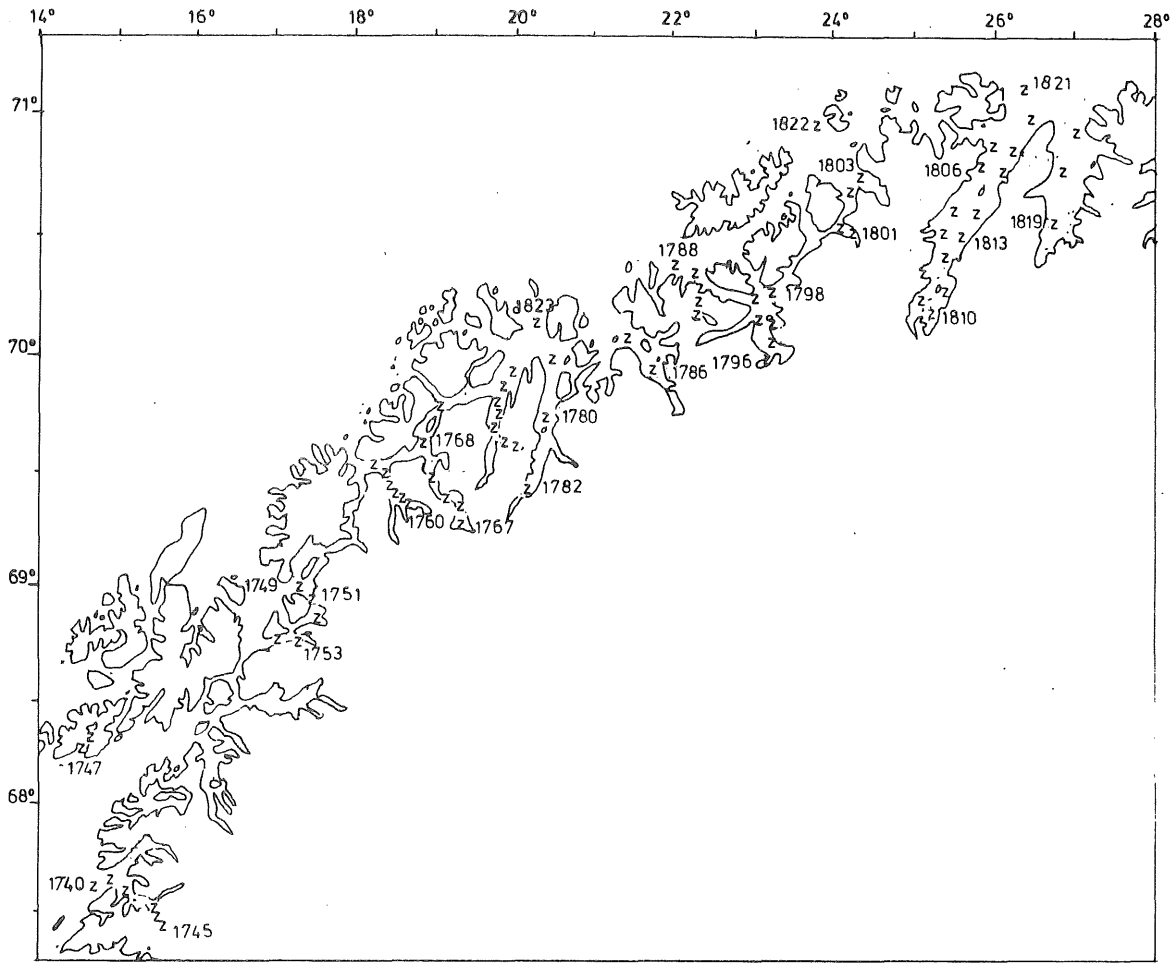
„JOHAN RUUD“



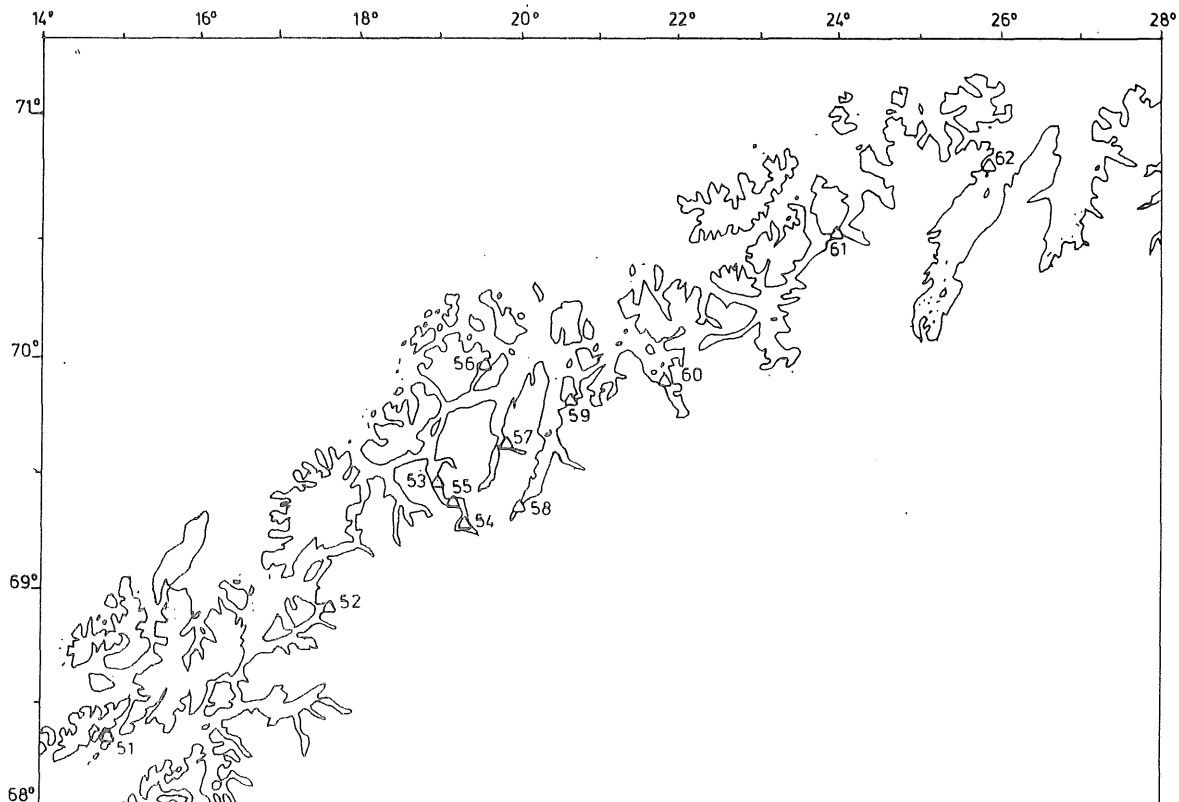
1-5 SEP. 1980 ST. NO 1-79 and 44-99

„JOHAN RUUD“



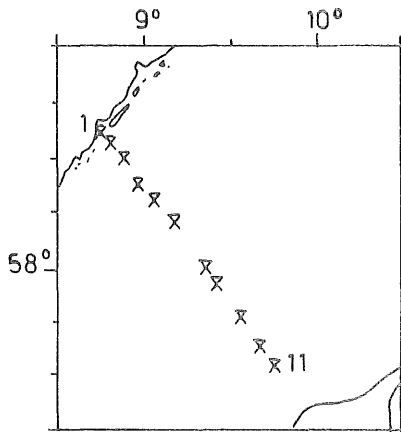


7 NOV. - 11 DEC. 1980 ST. NO. 1740 - 1823 NUMBER 70

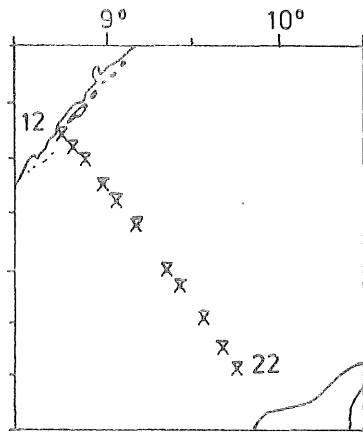


TRAWL ST 51-62

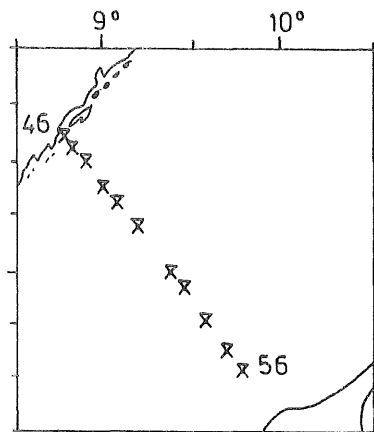
„JOHAN RUUD“



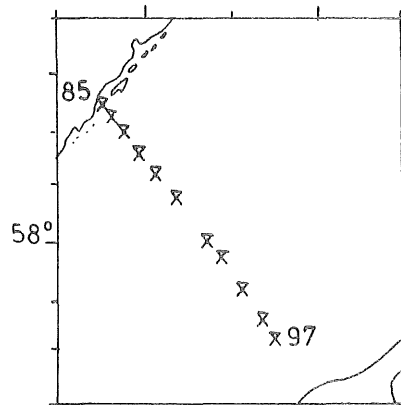
14 JAN. ST.NO. 1-11



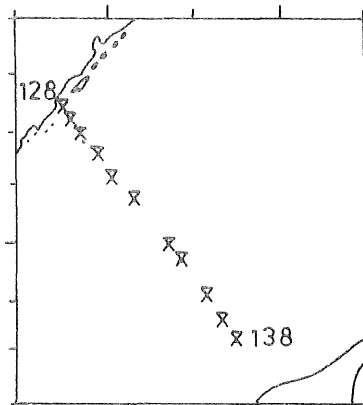
18 FEB. ST.NO. 12-22



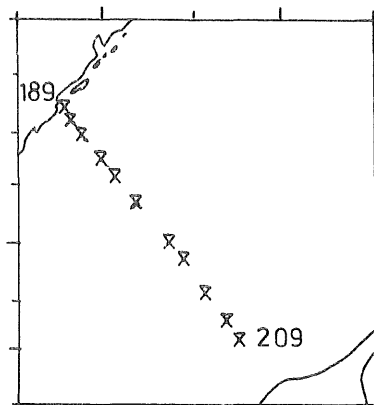
10 MAR. ST.NO. 46-56



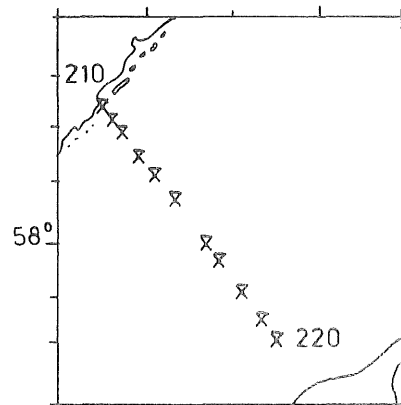
8 APR. ST.NO. 87-97



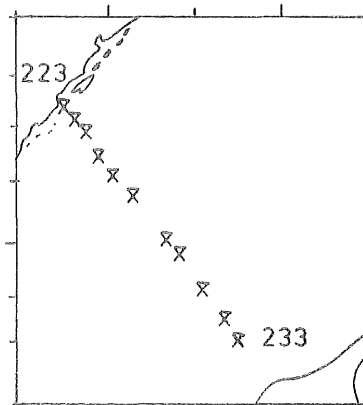
6 MAY. ST.NO. 128-138



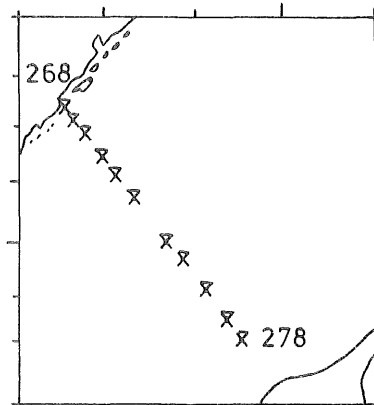
24 JUN. ST.NO. 189-209



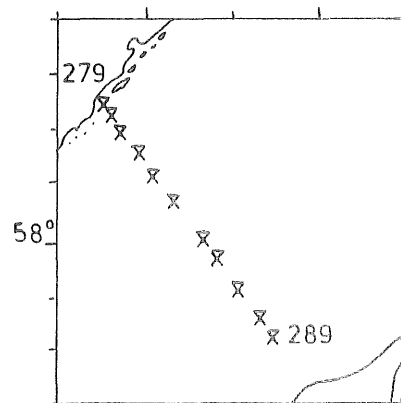
11 AUG. ST.NO. 210-220



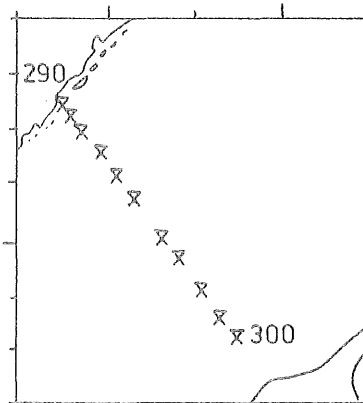
9 SEP. ST.NO. 223-233



13 OCT. ST.NO. 268-278

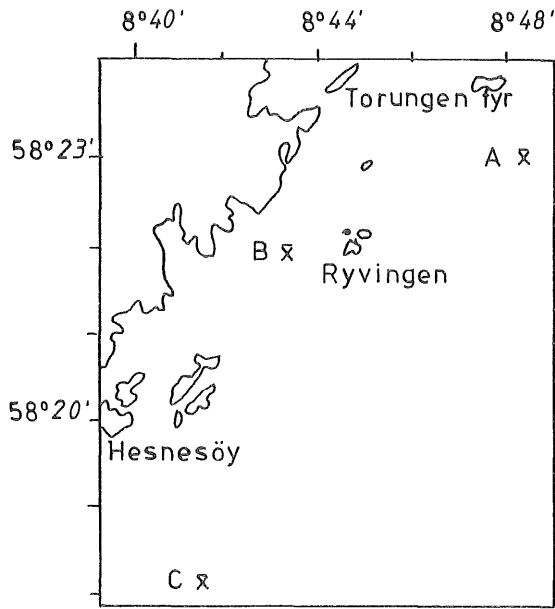


10 NOV. ST.NO. 279-289

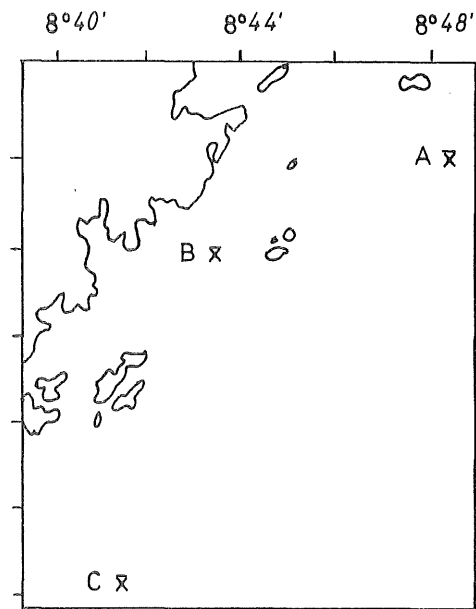


16 DEC. ST.NO. 290-300

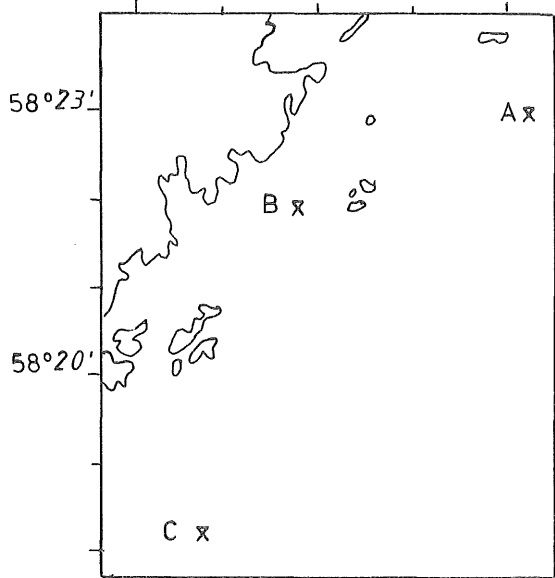
TORUNGEN - HIRTSHALS  
„G.M. DANNEVIG” 1980



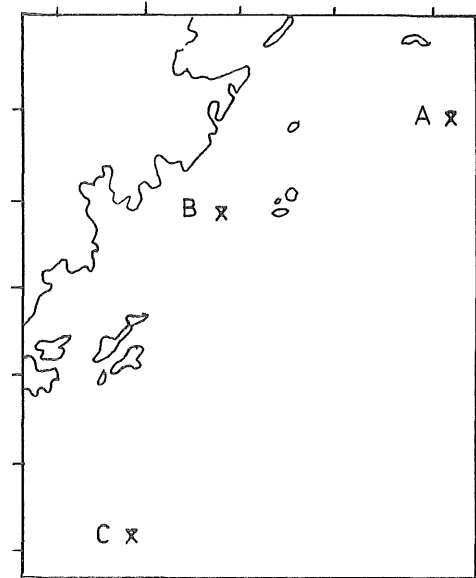
20-28 FEB. ST.NO. 23-45



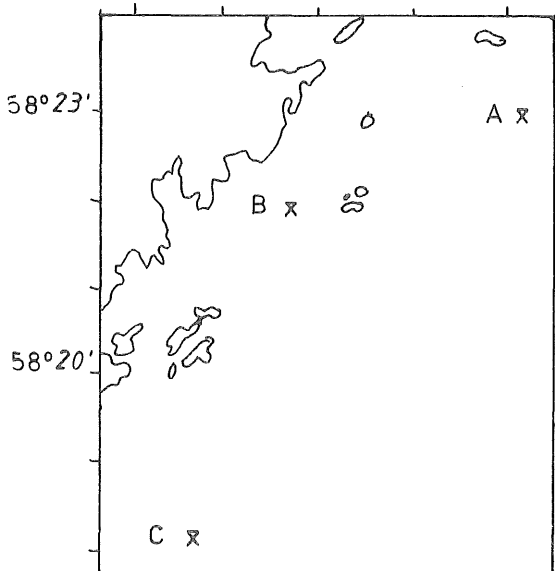
17-28 MAR. ST.NO. 61-86



14-23 APR. ST.NO. 98-127

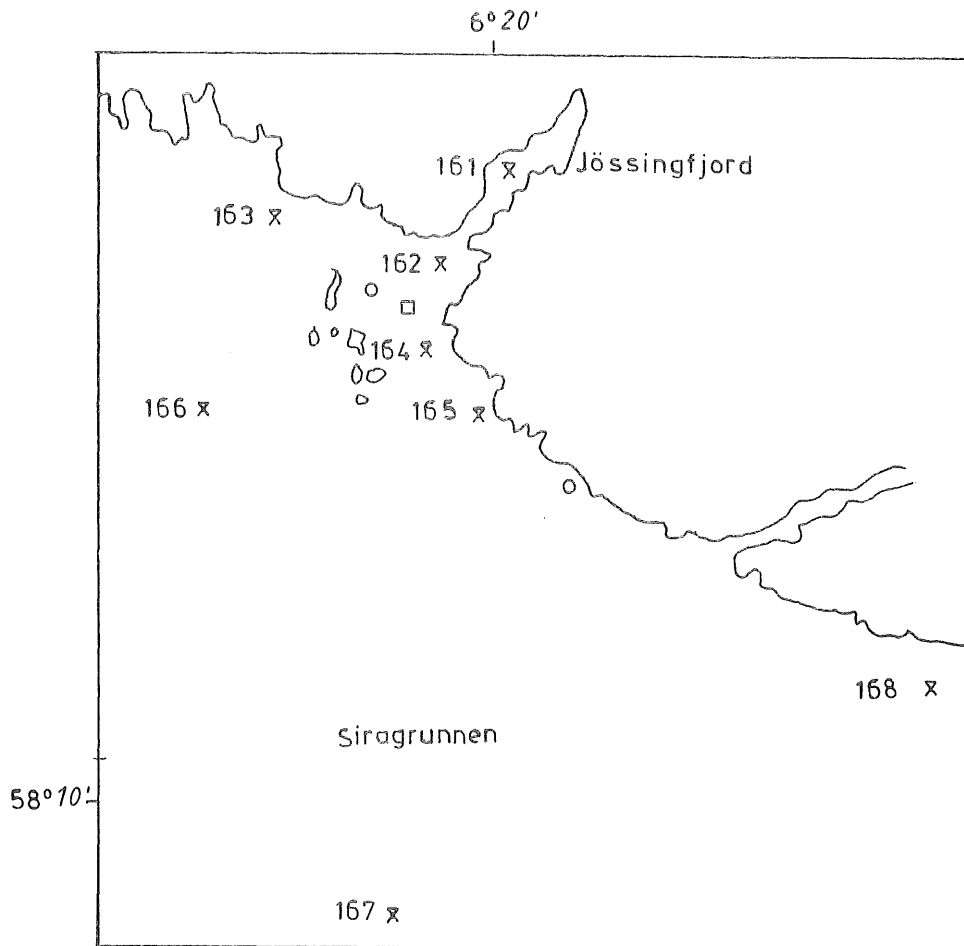


13-23 MAY ST.NO. 139-160

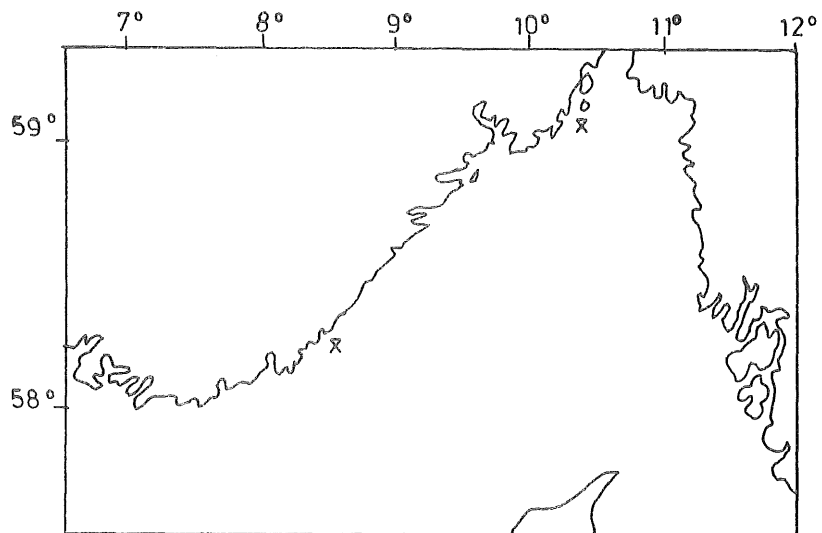


9-18 JUN. ST.NO. 169-198

„G. M. DANNEVIG” 1980



4-5 JUN. ST.NO. 161 168 ○ PURSEINE NET. □ MOORED BUOY ST.



3-9 SEP. HERRING TAGGING

