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Report on Commercial Trial Fishery for Shrimp at East Greenland in 1987

by

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1. INTRODUCTION.

In May to August 1987 a trial fishery for shrimp was carried out outside the commercially exploited fishing grounds in Denmark Strait. The Greenland trawler M/T Tasillaq carried out most of the trial fishery. Logbook data from this fishery were used to calculate an initial estimate of the shrimp density and biomass outside the area which is commercially fished.

2. TIME AND LOCATION OF THE TRIAL FISHERY.

The trial fishery took place in two periods: May 21 to May 29 and June 26 to August 19 1987. The trial area was separated by the commercial shrimp fishing area (roughly between 65°30'N and 67°30'N and east of 32°W, strata C2, C4 and C5) into a southern and a northern part (Fig. 1). The southern part was from Cape Farewell to south of the commercial area, and the northern part was north of the commercial area to 77°36'N (Table 1a-1c).

3. MATERIAL AND METHODS.

M/T Tasillaq is a 2,481 GRT stern trawler. The trawl used was a Bastard 2600 meshes (20 mm) equipped with bobbin gear and a codend of 44 mm meshsize (stretched). The trawl doors were of the type Thyborøn. The mean towing speed was 2.7 knots. The distance between the wings was estimated to 19 m +/- 1 m (E. Friis-Rødel, Danish Institute of Fishery Technology, personal communication).

The purpose of the trial fishery was to search for commercially exploitable concentrations of shrimp, and as no hauls gave catches of commercial value the trawler changed location after each haul. Therefore, all the hauls during the trial fishery may be considered to be placed at random.

Available sea charts made it possible to make a post-stratification by depth for the area south of 71°N (Fig. 1). Because of the 'semirandomness' of the trial fishery, the trawlings south of 71°N were treated as a stratified-random survey, knowing that the criteria for doing this were not met in all ways. Estimates of the trawlable shrimp biomass and the density of shrimp were calculated (Tables 3 and 5).

For the area north of 71°N it was only possible to calculate a mean density of shrimp.

A total of 266 hauls were carried out. 113 hauls were taken north of 71°N (Table 1a). 153 hauls were taken south of 71°N, 140 of which were taken in the area of the stratification (Table 1b-1e). The remaining 13 hauls were outside the stratification area and therefore discarded in the analysis.

4. RESULTS AND DISCUSSION.

In the northern trial area a total of 32.8 kg of shrimp were caught during 198 hours of trawling. Only 21 of the 113 hauls showed shrimp in the catch. In 20 of these hauls the catch of shrimp was below 4 kg, and in 1 haul the catch was 15 kg. The mean density was calculated to 2.24 kg per square km, and no fishable concentrations of shrimp were found. A West Greenland trawlsurvey gave a figure of 936 kg per sq km in a corresponding area outside and north of the commercial fishing grounds (71°-72°30'N) (Carlsson & Kannevorff, 1989).

In the East Greenland area between the commercial fishing grounds and 71°N 102 hauls were taken in stratum B1-B3 and C1-C3. In 10 of the hauls shrimp were caught, totalling 49.2 kg. The greatest density of shrimp was found in stratum B4 (22 kg per sq.km) at the eastern slope of the banks.

In the stratified area south of the commercial fishing grounds 38 hauls were taken of which 16 contained shrimp. The biggest shrimp catches were 22 kg (stratum D4) and 24 kg and 90 kg (stratum E1). These strata are located at the eastern slope of the banks and exhibited the highest densities of the trial fishery (132 and 700 kg per sq.km, respectively). The catches in stratum E1 gave a biomass estimate of 6,634 tonnes for this stratum.

The total trawlable biomass estimate of shrimp in the stratified area based on the trial fishery and using all hauls is 7400 tons (table 6). Of these stratum E1, represented by only two hauls, accounts for about 90% (6,624 tons) of the biomass estimate.

A Norwegian trawlsurvey in the Denmark Strait in September 1987 covered the supposed area of distribution of the commercially exploited shrimp stock (approx. strata C2, C5, C6 and D1) and gave an estimate of 28,045 tons of shrimp (Smedstad, 1988).

The trial fishery of M/T Tasillaq showed, that there is little reason to enlarge the area of future trawl surveys for estimating the trawlable shrimp biomass.

REFERENCES:

Carlsson, D. M. and Kannevorff, P., 1989.

Report on a Stratified trawl survey for shrimp (Pandalus borealis) in NAFO SAO+1 in July 1988. NAFO SCR doc. 89/40, Ser. No. N1617.

Smedstad, O. M., 1988.

Preliminary Report of a Cruise with M/T MASI to east Greenland Waters in September 1987. NAFO SCR doc. 88/4, Ser. No. N1488.

Table 1a

STATION LIST, TASIILAQ MAY - AUG 1987

STATION- IDENTIFICATION	POSITION-		DEPTH	TR- TIME	Catch in kg						
	N	W			SHR	RED	COD	GHL	POC	CAP	SQU
AREA A0, 000-999 M											
87081001	77.36	11.52	387.5	105	4.00	0.00	0.00	15.00	5.00	0.00	0.00
87081002	77.38	11.12	285.5	100	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87081003	77.31	10.19	268.5	150	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87080906	77.30	12.37	400.5	160	3.00	0.00	0.00	20.00	5.00	0.00	0.00
87081201	77.28	5.52	323.5	80	0.10	0.00	0.00	10.00	5.00	0.00	0.00
87080905	77.23	13.43	270.5	130	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87081202	77.22	8.24	280.0	80	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87081004	77.22	10.43	301.5	135	4.00	0.00	0.00	20.00	5.00	0.00	0.00
87080904	77.18	14.42	324.5	120	0.00	0.00	0.00	15.00	5.00	0.00	0.00
87080903	77.14	15.16	281.0	100	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87081203	77.09	12.30	260.0	95	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87080902	77.08	15.57	234.5	120	0.00	0.00	0.00	10.00	10.00	0.00	0.00
87081204	77.03	14.13	200.5	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080901	77.01	16.20	185.5	155	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87081206	76.59	15.32	200.5	115	0.10	0.00	0.00	5.00	0.00	0.00	0.00
87081205	76.56	14.57	170.0	95	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87081301	76.53	16.22	189.0	105	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080805	76.53	16.17	180.5	120	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87062601	76.46	7.53	407.5	55	0.00	10.00	0.00	0.00	0.00	0.00	0.00
87080701	76.46	14.54	239.0	180	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87080804	76.44	16.32	227.5	135	0.10	0.00	0.00	5.00	5.00	0.00	0.00
87081302	76.43	16.23	216.5	115	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87080702	76.39	15.36	191.0	135	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080801	76.35	18.18	124.0	160	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87080704	76.35	16.45	321.0	65	0.20	0.00	0.00	5.00	0.00	0.00	0.00
87080706	76.34	18.10	217.0	120	0.10	0.00	0.00	5.00	5.00	0.00	0.00
87080803	76.33	16.54	289.5	150	0.10	0.00	0.00	5.00	10.00	0.00	0.00
87080703	76.32	16.15	276.5	150	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87062604	76.32	8.14	506.5	70	0.00	5.00	0.00	0.00	0.00	0.00	0.00
87080802	76.31	17.36	147.0	120	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87081303	76.31	16.39	307.5	135	0.10	0.00	0.00	10.00	5.00	0.00	0.00
87062602	76.31	7.38	402.5	75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080705	76.30	17.30	195.0	145	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87062603	76.29	7.37	413.0	50	0.00	20.00	0.00	0.00	0.00	0.00	0.00
87080606	76.25	16.46	381.0	145	1.00	0.00	0.00	20.00	10.00	0.00	0.00
87081304	76.23	16.40	335.0	125	4.00	0.00	0.00	15.00	5.00	0.00	0.00
87080605	76.21	16.21	367.5	140	0.10	0.00	0.00	15.00	5.00	0.00	0.00
87080604	76.19	15.44	292.5	150	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87081305	76.13	16.40	176.0	110	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080603	76.12	14.57	278.0	205	0.00	0.00	0.00	5.00	10.00	0.00	0.00
87080602	76.11	14.17	267.0	105	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87080601	76.09	13.51	268.5	125	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87080506	76.08	13.21	217.5	125	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87080505	76.06	13.38	258.0	125	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87081306	76.04	16.38	124.0	120	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87080502	76.03	15.35	183.5	140	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080504	76.03	14.00	322.5	120	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87080501	76.01	17.07	343.0	80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080503	76.01	14.47	325.5	150	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87080105	75.58	14.36	304.0	120	1.00	0.00	0.00	10.00	5.00	0.00	0.00
87080406	75.58	17.59	67.5	105	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080201	75.57	13.45	195.0	105	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87080405	75.57	17.32	212.0	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080104	75.55	15.22	225.5	110	0.00	0.00	0.00	5.00	5.00	0.00	0.00

(Continued)

Table 1a (Continued) STATION LIST, TASIILAQ MAY - AUG 1987

STATION- IDENTIFICATION	POSITION-		TR- DEPTH	* TIME	Catch in kg						
	N	W			SHR	RED	COD	GHL	POC	CAP	SQU
AREA A0, 000-999 M											
87080202	75.54	13.02	301.0	105	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080404	75.53	17.24	332.0	90	0.50	0.00	0.00	5.00	0.00	0.00	0.00
87073102	75.53	16.20	73.5	80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080103	75.52	16.17	93.5	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080203	75.50	12.42	402.0	150	1.00	0.00	0.00	5.00	0.00	0.00	0.00
87080101	75.48	15.25	181.5	65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080102	75.47	15.45	163.5	120	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87080403	75.45	16.47	107.5	130	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080302	75.43	13.35	253.0	90	0.00	0.00	0.00	10.00	5.00	0.00	0.00
87080204	75.43	12.14	327.5	90	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87080303	75.42	14.10	191.5	90	1.00	0.00	0.00	10.00	5.00	0.00	0.00
87080304	75.41	14.51	175.0	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87073103	75.39	16.45	163.5	75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080301	75.39	13.07	250.0	90	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87080206	75.39	12.32	273.5	125	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87080205	75.38	11.43	308.0	120	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87080402	75.37	16.47	201.5	80	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87080305	75.37	15.43	164.0	100	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87073105	75.32	16.34	189.5	110	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87080401	75.31	17.00	337.0	80	0.50	0.00	0.00	5.00	0.00	0.00	0.00
87080306	75.31	16.43	237.5	120	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87073101	75.28	16.39	203.5	80	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87073104	75.27	17.02	351.0	120	0.00	0.00	0.00	15.00	5.00	0.00	0.00
87073004	75.22	16.30	264.5	90	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87073003	75.17	16.48	333.5	90	0.00	0.00	0.00	5.00	10.00	0.00	0.00
87073002	75.01	16.56	313.0	60	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87073001	74.53	16.38	329.0	95	0.00	0.00	0.00	10.00	0.00	0.00	0.00
87072906	74.50	17.06	352.0	120	0.00	0.00	0.00	10.00	0.00	0.00	0.00
87072905	74.31	18.06	199.5	90	0.00	0.00	0.00	10.00	5.00	0.00	0.00
87072904	74.12	18.49	174.5	90	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87072704	74.09	18.51	204.0	80	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87072801	74.04	19.27	332.5	90	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87072903	74.00	18.48	314.5	90	1.00	0.00	0.00	5.00	5.00	0.00	0.00
87072802	73.59	18.36	445.5	90	0.00	0.00	0.00	10.00	5.00	0.00	0.00
87072901	73.56	17.37	199.0	60	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87072902	73.50	18.06	327.0	70	3.00	0.00	0.00	15.00	1.00	0.00	0.00
87072805	73.50	16.15	227.0	90	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87072806	73.44	17.11	289.0	80	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87072803	73.42	18.01	256.0	65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87072804	73.40	15.53	432.0	90	0.00	0.00	0.00	15.00	0.00	0.00	0.00
87062901	73.30	9.21	580.0	75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87072703	72.32	20.46	356.5	95	0.00	0.00	0.00	0.00	10.00	0.00	0.00
87063001	72.24	11.45	422.5	75	0.00	0.00	1.00	10.00	0.00	0.00	0.00
87072702	72.20	21.17	192.5	75	0.00	0.00	0.00	5.00	10.00	0.00	0.00
87072701	72.14	21.11	210.0	100	0.00	0.00	0.00	0.00	10.00	0.00	0.00
87072607	72.08	21.03	193.0	60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87072606	72.03	21.25	389.0	80	0.00	0.00	0.00	5.00	10.00	0.00	0.00
87072603	71.55	21.10	439.0	70	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87072602	71.50	20.31	353.0	110	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87072605	71.50	21.35	390.5	80	0.00	0.00	0.00	5.00	15.00	0.00	0.00
87072601	71.47	19.59	318.5	115	0.00	0.00	0.00	10.00	5.00	0.00	0.00
87072604	71.41	21.36	339.5	70	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87072504	71.39	19.21	336.5	105	0.00	0.00	0.00	0.00	10.00	0.00	0.00
87063001	71.38	14.44	767.5	55	0.00	0.00	0.00	0.00	0.00	0.00	12.00
87072503	71.29	19.44	262.5	75	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87072502	71.12	20.04	342.5	120	0.00	0.00	0.00	5.00	10.00	0.00	0.00
87070101	71.03	13.53	453.5	85	15.00	1.00	0.00	10.00	0.00	0.00	0.00
87070102	71.01	14.01	594.0	120	0.00	5.00	0.00	5.00	0.00	0.00	0.00
87072501	71.01	19.43	433.0	110	0.00	0.00	0.00	5.00	5.00	0.00	0.00

Table 1b

STATION LIST, TASILLAQ MAY - AUG 1987

STATION-IDENTIFICATION	POSITION-		DEPTH	TR-TIME	Catch in kg						
	N	W			SHR	RED	COD	GHL	POC	CAP	SQU
AREA B1, 200-400 M											
87072401	70.51	19.48	397.5	125	0.00	0.00	0.00	10.00	0.00	0.00	0.00
87072405	70.49	20.27	273.5	110	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87072402	70.48	19.58	312.0	90	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87072305	70.39	19.55	275.5	100	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87072404	70.38	21.15	237.0	120	0.00	0.00	0.00	5.00	0.00	10.00	0.00
87072403	70.30	20.55	280.0	105	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87072304	70.25	19.58	292.5	75	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87071804	70.24	21.15	329.0	75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87071805	70.23	21.03	340.5	75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87081803	70.21	22.28	308.0	70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87072004	70.18	20.56	383.0	80	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87081901	70.07	21.39	392.0	90	0.00	0.00	0.00	10.00	5.00	0.00	0.00
87070501	70.01	19.34	303.0	75	0.00	0.00	0.00	10.00	0.00	100.00	0.00
87072001	89.58	20.56	387.5	75	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87071901	89.58	19.32	335.0	95	0.00	0.00	0.00	5.00	0.00	5.00	0.00
87072303	89.54	20.11	282.5	120	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87071807	89.54	20.05	290.5	105	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87071806	89.51	20.39	338.5	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87070403	89.51	20.29	312.5	80	0.00	0.00	0.00	5.00	2.00	10.00	0.00
87071907	89.48	20.11	293.0	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87071906	89.47	19.48	297.0	80	0.00	0.00	0.00	5.00	0.00	5.00	0.00
87072302	89.44	20.34	315.0	120	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87070402	89.43	19.54	310.5	115	1.00	0.00	0.00	2.00	2.00	0.00	0.00
AREA B2, 400-600 M											
87081802	70.22	24.28	539.5	120	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87081801	70.18	21.48	483.0	80	0.10	0.00	0.00	5.00	5.00	0.00	0.00
87071803	70.18	21.28	494.0	80	4.00	0.00	0.00	5.00	0.00	1.00	0.00
87081802	70.17	22.08	518.5	120	0.10	0.00	0.00	5.00	0.00	0.00	0.00
87071808	70.15	21.42	457.5	75	0.00	0.00	0.00	10.00	0.00	5.00	0.00
87072005	70.15	21.09	468.0	150	10.00	0.00	0.00	0.00	0.00	0.00	0.00
87071802	70.14	21.34	477.5	80	7.00	0.00	0.00	5.00	0.00	5.00	0.00
87081804	70.11	23.35	558.0	125	0.00	0.00	0.00	15.00	5.00	0.00	0.00
87081808	70.10	22.29	538.0	135	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87072008	70.10	21.17	570.5	135	0.00	0.00	0.00	50.00	0.00	0.00	0.00
87081805	70.09	23.08	555.5	110	0.00	0.00	0.00	15.00	5.00	0.00	0.00
87072101	70.08	21.38	529.0	90	0.00	0.00	0.00	10.00	0.00	0.00	0.00
87071807	70.08	21.49	480.5	75	8.00	0.00	0.00	5.00	0.00	5.00	0.00
87072003	70.08	21.04	528.0	70	4.00	0.00	0.00	5.00	0.00	0.00	0.00
87072102	70.08	21.09	532.5	105	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87072103	70.05	21.21	580.5	120	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87072104	70.04	21.41	578.0	80	0.00	0.00	0.00	15.00	0.00	0.00	0.00
87071808	70.03	22.03	489.0	80	0.00	0.00	0.00	5.00	0.00	10.00	0.00
87071801	70.02	21.43	538.5	90	0.00	0.00	0.00	10.00	0.00	0.00	0.00
87072002	70.00	21.19	531.0	115	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87071506	69.51	21.48	459.5	85	0.00	0.00	0.00	10.00	0.00	5.00	0.00
87071805	89.47	21.14	439.0	75	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87071505	89.44	21.52	493.0	85	0.00	0.00	0.00	0.00	0.00	10.00	0.00
87081902	89.43	21.44	483.0	120	0.00	0.00	0.00	15.00	5.00	0.00	0.00
87071804	89.37	21.12	412.5	75	0.00	0.00	0.00	5.00	0.00	5.00	0.00
87071504	89.34	21.50	444.0	85	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87071503	89.28	21.49	405.5	80	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87071803	89.26	21.10	434.0	135	0.00	0.00	0.00	0.00	10.00	0.00	0.00
87071802	89.23	21.17	418.5	85	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87072301	89.22	21.13	418.5	105	0.00	0.00	0.00	10.00	0.00	0.00	0.00
87071704	89.12	21.52	427.0	90	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87071501	89.05	21.39	458.0	80	0.00	0.00	0.00	0.00	0.00	5.00	0.00
AREA B3, 200-400 M											
87081708	70.56	24.29	278.0	140	0.00	0.00	0.00	10.00	5.00	0.00	0.00
87081705	70.48	24.34	275.0	150	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87081704	70.40	24.40	352.0	80	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87081702	70.35	24.27	328.0	110	0.00	0.00	0.00	0.00	5.00	0.00	0.00
87081701	70.30	23.54	283.0	180	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87081805	70.22	23.41	395.0	185	0.00	0.00	0.00	5.00	5.00	0.00	0.00
87081804	70.21	22.53	353.0	145	0.00	0.00	0.00	10.00	0.00	0.00	0.00
87071701	69.48	22.25	283.0	90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87072202	69.25	23.04	218.5	120	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87072203	69.20	23.13	219.5	70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87072204	69.18	23.06	253.0	40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87071801	69.17	21.37	390.5	75	0.00	0.00	0.00	5.00	0.00	5.00	0.00
87071502	69.13	21.39	381.5	75	0.00	0.00	0.00	0.00	0.00	5.00	0.00
87070504	69.10	20.48	399.0	60	0.00	0.00	0.00	10.00	0.00	0.00	0.00
87070802	68.40	24.38	328.0	60	0.00	0.00	0.00	0.00	0.00	25.00	0.00
87070801	68.34	24.20	380.0	50	0.00	0.00	0.00	0.00	0.00	20.00	0.00
87071403	68.28	24.43	380.0	85	0.00	0.00	0.00	0.00	0.00	10.00	0.00
AREA B4, 400-600 M											
87070103	70.57	12.33	495.0	70	2.00	0.00	0.00	15.00	0.00	0.00	0.00
87072308	70.47	19.40	401.5	85	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87070201	70.37	11.52	400.5	110	8.00	0.00	0.00	20.00	0.00	0.00	0.00
87071902	89.57	19.08	458.5	75	0.00	0.00	0.00	5.00	0.00	5.00	0.00
87071905	89.43	19.16	492.0	55	0.00	0.00	0.00	10.00	0.00	5.00	0.00
87070401	89.39	19.27	427.5	60	8.00	0.00	0.00	15.00	3.00	0.00	0.00
87070503	89.28	19.44	478.0	75	0.00	0.00	0.00	15.00	0.00	0.00	0.00
AREA B5, 400-600 M											
87081801	70.23	24.52	548.0	120	0.00	0.00	0.00	5.00	0.00	0.00	0.00
87072205	69.09	22.52	521.0	155	0.00	0.00	0.00	25.00	0.00	0.00	0.00
87071703	69.07	22.29	492.5	70	0.00	0.00	0.00	15.00	0.00	0.00	0.00
87071702	69.04	22.27	537.0	40	0.00	0.00	0.00	10.00	0.00	5.00	0.00

Table 1c STATION LIST, TASIILAQ MAY - AUG 1987

STATION-IDENTIFICATION	POSITION-		DEPTH	TR-TIME	Catch in kg			POC	CAP	SQU
	N	W			SHR	RED	COD			
AREA C1, 200-400 M										
87071402	88.24	25.16	318.0	35	0.00	0.00	0.00	0.00	5.00	0.00
87070702	88.10	26.01	308.5	60	0.00	0.00	0.00	0.00	0.00	0.00
87071401	88.09	25.33	365.0	75	0.00	0.00	0.00	0.00	10.00	0.00
87070701	88.06	25.31	311.0	25	0.00	0.00	0.00	0.00	10.00	0.00
87070703	87.53	26.06	344.0	80	0.00	0.00	0.00	0.00	0.00	0.00
87071301	87.48	25.40	368.5	70	0.00	0.00	0.00	0.00	0.00	0.00
87071305	87.44	27.12	301.0	60	0.00	0.00	0.00	5.00	0.00	0.00
87071303	87.43	26.15	338.5	110	0.00	0.00	0.00	10.00	0.00	0.00
87071202	87.42	26.03	315.5	45	0.00	0.00	0.00	0.00	0.00	0.00
87071304	87.41	26.54	323.0	85	0.00	0.00	0.00	5.00	0.00	0.00
87071204	87.40	25.59	377.5	70	0.00	0.00	0.00	0.00	10.00	0.00
87071002	67.38	26.38	301.5	75	0.00	0.00	0.00	0.00	0.00	0.00
87071201	87.37	26.26	309.5	60	0.00	0.00	0.00	0.00	0.00	0.00
87070804	87.37	28.42	308.5	60	0.00	0.00	0.00	0.00	0.00	0.00
87071001	87.34	26.58	305.5	60	0.00	0.00	0.00	0.00	5.00	0.00
87070901	87.32	29.27	244.0	50	5.00	0.00	0.00	0.00	10.00	0.00
87070801	87.32	28.39	301.0	85	0.00	0.00	0.00	0.00	0.00	0.00
87070803	87.31	27.56	288.5	80	0.00	0.00	0.00	0.00	0.00	0.00
87070802	87.30	27.10	268.5	80	0.00	0.00	0.00	0.00	0.00	0.00
AREA C3, 400-600 M										
87071302	87.45	25.47	436.0	60	0.00	0.00	0.00	0.00	5.00	0.00
87071203	87.40	25.51	447.5	70	0.00	0.00	0.00	0.00	10.00	0.00
87070704	87.34	26.01	406.0	80	0.00	0.00	0.00	0.00	10.00	0.00
AREA C6, 200-400 M										
87052106	65.24	33.10	288.5	105	0.00	2500	10.00	0.00	0.00	0.00
AREA C7, 400-600 M										
87052101	65.29	30.09	406.0	90	0.00	125.00	15.00	0.00	0.00	0.00
87052102	65.29	30.09	440.5	100	0.00	25.00	5.00	0.00	0.00	0.00
87052105	65.27	31.17	489.0	85	0.00	30.00	20.00	10.00	0.00	0.00
87052104	65.27	30.50	428.5	80	0.00	20.00	0.00	0.00	0.00	0.00
87052103	65.27	30.10	572.0	115	0.00	200.00	50.00	20.00	0.00	0.00

Table 1d STATION LIST, TASIILAQ MAY - AUG 1987

STATION-IDENTIFICATION	POSITION-		DEPTH	TR-TIME	Catch in kg			POC	CAP	SQU
	N	W			SHR	RED	COD			
AREA D1, 200-400 M										
87052201	65.07	34.53	333.0	70	0.05	1500	0.00	0.00	0.00	0.00
87052203	64.47	35.26	318.5	100	3.00	25.00	0.00	0.00	0.00	0.00
AREA D2, 400-600 M										
87052205	64.42	35.40	473.0	85	9.00	50.00	0.00	0.00	0.00	0.00
87052208	64.29	35.54	438.0	45	0.21	72.00	0.00	5.00	0.00	0.00
AREA D3, 200-400 M										
87052207	64.24	38.05	316.5	60	5.00	15.00	0.00	0.00	0.00	0.00
87052208	64.18	36.15	370.0	120	0.15	50.00	15.00	0.00	0.00	0.00
87052304	63.38	38.06	223.0	100	0.00	1500	5.00	0.00	0.00	0.00
87052901	63.35	37.29	353.5	125	0.00	325.00	40.00	0.00	0.00	0.00
87052302	63.32	37.34	315.5	180	0.05	10.00	150.00	10.00	0.00	0.00
87052303	63.30	37.51	282.0	80	0.00	125.00	175.00	0.00	0.00	0.00
87052405	63.20	40.14	220.5	30	0.28	0.00	0.00	0.00	0.00	0.00
87052406	63.02	40.29	213.5	60	0.04	0.00	0.00	0.00	0.00	0.00
AREA D4, 400-600 M										
87052204	64.42	35.22	402.5	80	22.00	125.00	5.00	0.00	0.00	0.00
AREA D5, 400-600 M										
87052403	63.36	40.05	419.0	15	0.22	0.00	0.00	0.00	0.00	0.00
87052402	63.33	39.40	548.5	120	0.00	75.00	0.00	5.00	0.00	0.00
87052401	63.24	39.27	443.5	140	0.05	100.00	0.00	0.00	0.00	0.00

Table 1e STATION LIST, TASIILAQ MAY - AUG 1987

STATION-IDENTIFICATION	POSITION-		DEPTH	TR-TIME	Catch in kg			POC	CAP	SQU
	N	W			SHR	RED	COD			
AREA E1, 200-400 M										
87052408	62.44	40.54	212.0	120	1.00	0.00	0.00	0.00	0.00	0.00
87052409	62.31	41.08	354.0	40	0.04	0.00	0.00	0.00	0.00	0.00
87052501	62.05	41.02	207.5	45	24.00	200.00	0.00	0.00	0.00	0.00
87052503	61.45	41.05	250.0	50	0.00	200.00	0.00	0.00	0.00	0.00
87052701	60.31	41.59	228.5	15	90.00	0.00	0.00	0.00	0.00	0.00
87052704	59.54	42.23	217.5	40	0.00	0.00	0.00	0.00	0.00	0.00
87052705	59.42	42.42	292.5	105	0.00	0.00	0.00	0.00	0.00	0.00
87052706	59.24	43.39	338.5	65	0.01	50.00	0.00	0.00	0.00	0.00
AREA E2, 400-600 M										
87052407	62.58	40.37	503.0	30	0.00	0.00	0.00	0.00	0.00	0.00
87052801	61.28	41.20	467.0	30	0.00	150.00	0.00	0.00	0.00	0.00
87052504	61.05	41.43	518.0	60	0.00	0.00	0.00	0.00	0.00	0.00
87052801	60.02	42.06	505.0	35	0.00	25.00	0.00	0.00	0.00	0.00
87052707	59.22	43.45	452.0	45	0.00	5.00	0.00	0.00	0.00	0.00

TABLE 2. Areas in sq.kms of depth strata outside 3 miles from basic line. Strata names refer to Figure 1.

Area name	areal Sq. km	% of total	Depth zones meters	Stratum name	areal Sq. km	% of area
B	28600	16	200-400	B1	11008	38
				B3	8681	30
			400-600	B2	5526	19
				B4	2081	7
				B5	1304	5
C	82225	47	200-400	C1	16631	20
				C2	23472	29
				C6	19810	24
			400-600	C3	1662	2
				C4	6428	8
				C5	13343	16
				C7	879	1
D	49866	29	200-400	D1	17413	35
				D3	20003	40
			400-600	D2	9315	19
				D4	632	1
				D5	2503	5
E	12888	7	200-400	E1	6467	73
			400-600	E2	3421	27
TOTAL	173579	100				

Table 3. BIOMASS OF SHRIMP IN STRATA
Tons per stratum

REGION OEST			STRBIOM					
STRATUM	AREA	SQKM	TONS	HAULS	STD	STDERR	MIN	MAX
AREA B, 200-400 M	B3	8881	0.00	17	0.00	0.00	0	0
	B1	11008	2.38	23	11.44	2.38	0	55
AREA B, 400-600 M	B5	1304	0.00	4	0.00	0.00	0	0
	B4	2081	46.35	7	68.64	25.94	0	179
	B2	5526	25.25	32	67.99	12.02	0	245
AREA C, 200-400 M	C1	16831	43.57	19	189.90	43.57	0	828
	C6	19810	0.00	1			0	0
AREA C, 400-600 M	C7	879	0.00	5	0.00	0.00	0	0
	C3	1682	0.00	3	0.00	0.00	0	0
AREA D, 200-400 M	D1	17413	128.94	2	167.47	118.42	9	245
	D3	20003	123.83	8	286.03	101.13	0	821
AREA D, 400-600 M	D4	832	83.74	1			84	84
	D5	2503	12.00	3	20.39	11.77	0	36
	D2	9315	311.91	2	401.23	283.72	28	596
AREA E, 200-400 M	E1	9487	6623.62	8	17252.18	6099.57	0	49198
AREA E, 400-600 M	E2	3421	0.00	5	0.00	0.00	0	0

Table 4. DENSITY OF SHRIMP IN STRATA
Kg per square km

REGION NORDOEST		SHRDENS					
STRATUM	AREA	KG	HAULS	STD	STDERR	MIN	MAX
AREA A0, 000-999 M		2.24	113	11.03	1.04	0	109

Table 5.

DENSITY OF SHRIMP IN STRATA
Kg per square km

REGION OEST

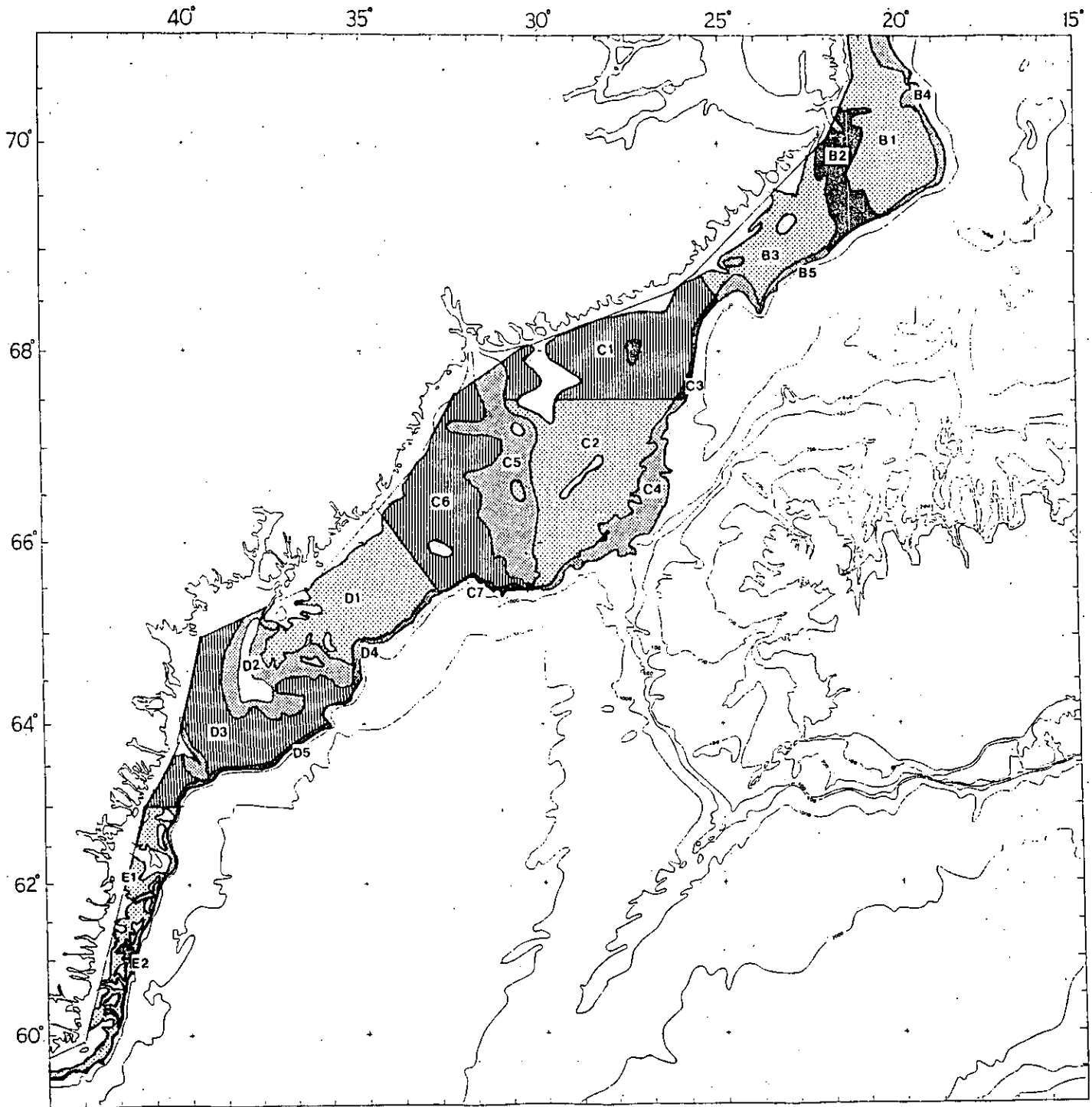
			SHRDENS					
			KG	HAULS	STD	STDERR	MIN	MAX
STRATUM	AREA	SQKM						
AREA B, 200-400 M	B3	8681	0.00	17	0.00	0.00	0	0
	B1	11008	0.22	23	1.04	0.22	0	5
AREA B, 400-600 M	B5	1304	0.00	4	0.00	0.00	0	0
	B4	2081	22.27	7	32.98	12.47	0	86
	B2	5526	4.57	32	12.30	2.18	0	44
AREA C, 200-400 M	C1	16631	2.62	19	11.42	2.62	0	50
	C6	19810	0.00	1			0	0
AREA C, 400-600 M	C7	879	0.00	5	0.00	0.00	0	0
	C3	1662	0.00	3	0.00	0.00	0	0
AREA D, 200-400 M	D1	17413	7.29	2	9.62	6.80	0	14
	D3	20003	6.19	8	14.30	5.06	0	41
AREA D, 400-600 M	D4	632	132.50	1			133	133
	D5	2503	4.80	3	8.15	4.70	0	14
	D2	9315	33.48	2	43.07	30.46	3	64
AREA E, 200-400 M	E1	9467	699.65	8	1822.35	644.30	0	5197
AREA E, 400-600 M	E2	3421	0.00	5	0.00	0.00	0	0

Table 6.

Biomass estimate and konfidence interval (after W.G. COCHRAN)
of Shrimp outside main fishing area ICES DIV XIV

REGION	BIOMASSE tons	+/-	PROCENT
OEST	7,400	12217	165.10

Fig. 1.



Stratification of The Denmark Strait.

200-400 m : B1, B3, C1, C2, C6, D1, D3 and E1.

400-600 m : B2, B4, B5, C3, C4, C5, C7, D2, D4, D5 and E2.