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## **Charter Fishing Vessel Solstice (FR 942)**

Cruise 0606H

### **REPORT**

7-28 February 2007

#### **Personnel**

R J Kynoch (In charge)  
I Penny  
D Bova  
M Burns (7-16 February)  
E Armstrong (19-28 February)

#### **Objectives**

1. To measure during day and night fishing the selectivity of a 95mm diamond mesh codend with a 120mm square mesh panel (SMP) positioned at 4-9m from the codline.
2. To measure during day fishing the selectivity of a 95mm diamond mesh codend with a 120mm SMP positioned at 9-14m from the codline.
3. To observe fish behaviour when encountering the SMP's using self-recording ccd cameras.

#### **Narrative**

Staff and equipment joined Solstice at Fraserburgh on 7 February 2007. Staff commenced rigging the fishing gear, wheelhouse instrumentation and fish measuring station aboard the vessel alongside Fraserburgh harbour. The vessel sailed to commercial Nephrops grounds in the 'Fladdens' (ICES Area IV) approximately 90nmiles NE of Fraserburgh. There after selectivity hauls were made for objectives 1 and 2. Due to a SE gale during the evening 10 February the vessel moved Scalloway Deepes and carried out a TV haul on the rig with the 120mm SMP positioned at 4-9m from the codline. However, ambient light levels were too low to obtain footage of the gear therefore the vessel made a port call into Scalloway to allow the SE gale to pass. The vessel left Scalloway on 13 February but due to a strong SE swell sailed to the Noup grounds to the west of the Orkney's. Selectivity trials were continued until the evening 15 February. During 27 February 3 TV hauls were made in the Moray Firth. The vessel sailed for Fraserburgh and landed on 16 February thereafter the staff returned to Aberdeen for a half landing.

Staff returned to Fraserburgh and re-joined the vessel on 19 February. The vessel sailed that afternoon to the same Nephrops grounds targeted during the first half of the cruise in the 'Fladdens' (ICES Area IV). Fishing commenced on 20 February with Selectivity hauls being made for objectives 1 and 2. However, due to the weather freshening and a force 9 SE gale being forecasted the vessel steamed to Lerwick, arriving during the evening 21

February. Due to a force 9-10 SE gale the vessel lay alongside in Lerwick until the morning of 25 February and then returning to the 'Fladden' grounds. Further selectivity hauls were made until the evening 26 February. Due to another SE gale the vessel steamed to the Moray Firth and carried out TV hauls during 27 February. The cruise ended at Fraserburgh on 28 February with all staff and equipment returning to Aberdeen

## Results

A total of 21 hauls were completed of which 15 were considered valid selectivity hauls a further 2 hauls were discounted due to fouling of the gear (Table 1). For most hauls haddock, whiting and to a lesser extent cod were encountered along with lemon sole, witch, megrim and Nephrops. A full statistical analysis will be carried out in the Laboratory to determine the selective properties for each test case.

A total of 4 hauls were completed using the net mounted cameras positioned to observe the SMP at 4-9m but, due to poor light levels no useful footage was obtained of the panel performance when fishing. However some interesting observations were made during haul back, after the gear had left the seabed and was travelling up through the water column.

**Table 1:** Summary of Hauls Completed for Each Test Case

| <b>Test Case</b> | <b>Day/Night</b> | <b>No of Valid Hauls</b> |
|------------------|------------------|--------------------------|
| SMP @ 4-9m       | Day              | 6                        |
| SMP @ 4-9m       | Night            | 4                        |
| SMP @ 9-14m      | Day              | 5                        |