

INTERN TOKTRAPPORT

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Fartøy: F/T "Anny Kræmer".

Avgang: Tromsø, 10. september 1990.

Ankomst: Tromsø, 12. oktober 1990.

Formål: Kartlegge mengde og utbredelse av bunnfisk og reker i området Svalbard - Bjørnøya.

Personell: Tor Ivar Halland og Harald Senneset.
Bjørn Kåre Berntsen fra 21/9-90

GJENNOMFØRING

Bunntrålsurveyet ble gjennomført med totalt 196 trålstasjoner, hvorav 192 stasjoner ble benyttet ved beregningene.

Fra 2/10 til 5/10 tok vi 15 stasjoner øst-nord/øst av Hopen som inngår i flerbestandsundersøkelsene. På slutten av toktet ble det foretatt endel hal med torsketrål i de nære kystområder.

Under hele toktperioden var det, i motsetning til tidligere år, meget gode værforhold.

Også i 1990 ble Campelen 1800/96 standard prøvetakingstrål, rockhopper gear og 40 meter sveipelengde benyttet. Tauetid var 1.5 n.m. (30.min). Tidligere (før 1989) ble det brukt bobbins gear, 80 m. sveiper og en times hal. Årets resultat er altså direkte sammenlignbar med fjorårets beregninger.

RESULTAT

Resultatet fra bunntrålsurveyet er vist i følgende standard tabeller og figurer:

Harald Senneset

Table 1A. Stratified indices on numbers (thousands) for different depths and areas in 1990.
Stratifiserte indekser i antall (tusen) for ulike dyp og områder i 1990.

Species	North of 76° N						South of 76° N						Total all areas
	0-100	100-200	200-300	300-400	>400	Total	0-100	100-200	200-300	300-400	>400	Total	
Cod	4050	7310	1760	325	150	13600	71200	71500	7340	2150	4340	157000	170000
Haddock	887	6260	860	26	4	8040	9970	28900	5870	188	92	45000	53100
<u>S. Marinus</u>	24	2730	3600	211	29	6580	0	7150	4510	914	41	12600	19200
<u>S. Mentella</u>	14	177000	114000	41400	39500	372000	728	27500	499000	227000	159000	914000	1290000
Greenland halibut	0	152	561	1620	1930	4260	0	164	7530	7930	8820	24400	28700
Long rough dab	2450	38400	19600	5980	602	67100	18700	197000	304000	82300	27600	630000	697000
Blue whiting	0	0	0	245	70	315	24	0	3280	5650	30600	39500	39800
Catfish	136	4440	4100	260	0	8930	1110	4280	324	159	27	5890	14800
Smaller catfish	38	311	407	469	124	1350	192	2530	1310	909	28	4980	6330

Table 1B. Recalculated indices (numbers) to compare pre-1989 equipment standard (80-m sweeps and bobbins ground gear).
Omregnede indekser (antall) for sammenligning med data fra før 1989 (gammel standard).

Species	North of 76° N						South of 76° N						Total all areas
	0-100	100-200	200-300	300-400	>400	Total	0-100	100-200	200-300	300-400	>400	Total	
Cod	1430	3950	1400	427	220	7430	28400	59100	7650	2530	5050	103000	110000
Haddock	180	1980	431	23	0	2620	2130	11700	1980	19	0	15800	18400

Table 2A. Stratified indices on weight (thousands kg) for different depths and areas in 1990.
Stratifiserte indekser i vekt (tusen kg) for ulike dyp og områder i 1990.

Species	North of 76° N						South of 76° N						Total all areas
	0-100	100-200	200-300	300-400	>400	Total	0-100	100-200	200-300	300-400	>400	Total	
Cod	1450	10600	4170	1370	869	18500	33400	117000	22600	7060	12700	193000	211000
Haddock	48	726	110	24	0	907	852	4260	697	8	1	5820	6730
<u>S. Marinus</u>	1	239	732	71	26	1070	0	577	1480	364	91	2510	3580
<u>S. Mentella</u>	6	3860	2900	1680	3960	12400	133	340	9590	11700	22100	43900	56300
Greenland halibut	0	136	393	765	1210	2510	0	220	5710	4820	8840	19600	22100
Long rough dab	50	3130	1970	600	89	5840	1550	21100	18400	6260	4340	51600	57400
Blue whiting	0	0	0	88	11	99	5	0	435	1550	6850	8840	8940
Catfish	87	927	1170	101	0	2280	408	2290	200	117	37	3060	5340
Smaller catfish	228	455	367	301	62	1410	1400	7360	1800	144	48	10800	12200
Shrimps	0	51	220	830	621	1720	0	908	2700	6190	8260	18100	19800

Table 2B. Recalculated indices (weight) to compare pre-1989 equipment standard (80m sweeps and bobbins ground gear).
Omregnede indekser (vekt) for sammenligning med data fra før 1989 (gammel standard).

Species	North of 76° N						South of 76° N						Total all areas
	0-100	100-200	200-300	300-400	>400	Total	0-100	100-200	200-300	300-400	>400	Total	
Cod	1130	12400	5070	1700	1090	21400	31500	136000	27700	8730	15600	220000	241000
Haddock	20	348	67	29	0	464	660	3000	399	2	0	4060	4530

Table 3. Stratified trawl indices on numbers (millions) for different ages of cod in 1990.
 Stratifisert trål-indekser i antall (millioner) av torsk i 1990 fordelt på alder.

Depth	Age										Total		
	0	1	2	3	4	5	6	7	8	9+			
North of 76°N	0-100	0.1± 0.1	2.5± 3.5	0.5± 0.7	0.5± 0.9	0.3± 0.5	0.1± 0.2						4.1± 3.2
	100-200	0.2± 0.3	3.7± 2.6	0.6± 0.9	0.5± 0.7	0.3± 0.3	0.3± 0.2	0.2± 0.1	0.9± 0.4	0.5± 0.3	0.1± 0.1		7.3± 4.3
	200-300		0.7± 0.4	0.1± 0.1			0.1± 0.1	0.2± 0.1	0.6± 0.4	0.1± 0.1			1.8± 0.7
	300-400								0.1± 0.0	0.2± 0.1	0.1± 0.0		0.3± 0.2
	>400	0	0	0	0	0	0		0.1± 0.1	0.1± 0.0			0.2± 0.1
Total	0.3± 0.3	6.8± 4.4	1.2± 1.2	1.0± 1.2	0.6± 0.6	0.4± 0.2	0.5± 0.2	1.8± 0.6	0.7± 0.3	0.1± 0.1		13.6± 5.3	
South of 76°N	0-100	1.8± 1.5	42.4±36.6	5.8± 3.3	5.1± 3.5	6.5± 4.5	5.2± 3.2	2.1± 1.2	1.3± 0.7			0	71.2±38.6
	100-200	1.0± 0.6	19.1±12.6	2.3± 0.9	2.3± 1.3	6.9± 6.2	16.3±21.9	11.4±14.7	11.3±10.8	0.5± 0.2	0.1± 0.0		71.5±54.1
	200-300	0.1± 0.0	1.3± 0.9	0.1± 0.0	0.1± 0.1	0.4± 0.3	0.8± 0.7	1.0± 0.5	2.8± 1.0	0.6± 0.2	0.1± 0.0		7.3± 2.8
	300-400		0.2± 0.2	0		0.1± 0.1	0.2± 0.1	0.4± 0.2	1.1± 0.4	0.1± 0.1			2.2± 0.6
	>400		0.3± 0.2	0.1± 0.1	0.1± 0.1	0.2± 0.2	0.6± 0.3	1.2± 0.4	1.7± 0.7	0.2± 0.1			4.3± 1.5
Total	2.9± 1.6	63.3±38.6	8.3± 3.4	7.6± 3.9	14.0± 7.7	23.0±22.1	16.1±14.8	18.2±10.9	1.4± 0.2	0.2± 0.2		157.0±66.8	
Total all areas	3.2± 1.7	70.1±38.9	9.4± 3.6	8.6± 4.1	14.6± 7.7	23.4±22.2	16.5±14.8	20.0±11.0	2.0± 0.3	0.3± 0.3		170.0±66.6	

Table 5. Stratified trawl indices on numbers (thousands) for different species in 1981 - 1990.
Stratifiserte trål-indekser i antall (tusen) for ulike arter i perioden 1981 - 1990.

	Year	Number of hauls	Cod	Haddock	*) <u>S.marinus</u>	<u>S.mentella</u>	Greenland halibut	Long rough dab	Blue whiting	Catfish	Smaller Catfish	
North of 76°N	1981	66	1 467	327	3 415	45 680	13 600	48 720	1 821	621	1 209	
	1982	70	4 140	56	204	59 190	12 940	34 190	537	1 527	279	
	1983	70	3 251	362	36 330	58 360	14 360	32 560	128	690	975	
	1984	72	20 700	38 490	373	278 600	12 680	73 410	422	2 167	1 518	
	1985	77	82 810	30 090	695	198 430	13 970	85 100	322	3 376	2 481	
	1986	69	83 600	2 370	2 140	57 200	6 970	26 700	86	1 970	1 070	
	1987	59	66 400	80	9 300	46 070	5 520	30 700	126	2 430	1 040	
	1988	60	3 130	321	1 590	151 354	15 200	20 700	0	3 060	817	
	**)	1989	68	6 770	2 400	4 370	206 187	5 570	51 000	193	5 420	1 940
	**)	1990	69	13 600	8 400	6 580	372 000	4 260	67 100	315	8 930	1 350
South of 76°N	1981	119	48 310	481	58 250	133 800	6 492	287 500	26 650	790	1 242	
	1982	121	41 460	928	11 790	218 500	13 070	336 100	27 230	1 082	1 452	
	1983	117	42 670	3 358	6 070	248 100	12 330	339 800	30 480	960	2 155	
	1984	122	90 810	30 160	33 100	273 500	23 960	592 400	67 110	1 358	4 190	
	1985	125	197 700	25 760	7 711	338 400	25 520	403 500	25 950	1 561	6 686	
	1986	122	201 000	22 200	7 570	296 000	12 500	152 000	4 910	2 340	2 640	
	1987	74	149 000	269	7 370	161 670	13 000	118 000	9 280	1 390	2 390	
	1988	111	87 800	612	4 860	76 982	24 100	161 000	2 180	1 660	2 410	
	**)	1989	113	67 400	2 590	5 780	714 451	26 300	414 000	14 200	2 850	3 520
	**)	1990	123	157 000	45 000	12 600	914 000	24 400	630 000	39 500	5 890	4 980
T o t a l	1981	185	49 770	808	61 670	179 500	20 100	336 300	28 470	1 411	2 450	
	1982	192	45 600	984	11 990	277 600	26 000	370 300	27 760	2 609	1 730	
	1983	187	45 920	3 720	42 400	306 500	26 690	372 400	30 610	1 650	3 130	
	1984	194	111 500	68 640	33 470	552 100	36 630	665 800	67 530	3 525	5 709	
	1985	202	280 600	55 850	8 405	536 820	39 450	488 600	26 270	4 936	9 167	
	1986	191	284 600	24 570	9 710	353 000	19 470	178 700	4 996	4 310	3 710	
	1987	133	215 000	349	16 700	208 100	18 500	149 000	9 410	3 830	3 430	
	1988	171	90 900	933	6 450	228 736	39 300	181 000	2 180	4 720	3 230	
	**)	1989	181	74 200	5 000	10 100	920 639	31 900	465 000	14 400	8 270	5 460
	**)	1990	192	170 000	53 100	19 200	1 290 000	28 700	697 000	39 800	14 800	6 330

*) 1981 - 1989 includes small unidentified *Sebastes* specimens.

**) New standard (40 m. sweep length and rockhopper gear).

1981-1989 inkluderer små individ av begge arter.
Ny standard (40 m. sweeper og rockhopper gear).

Table 6. Stratified trawl indices on weight (thousands kg) for different species in 1981 - 1990.
Stratifiserte trål-indekser i vekt (tusen kg) for ulike arter i perioden 1981 - 1990.

Year	Cod	Haddock	<u>S.marinus</u>	*) <u>S.mentella</u>	Greenland halibut	Long rough dab	Blue whiting	Catfish	Smaller Catfish	Shrimps		
North of 76° N	1981	3 156	942	453	11 030	3 645	4 125	400	1 032	343	17 060	
	1982	3 348	5	63	9 804	6 550	2 858	158	1 359	363	24 810	
	1983	3 226	35	3 984	6 869	4 967	2 322	38	462	1 104	13 240	
	1984	5 704	5 136	127	19 250	6 840	5 132	83	1 238	1 376	6 901	
	1985	32 980	4 068	295	15 130	7 880	7 082	79	1 638	3 055	3 830	
	1986	46 700	860	243	6 100	4 510	2 020	28	1 110	1 760	661	
	1987	30 100	21	402	3 246	2 420	2 400	37	648	1 530	1 450	
	1988	3 910	12	271	14 800	8 390	1 810	0	691	1 130	2 790	
	**)	1989	6 990	132	795	5 140	1 920	4 140	62	1 270	1 870	2 170
	**)	1990	18 500	907	1 070	12 400	2 510	5 840	99	2 280	1 410	1 720
South of 76° N	1981	73 270	988	10 230	31 510	5 794	40 770	4 968	1 054	3 764	50 650	
	1982	61 180	469	4 325	49 830	15 660	45 510	7 741	1 849	6 425	68 780	
	1983	54 350	474	1 252	35 350	18 170	46 610	9 349	2 335	6 309	60 090	
	1984	66 510	3 201	3 262	65 670	24 220	82 160	20 530	4 538	13 480	31 740	
	1985	133 500	7 122	1 346	22 030	19 270	53 010	7 643	3 323	25 110	12 670	
	1986	167 000	10 600	1 640	24 700	11 700	20 100	1 390	1 190	7 740	2 550	
	1987	122 000	189	1 430	14 489	8 320	15 500	2 460	2 900	3 130	11 000	
	1988	110 000	469	871	8 780	15 700	21 200	567	735	9 920	8 880	
	**)	1989	88 000	1 750	1 540	22 230	15 100	35 300	4 170	1 210	9 500	21 900
	**)	1990	193 000	5 820	2 510	43 900	19 600	51 600	8 840	3 060	10 800	18 100
Total	1981	76 430	1 930	10 680	42 530	9 439	44 890	5 368	2 086	4 407	67 710	
	1982	64 530	502	4 388	59 640	22 221	48 370	7 899	3 209	6 788	93 590	
	1983	57 580	509	5 236	42 350	23 130	48 930	9 387	2 797	7 412	74 330	
	1984	72 210	8 337	3 389	84 920	31 060	87 290	20 610	5 776	14 850	38 640	
	1985	166 400	11 119	1 641	37 160	27 160	60 090	7 721	4 961	28 170	16 500	
	1986	213 700	11 460	1 883	30 800	16 210	22 120	1 418	2 300	9 500	3 210	
	1987	152 000	211	1 830	17 755	10 700	17 900	2 500	3 550	4 660	12 400	
	1988	114 000	481	1 140	23 600	24 100	23 000	567	1 430	11 000	11 700	
	**)	1989	95 800	1 890	2 330	27 400	17 000	39 400	4 240	2 490	11 400	24 100
	**)	1990	211 000	6 730	3 580	56 300	22 100	57 400	8 940	5 340	12 200	19 800

*) 1981 - 1989 includes small unidentified *Sebastes* specimens.
**) New standard (40 m. sweep length and rockhopper gear).

1981-1989 inkluderer små individ av begge arter.
Ny standard (40 m. sweeper og rockhopper gear).

Tabel 7. Age distribution (percent) of cod.
 A:0-100m, B:100-200m, C:200-300m, D:300-400m,
 E:Deeper than 400m, F:Northern area, G:Southern
 area, H:Total area.
 Aldersfordeling (prosent) av torsk.

AGE	A	B	C	D	E	F	G	H
0	2.5	1.6	0.8	1.6	0.6	2.3	1.9	1.9
1	60.5	28.9	21.6	10.0	7.5	51.0	40.8	41.7
2	8.4	3.7	2.0	+	1.3	9.0	5.3	5.6
3	7.6	3.5	1.7	0.2	1.8	7.5	4.9	5.1
4	9.1	9.1	5.0	2.3	3.5	4.6	9.0	8.7
5	7.1	20.9	9.2	9.8	12.5	3.1	14.8	13.9
6	2.9	14.7	13.1	16.9	27.0	3.4	10.4	9.8
7	1.9	16.2	37.7	51.3	40.3	13.4	11.8	11.9
8	+	1.2	7.6	7.1	4.4	4.9	0.9	1.2
9 +	+	0.2	1.3	0.8	1.1	0.8	0.2	0.2

Tabel 8. Age distribution (percent) of haddock.
 A:0-100m, B:100-200m, C:200-300m, D:300-400m,
 E:Deeper than 400m, F:Northern area, G:Southern
 area, H:Total area.
 Aldersfordeling (prosent) av hyse.

AGE	A	B	C	D	E	F	G	H
0	68.6	7.1	0.9	31.9	100.0	27.9	17.6	19.2
1	28.9	88.6	96.7	60.8	0	70.4	78.3	77.1
2	0.5	1.7	1.0	0.2	0	1.2	1.4	1.3
3	0	+	0	0	0	0	+	+
4	+	0.1	0.3	0.2	0	+	0.1	0.1
5	0.3	0.5	0.1	1.6	0	0.1	0.5	0.4
6	0.5	0.6	0.2	2.1	0	0.1	0.6	0.5
7+	1.2	1.4	0.8	3.2	0	0.3	1.5	1.3

Tabel 9. Age distribution (percent) of Greenland halibut.
 A:0-100m, B:100-200m, C:200-300m, D:300-400m,
 E:Deeper than 400m, F:Northern area, G:Southern
 area, H:Total area.
 Aldersfordeling (prosent) av blåkveite.

AGE	A	B	C	D	E	F	G	H
0	0	0	0.8	0	0	0	0.3	0.2
1	0	0	1.4	0	0	0	0.5	0.4
2	0	0	2.0	1.1	0.7	0.8	1.2	1.2
3	0	3.3	12.4	27.7	12.9	24.2	16.5	17.6
4	0	11.4	24.6	29.3	21.3	35.3	23.0	24.8
5	0	28.8	35.0	24.5	23.0	25.4	27.2	26.9
6	0	25.5	16.2	9.8	20.1	9.4	16.7	15.6
7	0	12.6	4.9	4.5	13.6	2.7	9.1	8.1
8	0	4.9	1.8	1.8	5.5	1.2	3.5	3.2
9+	0	13.5	0.9	1.3	2.9	1.0	2.0	1.9

Tabel 10. Length distribution (percent) of *Sebastes marinus*.
 A:0-100m, B:100-200m, C:200-300m, D:300-400m,
 E:Deeper than 400m, F:Northern area, G:Southern
 area, H:Total area.
 Lengdefordeling (prosent) av vanlig uer.

LENGTH	A	B	C	D	E	F	G	H
5- 9	0	16.9	0	0	0	4.3	11.0	8.7
10-14	0	35.9	3.9	2.0	0	18.0	21.4	20.2
15-19	100.0	27.3	19.5	17.9	0	31.6	19.0	23.3
20-24	0	11.8	32.0	25.4	0	25.5	18.8	21.1
25-29	0	5.8	25.9	26.7	5.9	13.6	16.5	15.5
30-34	0	1.6	14.9	11.5	17.7	4.9	9.4	7.9
35-39	0	0.6	2.7	7.2	0	1.5	2.1	1.9
40-44	0	0	0.7	6.9	5.9	0.5	0.8	0.7
45-49	0	0.1	0.2	0	31.3	0.1	0.3	0.3
50-54	0	0	0.3	2.3	0	0	0.4	0.2
55-59	0	0	0	0	39.2	0	0.2	0.1
60-64	0	0	0	0	0	0	0	0

Tabel 11. Length distribution (percent) of *Sebastes mentella*.
 A:0-100m, B:100-200m, C:200-300m, D:300-400m,
 E:Deeper than 400m, F:Northern area, G:Southern
 area, H:Total area.
 Lengdefordeling (prosent) av snabeluer.

LENGTH	A	B	C	D	E	F	G	H
5- 9	13.7	13.1	22.3	4.0	4.8	7.3	17.1	14.3
10-14	27.9	83.0	69.7	53.8	39.4	76.6	58.5	63.8
15-19	3.2	2.8	3.1	5.6	9.4	5.7	4.1	4.6
20-24	12.7	0.4	2.0	13.0	8.4	4.3	5.3	5.0
25-29	25.3	0.1	2.1	20.0	22.1	3.9	10.6	8.6
30-34	12.7	0.1	0.1	1.8	8.9	0.7	2.3	1.8
35-39	0	0.5	0.3	0.9	4.8	1.0	1.2	1.2
40-44	3.2	0	0.2	0.7	1.9	0.4	0.6	0.5
45-49	0	0	0.2	0.2	0.3	0.1	0.3	0.2
50-54	0	0	0	0	0	0	0	0
55-59	1.4	0	0	0	0	0	0	0

Tabel 12. Length distribution (percent) of Long rough dab.
 A:0-100m, B:100-200m, C:200-300m, D:300-400m,
 E:Deeper than 400m, F:Northern area, G:Southern
 area, H:Total area.
 Lengdefordeling (prosent) av gapeflyndre.

LENGTH	A	B	C	D	E	F	G	H
5- 9	4.5	8.2	11.5	10.6	1.2	2.0	10.5	9.7
10-14	56.9	30.4	44.8	32.1	7.8	28.7	38.1	37.2
15-19	14.6	22.3	18.4	15.0	3.5	28.4	17.5	18.6
20-24	7.5	17.7	11.0	22.1	26.2	22.6	14.4	15.2
25-29	8.6	10.8	7.5	14.9	45.1	10.6	11.2	11.1
30-34	3.8	5.5	4.0	3.9	12.7	5.2	4.8	4.9
35-39	2.8	4.2	2.1	1.1	3.0	2.0	2.9	2.8
40-44	1.3	0.9	0.6	0.2	0.4	0.6	0.7	0.7
45-49	0	0	0	0	0	0	0	0

Tabel 13. Length distribution (percent) of Blue whiting.
 A:0-100m, B:100-200m, C:200-300m, D:300-400m,
 E:Deeper than 400m, F:Northern area, G:Southern
 area, H:Total area.
 Lengdefordeling (prosent) av kolmule.

LENGTH	A	B	C	D	E	F	G	H
15-19	0	0	47.9	0	0	3.5	4.0	4.0
20-24	0	0	23.7	3.2	9.6	8.5	9.8	9.8
25-29	0	0	1.4	12.8	17.6	1.4	15.7	15.6
30-34	100.0	0	10.1	38.8	57.2	28.2	50.8	50.6
35-39	0	0	16.6	42.7	14.5	58.4	18.6	18.9
40-44	0	0	0.3	2.3	1.0	0	1.2	1.2

Tabel 14. Length distribution (percent) of Smaller catfish.
 A:0-100m, B:100-200m, C:200-300m, D:300-400m,
 E:Deeper than 400m, F:Northern area, G:Southern
 area, H:Total area.
 Lengdefordeling (prosent) av flekksteinbit.

LENGTH	A	B	C	D	E	F	G	H
5- 9	0	0	0	0	0	0	0	0
10-14	0	2.1	1.3	0	0	0.4	1.5	1.3
15-19	0	5.9	4.4	20.0	0	5.1	9.1	8.2
20-24	0	3.3	5.3	33.4	2.7	9.6	10.5	10.3
25-29	0	8.1	15.0	16.5	31.5	18.4	10.4	12.1
30-34	4.6	6.3	12.5	7.6	26.7	16.4	6.6	8.7
35-39	0	4.7	14.7	8.1	0	13.5	6.4	7.9
40-44	0	3.9	8.0	9.7	2.9	11.2	4.7	6.1
45-49	0	3.3	4.4	1.3	6.7	4.9	2.6	3.1
50-54	0	6.2	13.9	0.5	6.9	3.5	7.7	6.8
55-59	0	11.6	7.5	0.9	22.6	4.6	8.9	8.0
60-64	8.5	9.9	5.5	0.7	0	3.1	7.3	6.4
65-69	2.2	10.0	2.3	0.7	0	2.6	6.1	5.3
70-74	2.2	6.3	1.3	0	0	1.5	3.8	3.3
75-79	23.1	8.7	0.4	0.5	0	2.6	5.6	5.0
80-84	0	1.6	0	0	0	0	0.9	0.7
85-89	22.7	1.7	0	0	0	0.2	2.0	1.6
90-94	9.5	0.9	1.9	0	0	0.8	1.4	1.2
95-99	18.6	1.7	1.1	0	0	1.6	1.8	1.7
100-104	0	0.9	0	0	0	0	0.5	0.4
105-109	0	0.9	0	0	0	0	0.5	0.4
110-114	8.5	1.8	0	0	0	0	1.4	1.1
115-119	0	0	0	0	0	0	0	0
120-124	0	0	0.7	0	0	0	0.2	0.2

Tabel 15. Length distribution (percent) of Catfish.
 A:0-100m, B:100-200m, C:200-300m, D:300-400m,
 E:Deeper than 400m, F:Northern area, G:Southern
 area, H:Total area.
 Lengdefordeling (prosent) av gråsteinbit.

LENGTH	A	B	C	D	E	F	G	H
5- 9	0	0	0	0	0	0	0	0
10-14	1.7	13.4	5.0	0	0	9.1	10.1	9.5
15-19	4.4	26.1	26.3	0.6	0	33.4	8.6	23.6
20-24	30.1	12.0	17.4	10.5	0	17.1	11.9	15.0
25-29	28.5	11.3	17.1	28.6	0	14.8	15.3	15.0
30-34	12.7	11.2	16.1	12.0	0	12.4	13.4	12.8
35-39	8.1	9.2	6.7	16.3	0	5.1	13.8	8.6
40-44	3.1	6.2	3.4	11.0	0	2.0	10.1	5.2
45-49	3.3	3.7	3.9	9.4	0	2.5	5.9	3.9
50-54	3.5	3.3	0.8	5.7	100.0	1.3	5.0	2.8
55-59	2.5	1.9	1.5	3.9	0	1.2	2.8	1.8
60-64	1.9	1.0	1.2	2.1	0	0.7	1.9	1.2
65-69	0	0.8	0	0	0	0	1.2	0.5
70-74	0	0	0.4	0	0	0.2	0	0.1
75-79	0	0	0	0	0	0	0	0
80-84	0.2	0	0	0	0	0	0	0

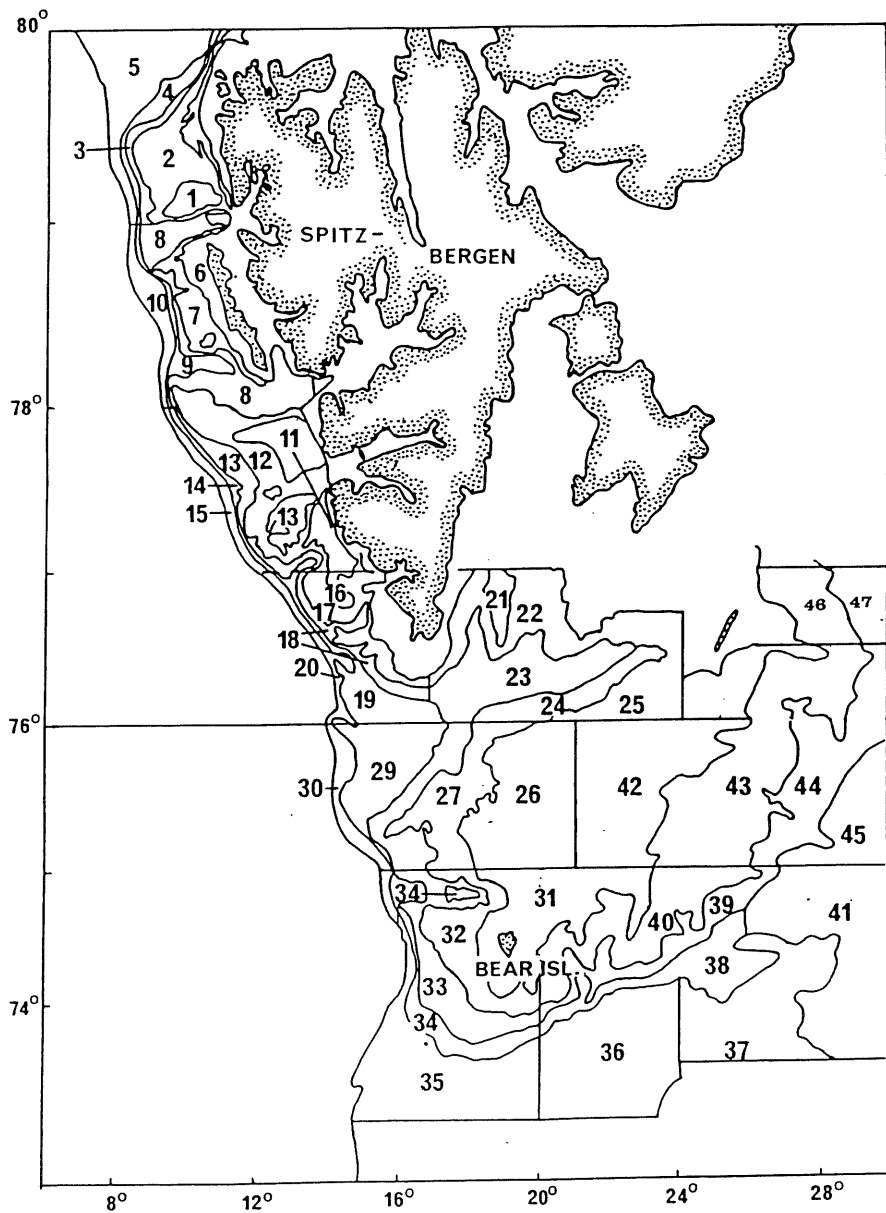


Fig: 1. The area of investigation with the different strata.

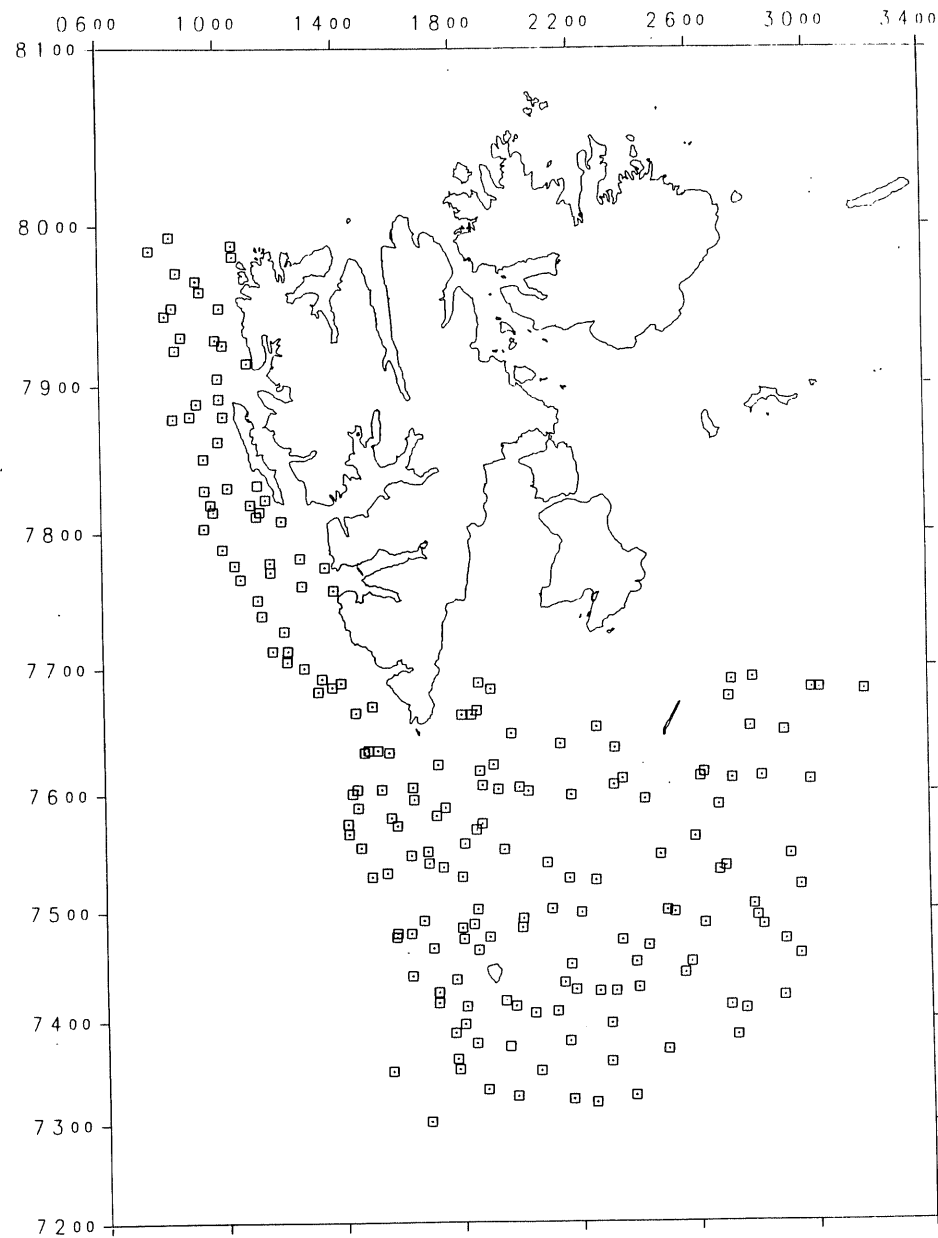


Fig: 2. Bottom trawl-stations (192) taken by F/T "Anny Kramer" 11.09. - 02.10. 1990.

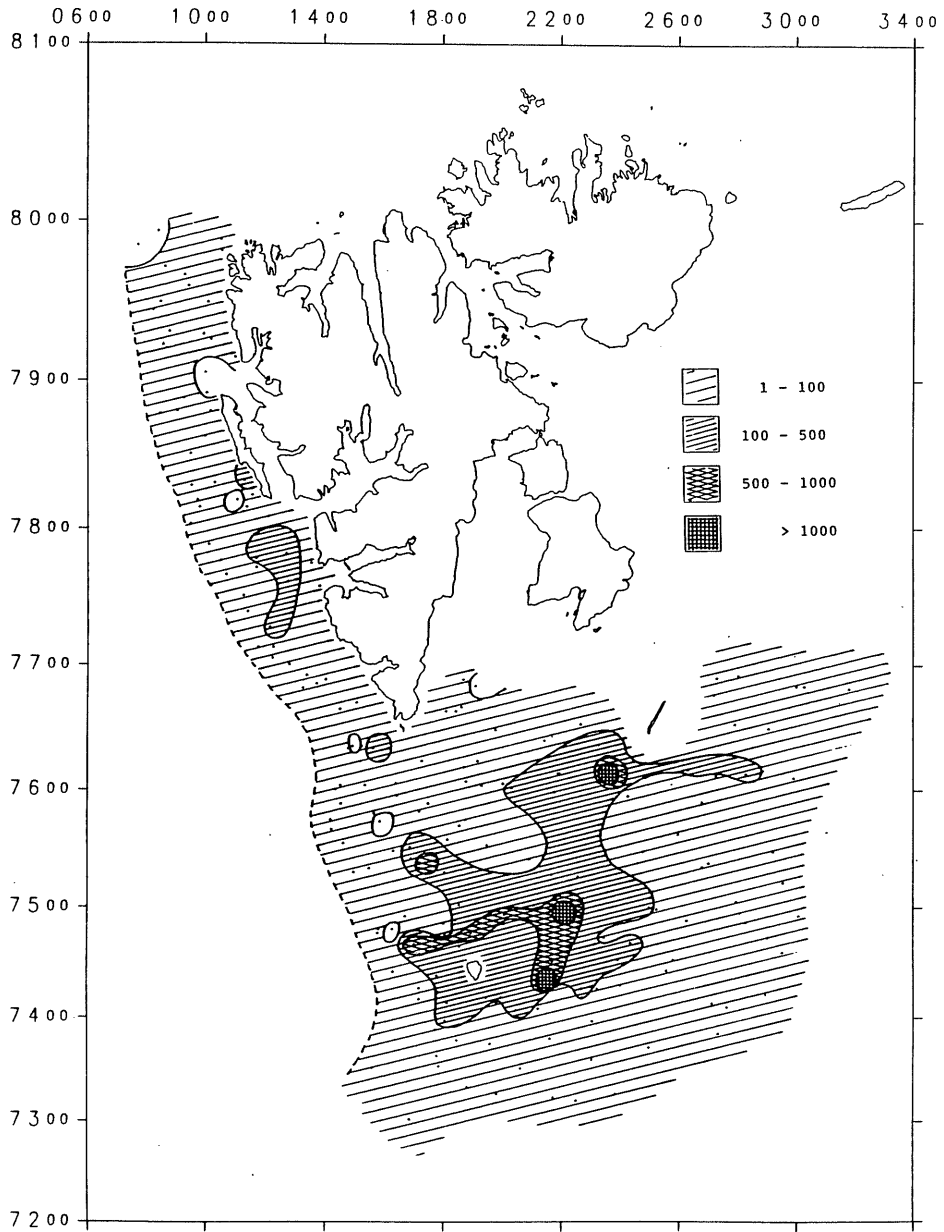


Fig: 3. Distribution of COD in the trawl catches (number per hour trawling).

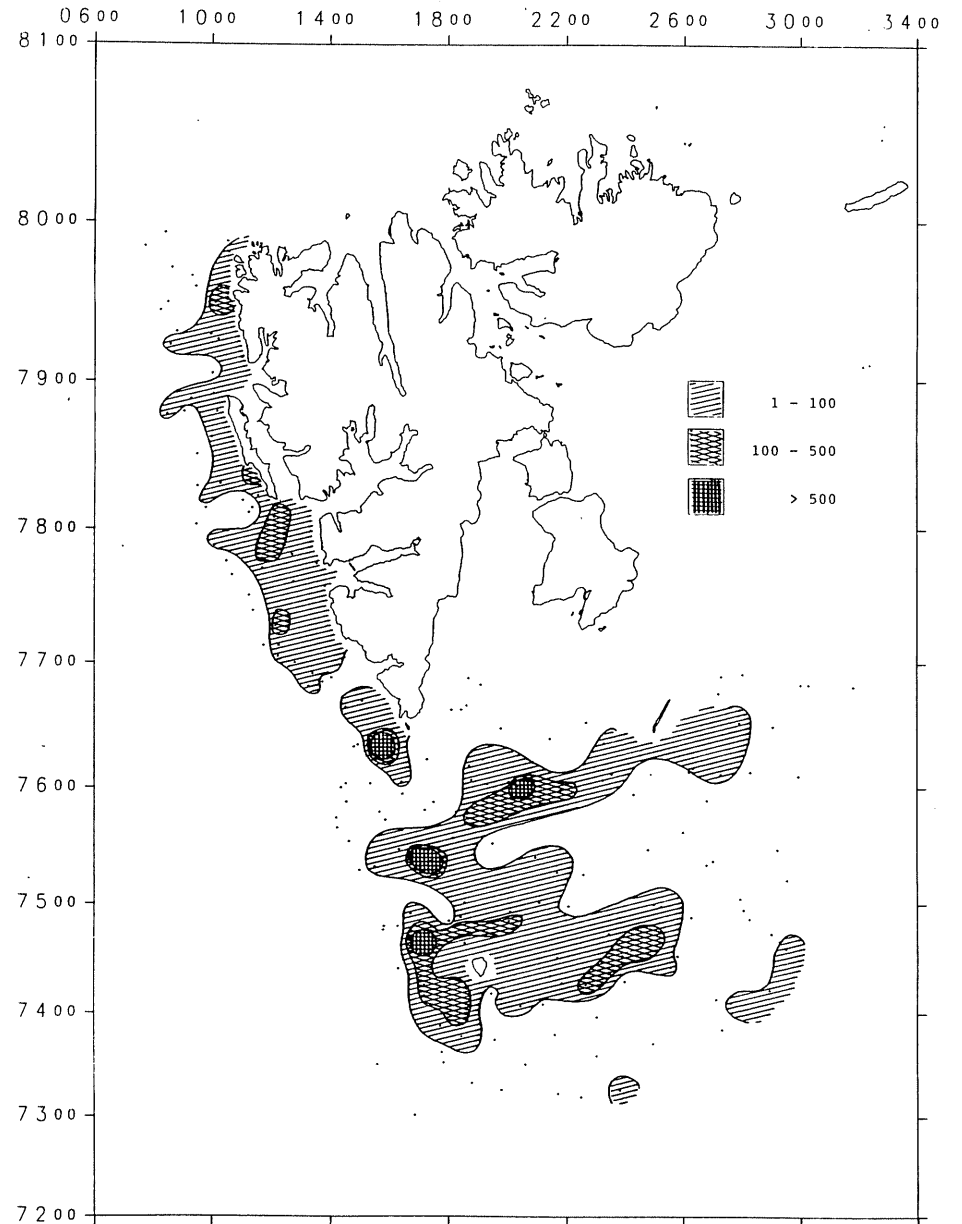


Fig: 4. Distribution of HADDOCK in the trawl catches (number per hour trawling).

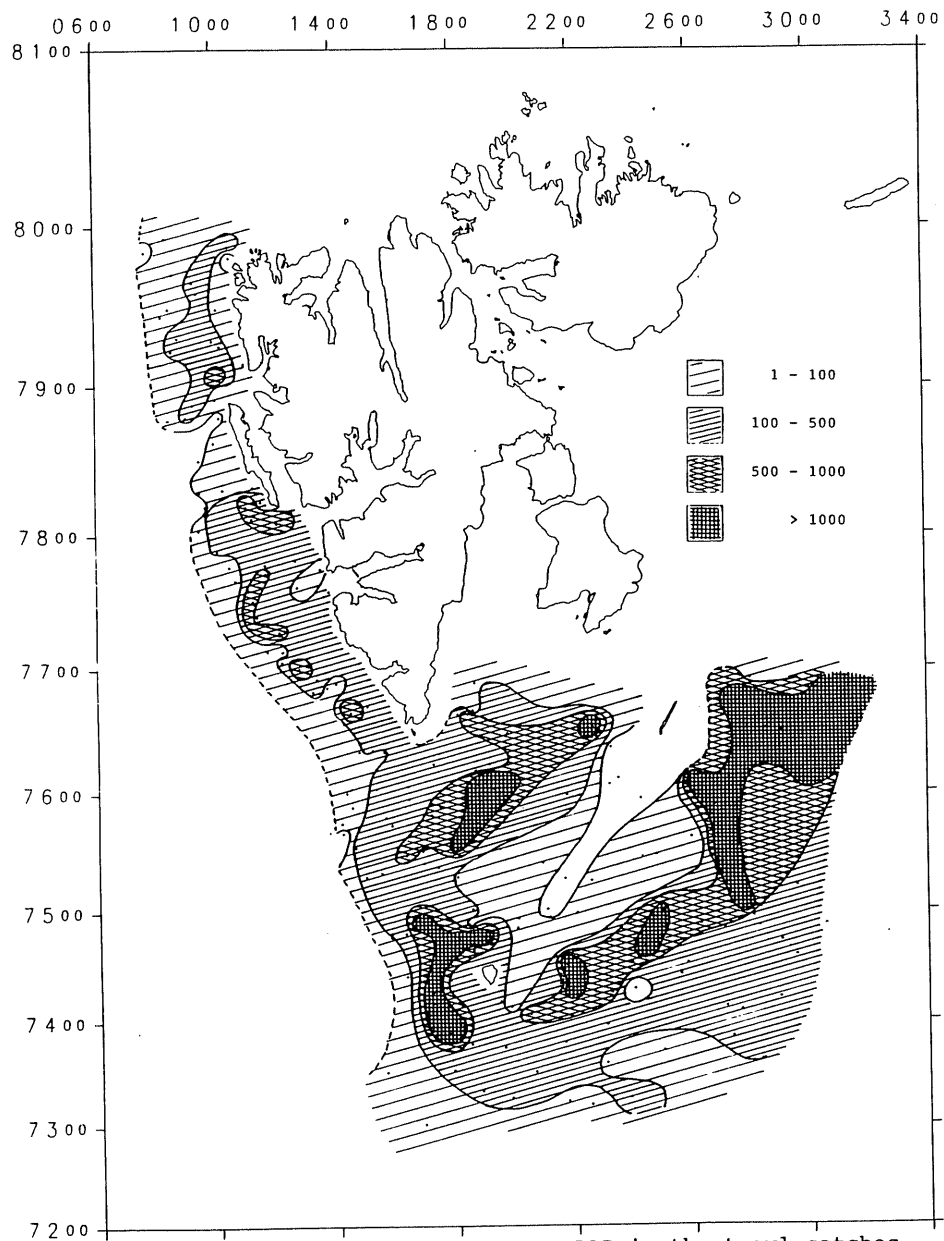


Fig: 5. Distribution of LONG ROUGH DAB in the trawl catches (number per hour trawling).

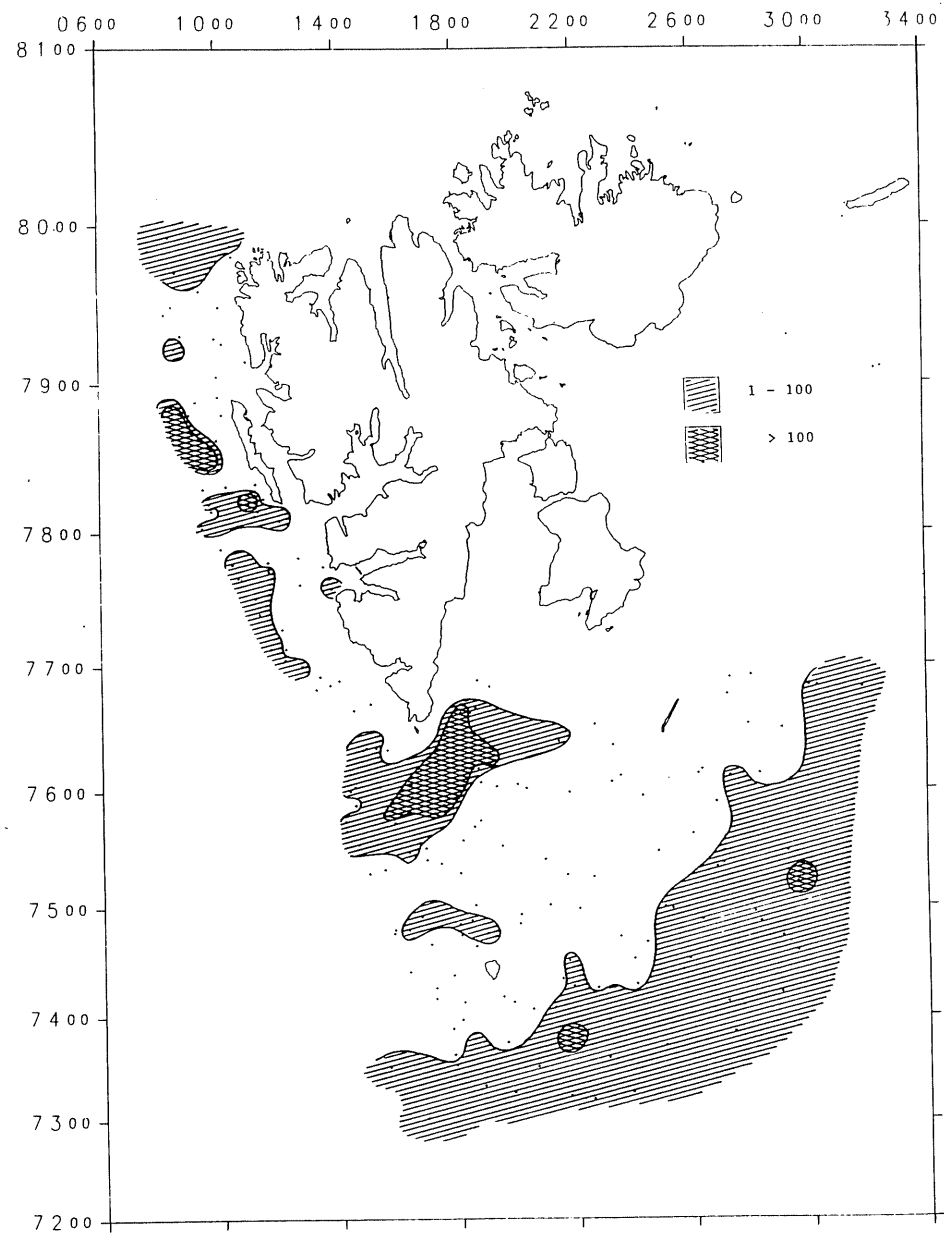


Fig: 6. Distribution of GREENLAND HALIBUT in the trawl catches (number per hour trawling).

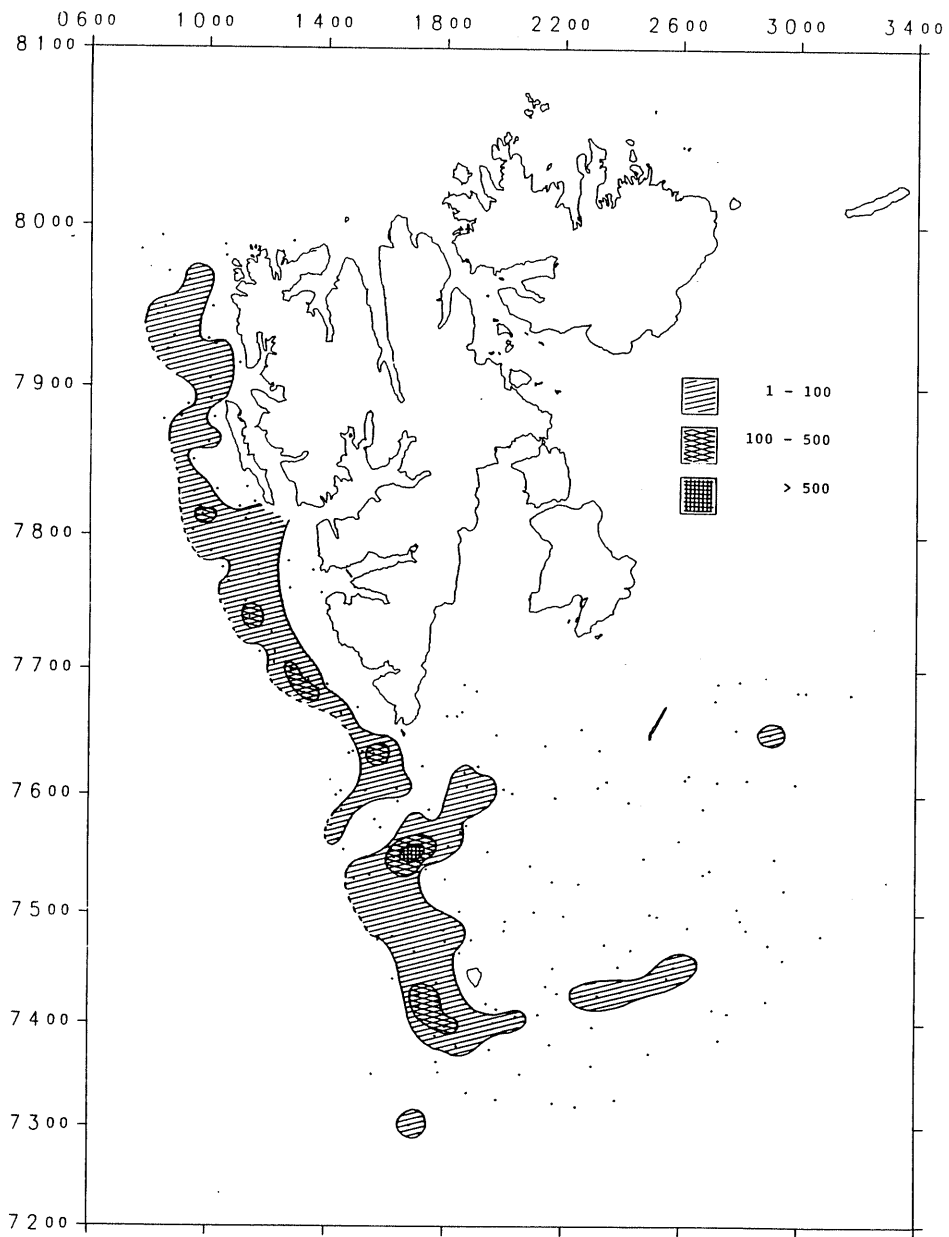


Fig: 7. Distribution of SEBASTES MARINUS in the trawl catches (number per hour trawling).

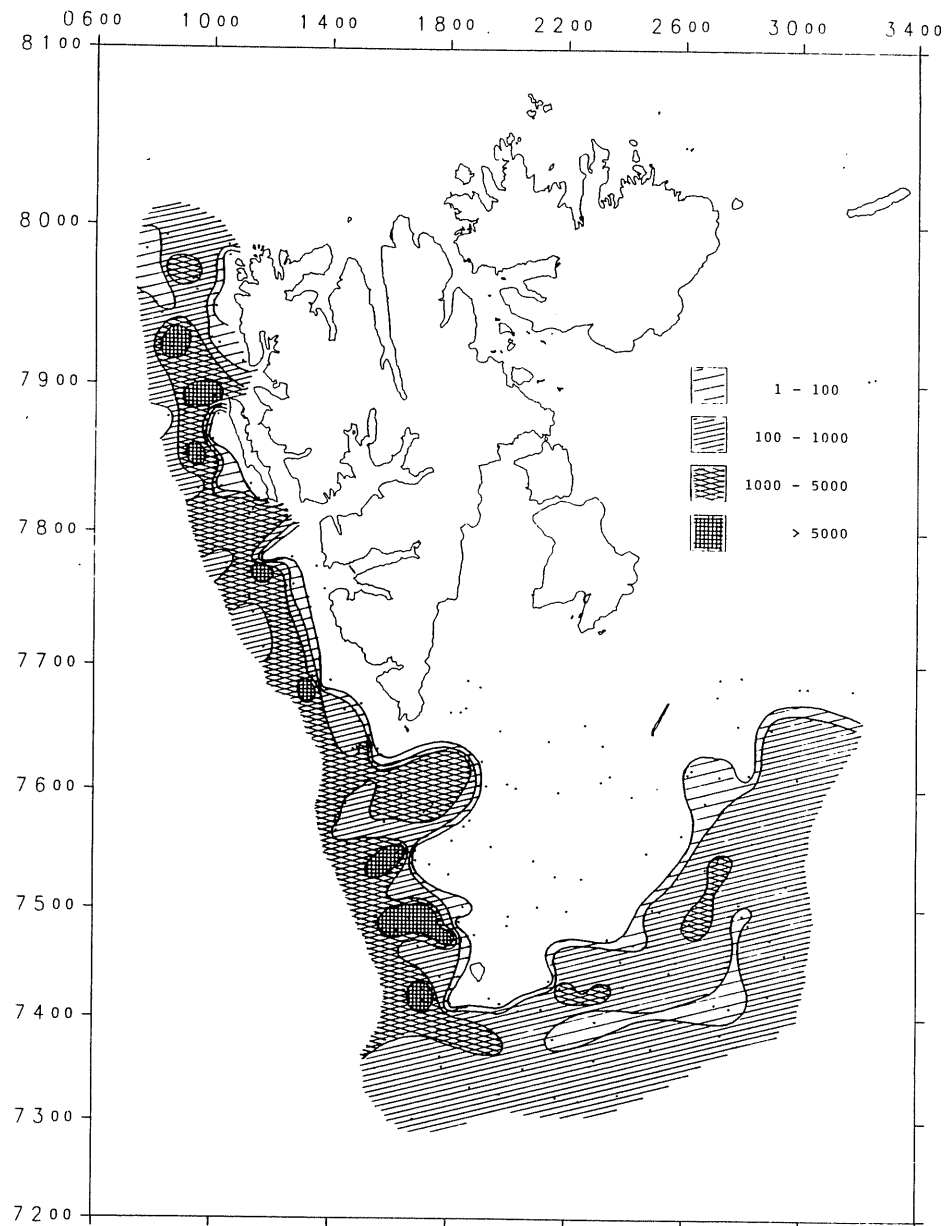


Fig: 8. Distribution of SEBASTES MENTELLA in the trawl catches (number per hour trawling).

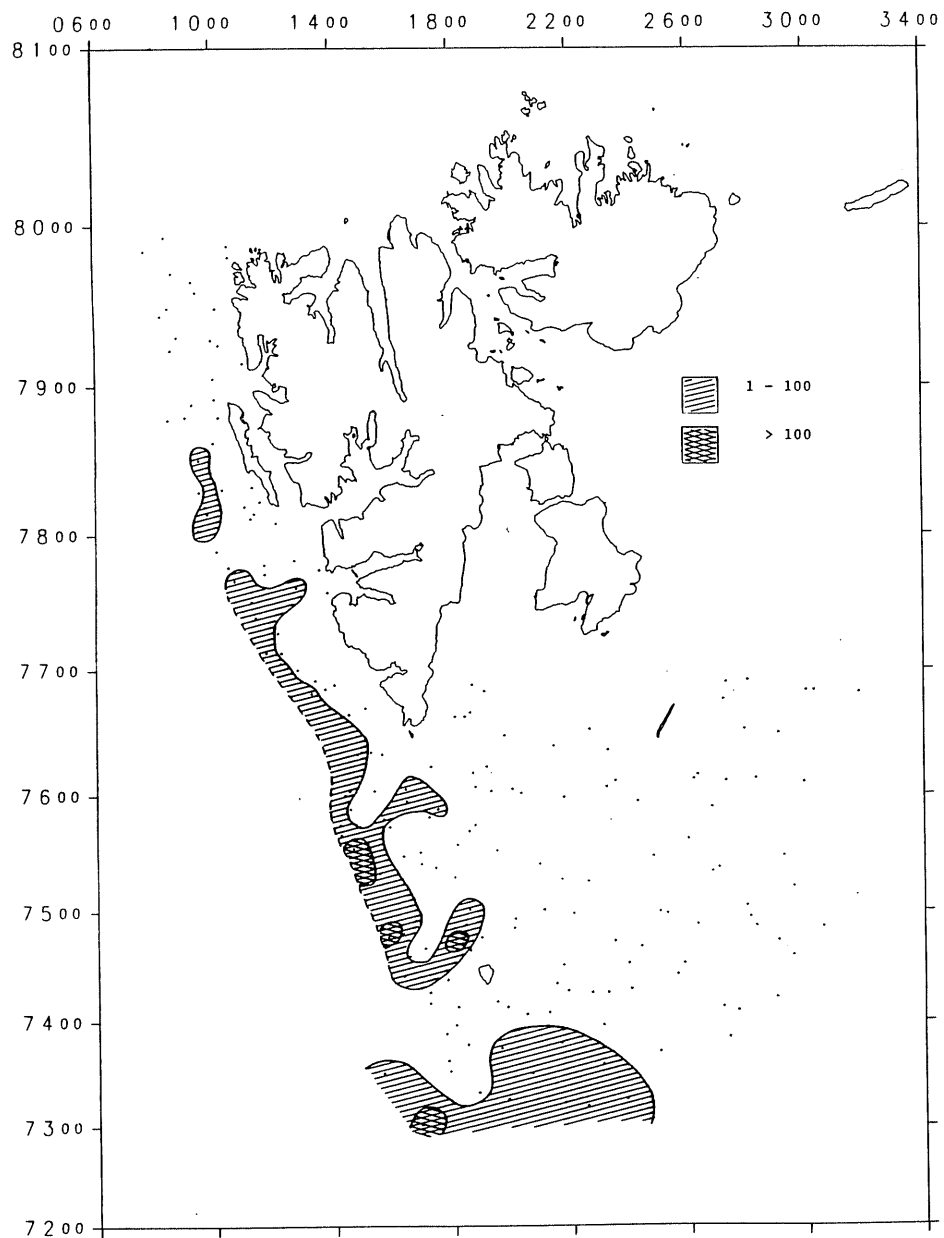


Fig: 9. Distribution of BLUE WHITING in the trawl catches (number per hour trawling).

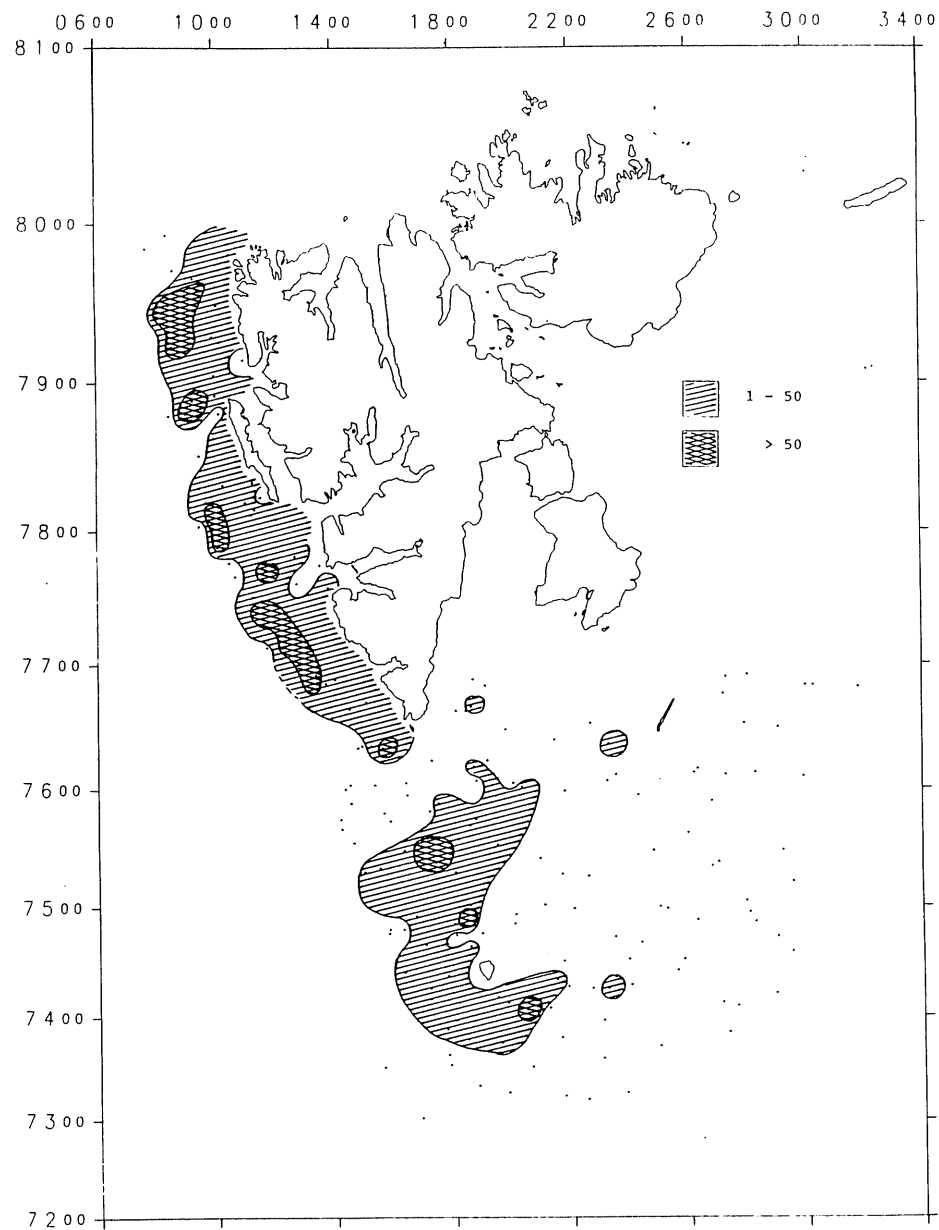


Fig:10. Distribution of CATFISH in the trawl catches (number per hour trawling).

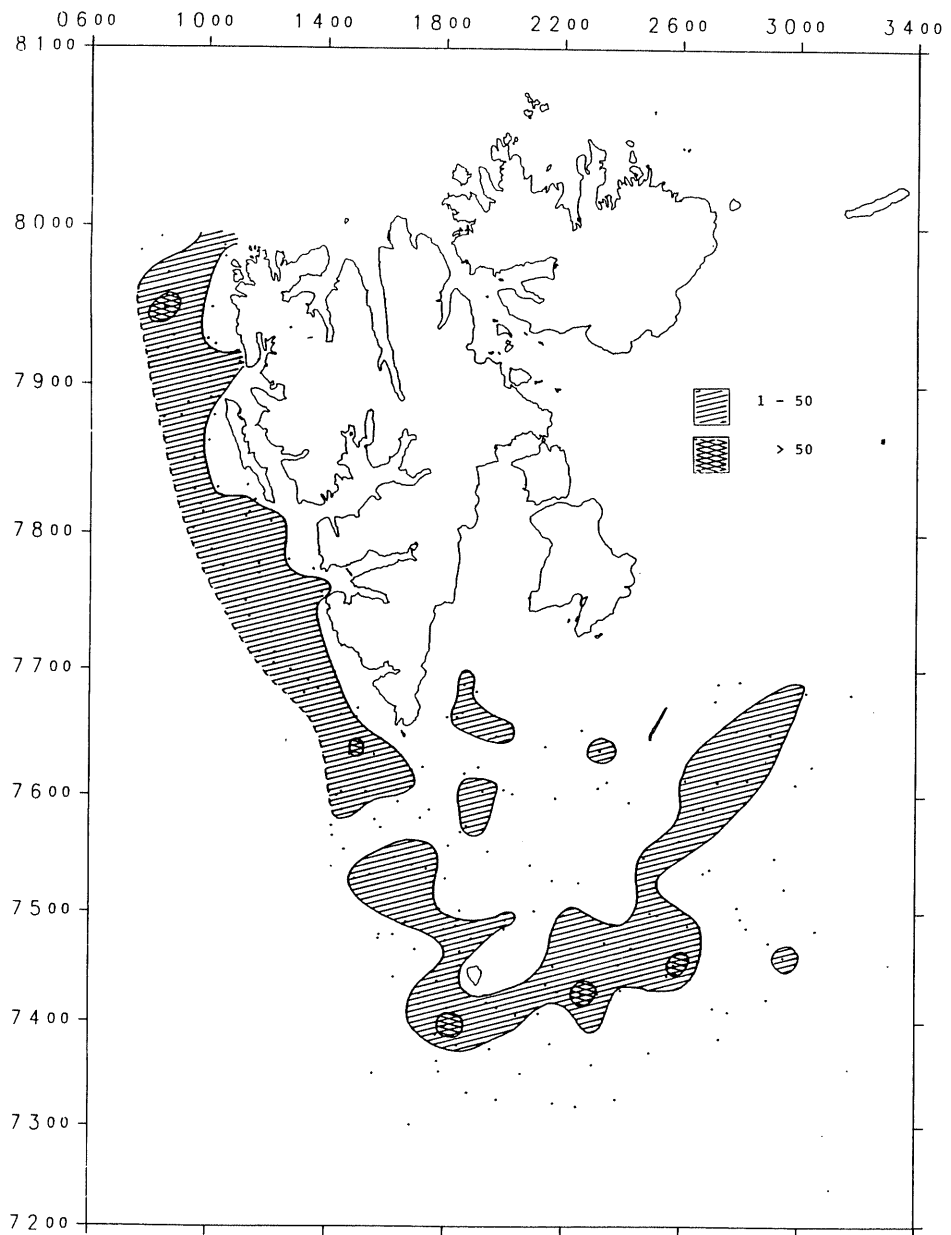


Fig:11. Distribution of SMALLER CATFISH in the trawl catches (number per hour trawling).

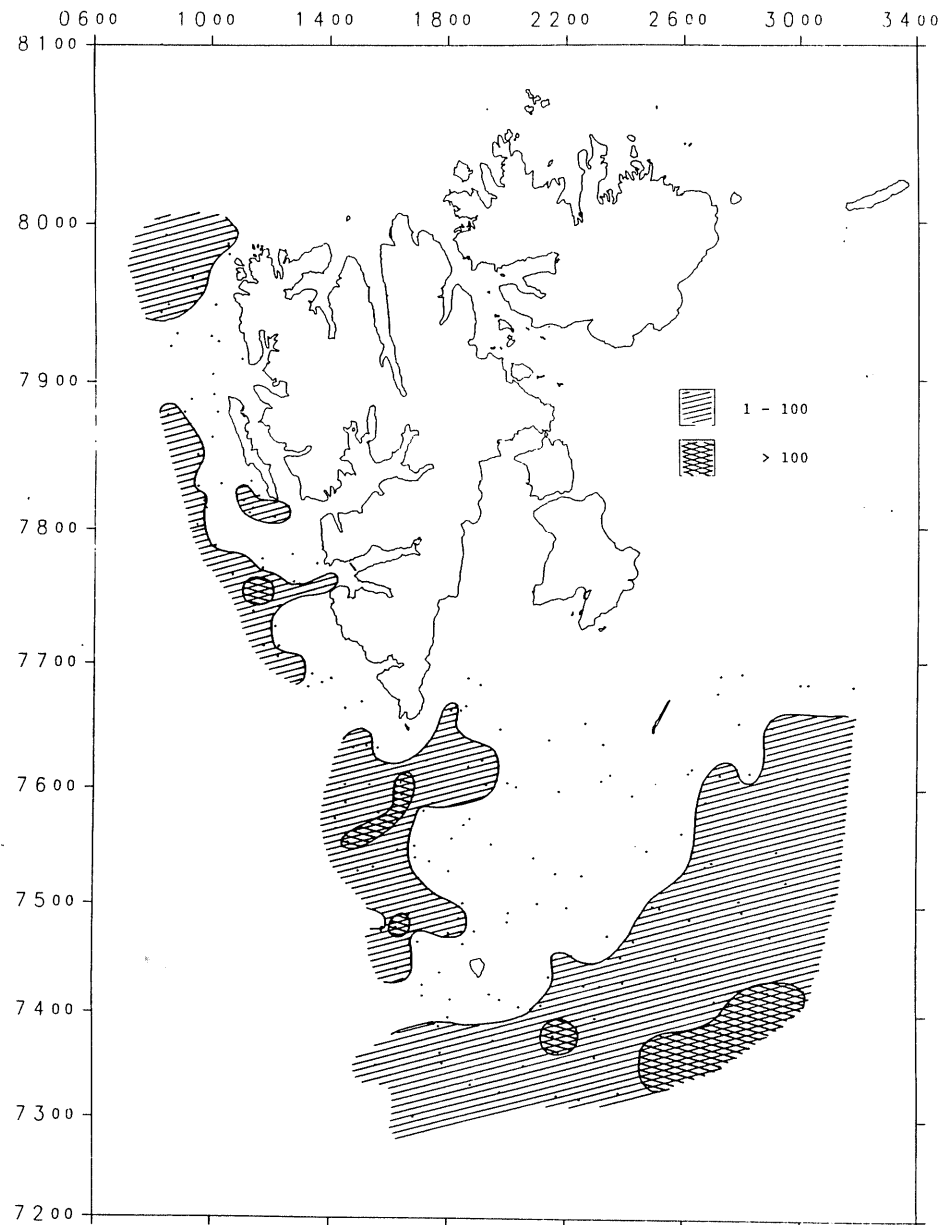


Fig:12. Distribution of SHRIMPS in the trawl catches (kilos per hour trawling).