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FRV *Clupea*

Cruise 1201C

REPORT

27 August - 10 September 2001

Personnel

I Tuck	(In charge)
C Shand	
A Weetman	
H Lizarraga	(27 August - 3 September) (Student Visitor, University of Aberdeen)

Objectives

- To obtain estimates of distribution and abundance of *Nephrops* in the Firth of Forth and Moray Firth using underwater cameras.
- To collect sediment samples at each station.
- To use trawl caught samples of *Nephrops* to examine biological features at different sites throughout the survey areas.
- The TV survey will also be used to collect data on other potential commercial species.
- Make video observations of crab and lobster habitat off Fife Ness using the drop frame.
- Collect *Nephrops* burrow density data and biological samples for baseline survey of Inchkieth area in Firth of Forth for Environmental Protection Group.

Out-turn Days per Project: 15 Days MF01T

Narrative

Clupea sailed from Fraserburgh at 1230 hours on Monday 27 August 2001 and steamed for the Firth of Forth. TV survey work commenced at 0800 hours on the 28th in the outer Firth, working towards the west. The main survey consisted of 40 stations, which were completed by lunch on the 31st. An additional eight stations were then surveyed around Inchkieth. At each TV station, a sediment sample was collected for granulometric analysis. In addition to the TV stations, seven trawls were undertaken. In the evening of 1 September, eight TV transects were carried out over the lobster grounds off Fife Ness with the drop frame system. *Clupea* left the Firth of Forth area on the morning of the 2nd, and headed for Fraserburgh for the half landing.

NW'ly gales prevented sailing on 4 September, and work recommenced in the Moray Firth on the 5th. Thirty-one of the 35 planned stations were surveyed by the evening of the 7th, with sediment samples collected at each of these TV stations. Further NW'ly gales meant that the vessel had to return to Fraserburgh, and was unable to work for the remainder of the cruise. It was not possible to carry out any trawling in the Moray Firth. Unloading was carried out on Monday 10 September.

Results

Preliminary estimates of mean *Nephrops* burrow density for each station are shown in Table 1. The distribution and comparative densities are shown on the charts.

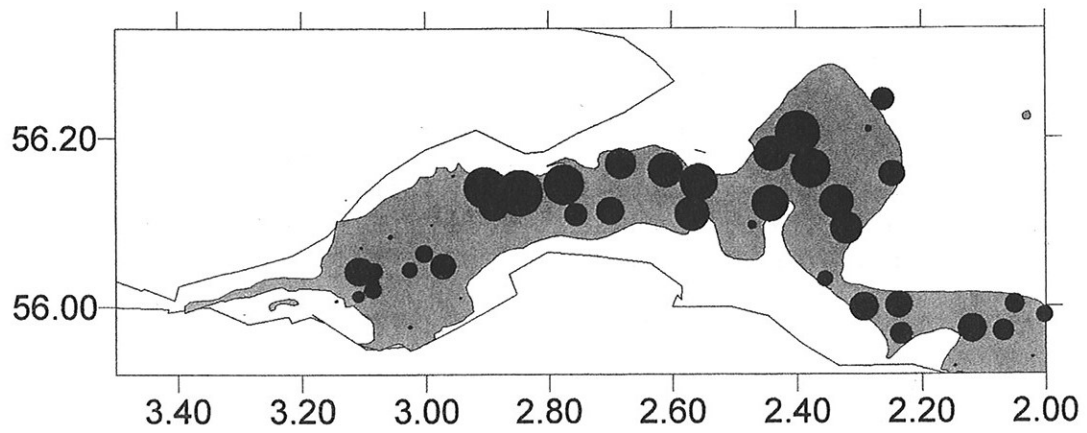
Final analysis of the video tapes will be carried out within the laboratory.

Ian Tuck
1 February 2002

Firth of Forth			
station	lat	long	preliminary density
801	56.2455	-2.2615	0.49617
802	56.206	-2.3985	1.04865
803	56.1815	-2.441	0.81119
804	56.164	-2.378	0.91756
805	56.2105	-2.2845	0.10231
806	56.1575	-2.2475	0.58247
807	56.124	-2.3365	0.78598
808	56.093	-2.321	0.73632
809	56.033	-2.3555	0.32646
810	56	-2.293	0.64715
811	56.002	-2.2375	0.60097
812	55.968	-2.234	0.48276
813	55.9295	-2.1475	0
814	55.974	-2.12	0.64671
815	55.971	-2.0695	0.46899
816	55.94	-2.022	0.01115
817	55.9895	-2.0025	0.35545
818	56.0025	-2.051	0.4261
819	56.097	-2.4725	0.1533
820	56.1225	-2.4435	0.84553
821	56.1475	-2.558	0.86637
822	56.1105	-2.569	0.8018
823	56.162	-2.6115	0.80342
824	56.17	-2.684	0.70833
825	56.114	-2.7015	0.62576
826	56.1095	-2.757	0.51082
827	56.145	-2.7765	0.93976
828	56.135	-2.848	1.09475
829	56.1415	-2.905	0.96801
830	56.119	-2.8905	0.65309
831	56.0975	-2.991	0
832	56.0835	-3.0585	0.04197
833	56.0705	-3.1055	0.00476
835	56.0445	-3.027	0.32782
836	56.0485	-2.9725	0.57803
837	56.1555	-2.9555	0
838	56.0635	-3.0035	0.37347
839	56.011	-2.944	0
840	55.9765	-3.0265	0.03876
841	56.0075	-3.1455	0.00538
842	56.013	-3.1105	0
843	56.019	-3.0995	0.0101
844	56.021	-3.087	0.36816
845	56.0275	-3.085	0.21088
846	56.0295	-3.0945	0.06179
847	56.0365	-3.095	0.21441
848	56.0425	-3.109	0.64693
849	56.0425	-3.086	0.38618

Moray Firth			
station	lat	long	preliminary density
701	57.791	-2.253	0
702	57.838	-2.0945	0.25
703	57.876	-2.0095	0.09655
704	57.9085	-2.0099	0
705	57.94	-2.184	0.25536
706	57.8645	-2.274	0.40854
707	57.833	-2.429	0.23884
708	57.7925	-2.441	0.20136
709	57.7625	-2.366	0
710	57.8045	-2.5735	0.25969
711	57.845	-2.7505	0.2398
712	57.8345	-3.043	0.29167
713	57.748	-3.494	0.42152
714	57.687	-3.6695	0.01111
715	57.6875	-3.8005	0.37591
716	57.671	-3.9075	0
717	57.758	-3.731	0
718	57.7745	-3.6695	0.77005
719	57.899	-3.8585	0
720	57.9335	-3.786	0.04011
721	57.919	-3.652	0.36111
722	57.8785	-3.5295	0.24359
723	57.883	-3.3895	0.35354
724	57.841	-3.242	0.00585
725	57.865	-3.2045	0.23248
726	57.8985	-3.0615	0.19156
727	57.955	-2.9605	0.43082
728	57.9715	-2.832	0.60185
729	57.945	-2.7435	0.48425
730	57.9165	-2.9315	0.27333
731	57.8745	-2.9345	0.16867

Firth of Forth Nephrops burrow density, 2001



Moray Firth Nephrops burrow density, 2001

