

Department of Agriculture for Northern Ireland  
Agriculture and Environmental Science Division

**Cruise Report: LF2494 Young fish Survey**

**Vessel:** RV *Lough Foyle*

**Dates & area:** 25 Sept. - 6 Oct. 1994 in the Irish Sea (north); ICES div. VIIa

<b>Personnel:</b>	Mark Dickey-Collas	DANI	SIC/HSO
	Chris Burns	DANI	ASO
	John Peel	DANI	ASO
	Mark Livingstone	DANI	SO
	Michael McAliskey	DANI	SO
	Linda Drummond	UCC	student
	Adam Windrum	J Moores Uni.	student
	Paul Newton	Liverpool Uni	student

**Objectives:**

1. To collect data for the ongoing time series of ground fish surveys carried out by the Department of Agriculture in the northern Irish Sea.
2. To collect otolith samples for whiting, cod, haddock and hake ageing.
3. To collect stomachs for multispecies work on Irish Sea fish.
4. To collect cephalopods for projects at University College Cork.

**Cruise narrative:**

Sunday 25 September 1994

All scientific crew were onboard by 22:30.

Monday 26 September 1994

The ship set sail at 06:00 and reached station 35 at 07:00. This station was fished and then stations 86, 83, 81 and 101 were surveyed. The ship anchored in Dundrum Bay over night.

Tuesday 27 September 1994

Station 100 was trawled at 07:00, followed by stations 70, 71, 208, 88 and 17 throughout the rest of the day. The ship drifted in mid-channel overnight.

Wednesday 28 September 1994

The ship worked its way south along the west coast of the Isle of Man. Stations 97, 46, 99, 48, 51 and 96 were trawled. The ship spent the night drifting in mid-channel in the vicinity of station 216.

Thursday 29 September 1994

Trawling started at 07:00 at station 216 and then stations 50, 105, 90 and 75 were sampled. The ship anchored off Clogher Head over night.

Friday 30 September 1994

Trawling began at 07:00 and stations 73, 79, 92 and 93 were surveyed prior to arrival in Dublin at 16:00. The was tied up at Sir John Rogerson Key, Dublin overnight. 2 of the scientific staff disembarked in Dublin.

Saturday 1 October 1994

The ship remained docked in Dublin, to allow for the loading of essential supplies and to provide a mid-cruise break. Michael McAliskey joined the scientific staff for the remainder of the cruise.

Sunday 2 October 1994

The RV *Lough Foyle* sailed at 09:00 for station 94. Trawling started at 11:00. Stations 56 and 103 were then successfully trawled. The ship anchored in Castletown Bay, Isle of Man, overnight.

Monday 3 October 1994

The ship set sail at 06:00 for station 77, but the sea conditions had deteriorated overnight and the ship returned to shelter in 40 knot winds. Further attempts to start sampling were made throughout the day but the winds and swell remained high. By 15:30, conditions had improved and the vessel left the Manx coast for station 76. Station 77 was also trawled. The ship drifted south of the Isle of Man overnight.

Tuesday 4 October 1994

Stations 102, 243, 245 and 246 were trawled in chilly northerly winds. The ship headed north in the evening and then drifted in the vicinity of station 250 overnight.

Wednesday 5 October 1994

Trawling started at 07:00 at station 250, and the ship worked its way north through stations 259, 258, 257 and 256. The ship anchored overnight in Ramsey Bay.

Thursday 6 October 1994

Stations 64 and 63 were trawled and due to deteriorating weather and sea conditions the *Lough Foyle* headed for Belfast. The ship docked at <sup>^</sup> in Belfast.

**Results:**

42 of the 45 stations were successfully trawled over the 12 day cruise (Figure 1). No large cod were caught in the western Irish Sea, but 0 and 1 year olds were present. The catches of 0 group haddock in stratum 2 were very high, 22-369kg per trawl (Table 1, Figure 2) and some 0 group haddock were caught in the eastern Irish Sea.

1262 fish were individually measured, weighed and had their otoliths extracted. Stomachs were taken from whiting, cod, haddock, angler fish, hake, large poor cod, gurnards and mackerel at each station on the cruise.

Analysis of the surface temperatures and salinity suggest that stratification of the water column had broken down (Figure 3).

**Acknowledgements:**

The officers and crew of the RV *Lough Foyle* must be thanked for their hard work and help. The commitment and ardour of the scientific team must be commended. They operated extremely well throughout the cruise and worked to a high standard from start to finish. Their team work and efficiency was crucial to the successful completion of the cruise.

**Signed:**

SIC: Mark Collos

Date: 10/10/94

Master: A.W. Birt

Date: 6th October 1994.

Division Head: S.J. Henry

Date: 10/10/94

## Weights of catch (kg) per 3nm

Stratum 1	cod	whiting	hake	haddock	Nor. pout	poor cod	herring	sprat	<i>Nephrops</i>
35	15.666	251.496	0.000	6.358	0.230	3.528	2.778	38.968	0.164
86	14.055	202.450	0.000	6.900	0.185	13.575	0.048	0.386	0.000
83	3.943	518.610	0.000	0.324	11.520	12.786	1.284	0.000	26.850
Total kg	33.664	972.556	0.000	13.582	11.935	29.889	4.110	39.354	27.014
mean of strat.	11.221	324.185	0.000	4.527	3.978	9.963	1.370	13.118	9.005

Stratum 2	cod	whiting	hake	haddock	Nor. pout	poor cod	herring	sprat	<i>Nephrops</i>
81	0.000	84.525	0.000	22.300	37.325	1.760	49.885	52.450	24.250
100	0.954	357.008	0.000	153.270	0.022	0.828	2.178	2.682	0.207
70	3.745	123.375	0.550	369.910	0.972	43.278	0.414	6.024	0.000
71	0.000	154.500	0.000	15.036	18.576	1.632	90.870	47.400	3.612
73	1.620	175.201	0.000	13.061	0.216	0.396	1.976	23.063	26.291
79	0.620	337.375	0.000	83.595	45.125	1.520	12.950	129.955	0.970
92	3.552	303.888	0.000	284.666	34.834	11.415	33.029	4.752	0.211
93	7.226	400.309	0.000	292.145	100.065	31.216	25.900	11.620	0.700
94	3.614	409.291	0.491	76.670	89.715	12.444	0.704	0.660	0.000
Total kg	21.331	2345.472	1.041	1310.653	326.850	104.489	217.906	278.606	56.241
mean of strat.	2.370	260.608	0.116	145.628	36.317	11.610	24.212	30.956	6.249

Stratum 3	cod	whiting	hake	haddock	Nor. pout	poor cod	herring	sprat	<i>Nephrops</i>
101	0.072	32.615	0.590	1.012	23.200	3.660	75.060	0.000	33.010
17	0.000	110.566	0.442	4.210	17.606	2.928	115.192	11.616	66.024
88	0.000	61.529	0.000	29.580	26.338	0.718	233.272	1.755	20.696
208	0.120	97.270	0.004	2.610	63.540	0.280	55.080	2.432	50.770
75	1.003	273.808	0.000	14.894	66.733	0.782	90.061	3.068	27.341
90	8.290	553.860	2.455	5.740	75.810	1.692	5.928	0.096	49.380
56	35.980	414.435	0.000	49.300	43.725	8.745	0.762	1.560	4.215
Total kg	45.465	1544.083	3.491	107.346	316.952	18.805	575.355	20.527	251.436
mean of strat.	6.495	220.583	0.499	15.335	45.279	2.686	82.194	2.932	35.919

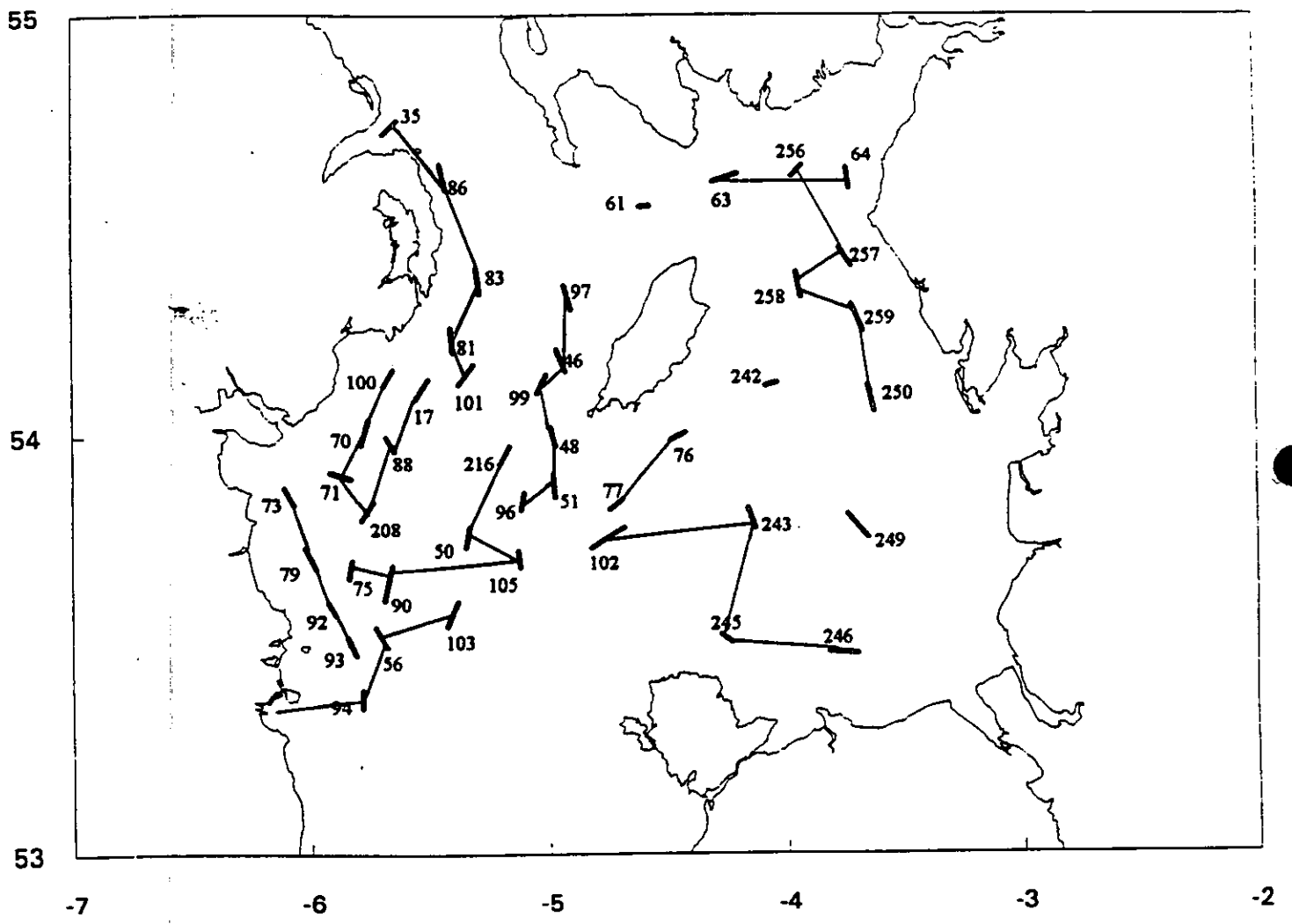
Stratum 4	cod	whiting	hake	haddock	Nor. pout	poor cod	herring	sprat	<i>Nephrops</i>
97	1.246	126.405	0.322	5.960	77.501	12.255	214.977	0.258	65.075
46	0.154	161.569	1.420	0.907	55.855	1.766	90.144	0.019	27.780
99	7.450	65.770	0.626	8.296	57.090	10.532	34.280	0.000	30.220
48	1.495	11.631	1.155	16.145	2.775	35.010	3.045	0.000	0.370
216	0.076	97.355	0.166	0.016	15.341	0.468	2.800	0.352	34.815
51	2.511	194.881	2.509	159.667	77.293	42.409	0.476	0.030	9.199
96	6.615	241.995	0.000	14.802	31.778	16.791	0.680	0.000	86.477
50	0.020	37.790	0.000	0.052	5.653	1.038	0.242	0.678	10.605
103	1.255	124.755	0.000	23.710	15.960	13.065	0.230	0.092	0.000
Total kg	20.822	1062.151	6.198	229.555	339.246	133.334	346.874	1.429	264.541
mean of strat.	2.314	118.017	0.689	25.506	37.694	14.815	38.542	0.159	29.393

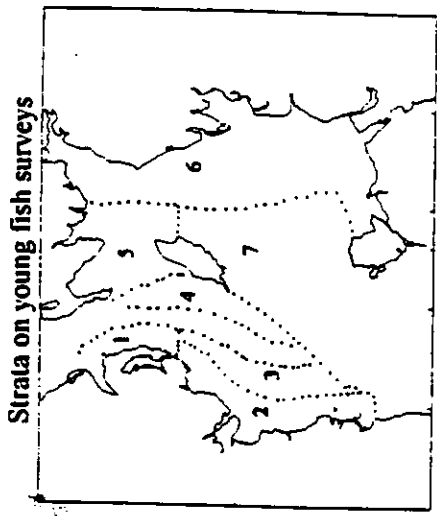
Stratum 5	cod	whiting	hake	haddock	Nor. pout	poor cod	herring	sprat	<i>Nephrops</i>
63	28.742	6.683	0.000	3.675	0.083	16.241	0.287	0.027	0.000
Total kg	28.742	6.683	0.000	3.675	0.083	16.241	0.287	0.027	0.000
mean of strat.	28.742	6.683	0.000	3.675	0.083	16.241	0.287	0.027	0.000

Stratum 6	cod	whiting	hake	haddock	Nor. pout	poor cod	herring	sprat	Nephrops
246	59.240	109.823	0.000	0.414	0.000	6.215	0.000	0.000	0.000
250	0.852	490.440	0.762	0.000	0.102	15.367	0.000	7.158	9.870
259	0.195	223.251	0.000	0.000	0.125	13.575	9.813	6.760	9.400
258	5.534	316.076	0.000	0.117	0.421	13.098	5.072	0.741	12.692
257	6.369	150.612	0.000	0.000	0.000	22.050	1747.464	0.267	11.529
256	0.028	67.566	0.000	1.875	0.084	13.468	3.900	1.128	0.000
64	6.160	163.115	26.480	0.060	0.040	2.720	4.050	0.510	0.000
Total kg	78.378	1520.883	27.242	2.466	0.772	86.493	1770.299	16.564	43.491
mean of strat.	11.197	217.269	3.892	0.352	0.110	12.356	252.900	2.366	6.213

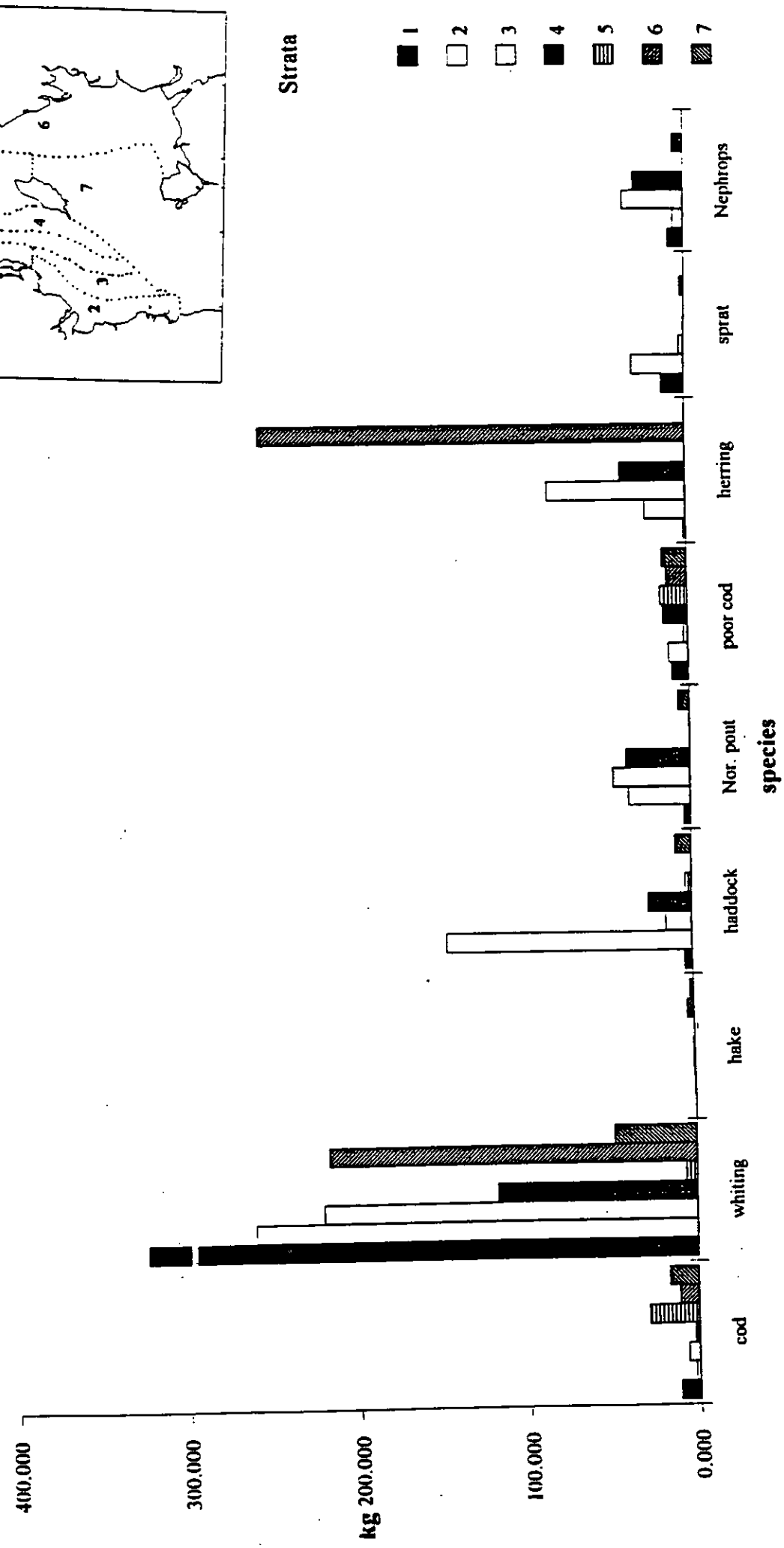
Stratum 7	cod	whiting	hake	haddock	Nor. pout	poor cod	herring	sprat	Nephrops
76	2.665	0.244	0.000	0.000	0.000	15.345	0.190	0.000	0.000
77	16.985	79.150	0.000	23.390	0.000	31.705	0.222	0.000	0.000
102	17.685	44.172	1.825	3.595	0.052	13.310	0.000	0.000	0.000
243	15.355	11.660	0.000	0.000	0.000	20.015	0.000	0.000	0.000
245	44.900	77.739	8.027	0.000	0.000	2.359	0.000	0.000	0.000
105	3.656	75.995	2.750	30.895	40.124	5.902	1.472	0.000	0.288
Total kg	101.246	288.960	12.602	57.880	40.176	88.636	1.884	0.000	0.288
mean of strat.	16.874	48.160	2.100	9.647	6.696	14.773	0.314	0.000	0.048

Cruise track on LF2494

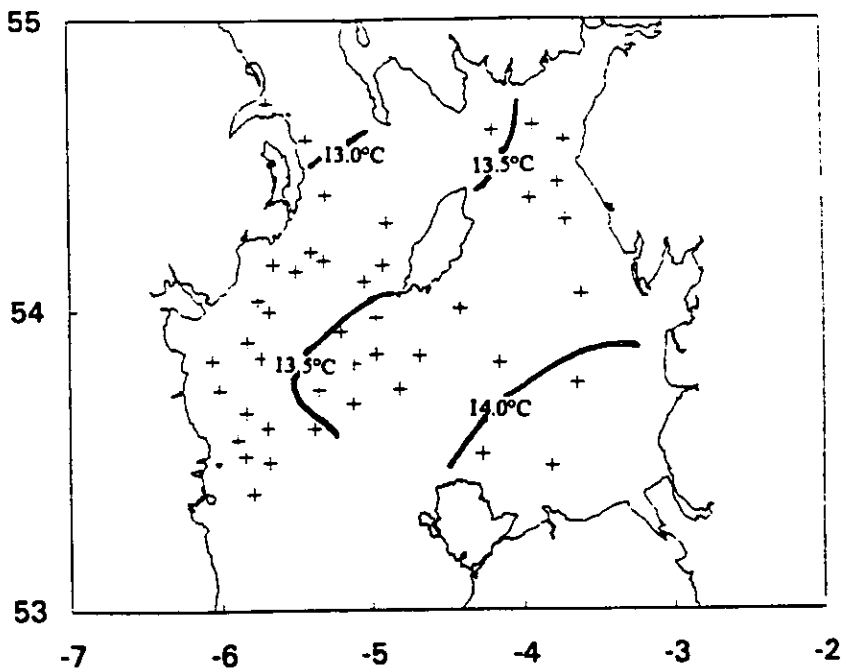




Mean catches (kg) per 3nm per strata on LF2494



Sea surface temperature on LF2494



Sea surface salinity on LF2494

