R1/3

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MFV '*Seagull'* (BF 74)

Cruise 1007H

REPORT

31st October - 8th November 2007

Personnel

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Objectives:

1. To undertake a nationally co-ordinated demersal trawling survey of anglerfish (*L. piscatorius, L. budegassa*) in the North West of Scotland and West of Shetland sea areas.

2. To obtain temperature at depth profiles at each trawling station.

Out-turn days per project: MFO353 – 10 days.

Narrative

This was the third annual Anglerfish trawl survey, of a three year project, undertaken to a set of protocols drawn up by an Industry / Science survey planning group which was made up of FRS scientists and Fishing Industry representatives.

Scientific staff travelled up to Thurso on the afternoon of Tuesday 30 October, where they remained overnight. FRS staff rendezvoused with MFV *Seagull* in Scrabster in the early hours of Wednesday the 31 October, where all scientific and survey equipment was loaded prior to sailing. *Seagull* eventually sailed from Scrabster at 1400 and headed for the first stations, located to the west of the Orkney Isles. *Seagull* arrived on-station at 2100 and the survey commenced, with trawling at 2130 on the 31 October. *Seagull* was then able to trawl on selected stations to the north and north west of Lewis up until 2000 on 2 November, when severe weather conditions forced us to abandon operations and dodge. The vessel continued to dodge through the night until 0600 the following morning, when an improvement in sea conditions allowed us to continue survey operations. *Seagull* progressed well through the survey design until the early hours of the 7 November when severe weather once again halted operations, for a period of 12 hours. *Seagull* resumed surveying when the weather allowed and continued up until the morning of the 8th, when the imminent arrival of hurricane force 11 winds forced *Seagull* , *Scotia* and the other vessels (*Genesis, Marigold*) participating in this survey, to head for port. *Seagull* berthed alongside Scrabster on the morning of the

8th. Scientific staff disembarked and all survey equipment was unloaded and returned to the east coast on the evening of the 8th.

Results

A total of 29 valid and 1 invalid trawl hauls were completed on the North West and West of Shetland grounds (Fig. 1), comprising of 29 hours and 24 minutes of trawling in total. Although many of the surveys trawl hauls were undertaken in poor weather conditions, the fishing gear (BT 195) performed exceptionally well throughout the survey and was closely monitored with both Scanmar net sensors and a NOAA bottom contact sensor. Temperature at depth data was collected for all hauls, using a minilogger sensor attached to the trawl.

A total of 378 anglerfish (*L. piscatorius*) and 19 black bellied anglerfish (*L.budegassa*) were caught and scored for length (cm), sex, maturity stage, whole wt (g) and gutted weight (g). In addition, both the otolith and illicia were removed from all *L.piscatorius* and *L.budegassa* for age determination work, to be undertaken on return to FRS. The total live weight of *L. piscatorius* caught was 790.399 kg and 33.507kg of *L.budegassa* were also secured. *L. piscatorius* were caught in water depths ranging from 79 to 333 metres. It is worth noting that no anglerfish were caught during the surveys deepest tows at 560, 455 and 448 metres. Length frequency and catch weight information was also collected for all megrim caught during this survey resulting in 637 being scored for length (cm) from 251 kg caught.

Further and more detailed analysis of the data from this survey and the other 3 surveys undertaken under the auspices of the Anglerfish Industry / Science partnership will be carried out at FRS.

Conclusions

Overall, even under the poor weather conditions, this survey was very successful covered, with only 3 stations being dropped from the ambitious original survey design. These stations were dropped at the very end of the survey due to the imminent arrival of hurricane force 11 winds. For the 'North' sector of this coordinated survey, the catch rate (both n per hr and Kg per hr) were up on the 2006 and 2005 surveys.
The new anglerfish trawl (BT195) was very impressive during the whole of the cruise and performed exceptionally well in adverse weather and on unsuitable ground (rock / boulder) with only minor damage incurred. This is credit to the gear consultation sub-group formed from members of the Science / Industry partnership group.
Thanks must be given to the skipper and crew of the *Seagull* and also FRS staff involved in this survey for their terrific efforts in extreme conditions, to ensure this survey was a success. Thanks must also go to Phillip Copland for his invaluable technical help and support prior to the cruise and during gear installation onboard the vessel.

Craig.G.Davis
1 December 2007

Fig 1. Trawl locations