

P17/8

Not to be cited without prior reference to FRS Marine Laboratory, Aberdeen

Charter Fishing Vessel Zenith (BF106)

Cruise 0808H

REPORT

14-28 April 2008

Personnel

R J Kynoch (In charge)
D Bova
E Armstrong

Objectives

1. To measure the selectivity of an 80mm diamond mesh codend with a 110mm square mesh panel (SMP) rigged into the trawls tapered section and positioned 15-18m from the codline.
2. To measure the selectivity of an 80mm diamond mesh codend with a 120mm square mesh panel (SMP) rigged into the trawls tapered section and positioned 15-18m from the codline.
3. To measure the selectivity of a 90mm diamond mesh codend with a 110mm square mesh panel (SMP) rigged into the trawls tapered section and positioned 15-18m from the codline.
4. If time allows, measure the selectivity of a 90mm diamond mesh codend but with less open meshes in the circumference and with the same SMP configuration as Objective 3.

Narrative

Staff and equipment joined Zenith at Fraserburgh on 14 April 2008. Staff commenced rigging the fishing gear, wheelhouse instrumentation and fish measuring station aboard the vessel alongside Fraserburgh harbour. The vessel sailed on the morning of 15 April for shake-down hauls in the Moray Firth approximately 10niles from Fraserburgh. It became apparent after the second haul that the performance of the 110mm SMP was extremely poor with very few if any haddock escapes occurring. Therefore, the decision was made to return to Fraserburgh on the evening of 15 April to re-rig the gear. The modifications entailed moving the panel closer towards the end of the nets tapered section and extending the length of the straight extension. After these alterations the panel was now 5 meshes from the end of the tapered section and 15-18m from the codline. The vessel sailed on the evening of 15 April to commercial grounds approximately 80 nautical miles NE of Fraserburgh. Thereafter selectivity hauls were made for the remainder of the trials in this area and on ground in the outer Moray Firth. A port call was made into Fraserburgh on the 22 April and the cruise ended on the 28 April with all staff and equipment returning to Aberdeen.

Results

Throughout the trials sufficient numbers of haddock and whiting and some hake were encountered but few cod. Nephrops catches tended to be low with most ranging between 5 to 55kgs. Towing speed was kept to the vessels normal when commercial fishing commercially and ranged between 2.5 to 2.7 knots.

During the first period of the trials selectivity data was collected for the 110mm and 120mm SMPs as per Objectives 1 and 2 using the 80mm codend. A total of 8 and 10 valid hauls were made with the 110mm and 120mm cases respectively. A preliminary analysis of the results suggested that for whiting both panels were allowing some escapes but for haddock there were few if no escapes through the 110mm case. There appeared to be no effect on Nephrops selectivity by either case and the data for cod was sparse. To investigate if this effect on haddock was due to a seasonal effect (Post spawning) or panel positioning the 110mm panel was move during the port call from the tapered section and inserted into the straight extension. The extension was also lengthened so that the panel positioned was maintained at 15-18m from the codline. After the port call 9 hauls were made with this new test configuration. To better understand the selective performance of the 80mm codend the 3 final hauls were made without any SMP inserted. Due to these changes to the programme Objectives 3 and 4 were dropped from this cruise.

A full statistical analysis will be carried out in the Laboratory to determine the selective properties for each test case.

R J Kynoch
8 May 2008