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Chartered Fishing Vessel *Fair Morn* (BA 19)

Cruise 1001H

REPORT

18 February - 8 March 2002

Personnel

R D Galbraith	(In charge)
G I Sangster	
P J Barkel	(18-22 February)
J McDonnell	Gear-Tech Ireland (18-22 February)
J Mair	(25 February - 8 March)

Objectives

1. Fishing trials will be carried out with two versions of an inclined panel separator trawl designed to separate cod and other roundfish species from *Nephrops.*

2. Underwater videofilm of inclined panels and associated fish reactions will be obtained using *in-situ* mini-television systems.

3. Additional biological sampling of cod will be undertaken for the project METACOD. Length, sex and maturity data along with tissue samples will be taken from all cod >25 cm. Gill tissue will be fixed in 100% ethanol for genetic studies, otoliths will be removed with plastic forceps for microchemistry and age reading.

Out-turn days per project: MF06q – 15 days

Narrative

Fair Morn arrived in Campbeltown early on 18 February, having taken on board at Troon the experimental separator panel netting sections and cod-ends transported from Howth the previous week. The vessel's port side twin rig 80 mm prawn trawl was modified to incorporate version 1 of the inclined panel gear which is designed to divert roundfish, and in particular spawning cod, to an escape aperture ahead of the cod-end. Such a gear is permitted in designated closed areas of the Irish Sea under legislation to promote cod stock recovery measures. An 80 mm retaining bag or secondary upper cod-end was attached over the escape aperture to investigate the effectiveness of the gear in separating cod and other species from *Nephrops.* Trials commenced in the Firth of Clyde cod closure area that afternoon and continued until 20 February when bad weather kept the vessel in harbour. One further haul was carried out on the morning of 21 February but the weather again deteriorated later that day and staff returned to Aberdeen on 22 February.

Work resumed in the Firth of Clyde closed area on 25 February and continued until the afternoon of 27 February when bad weather again prevented fishing trials. However work was possible on both 28 February and 1 March and staff returned home for the weekend on Friday evening. After a further haul on 4 March version 1 of the separator trawl was replaced by version 2. This gear does not employ an escape aperture, but is designed to retain roundfish in the upper section of a divided cod-end constructed in 100 mm mesh, with *Nephrops* being taken in the lower 80 mm section. Two hauls were carried out with this gear on 5 March but SW gales prevented any work on 6 March. A further haul was made on the afternoon of 7 March but debris blocking the opening under the separator panel diverted all the catch to the upper cod-end. The cruise ended in Campbeltown on 8 March when staff and equipment returned to Aberdeen.

Results

1. Overall 15 hauls (46 hours fishing time) were carried out, with 10 hauls (32 hours) considered valid for species separation analysis. Preliminary totals for these ten hauls indicate that 20% of cod by weight were taken in the lower cod-end, with 80% in the upper. For *Nephrops* the proportions are exactly reversed, with four fifths of the target species being retained in the lower cod-end. A detailed haul by haul analysis of the main commercial species encountered ie *Nephrops*, whiting, haddock and cod will be carried out in the Laboratory, taking into account the various gear modifications made.

2. Some six hours of underwater videofilm were recorded but visibility at fishing depth on the soft bottom was extremely poor. Even when using artificial light most observations throughout each haul were completely obscured by mud thrown up by the trawl gear.

3. A total of 185 cod of length greater than 25 cm were sampled for the METACOD project.

R D Galbraith
15 May 2002