

**FRV ‚Solea‘**

**Cruise 584**

**03.01. – 06.02.2008**

**Winter Distribution of Brown Shrimp in the German Bight**

Scientist in charge: Dr. Th. Neudecker

**Narrative**

The purpose of the research trip of RV „Solea“ in January 2008 was surveying the area of the German Bight and adjacent waters for distribution and abundance of brown shrimp (*Crangon crangon*). The programme was initiated 1991. Due to adverse weather conditions fishing was possible only at 12 out of 32 days from Borkum up to Jutland, DK, and at some stations from west to east north of Helgoland.

By that the German-Danish cooperation started in 2005 was continued.

The depth range of the 72 hauls was between 10 and 40 metres and did not reach the 50 m depth line which is assumed to be the distributional border for brown shrimp in the southern North Sea.

This year the mean catch of brown shrimp per half hour tow was 2.2 kg, i.e. less than half of the amount the years before. Higher concentrations were found west of Schleswig-Holstein and northwards along the Jutland coast with best catches between 20 and 35 metres. Water temperatures were again high at that time ranging between 4 and 7 °C. Numerous shrimpers were seen especially in the Danish and Schleswig-Holstein part.

The intended series of stations across the North Sea into British waters could not be fished.

**Participants:**

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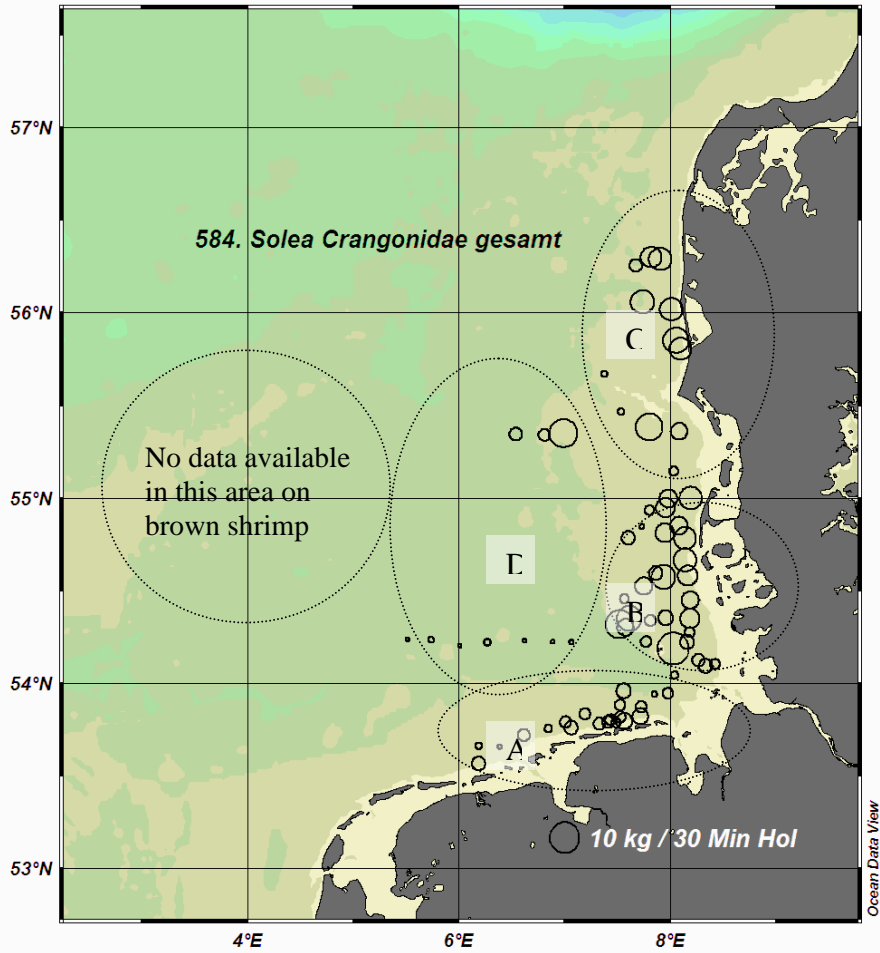
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**Figure 1: Haul positions and catch of Crangonids during 584. cruise of RV “SOLEA“ January 2008**

<b>Table 1: Meta data on RV "SOLEA" cruise 584. from January 2008</b>	
Days at sea (planned):	30 (32)
Fishing days:	12
No. of hauls (usable):	73 (72)
mean tow length [nm]:	1,613
fished area [km <sup>2</sup> ]:	1,614
Total catch of all kind [t]:	0,991
registered Fishspecies:	41
Measured and counted specimens:	13263
No. of shrimps samples (200g each):	72
Miles at Sea	1446

<b>Table 2: List of fin fish species from 72 beam trawl catches during 584. RV Solea-cruise 04.01.- 06.02. 2008</b>							
Name	NO.	Catch weight of all hauls in kg			Number of specimens in hauls		
		Sum	Mean	Maximum	Summe	Mittel	Maximum
Limanda limanda	1	76.104	1.015	4.960	9614	128.2	487
Clupea harengus	2	46.437	0.619	4.170	5076	67.7	503
Sprattus sprattus	3	45.161	0.602	6.859	7014	93.5	781
Pomatoschistus minutus	4	23.740	0.317	2.781	13347	178.0	1474
Pleuronectes platessa	5	19.620	0.262	1.254	1814	24.2	156
Gadus morhua	6	18.340	0.245	6.780	112	1.5	10
Merlangius merlangus	7	18.304	0.244	4.990	429	5.7	131
Buglossidium luteum	8	12.133	0.162	1.619	2007	26.8	277
Agonus cataphractus	9	10.049	0.134	1.016	1005	13.4	201
Myoxocephalus scorpius	10	6.374	0.085	1.026	108	1.4	24
Platichthys flesus	11	4.158	0.055	1.180	22	0.3	6
Callionymus lyra	12	2.222	0.030	0.474	267	3.6	80
Alosa fallax	13	1.794	0.024	0.356	43	0.6	7
Callionymus reticulatus	14	1.625	0.022	0.664	329	4.4	115
Ciliata mustela	15	1.230	0.016	0.166	31	0.4	4
Hyperoplus lanceolatus	16	1.084	0.014	0.260	56	0.7	10
Arnoglossus laterna	17	1.042	0.014	0.348	150	2.0	30
Osmerus eperlanus	18	1.027	0.014	0.218	205	2.7	72
Microstomus kitt	19	0.917	0.012	0.180	29	0.4	4
Rhinonemus cimbricus	20	0.810	0.011	0.352	31	0.4	15
Solea vulgaris	21	0.774	0.010	0.456	5	0.1	1
Liparis liparis	22	0.428	0.006	0.136	26	0.3	17
Ammodytes spec.	23	0.383	0.005	0.120	29	0.4	7
Pomatoschistus microps	24	0.300	0.004	0.142	259	3.5	142
Trisopterus luscus	25	0.242	0.003	0.084	4	0.1	1
Psetta maxima	26	0.174	0.002	0.172	33	0.4	31
Pholis gunellus	27	0.140	0.002	0.034	12	0.2	2
Callionymus maculatus	28	0.104	0.001	0.046	10	0.1	5
Echiichtys vipera	29	0.082	0.001	0.042	5	0.1	1
Gasterosteus aculeatus	30	0.072	0.001	0.017	24	0.3	6
Liparis montagui	31	0.054	0.001	0.044	5	0.1	4
Zoarces viviparus	32	0.050	0.001	0.040	3	0.0	2
Engraulis encrasicolus	33	0.044	0.001	0.034	2	0.0	1
Hippoglossoides platessoides	34	0.042	0.001	0.042	1	0.0	1
Phrynorhombus norvegicus	35	0.039	0.001	0.034	6	0.1	5
Syngnathus rostellatus	36	0.038	0.001	0.008	38	0.5	12
Entelurus aequoreus	37	0.028	0.000	0.010	4	0.1	1
Eutrigla gurnardus	38	0.012	0.000	0.012	1	0.0	1
Trachurus trachurus	39	0.010	0.000	0.010	1	0.0	1
Hippocampus	40	0.004	0.000	0.004	1	0.0	1
Aphia minuta	41	0.003	0.000	0.002	4	0.1	2
Total	41	295.193			42162		

<b>Table 3: List of "SF"- invertebrate species from 72 beam trawl catches during 584. RV Solea-cruise 04.01.- 06.02. 2008</b>							
Name	NO.	Catch weight of all hauls in kg			Number of specimens in hauls		
		Sum	Mean	Maximum	Summe	Mittel	Maximum
Crangon spec.	1	195.502	2.607	1.242	2	0.0	2
Portunidae	2	155.725	2.076	0.026	27950	372.7	2241
Asterias rubens	3	95.674	1.276	14.225	4341	57.9	621
Ophiurida	4	72.336	0.964	0.479	86899	1158.7	31007
Micrasterina	5	14.030	0.187	0.724	2752	36.7	2142
Astropecten irregularis	6	8.332	0.111	21.850	1041	13.9	684
Paguridae	7	4.846	0.065	0.119	2543	33.9	2135
Cancer pagurus	8	2.386	0.032	10.036	4	0.1	2
Carcinus maenas	9	1.500	0.020	5.685	157	2.1	137
Aphrodita aculeata	10	1.284	0.017	10.782	297	4.0	252
Buccinum undatum	11	0.841	0.011	24.961	20	0.3	16
Pandalidae	12	0.622	0.008	0.162	496	6.6	107
Corystes cassivelaunas	13	0.557	0.007	2.007	139	1.8	43
Echinidae	14	0.031	0.000	1.098	6	0.1	4
Total	14	553.667			126646		