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Chartered Fishing Vessel *Zenith* (BCK 106)

Charter Cruise 1102H Part II

## REPORT

13-22 January 2003

### Personnel

David J Bova (In charge)  
G I Sangster  
K Summerbell  
I Penny

### Objectives

1. To compare Nephrops catches taken in square mesh test cod-ends with those taken in a small mesh control cod-end using twin trawl methodology.
2. To derive selectivity data for Nephrops and round fish for each mesh size of cod-end.
3. To film sequences of working operations during cruise.

**Out-turn days per project:** MF06q - 7 days

### Narrative

*Zenith* departed from Fraserburgh on 13 January and after a passage of six hours arrived at the Fladen ground near the Captain oil field. Fishing operations commenced using the 110 mm diamond mesh test cod-end attached to the port net and the small 40 mm diamond mesh (total population) cod-end on the starboard net. After each haul the test cod-end and total population cod-end were changed from side to side to minimise bias. The gear was monitored for wing-end spread, headline height and net speed using Scanmar units and the data recorded to a PC, along with navigational data to give distance covered per haul. Fishing duration was three hours. Unfortunately weather conditions deteriorated rapidly after the first haul and with a poor outlook for the next few days, *Zenith* returned to Fraserburgh. Fishing resumed on 18 January and continued uninterrupted until Wednesday 22 January when the trip terminated.

### Results

A total of 10,041 *Nephrops* were measured for 10 valid hauls using the 110 mm and two valid hauls with the 90 mm square mesh.

Some encouraging results in terms of selectivity were obtained using the 110 mm diamond mesh. The initial estimate of Lc50 was 35.1 mm carapace length at an estimated selection range of 8.0. The 90 mm square mesh retained few *Nephrops* in the size range available on the grounds. Further statistical analysis of the data will be completed in due course. A summary of the catch retained in the small mesh codend (Total Population) and the test codends (Test) by species by weight is presented in the table below expressed in Kg per hour:

Test Cod-end 90 mm <b>Square Mesh</b>	Catch in Kg/Hr	Test	Test Cod-end 110 mm <b>Diamond Mesh</b>	Catch in Kg/Hr	Test
Hauls 26 and 27	Total Population		Hauls 19 to 25 and 28, 29	Total Population	
Nephrops	82	6	Nephrops	13.7	1.0
Cod	17	9	Cod	0	0
Haddock	139	50	Haddock	200	186
Whiting	0	0	Whiting	139	129
Saithe	14	21	Saithe	0	0
Flatfish	16	3	Flatfish	0	0
Ling	0	8	Ling	0	0
Monkfish	36	13	Monkfish	0	0
Discards	987	135	Discards	1967	715
Mixed	105	74	Mixed	104	92

Some short sequences of video film were recorded of the gear being shot and hauled and the catch sorting process.

D J Bova  
28 April 2003